Completion Report

Project Number: 49320–001
Grant Number: 9181
June 2021

Vanuatu: Cyclone Pam School Reconstruction Project

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Asian Development Bank

CURRENCY EQUIVALENTS

Currency unit – Vatu (Vt)

		At Appraisal	At Project Completion
		25 October 2015	30 June 2020
Vt1.00	=	$0.0091	$0.0086
$1.00	=	Vt110.00	Vt115.96

ABBREVIATIONS

ADB	–	Asian Development Bank
APFS	–	audited project financial statement
CEMP	–	construction environmental management plan
DSC	–	design and supervision consultant
EMP	–	environmental management plan
GAP	–	gender action plan
GRM	–	grievance resolution mechanism
JFPR	–	Japan Fund for Poverty Reduction
JICA	–	Japan International Cooperation Agency
JSS	–	junior secondary school
MFEM	–	Ministry of Finance and Economic Management
MOET	–	Ministry of Education and Training
NGO	–	nongovernment organization
NPV	–	net present value
PMU	–	project management unit
Q	–	quarter
WASH	–	water, sanitation and hygiene

NOTE

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

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CONTENTS

BASIC DATA

A. Grant Identification

1.	Country	Vanuatu
2.	Grant number and financing source	9181-VAN, Japan Fund for Poverty Reduction
3.	Project title	Cyclone Pam School Reconstruction Project
4.	Recipient	Government of Vanuatu
5.	Executing agency	Ministry of Finance and Economic Management
6.	Amount of grant	$5,000,000
7.	Financing modality	Project grant

B. Grant Data

1.	Appraisal	
	– Date started	29 July 2015
	– Date completed	5 August 2015
2.	Grant negotiations	
	– Date started	22 October 2015
	– Date completed	22 October 2015
3.	Date of Board approval	16 November 2015
4.	Date of grant agreement	20 November 2015
5.	Date of grant effectiveness	
	– In grant agreement	18 February 2016
	– Actual	3 March 2016
	– Number of extensions	1
6.	Project completion date	
	– Appraisal	30 June 2018
	– Actual	30 June 2020
7.	Grant closing date	
	– In grant agreement	30 June 2018
	– Actual	30 June 2020
	– Number of extensions	1
8.	Financial closing date	
	– Actual	24 August 2020

9. Disbursements

a. Dates

Initial Disbursement	**Final Disbursement**	**Time Interval**
5 January 2017	12 August 2020	43 months
Effective Date	**Actual Closing Date**	**Time Interval**
3 March 2016	24 August 2020	54 months

b. Amount ($ million)

Category	Original Allocation (1)	Last Revised Allocation (2)[b]	Amount Disbursed (3)	Undisbursed Balance (4 = 2 – 3)
Civil works[a]	2.750	2.750	3.844	(1.094)
Consulting services				
Project management	0.980	0.980	1.018	(0.038)
Community capacity building	0.450	0.450	0.052	0.398
Contingencies	0.820	0.820	0.000	0.820
Total	5.000	5.000	4.914	0.085

Note: All cost categories were included under a single overarching category for ease of disbursement.
[a] Includes school furniture.
[b] There were no increases or cancellations during implementation.

C. Project Data

1. Project Cost ($ million)

Cost	Appraisal Estimate	Actual
Basic cost		
Output 1: School rehabilitation	4.28	5.37
Output 2: Disaster preparedness	0.62	0.26
Subtotal	**4.90**	
Contingencies	0.82	
Total	**5.72**	**5.63**

2. Financing plan ($ million)

Cost	Appraisal Estimate	Actual
Japan Fund for Poverty Reduction	5.00	4.915
Government of Vanuatu	0.72	0.720
Total	**5.72**	**5.635**

3. Cost breakdown by project component ($ million)

Component	Appraisal Estimate	Actual
A. Investment Cost		
1. Civil works	3.02	4.39
2. Consulting services	1.58	1.15
a. Project management	1.08	0.98
b. Community capacity building	0.50	0.16
Subtotal (A)	**4.60**	**5.53**
B. Recurrent costs		
1. Salaries	0.20	0.00
2. Accommodation	0.05	0.00
3. Equipment operation and maintenance	0.05	0.10
Subtotal (B)	**0.30**	**0.10**
Total base cost (A+B)	**4.90**	**5.63**
C. Contingencies		
1. Physical	0.69	0.00
2. Price	0.12	0.00
Subtotal (C)	**0.82**	**0.00**
Total project cost (A+B+C)	**5.72**	**5.63**

Source: Asian Development Bank.

4. Project schedule

Item	Appraisal Estimate	Actual
Date of contract with consultants	15 January 2016	27 October 2016
Completion of engineering designs	30 March 2016	29 September 2017
Civil works contract		
Date of award	31 July 2016	5 June 2018
Completion of work	30 November 2017	30 November 2019
Dates		
First procurement	15 January 2016	27 October 2016
Last procurement	12 June 2016	29 June 2020
Start of operations	by 30 December 2017	20–21 February 2020
Other milestones		
Contract with nongovernment organization signed	15 January 2016	5 May 2018
Completion of nongovernment organization's assignment	30 June 2017	19 December 2019

5. Project performance report ratings

Implementation Period	Ratings
From 1 January 2016 to 31 March 2016	Potential problem
From 1 April 2016 to 30 June 2016	Actual problem
From 1 July 2016 to 30 September 2016	Actual problem
From 1 October 2016 to 31 December 2016	Actual problem
From 1 January 2017 to 31 March 2017	Actual problem
From 1 April 2017 to 30 June 2017	Actual problem
From 1 July 2017 to 30 September 2017	Actual problem
From 1 October 2017 to 31 December 2017	On track
From 1 January 2018 to 31 March 2018	Potential problem
From 1 April 2018 to 30 June 2018	Actual problem
From 1 July 2018 to 30 September 2018	Potential problem
From 1 October 2018 to 31 December 2018	On track
From 1 January 2019 to 31 March 2019	Potential problem
From 1 April 2019 to 30 June 2019	Potential problem
From 1 July 2019 to 30 September 2019	Potential problem
From 1 October 2019 to 31 December 2019	On track
From 1 January 2020 to 31 March 2020	On track
From 1 April 2020 to 30 June 2020	On track

D. Data on Asian Development Bank Missions

Name of Mission	Date	No. of Persons	No. of Person-Days	Specialization of Members
Other grant project	29 Jul–5 Aug 2015	3	4	a, b, c
Loan inception	29 Jan–6 Feb 2017	3	3	a, b, d
Project consultation	22 May–2 Jun 2017	3	4	a, e, f
Review 1	20–24 Nov 2017	1	5	a
Other grant project administration	21–22 Feb 2018	1	2	a
Other grant project administration	24–31 Aug 2018	1	3	g
Midterm review	27–31 Aug 2018	2	5	a, b
Other grant project administration	4–14 Feb 2019	2	10	a, b
Loan review	8–11 Oct 2019	3	4	a, h, h
Other grant project administration	19–21 Feb 2020	1	3	e
Project completion (virtual)	10–13 Nov 2020	9	3	a, c, e, f, h, i, j, k, l

a = senior project officer (infrastructure or urban development)/mission leader, b = environmental safeguards specialist (consultant), c = associate project analyst, d = project analyst, e = senior country coordination officer, f = design supervision specialist (consultant), g = senior financial partnership specialist, h = senior operations assistant, i = infrastructure specialist/mission leader, j = evaluation specialist (consultant); k = financing partnerships specialist; l= financing partnerships analyst

I. PROJECT DESCRIPTION

1. In March 2015, Tropical Cyclone Pam struck Vanuatu, causing one of the worst disasters in its history, displacing people, and leaving widespread damage to crops and infrastructure.[1] Total economic damage and losses were estimated at Vt48.60 billion ($441.35 million), equivalent to 64.1% of Vanuatu's gross domestic product.[2] The Post-Disaster Needs Assessment completed by the government in collaboration with development partners concluded that Tafea and Shefa provinces were most affected, with the social sector (e.g., education and health) sustaining significant damage (footnote 2). The education sector's estimated medium to long-term recovery needs totaled $62.30 million and it required immediate assistance.

2. On 16 November 2015, the Asian Development Bank (ADB) responded to the government's request for an emergency assistance project to support school reconstruction by approving a $5.0 million Japan Fund for Poverty Reduction (JFPR) grant for the Cyclone Pam School Reconstruction Project.[3] The project was designed to support recovery and rehabilitation efforts in the education sector and emphasized school infrastructure at junior secondary schools (JSSs) on Tanna Island in Tafea Province.[4] It was designed on "build-back-better" concepts as per the Sendai Framework for Disaster Risk Reduction and Strengthening ni-Vanuatu Resilience - National Recovery and Economic Strengthening Program Plan (June 2015) and aimed to strengthen the resilience of schools and communities to future disasters and climate change risks.[5] The Ministry of Finance and Economic Management (MFEM) was the executing agency and the Ministry of Education and Training (MOET) the implementing agency. The envisaged outcome was to resume critical education services with disaster-resilient infrastructure by achieving two outputs: (i) upgrading and/or rebuilding schools in Tafea Province, and (ii) strengthening the capacity of communities and MOET staff for disaster risk reduction and preparedness. The project was completed on 30 June 2020.

II. DESIGN AND IMPLEMENTATION

A. Project Design and Formulation

3. Both at appraisal and design, the project was relevant and consistent with the government's objectives under the National Recovery and Economic Strengthening Program Plan (footnote 5). It responded to three aims of the program: (i) promote a participatory approach to reconstruction, (ii) adopt climate and disaster risk reduction measures to reduce vulnerability to future risks, and (iii) enable a more cost-effective and sustainable recovery. The project design was also consistent with Vanuatu's education sector strategy[6] and aligned with Vanuatu's Priorities and Action Agenda,[7] which aimed to promote (i) improved quality of education,

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[1] Efate, Erromango, and Tanna islands were worst affected. The cyclone damaged or destroyed 17,000 buildings, displaced an estimated 65,000 people needing temporary shelter, and affected more than 34,600 school children.

[2] Government of Vanuatu. 2015. *Post-Disaster Needs Assessment Tropical Cyclone Pam*. Port Vila.

[3] ADB. 2015. *Report and Recommendation of the President to the Board of Directors: Proposed Administration of Grant to the Republic of Vanuatu for the Cyclone Pam School Reconstruction Project*. Manila.

[4] Tanna, the largest of five islands in Tafea Province, accounts for 88% of the province's population. The focus on Tanna island was reflected through a minor change in scope to the project. ADB (Pacific Department). 2019. *Minor change in scope: Cyclone Pam School Reconstruction Project. Memorandum.* 26 March (internal).

[5] United Nations Office for Disaster Risk Reduction. 2015. *The Sendai Framework for Disaster Risk Reduction 2015–2030*. Geneva. Government of Vanuatu. 2015. *Strengthening ni-Vanuatu Resilience: National Recovery and Economic Strengthening Program Plan.* Port Vila.The National Recovery and Economic Strengthening Program Plan emanated from the Post-Disaster Needs Assessment (footnote 2)

[6] MOET. 2006. *Vanuatu Education Sector Strategy 2007–2016*. Port Vila.

[7] MFEM. 2006. *Priorities and Action Agenda 2006–2015: An Educated, Healthy and Wealthy Vanuatu.* Port Vila.

(ii) equitable access to education for all people in Vanuatu, and (iii) improved management of the education system.

4. The reconstruction of JSSs was deemed critical to normalize students' lives after Tropical Cyclone Pam. The project aimed to provide a safer learning environment and minimize delay in resuming education services post-disaster, thereby minimizing students' discontinuity in schooling. The project grant modality was appropriate for a small-scale emergency project in the case of a disaster, and in which target schools for reconstruction could be easily identified and supported. The focus of the climate and disaster resilience and build-back-better concepts were appropriate because Vanuatu has consistently ranked first in the World Risk Index.[8]

5. The project's two-pronged build-back-better approach involved (i) constructing and rebuilding school infrastructure to withstand future disasters and provide community emergency shelters during disasters; and (ii) building local disaster resilience capacity by training the community, students, school administrators, and provincial education officers. The project scope aligned with ADB's Disaster and Emergency Assistance Policy,[9] which emphasizes expanding assistance beyond disaster response by including activities mitigating the impacts of future disasters, thereby complementing the government's build-back-better policy. Consistent with this being an emergency project, in accordance with the Disaster and Emergency Assistance Policy, processing was fast-tracked. Project-funded consultants prepared the feasibility study, due diligence (for technical, economic, financial feasibility, safeguards and gender issues, and governance matters), and detailed designs during implementation. Consistent with ADB's Pacific Approach, the project promoted participation and ownership by closely consulting with local communities and school administrations during project design and implementation.[10]

6. The project's emergency response nature, requiring rapid project preparation, meant the precise scope and locations of rehabilitation works could not be identified before approval. The arrival of other donors assisting with school reconstruction (e.g., nongovernment organizations [NGOs]) could not be foreseen at appraisal. Consequently, in March 2019, the project's scope was revised from rehabilitating five schools to four to accommodate the involvement of other donors, avoid duplication, and better utilize resources (footnote 4).[11] The project funds were used to undertake additional works at these four schools using a slightly larger capital works budget ($3.58 million versus $3.02 million at project appraisal). The rationalization of the project scope enhanced the project's continued relevance in the face of unexpected events, enabling more comprehensive interventions in the four schools within the available resource envelope. The project was relevant at design, during implementation, and at completion.

B. Project Outputs

7. The project had two outputs, as outlined in the project design and monitoring framework. ADB approved a minor change in scope (footnote 4) that led to a revised framework being approved in March 2019. Appendix 1 shows achievement against the original and revised targets. The first output had three targets; the second had two. All five targets were achieved.

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[8] Published annually by the United Nations University, Institute for Environment and Human Security. https://reliefweb.int/sites/reliefweb.int/files/resources/WorldRiskReport-2020.pdf

[9] ADB. 2004. *Disaster and Emergency Assistance Policy*. *Manila.*

[10] ADB. 2015. *Interim Pacific Approach, 2015.* Manila*; and* ADB. 2009. *ADB's Pacific Approach, 2010–2014.* Manila. Note that the Interim Pacific Approach, 2015, extends the validity of the Pacific Approach, 2010–2014.

[11] The Lawanatom Catholic JSS had carried out all repair work within 6 months of the cyclone from its own sources and hence was dropped from the project's scope.

1. Output 1. Schools on Tanna Island in Tafea Province are rebuilt and/or upgraded

8. **School buildings.** Rebuilding and/or retrofitting works were undertaken at four JSSs (Ienaula, Imaki, Kwataparen, and Lowiepeng). The build-back-better approach involved enhancing resilience of existing buildings and constructing disaster-resilient new buildings, enabling some to function as emergency shelters. The project supported repair works for 35 buildings and construction of 61 new buildings (Appendix 2).[12] The post-disaster site investigations identified that most of the existing buildings were poorly constructed and maintained, and suffered significant roof structure loss during the cyclone due to inadequate installation (insufficient hold-down capacity and detailing).[13] As the structural integrity and resilience of these buildings to disasters could not be confidently predicted, a differentiated approach to building safety certification was adopted. Those existing buildings that were deemed safe for rehabilitation were repaired, retrofitted, and repurposed as spaces for everyday use but not for the explicit purpose of sheltering people during a category 5 cyclone.[14] Improvements focused on providing new shutters and doors; strengthening roof structures, including strengthened and additional tie-downs; replacing roof sheeting; replacing blackboards; and installing partitions to form new spaces. The enhancements were designed to maximize the ability of these building to withstand future events and brought them up to an appropriate level of compliance with the National Building Code for Vanuatu.[15]

9. The design phase was informed by a vulnerability and risk assessment in relation to climate change and natural hazards. The proposed adaptation measures informed the design of the new buildings as well as the retrofitting works. The structural integrity of all new buildings was certified by the design and supervision consultant (DSC) as complying with the Vanuatu National Building Code. Buildings intended to function as evacuation centers were designed to adhere to the National Disaster Management Office's guidelines and checklist for selecting and assessing evacuation centers, thereby accounting for the full range of design challenges posed by cyclones, storm surges, volcanic eruptions, and earthquakes.[16] The new buildings were structurally certified as fit-for-purpose for disaster events (i.e., cyclones and seismic events) and were marked with the shelter symbol for easy recognition. The design considered: siting of new buildings (away from trees, on higher ground, etc.);[17] durability of design and construction materials; use of minimal moving parts in construction; raising building floor levels above design surge levels; avoiding critical access paths in areas of surge risk; improved electrical safety; and provision of emergency shelters with adequate water, sanitation, and power. Based on the National Disaster Management Office guidelines, the facilities were designed to withstand Category 5 cyclones and can accommodate 1,086 people across the four schools.[18] Storerooms were constructed at each school, and the project provided portable generators and other emergency equipment. Food stocks for 4 months were also provided to ensure adequate nutrition for students.

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[12] The Ienaula and Lowiepeng schools were later combined as a bilingual school under a single administration in line with the Vanuatu National Language Policy 2012, which encourages schools to become bilingual.

[13] Most existing buildings were constructed with minimal skill, construction knowledge, and structural material, as well as insufficient reinforcement and nearly no concrete core fill within the walls and ring beams.

[14] Buildings identified by structural engineer to be unsafe were not rehabilitated. Several were demolished. New buildings, such as dormitories, staff housing, and administration and library blocks, were designed as safe shelters.

[15] Government of Vanuatu. 2000. *National Building Code for Vanuatu-2000.* Port Vila.

[16] Government of Vanuatu. 2016. Ministry of Climate Change and Adaptation. *Republic of Vanuatu National Guidelines for the Selection and Assessment of Evacuation Centres.* Port Vila.

[17] Consultation in May 2017 resulted in siting new school buildings outside of storm surge zones to enhance resilience.

[18] National Disaster Management Office guidelines require 1.5 square meters per person for emergency shelters.

10. The new facilities were designed to harvest rainwater, enabling increased water storage capacity essential to provision and improved performance of water, sanitation and hygiene (WASH) facilities. Solar lighting, backup power, paved walkways, and security and privacy fencing contributed to improved functionality. The dormitories and associated WASH and other facilities (showers, laundry, toilets, and ablution blocks) helped boost the boarding capacity of schools from 237 male and 227 female students to 320 male and 320 female students, a 39% increase. The official opening ceremony for the four schools, held on 21 February 2020, was attended by Vanuatu's caretaker Minister of Education, Japan's Ambassador to Vanuatu, and ADB staff. Near project closing, the project team utilized the remaining available funds to procure furniture, further improving the utility and functionality of the schools (Appendix 3).

11. The project demonstrated a special focus on gender-related requirements and sensitivities through the design process. Separate facilities were provided for boys and girls (dormitories, ablution, and toilet facilities). Formed pathways and lighting at all school sites catered to the access and safety needs of girls and children with disabilities. Community consultations influenced some aspects of the final building designs, including additional fencing and the location of buildings.[19] The consultations at Ienaula and Lowiepeng JSSs were held together, as the schools were combined under a single administration (footnote 12). During the consultation, the community asked to locate all new dormitory buildings for girls to the Ienaula site while the boys' dormitories were located on the Lowiepeng site. Furthermore, the new dining hall, outdoor kitchen, generator shed, and classrooms were located at the Ienaula site to limit the travel distance between school sites and further enhance safety for female students.

12. **Community shelters.** The output 1b indicator envisaged providing community shelters for at least 18,000 inhabitants in Tanna.[20] The combined effort of the government and development partners improved the disaster resilience of these facilities across Tanna. At the time of project completion, 337 classrooms could accommodate 16,800 persons, and 16 dormitories and dining halls could accommodate an additional 800 persons. The combined efforts of the government, churches, and health centers (clinics) created capacity to accommodate at least 2,000 additional people during emergencies. As per the projections of the project's economic analysis, the four project-supported schools can provide shelter to about 24.3% of the population (1,086 persons) within a three-kilometer radius.[21]

13. **Technical quality assurance by the Ministry of Education and Training.** As planned, the designs for all school buildings and associated facilities underwent technical quality assurance by MOET. The project-recruited DSC undertook design preparation, due diligence, monitoring and reporting, and internal quality assurance and technical reviews. The project management unit (PMU) within MOET engaged an experienced technical advisor and a senior architect to ensure the designs conformed with the stated design and functionality standards for schools and exploited the full range of opportunities for building-back-better (Appendix 4). The designs and documentation prepared by the DSC went through their own internal quality assurance process before being reviewed by the MOET PMU (comprising two architects and a gender focal). Comments provided by the PMU were incorporated into the final design and bidding documents. This process helped to improve teaching and user functionality of the spaces, refine key details and specifications, and incorporate gender-sensitive design features.

[19] Initial community consultations were held in May 2017 at all four schools.
[20] In Vanuatu, schools, churches, and health clinics are important community buildings. In Tanna, all provide a secondary function and serve as community shelters during emergencies.
[21] Shelter capacity at the four project-supported JSSs included 648 at Kwataparen, 297 at Ienaula, and 141 at Imaki.

2. Output 2: The capacity of communities and MOET management for disaster risk reduction and disaster preparedness is strengthened

14. **Capacity building in communities.** Ten disaster risk management training sessions (two per school) were initially planned for communities living near the schools, with at least 40% of participants to be women and young people. With the removal of one school from the project scope and combination of two schools under a single administration (footnote 12), the number of disaster risk management workshops was reduced to 6, which included 3 disaster risk reduction workshops and 3 cyclone simulation workshops for the communities surrounding each school.[22] The disaster risk reduction workshops included training on build-back-better principles, practical demonstration on how to secure roofing components, and a site walk-around to help community members understand construction concepts. These workshops were conducted by the DSC in August 2019 and attended by 44 participants (22 male, 22 female).[23] The cyclone simulation workshops reviewed the cyclone response plans for each school, as well as the roles and responsibilities of school disaster management committee members. They also tested response plans by enacting a cyclone simulation. Overall, 308 persons (150 male, 158 female) attended these 6 workshops, 265 of which were students (130 male, 135 female).

15. Three sexual and reproductive health workshops were delivered to the communities by the NGO, CARE International, in August 2018 and were attended by 251 participants (52% female). The workshops covered safeguards and grievance redress mechanisms and an overview of sexually transmitted infection risks and prevention (including HIV/AIDS). The NGO worked closely with the Vanuatu Family Health Clinic in Tanna to ensure that messaging regarding HIV/AIDS, sexually transmitted infections, and sexual health was both culturally and gender-appropriate and consistent with government initiatives. A fourth workshop was held for construction workers. In October and November of 2019, the project supported three community training workshops on food security, WASH, hygiene, and menstrual health management at the project supported JSSs. A total of 277 people attended the workshops (140 female participants [51%]), where 200 menstrual health management kits were distributed to women and girls.

16. **Capacity building at the Ministry of Education and Training.** The project envisaged that at least 20 people (involving at least 3 women) from MOET and other ministries would acquire technical skills on disaster risk reduction approaches. The original intent was to train MOET staff in Port Vila and other line ministries to support MOET in updating its disaster preparedness planning processes. Consultation with MOET and other relevant stakeholders suggested the need to focus on MOET staff at the provincial level in Tafea, as they had received limited training to date. Forty MOET staff (25 male, 15 female) were trained in disaster risk reduction. These included (i) two workshops for MOET provincial staff in Tanna in November 2019 attended by 9 participants (8 male, 1 female), and 31 MOET staff (including office administrators, teaching, and maintenance staff) attending the three disaster risk management and three cyclone simulation workshops held at each school (45% female) between August and October 2019. These workshops promoted an understanding of the link between the disaster management plans developed for the four schools and the provincial contingency plan. Effort was invested in raising awareness of the specific needs of women and girls during an emergency. The workshop included a desktop simulation where participants role-played responses to disaster scenarios.

[22] Cyclone simulation workshops conducted by the NGO in 2019 had 295 participants (51% female).

[23] The topics covered included site health and safety, structural safety of building (e.g., anatomy of timber structures, cyclone strapping, roof tie-downs, post connections, wall bracing, bracket and post holders), proper methods for working with concrete on site (including testing).

C. Project Costs and Financing

17. The total project cost at appraisal was estimated at $5.720 million, comprising a $5.000 million (87.4%) JFPR grant and $0.720 million (12.6%) government contribution.[24] The actual project cost was $5.635 million, drawing on $4.915 million from the JFPR grant and the government's $0.720 million in-kind contribution of value-added tax exemptions, counterpart staff, and lease payments for schools. The school upgrading output constituted 95.4% of total costs (compared to 87.3% at appraisal). The capacity development (output 2) represented 4.6% of the project cost at completion compared to 10.84% at appraisal (excluding contingencies). The overall project cost was in line with appraisal estimates (Appendixes 5 and 6). The removal of one school (para. 6) enabled the accommodation of additional construction works. Also, savings were incurred because fewer capacity building workshops were needed at the schools due to the scope reduction. During the delay in recruiting the DSC (paras. 18 and 21), the price of construction materials increased. Hence, the cost of civil works contracts ($3.65 million) exceeded cost estimates by 20%. At completion, the remaining balance of funds was used to procure furniture and food rations for the schools. No cost reallocations were required.[25]

D. Disbursements

18. The project had disbursed $4.915 million of the grant proceeds (98.3%) at completion (Appendix 7). The disbursement followed ADB's *Loan Disbursement Handbook* (2017, as amended from time to time). The fund-channeling mechanism involved direct payments from ADB to the consultants, contractor, and suppliers without use of an imprest account. The contract awards and disbursements lagged projections for the first 2 years. The first disbursements were made in the first quarter (Q1) of 2017, after the DSC mobilized. ADB revised the disbursement projections in December 2017 following a 2-year project extension. With award of the construction contract in June 2018, disbursements accelerated from Q3 2018. The contract award and disbursement profiles are in Appendixes 7 and 8. Overall, the cumulative contract awards and disbursements were slower than originally envisaged. ADB cancelled the $85,126.60 undisbursed balance at completion.

E. Project Schedule

19. The project became effective 3 months after grant signing. On 12 December 2017, ADB approved a 24-month project extension.[26] The project closed in June 2020. Implementation was delayed 2 years. The failed single-source selection negotiations with the preferred DSC firm, followed by recruitment using quality- and cost-based selection procedure resulted in a cumulative 10-month delay (para. 21).[27] A 3-month delay was incurred when finalizing bidding documents in consultation with the implementing agency. The revised implementation schedule after the project extension enabled the project to return to an on-track rating and activities were completed within the extended grant availability period. The contractor commenced the 12-month works contract in October 2018. Works were completed in February 2020 after a 4-month extension. Appendixes 9 and 10 show the chronology of events comparing the original and actual implementation schedules.

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[24] Costs included civil works for school rehabilitation, disaster preparedness, consulting, community capacity building, project management, contingencies, and recurrent costs.

[25] All costs were included under a single overarching category for ease of disbursement.

[26] Consistent with the Staff Instruction for Administration of Emergency Loans para. 45 (ii), extension of emergency projects requires vice-presidential approval. ADB (Pacific Department). 2017. Approval of an Extension of Completion Date: Cyclone Pam School Reconstruction Project. Memorandum. 12 December (internal).

[27] Design work and preparation of bidding documents could only be commenced after the DSC's engagement.

F. Implementation Arrangements

20. The project followed implementation arrangements as in the approved grant documents. The PMU within MOET oversaw day-to-day implementation and monitored project progress.[28] The PMU comprised MOET counterpart staff (para. 13), a project accountant, and an environmental management team engaged by the DSC. The DSC's support strengthened the PMU's existing technical, safeguards, and managerial capacities to integrate the build-back-better concepts with disaster-resilient and climate-proof standards. The PMU and DSC visited the sites frequently to facilitate the smooth progress of works and delivery of supporting activities. The project steering committee was chaired by the acting director general of MOET and comprised two MOET directors, the PMU project manager, a representative from MFEM, and a member from the Prime Minister's office with a representative from ADB's Vanuatu country office as an observer. The steering committee met regularly and provided the required guidance. On-site, following the project's communication and consultation plan, the DSC and contractor established communication channels with the communities, including an effective grievance resolution mechanism (GRM). Communications and grievance redress actions were reported and documented in progress and semiannual safeguards monitoring reports. The implementation arrangements were adequate to deliver the project outputs and outcomes and required no changes during implementation. During the completion review field interviews, however, some school administrators and community members said the final design did not take their suggestions into consideration, indicating that communication planning and implementation could have been improved.

G. Consultant Recruitment and Procurement

21. Due to its emergency nature, the project first opted to engage a DSC using single-source selection. Disagreement on commercial rates led to failed negotiations with the preferred firm. Another was recruited using quality- and cost-based selection, resulting in cumulative start-up delay of 10 months. The consultant's recruitment followed ADB's Guidelines on the Use of Consultants (2013, as amended from time to time). The DSC subcontracted a locally based international NGO (CARE International) to implement capacity building, gender action plan (GAP), and communicable diseases awareness and prevention activities. The DSC engaged 29.8 person-months of international and 26.0 person-months of national consultants for implementation compared with the initially envisaged 24 person-months of international and 41 person-months of national consulting inputs.[29] These adjustments to the consulting inputs helped respond to project needs. The DSC deployed adequate resources, ensured continuity of key specialists, and demonstrated a strong commitment to delivering timely and quality outputs. The performance of consultants is assessed as satisfactory.

22. The project followed ADB's Procurement Guidelines (2015, as amended from time to time) and methods outlined in the grant agreement. The design, preparation, and finalization of bidding documents were delayed due to the delay in DSC engagement. The package for the reconstruction works at the four schools was advertised through an international competitive bidding process comprising four lots (corresponding to each of the schools). The contract was awarded to a single contractor having the lowest-evaluated, substantially-responsive bid. The contract was signed on 6 July 2018 with mobilization in October 2018. The initial contract duration

[28] Including oversight for final design and costing, preparation of tender documents, bill of quantities, tendering, contract management and supervision, and day-to-day project implementation (financial management, monitoring).

[29] The consultants team included a team leader/architect, two safeguard specialists, accountant, a structural engineer, a national construction engineer/supervisor, and a procurement specialist.

was 12 months. A 4-month extension at no additional cost was required to complete the works. Grant savings were used to procure seven school furniture contracts using international competitive bidding and two contracts for rations through a request for quotation (shopping procedures). The contractor effectively implemented safeguards, hygiene and sanitation, community sensitivity, and communications requirements. Contractors and suppliers' performances are assessed as satisfactory. Works and goods were of acceptable quality.

H. Gender Equity

23. The project was categorized as effective gender mainstreaming. To maximize positive gender impact, the GAP focused on (i) increasing girls' participation and retention in secondary education, (ii) strengthening the resilience of women and girls to future disasters and climate change risks, and (iii) building capacity for provincial institutions and school communities.

24. GAP implementation was successful in delivering its intended gender equality results based on (i) 100% (7/7) of activities completed, (ii) 80% (4/5) of quantitative targets fully met, and (iii) sex-disaggregated data on beneficiaries provided to support the achievement level (Appendix 11). Key achievements included (i) 247% increase in enrolment of girls in the four project schools (from 228 in 2014 to 564 in 2020); (ii) 50% women's participation in capacity building workshops (target 40%), 52% women's participation in disaster reduction training, and 51% women's participation in sexual and reproductive health and WASH training workshops; (iii) 45% women's participation in community consultations on proposed infrastructure designs (244 out of 545, target: 40%); and (iv) 45% women's participation (target 40%) in consultations for school reconstruction and suggested design improvements to account for the security, safety, access, and hygiene needs of women, girls, and disabled children. Impact stories from project beneficiaries show that women and girls benefitted through (i) increased resilience and higher capacity in disaster preparedness; and (ii) greater school attendance due to safer, more accessible, and gender-appropriate school facilities.

25. The project also provided additional benefits through the employment of five ni-Vanuatu women as community liaison officers by the construction contractor and four ni-Vanuatu women by the DSC. Employing local women and men increased cash flow in households and the community and supported other income-generating activities for family units.

26. A participatory approach to community workshops and consultations, with at least 40% women's participation, contributed significantly to successful GAP implementation. However, a better-designed outreach plan ensuring constant two-way information exchange could have helped beneficiaries feel that their inputs were adequately considered in the design (para. 20). Engaging an international NGO with local presence, familiarity with the local context, and experience in delivering training through workshops further contributed to successful gender outcomes.

I. Safeguards

27. **Environment.** The project was classified as category B for the environment. Being an emergency response project, an environmental assessment and review framework was prepared to guide overall identification and management of environmental risks and the development, review, and clearance of an initial environmental examination report for the subprojects. The report, prepared in August 2017, contained an environmental management plan (EMP) covering the scope of works at each of the four schools. The EMP identified environmental impacts and mitigation measures to be implemented during the design and preconstruction,

construction, and operation phases.[30] ADB staff provided training to the DSC, MOET, and the contractor in preparing, implementing, and monitoring the construction EMP (CEMP). In compliance with the contract, the contractor prepared a CEMP for each of the four school sites. The DSC organized two follow-up workshops with MOET and the contractor on implementing the CEMP. Overall, environmental safeguards were well managed during implementation. Construction camps were well maintained. The contractor's health and safety environmental manager conducted weekly environmental audits, provided training to the contractor's personnel, and monitored the contractor's performance on environmental management, health, and safety. The DSC undertook monthly audits of the contractor's CEMP compliance.[31] The contractor responded to corrective action requests issued by the DSC, with the DSC following up until these were closed out satisfactorily. The DSC engaged a two-person environmental management team at the PMU for overall inspection, auditing, and reporting of compliance with environmental safeguard requirements. The effectiveness of the implemented measures was documented in progress reports and the safeguards monitoring reports that were submitted in a timely manner to ADB and disclosed on ADB's website. A strong commitment and a good monitoring and reporting system led to improvement of construction practices on-site, including: use of personal protective equipment by workers, use of bunds and drip trays for diesel generators, training in deploying and maintaining spill kits at each site, bundling of hazardous goods, segregation of dry waste goods and fuel, regular toolbox talks, good management of construction camps and work sites, and appropriate waste segregation.

28. **Social safeguards.** The project was categorized as C for involuntary resettlement and indigenous peoples. The Kwataparen, Lowiepeng, and Ienaula JSSs already had land leases including the area for construction of new buildings when the project was approved. All civil works were conducted within the lease boundaries.[32] The Imaki JSS did not require a land lease because it is on land designated for schools and medical centers.[33] MOET employed a full-time professional to investigate the status of leases and annual rent payments for all school properties within Vanuatu. The annual lease payments were updated, and outstanding lease payments were made for Lowiepeng and Ienaula schools. Due to a pending court decision to declare the rightful customary ownership of the land at the Kwataparen school site, the school administration (Seventh Day Adventist Mission) retained the outstanding lease repayment in its reserve accounts.[34] The community was consulted about closure of the Kwataparen school through 2018. MOET made alternative arrangements for the temporary relocation of staff and students to nearby schools while works were ongoing.

29. **Grievance redress.** The project's GRM involving the PMU, DSC, and MOET was established in Q1 2017. Its procedures and timelines were communicated to the local communities during the first round of consultations in May 2017. Seven grievances were recorded during the project. Each was successfully resolved at the first (local) tier of the GRM.

[30] The EMP included mitigation measures for temporary disruption to services, ensuring health and safety of workers and communities, noise control, dust management, protection of local flora and fauna, hazardous and other waste management, water quality, and traffic management.

[31] In addition, the DSC also conducted weekly ad hoc inspections at all sites. The DSC environmental team comprised an international environment specialist, national environmental specialist, and national site supervisor.

[32] The land in Kwataparen school is under a 50-year lease from 17 January 1986, Ienaula has a 75-year lease from 13 January 2003, Lowiepeng JSS has a 75-year lease from 30 July 1982. At Kwataparen, additional land could not be acquired at the school site, necessitating location of the girls' and boys' dormitories adjacent to each other.

[33] A memorandum of agreement was signed on 30 April 2018 informing the community of the proposed works and seeking approval from landowners around the site for use of the land for future development works.

[34] The Seventh Day Adventist Mission has budgeted the amount and assured settlement once court dispute is resolved.

30. **Consultations and communications.** Following the project's communication and consultation plan, regular notices were issued to, and consultations took place with, the local communities, including for aspects of site safety. The contractor also employed three male and three female community liaison officers at all sites to ensure environmental compliance and serve as the first point of community contact. The community liaison officers helped build good relationships with the school and local communities, with the contractor organizing cultural training for expatriate staff to raise awareness and heighten sensitivity to important cultural norms.

J. Monitoring and Reporting

31. The project grant had 50 covenants, of which 47 were complied with, 2 were partially complied with, and 1 was not complied with (Appendix 12). Schedule 3 (para. 6) of the grant agreement stipulated that the recipient should follow the single-source method for selecting and engaging the consulting services in accordance with the procurement plan. However, failed negotiation with the preferred firm culminated in ADB's advising the recipient to use quality- and cost-based selection (para. 21). Despite being a noncompliance, the use of quality- and cost-based selection resulted in more transparency and enhanced competition for firm selection. Schedule 4 (para. 10[d]) required GAP implementation monitoring and progress reporting. While the GAP was monitored, this was not regularly reported in the quarterly progress reports. All safeguard-related covenants were accomplished.

32. Similarly, Article 4.02(a) required the recipient to furnish audited project financial statements (APFS) to ADB no later than 6 months after the end of the relevant fiscal year. ADB received the APFS for 2017 on time, but those for 2018 were delayed and the final APFS for 2020 (with overall reconciliation of all grant expenditures) has not yet been submitted.[35] ADB deemed the APFS to be of generally acceptable quality, albeit with a few observations that the executing agency satisfactorily resolved. ADB received on-time quarterly monitoring reports (covering safeguards actions and compliance) and safeguards monitoring reports.

III. EVALUATION OF PERFORMANCE

A. Relevance

33. The project is assessed *relevant* during design, implementation, and completion as (i) it was consistent with the government's objectives under the ni-Vanuatu Resilience for the National Recovery and Economic Strengthening Program and aligned with ADB's overall policies; (ii) its focus on Tanna Island was justified, as it accounts for 88% of Tafea Province's population; (iii) the grant modality was appropriate for a small-scale emergency project caused by a disaster triggered by natural hazards; (iv) the design based on build-back-better principles addressed local needs and helped strengthen disaster resilience of schools and communities; and (v) reducing the number of schools from five to four (through a minor change in scope, footnote 4) enhanced the project's relevance by avoiding duplication of resources and enabling more comprehensive interventions within the limited budget. The project extension was relevant, enabling project activities to be completed within the extended grant availability period.

34. The original and revised project design and monitoring frameworks were reasonable. The impact statement could have been tailored to reflect the specific support to the education sector. The target for the outcome (restoring enrolment to 60% of pre-cyclone enrolment levels)

[35] The APFS for FY2018 was delayed by about 4 months and received on 24 October 2019. The 2016 APFS was deferred at the request of the recipient because the project incurred no expenses due to delayed start-up. The APFS for 2020 is due by 30 June 2021.

could have been specific to the number of schools supported by the project (rather than aggregating all schools in Tanna) to better highlight the project's specific development outcome.

B. Effectiveness

35. The project is rated *effective* in achieving its outputs and outcome. The outcome indicator and all five output indicators were achieved (Appendix 1), and GAP implementation was successful (Appendix 11). The outcome envisaged increasing island-wide student enrolments at JSSs for both boys and girls to at least 60% of the pre-cyclone level. At project completion, island-wide student enrolment was 2,196, exceeding the appraisal target of 1,260 (60% of the baseline enrolment of 2,100 students in 2015). The enrolments also exceeded the revised baseline target of 759 students (60% of 1,265 students).[36] Enrolment in the four project JSSs project grew from 451 in 2015 to 634 (44% female) in August 2020, representing an increase of 41%.

36. The project supported the rehabilitation of existing and construction of new buildings (para. 8). It further improved the schools' overall functionality by providing furniture, including bunk beds, mattresses, dining tables and chairs, library shelves, science lab benches and stools, teachers' tables, and student desks. The project has enabled the schools to provide safe shelter to 1,086 persons and strengthened the disaster resilience capacity of surrounding communities (paras. 12 and 14). The robust technical review procedure established by the PMU for the design of school buildings and associated facilities has enabled delivery of facilities responsive to gender needs and of those differently abled while meeting national disaster resilience standards.

37. The various capacity development workshops on (i) disaster risk management, including cyclone simulation exercises for schools and communities; (ii) sexual and reproductive health; and (iii) hygiene awareness complemented the build-back-better approach and were appreciated by female students. The inclusion of provincial education office staff in these workshops helped build local-level capacity in disaster resilience.

38. Overall, the project complied with the environment and social safeguard requirements (paras. 27–29), and the gender promotion goals were successfully reached based on the achievement of GAP targets (paras. 23–26). The expected reporting requirements and compliance with grant covenants (excluding submission of final APFS) also were satisfactory.

C. Efficiency

39. With this being an emergency project, economic analysis was undertaken during implementation. It adopted a cost-effectiveness analysis consistent with ADB's *Guidelines for the Economic Analysis of Projects* and the 1994 Framework and Criteria for the *Appraisal and Socioeconomic Justification of Education Projects*. For consistency, the analysis at completion followed a similar approach (Appendix 13). Two measures of efficiency were applied: (i) net present value (NPV, a proxy for cost-effectiveness) of cost incurred per student per year and per graduate,[37] and (ii) NPV of cost per person that can be sheltered during a disaster (including construction and maintenance costs).[38]

40. The project is rated *efficient*. The NPV of cost per student per year (comprising construction and maintenance) at completion was $237 compared to $279 at appraisal (15%

[36] The baseline was revised with the minor change in scope. The achievement was in part due to other interventions.
[37] Per graduate cost is computed based on a 4-year education (grades 7 to 10).
[38] The NPV calculations considered the superior utility benefits of building back better.

less), as shown in Appendix 13, Table A13.6 indicating cost efficiency. Variations among the schools are a function of the numbers of students enrolled. For example, the unit NPV cost per student per year was 20% higher for Kwataparen JSS, 15% higher for Imaki JSS and 28% lower for the Lowiepeng/Ienaula JSS at completion compared to the appraisal scenario estimates. The per-graduate NPV cost was $946 at completion compared to $1,114 at appraisal. Per-graduate NPV cost was computed as $1,500, $713, and $896 at completion compared to $1,249, $988, and $780 at appraisal for Kwataparen, Lowiepeng/Ienaula, and Imaki JSSs, respectively.

41. The NPV cost per head of the population protected from disaster or emergency was computed at project completion as $3,273 compared to $4,144 at appraisal, a 21.0% lower unit cost (Appendix 13, Table A13.7). The reconstructed facilities can safely shelter 1,086 persons within a 3-kilometer radius of the schools. That is 100% of the originally envisaged target. The unit cost represents the NPV cost over the 30-year economic life of the project. The project was managed within the approved budget and project duration that was extended for 24 months.

D. Sustainability

42. The project is rated *likely sustainable*. MOET has a *School Maintenance Policy* outlining government grants and schools' rental income as primary sources of the maintenance fund.[39] It encourages schools to generate funds from other sources, including fundraising and support from communities. The Vanuatu Education and Training Sector Strategy Plan 2020–2030 recognizes "school infrastructure and associated assets meet relevant standards to support student access" as a key outcome.[40] Among other things, the strategy plan envisages how to plan and implement quality school infrastructure based on identified needs and priorities by reviewing, updating, and implementing school minimum quality standards, the school plumbing and maintenance manual, and the asset master plan. The schools actively use the operations and maintenance manual developed by the contractor to support the schools' asset management plan.[41] The national and provincial governments and local communities have demonstrated strong ownership of the project, with substantial allocation for maintenance and development expenditure by the schools in 2020 compared to previous years (this includes lease payments). The schools' income and expenditure data show that while two of the three schools would have had net surplus funds available at end-2020, the Kwataparen JSS will be in loss (Appendix 14). Its 2020 enrolment was 160 students, as opposed to the design capacity of 260, because students were relocated to other schools during construction (para. 28). ADB projections for 2021–2025 suggest that the student numbers at Kwataparen as well as the other two JSSs will increase in 2021 and beyond. This is expected to bridge the resource gap, with all schools returning to positive balances from 2023 onwards. It is expected that the improved infrastructure, including refurbishment of existing buildings and construction of new buildings at the three schools, will contribute to attracting and retaining more students. The schools are likely to use savings for other emerging needs and expansion plans in response to demand from the communities.

43. In addition to providing annual government grants for every student covering tuition fees and maintenance costs, MOET has committed to continue supporting the schools with additional resources based on their needs.[42] Current budget allocations are deemed sufficient to finance recurrent operation and maintenance expenditures. Field interviews showed that some schools are generating additional income by renting out school facilities outside of school sessions.

[39] MOET. 2008. *School Maintenance Policy*, Port Vila.
[40] MOET. 2020. *Vanuatu Education and Training Sector Strategy Plan 2020–2030*, Port Vila.
[41] According to testimonials from school administrators.
[42] Under the Education Regulation (Amendment) order 107 (2019), the government pays in the form of grant for each student enrolled in JSS per year (i) a tuition fee of Vt42,000, and (ii) an operational fee of Vt8,125.

E. Development Impact

44. Development impact is rated *satisfactory*. At project completion, MOET's report indicates enrolments at the four JSSs had returned to levels before Tropical Cyclone Pam and education services have fully resumed with disaster-resilient infrastructure. This confirms achievement of the project outcome.[43] The new and renovated school buildings have helped boost enrolment in the schools. Testimonials from students and teachers indicate the enhanced school environment motivates students, including girls, to attend and remain in school.

45. The contractor adopted a high labor intensity approach due to difficulties of moving heavy plant and machinery to the site. This led to it providing employment to 200 local labor who gained skills in constructing disaster-resilient buildings. Some have been employed afterwards on other construction projects and rebuilt their homes and community buildings to be more disaster-resilient. Improved resilience of schools, students, and communities to disasters was achieved through (i) capacity building, (ii) provision of emergency shelters, (iii) construction of high-quality new buildings, and (iv) renovation of existing buildings based on build-back-better concepts. School communities received training in disaster preparedness, WASH, sexual and reproductive health, menstrual health management awareness, and food security. MOET staff in Tafea Provincial Education Office were trained in disaster risk management, contributing to better local preparedness for disasters. Testimonials from training recipients indicate appreciation for provision of emergency shelters and better awareness of sexual and reproductive health, gender roles, and hygiene. Communities and MOET expressed satisfaction with project performance.

F. Performance of the Recipient and the Executing Agency

46. Performance of the executing and implementing agencies, is assessed *satisfactory*. MOET established a PMU within the ministry compound shortly after grant effectiveness and appointed a project manager and other counterpart staff. It also facilitated selection and participation of its provincial staff in training to enhance institutional capacity at local level. The recipient complied with grant covenants and fulfilled most reporting requirements, albeit with some delays (paras. 31–32). It also demonstrated a high degree of project ownership and played an important role in procuring works and consulting services. It met its counterpart financing obligations, actively facilitated community consultation at different project stages, engaged fully with the DSC in detailed project design preparation, coordinated with the four participating JSSs during implementation, and supervised civil works and capacity development training workshops with the DSC's support. The recipient's completion report remained incomplete and the final audit for 2020 has not yet been submitted to ADB (footnote 35).

G. Performance of Cofinanciers

47. JFPR's funding support enabled ADB to respond quickly to the government's request for disaster recovery in a critical social sector. A representative from the Japan International Cooperation Agency (JICA) participated in discussions during the project inception phase and discussed project coordination arrangements. ADB's focal person for JFPR participated in the midterm review and project completion missions. The project completion mission met JICA resident representative to Vanuatu and Embassy of Japan representatives (to both Fiji and Vanuatu) to brief on the project's development outcomes. As per the grant agreement, ADB missions confirmed that (i) the project vehicle included JFPR logo stickers, (ii) all design drawings, bidding documents, reports, and project signboards included the correct logos, and (iii) all

[43] It is too early to assess impact because the schools were inaugurated only in February 2020.

opportunities were taken to acknowledge the contribution by the Government of Japan and JFPR at the site groundbreaking, inauguration, and in media launches (Appendix 15). The bid documents also acknowledged JFPR. During review missions, the project team acknowledged the Government of Japan's contribution at the community and government meetings. Importantly, JICA's representative for Vanuatu attended the opening ceremony of the project supported schools in February 2020.

H. Performance of the Asian Development Bank

48. The performance of ADB is assessed *satisfactory*. It approved the grant promptly after receiving the government's request for support and was proactive in jointly resolving such implementation challenges as (i) approving competitive bidding for DSC selection after the intended single-source recruitment failed; (ii) providing safeguards-related training to the consultant, DSC, and MOET; (iii) fielding regular project administration and review missions to improve and report on project progress; and (iv) approving a 2-year project extension to counter start-up delays. ADB also swiftly approved the government's request to reduce the number of JSSs for project support from five to four, enabling more directed use of grant financing. The executing and implementing agencies reported satisfaction with ADB's work quality and continued support during design, implementation, and completion phases. ADB's in-country presence further enabled it to maintain a good partnership with MOET and MFEM. The local communities are satisfied with ADB and expressed appreciation for JFPR's funding support.

I. Overall Assessment

49. The project is deemed *relevant, effective*, *efficient,* and *likely sustainable,* with the overall project rating *successful*. The GAP implementation is also rated *successful*.

Overall Ratings

Criteria	Rating
Relevance	Relevant
Effectiveness	Effective
Efficiency	Efficient
Sustainability	Likely sustainable
Overall Assessment	Successful
Development impact	Satisfactory
Recipient and executing agency	Satisfactory
Performance of Asian Development Bank	Satisfactory

Source: Asian Development Bank.

IV. ISSUES, LESSONS, AND RECOMMENDATIONS

A. Issues and Lessons

50. **Strengthening planning.** Infrastructure investments based on build-back-better principles and capacity development support contributed to strengthening disaster resilience at local level. The assessment found that increasing school enrolment numbers can help to channel sufficient funds to facilities operation and maintenance. To address this issue, future projects can help improve schools' operational sustainability through measures such as combining schools for administrative efficiencies and exploring opportunities for schools to generate additional revenue. There is also need for a national strategy and operational plan to strengthen the disaster resilience of school assets, including a holistic assessment of other school infrastructure needs.

51. **Community engagement.** Community consultations were held at each school, but testimonials indicate that some community members felt the final design did not fully consider their suggestions. Better feedback throughout the project lifecycle could have ensured that the community felt more included in the final design by communicating information about why certain design suggestions were not adopted. From the successes of this project and its lessons, it is recommended that community outreach activities should involve (i) separate consultation sessions for males and females, with workshops scheduled on days when women are not undertaking care or income-generating activities; (ii) consultations with local communities on strengthening project sustainability; (iii) awareness-raising activities to achieve a common understanding on the basis for final design criteria and special design features; and (iv) prioritized needs-based institutional capacity building at the local level for a stronger first response to disasters, especially in remote areas.

52. **Procurement.** It is unclear why a covenant was necessary to ensure use of single-source recruitment. The method may not always save time, as the need to negotiate remuneration rates poses a significant risk of offsetting the time savings from bypassing advertising and shortlisting.

53. **Monitoring.** The outcome and shelter-related output indicator (1b) should have been specific to the project schools to correlate with project inputs and overall objectives. The GAP design could have included more quantitative indicators and activity targets for enhanced monitoring and evaluation. As GAP activities occurred later in the project cycle, baseline data could have been collected midway for refining the GAP targets during the midterm review. Regular GAP monitoring could have been strengthened, as this data would have further strengthened project management. Beneficiaries noted that upgraded buildings and furniture noticeably improved student and teacher morale, contributing to higher student retention.

54. **Scaling up potential.** Designs prepared for the schools can be prototypes for rehabilitating or constructing schools with community emergency shelters throughout the country. Notably, MOET is using designs developed under this project for two secondary schools under a World Bank-financed project.

B. Recommendations

55. **Future monitoring.** ADB should monitor annual government budget allocations for operations and maintenance of project schools and the overall sector to (i) determine project sustainability over its economic life and (ii) ensure continued effective education at JSSs. ADB should also monitor the resilience of reconstructed buildings to future disasters so that the government may consider scaling up the initiative to other parts of the country.

56. **Covenants.** Small-scale projects should have fewer critical covenants.

57. **Further action or follow-up.** Scope exists for ADB's further engagement in Vanuatu's education sector. ADB should explore the feasibility of further strengthening the sector in partnership with other development partners active in the region.

58. **Timing of project performance evaluation report.** A project performance evaluation report is not recommended, but the Independent Evaluation Department may consider including the project in future Pacific education sector and emergency assistance evaluations.

DESIGN AND MONITORING FRAMEWORK

Impact the Project is Aligned with Accelerated social recovery in Vanuatu's cyclone-affected provinces (defined by the project)			
Results Chain	**Performance Indicator and Target with Baseline**	**Revised Target after Minor Change in Scope[a]**	**Achievement at Project Completion**
Outcome Critical education services resumed with disaster-resilient infrastructure.	**By 2019:** Enrollment rates in JSS for boys and girls, restored to 60% of pre-cyclone enrollment level in the project location. (2015 baseline: 2,100).	**By December 2020:** Enrollment rates in JSS for boys and girls restored to 60% of pre-cyclone enrollment level in project location. (2015 revised baseline: 1,265).	**Achieved:** In August 2020, 2,196 boys and girls were enrolled in JSS in Tanna, representing 173.6% of the revised enrollment target and exceeded the original target by 4.6%. For the four schools upgraded with project support, student enrolment increased from 451 in 2015 to 634 in 2020 (44% female). This represents a 41% increase.[b]
Output 1 Schools in Tafea Province are rebuilt and/or upgraded.	**By 2018 (1–2):** 1a. At least five schools are rebuilt or retrofitted following build-back-better principles and as community emergency shelters (2015 baseline: 0).	**By 2020 (1–2):** 1a. At least four schools rebuilt or retrofitted following build-back-better principles and as community emergency shelters (2015 baseline: 0) The output description changed from "Tafea Province" to "Tanna Island in Tafea Province".	**Achieved:** By August 2020, four schools (Kwataparen JSS, Ienaula JSS, Lowiepeng JSS, and Imaki JSS) on Tanna Island were provided with (i) new buildings designed in accordance with Vanuatu's building code and marked as community "safe shelters" in case of emergency, and (ii) retrofitted existing buildings with new partitioned classrooms, strengthened shutters, doors, roof structure, and roof sheeting to enhance resilience. 35 buildings were rehabilitated and 61 new buildings constructed under the project. The schools' overall functionality improved by furniture procured through the project, including bunk beds, mattresses, dining tables and chairs, library shelves, science lab benches and stools, teachers' tables, and student desks.
	1b. Community shelters will benefit at least 18,000 inhabitants (2015 baseline: 0).	No change	**Achieved**. 337 classrooms across Tanna Island can provide shelter to about 16,800 people, 16 dormitories and dining halls able to provide shelter for about 800 people, and churches and clinics can provide shelter for at least 2,000 people (total shelter for 19,600 people in Tanna). This includes the four project supported improved JSSs that can provide shelter to 1,086 persons.
	1c. School building and associated facilities design work undergoes technical quality assurance by MOET (Baseline: not applicable).	No change	**Achieved.** The PMU at MOET established a technical review procedure and submissions of comments on school buildings and associated facilities' design work. The DSC followed the procedures and submitted documents to two

Impact the Project is Aligned with Accelerated social recovery in Vanuatu's cyclone-affected provinces (defined by the project)			
Results Chain	**Performance Indicator and Target with Baseline**	**Revised Target after Minor Change in Scope[a]**	**Achievement at Project Completion**
			architects and the gender focal at the MOET PMU for review throughout the design process. Comments provided by the PMU were adopted in the final design documents by the DSC. This process helped refine key details around shutters, doors, and location of buildings and fences to improve building for gender-related and differently abled purposes. Designs now being used by MOET for construction of other schools (including two schools being financed under an ongoing World Bank project).
Output 2 The capacity of communities and MOET management for disaster risk reduction and disaster preparedness is strengthened.	2a. At least 10 disaster risk management training sessions are conducted for communities living near the schools, with at least 40% of participants being women and children (2015 baseline: 0).	No change	**Achieved:** The project conducted 6 of 10 planned workshops on disaster risk management (two per JSS—the Lowiepeng and Ineula JSS workshops were combined as the schools were later merged into one administration). These workshops, including cyclone simulation exercises, were held for communities near the schools in August and September 2018. Women accounted for 51% of the 836 participants in these workshops. The project also delivered four workshops on sexual and reproductive health [three for the communities and one for the contractor] and three hygiene awareness workshops for the communities living near the JSSs.
	2b. At least 20 people (at least three women) of MOET and other ministries acquire skills in technical approaches to disaster risk reduction (2015 baseline: 0).	No change	**Achieved:** 40 MOET staff (37.5% female) participated in two provincial workshops and six community workshops and acquired skills in technical approaches to disaster risk reduction.

DSC = design and supervision consultant, JSS = junior secondary school, MOET = Ministry of Education and Training, PMU = project management unit.

[a] At the government's request, ADB approved a minor change in scope in March 2019, which included the outcome target to be achieved by December 2020 and the target for rebuilding or retrofitting four schools in Taana Island instead of five schools in Tafea Province. The revised targets reflect these changes. ADB (Pacific Department). 2019. Minor change in scope: Cyclone Pam School Reconstruction Project. Memorandum. 26 March (internal).

[b] Based on MOET data extracted from their information management system (Open Vanuatu Education Management Information System).

Source: Asian Development Bank.

NUMBER OF REHABILITATED AND NEW BUILDINGS BY SCHOOL

Rehabilitated Existing Buildings	Quantity	New Buildings	Quantity
Kwataparen Junior Secondary School			
Classroom building	1	Dormitory with water closet (WC)[a]	2
Classroom, science, and library	1	Dormitory without WC[a]	4
Administration and classroom	1	Shower block	4
Staff house	2	Toilet block	14
Computer lab	1	Dining hall [a]	1
		Outdoor kitchen	1
		Staff house [a]	1
		Administration and library [a]	1
Ienaula Junior Secondary School			
Principal's house	1	Dormitory with WC [a]	1
Science lab	1	Dormitory without WC [a]	2
Girls' dorm to double classroom	1	Shower block	2
Double classroom	1	Toilet block	6
Boys' dorm to double classroom	1	Dining hall [a]	1
Dining hall to science classroom	1	Outdoor kitchen	1
Administration library	1	Generator shed	1
Staff house	3		
Lowiepeng Junior Secondary School			
Classroom	5	Shower block	2
Girls' dormitory	1	Toilet block	8
Boys' dormitory	1		
Imaki Junior Secondary School			
Library/classroom to library	1	Dormitory with WC [a]	2
Administration	1	Bush kitchen	1
Classroom/computer room	1	Toilet blocks	6
Classroom/science building	1		
Boys' dormitory	1		
Girls' dormitory	1		
Boys' shower	1		
Girls' shower	1		
Boys' and girls laundry room	1		
Staff house	1		
Principal's house	1		
Dining hall	1		

[a] Buildings designed as safe shelters.
Source: Government of Vanuatu Ministry of Education and Training.

LIST OF FURNITURE PROCURED UNDER THE PROJECT FOR SCHOOLS

Type of Furniture	Quantity	Recipient School			
		Kwataparen JSS	Ienaula and Iowiepeng JSS (Whitesands Bilingual College)	Imaki JSS	Additional stock
Bunk beds	240	80	120	40	0
Chairs	3,881	460	600	105	2,716
Desks	32			32	0
Dining table carts	2	1	1		0
Dining tables	24	12	12		0
Library shelves	13	13			0
Student desks	280	280			0

JSS = junior secondary school.
Source: Government of Vanuatu, Ministry of Education and Training.

PROJECT'S BUILD BACK BETTER APPROACH

A. INTRODUCTION

1. The impact of Tropical Cyclone Pam on the education sector was catastrophic. Total economic damage and losses were estimated at Vt48.60 billion ($441.35 million), equivalent to 64.1% of Vanuatu's gross domestic product.[1] The cyclone severely damaged education facilities such as classrooms, staff houses, kindergartens, and water and sanitation facilities as well as all the associated school furniture, books, and other resources. The post-disaster needs assessment recorded the following damages: (i) 187 classrooms were totally destroyed, (ii) 279 classrooms suffered major damage, (iii) 152 classrooms had minor damage, (iv) 490 staff houses were damaged to some extent, (v) 218 kindergartens were damaged or destroyed, and (vi) school resources and furniture were damaged or destroyed. Schools in Tafea Province were the worst affected.

2. The number of damaged school buildings highlighted poor construction standards and lack of maintenance of existing facilities. Initial damage assessments indicated that up to 34,614 children were impacted by damaged school facilities, with 54% of early childhood care education centers damaged and 46% of all primary and secondary facilities destroyed. In many cases, destroyed buildings had been built by the community to meet the need for more classrooms, or to provide accommodation for teachers. In these instances, the buildings had generally been constructed on a very limited budget and absent of building standards. The post-disaster needs assessment also found that the most affected schools also needed access to water and sanitation to ensure public health and safety, particularly in boarding schools.

3. Immediate reconstruction efforts were required for resumption of education facilities which would enable children to return to school. The chance of continuing education, the return to routine, and the familiarity of the school environment has been proven to help children recover from disasters.[2] Another key aspect of the GAP activities was to increase the resilience of women and girls to disasters and climate change risks. Although disasters and climate change affect both men and women, the impacts and domestic burdens of caring for family and community are often borne heavily by women.

4. The post-disaster needs assessment proposed that a build-back-better approach be adopted for reconstruction interventions. The assessment defined build-back-better as "an approach to reconstruction that seeks to reduce vulnerability and improve living conditions, while promoting more effective and sustainable reconstruction. Build-back-better uses the opportunity of having to rebuild to examine the suitability and sustainability of reconstruction activities." The focus was on reconstruction and strengthening community resilience.

5. The project's two-pronged 'build-back-better' approach involved (i) construction and rehabilitation of school infrastructure to withstand future disasters; and (ii) building local disaster resilience capacity by training the community, schools, and provincial education officers.

B. DESIGN APPROACH

6. Each of the four schools had a range of buildings built from as early as the 1970s through to construction in the recent years. However, due to minimal maintenance and poor construction

[1] Government of Vanuatu. 2015. *Post-Disaster Needs Assessment Tropical Cyclone Pam*. Port Vila.
[2] UNESCO. 2006. *Guidebook for Planning Education in Emergencies and Reconstruction.*

knowledge and building practices, most, if not all existing buildings could not be certified as safe shelters. The design and supervision consultants' (DSC) site examinations found that incorporating minor improvements into the building envelope and structural elements could raise the resilience of these existing facilities against future events and allow these spaces to be repurposed for teaching.

7. The design considered the following environmental hazards: (i) cyclones (wind speed), (ii) intense rainfall, (iii) storm surge, (iv) earthquakes, (v) volcanic eruptions, and (vi) extreme temperatures. Table A4.1 shows the impact of these hazards on site components of project schools, with the challenges observed also mapped against the main environmental hazards.

Table A4.1: Impact of Hazards on Project School Components

Key environmental hazards	Impact on Key Site Components									Key Challenges					
	Foundations	Walls	Windows/doors	Roof	Access ways	Power	Communications	Water	Sanitation	Equity/inclusion	Preparedness	Quality of design	Quality of construction	Suitability of materials	Sustainability
Cyclone—winds		x	x	x	x	x	x	x		x	x	x	x	x	x
Cyclone—rain	x		x	x	x	x	x		x	x	x	x	x	x	x
Storm surge	x				x	x			x	x	x	x	x		
Tsunami	x	x	x	x	x	x	x	x	x	x	x		x		
Earthquake	x	x	x	x		x	x	x	x	x	x	x	x	x	x
Volcanic eruption	x	x	x	x		x	x	x	x	x	x			x	x
Extreme temperatures				x		x		x	x	x	x	x	x	x	x

Source: Design and Supervision consultant's report.

8. DSC inspections found that it was difficult to confirm the structural integrity of some buildings without costly, extensive, and potentially destructive testing. Hence a differentiated approach to building safety certification was devised:

(i) New Buildings: All new buildings were designed such that the structural engineer could certify compliance with the National Building Code for Vanuatu[2] and could confirm the buildings' structural integrity/resilience during specified catastrophic design events (i.e., warranting that the design is "fit for its intended purpose" of withstanding a Category 5 cyclone). A special symbol was painted on such buildings for ease of identification during disasters. The buildings intended to function as evacuation centers were designed to adhere to the National Disaster Management Office's National Guidelines for the Selection and Assessment of Evacuation Centres checklist, thereby accounting for the full range of design challenges posed by cyclones, storm surges, volcanic eruptions, and earthquakes.[3]

[2] Government of Vanuatu. 2000. *National Building Code for Vanuatu-2000.* Port Vila.
[3] Government of Vanuatu. 2016. Ministry of Climate Change and Adaptation. *National Guidelines for the Selection and Assessment of Evacuation Centres.* Port Vila.

(ii) Those buildings the structural engineer clearly identified as “unsafe” were not rehabilitated in any way, to minimize future perceptions that the building was safe. Several of these buildings were demolished.

(iii) Finally, for existing buildings that were in a reasonable condition, these were rehabilitated with the DSC certifying these as “safe for day-to-day use”. The structural integrity/resilience of these buildings to disasters could not be accurately predicted. These were repaired, rehabilitated, or retrofitted and repurposed to be used as classrooms and administration (not shelters). The purpose of these buildings was decided jointly by the Ministry of Education and Training and the school administrations, after the project undertook rehabilitation works. The resilience of existing buildings was improved in rehabilitation works to ensure compliance with the build-back-better principle. The enhancements were designed to maximize the ability of these buildings to withstand future events and brought them up to an appropriate level of compliance with the National Building Code for Vanuatu (footnote 2).

9. **Design considerations for new buildings** included factors such as siting of new buildings (away from trees, on higher ground, etc.),[4] the durability of design and construction materials, use of minimal moving parts in construction, raising building floor levels above design surge levels, avoiding critical access paths in areas of surge risk, improved electrical safety, and the provision of emergency shelters with adequate water, sanitation, and power. Based on the National Disaster Management Office guidelines, the facilities were designed to withstand Category 5 cyclones and can accommodate 1,086 people across the four schools.[5] Storerooms were constructed at each school for food and emergency supplies, and the project provided portable generators and other emergency equipment.

10. **Rehabilitation and retrofitting of existing buildings with remaining useful life.** In many of the existing and aged buildings, material properties were not known with certainty (e.g., strength of concrete blocks in walls, strength of steel in trusses), the original design was not documented or known with confidence to enable analysis (e.g., lateral bracing for walls not known), and the adequacy of the existing designs could not be predicted with confidence and therefore certified by the DSC. In this instance, the structural engineer advised on the elements of the building being replaced to maximize the ability of the building to withstand future events.[6] The designer used "Industry Best Practice" (Cl20.1 of Special Conditions of Contract) including compliance with the current National Building code for Vanuatu for building-back-better. To enable the DSC to warrant that the design "is fit for its intended purpose" (Cl20.4 of Special Conditions of Contract), the intended purpose of the building was made clear by MOET (e.g., classrooms or administration building for everyday use but not for the explicit purpose of housing people during a category 5 cyclone). All major elements were upgraded for such buildings.

11. From a “soft” building-back-better viewpoint, a nongovernment organization engaged by the DSC helped implement gender mainstreaming initiatives under the project. This focused on

[4] In May 2017, consultation meetings held at each school resulted in changes to the location of new school buildings outside of high tide and surf zones to enhance resilience.

[5] National Disaster Management Office guidelines require the provision of 1.5 square meters per person for emergency shelters.

[6] From a practical perspective, if existing buildings are standing and have roofs, then they have previously withstood a significant event (i.e., Cyclone Pam and many previous earthquakes without extensive structural damage).

improving women's and community involvement in discussions about disaster risk reduction and management, food security, sexual transmitted infections (HIV) and sexual and reproductive health, personal hygiene and water, sanitation and hygiene awareness. These directly complimented improved water and sanitation facilities developed in the schools under the project.

12. Additional "soft" building-back-better training workshops were held with the school, community and women to outline the key features of each building, develop an appreciation for maintenance and understanding the maintenance schedules with a focus on pre-cyclone season inspections of various building components and cyclone preparedness. Mock trusses with purlins were used to describe the importance of material selection, fixings and strapping. Separate workshops were held with women to work around their family commitments. These directly complimented improved understanding of disaster preparedness, increased community resilience and developed a sense of pride in relation to the new school assets. These workshops were extended to 11 other schools within the proximity of the Ienaula school. Principals, community member's and maintenance staff were invited to participate in the workshops.

C. DETAILED BUILD-BACK-BETTER APPROACHES

13. Table A4.2 details the issues and hazards facing the project, communities, and schools and the approaches adopted to build-back-better, under four key headings:

(i) General issues. Covering overall project issues and approaches in design and reconstruction.
(ii) Communities. Covering issues relating to consultation, coordination, and alignment with local disaster response needs.
(iii) New buildings and facilities within the schools.
(iv) Existing buildings and facilities within the schools.

Table A4.2: Building-Back-Better
New Buildings

New Buildings—Building-Back-Better				**All New buildings have been designed in accordance with the Building Code of Vanuatu and deemed safe by engineering site verification.**
Hazard	**Frequency**	**Risk**	**Event/Failure mechanism**	**Proposed actions to address**
Cyclone (wind and rain)	More than one per year	Medium	Foundations being compromised by surface water.	Allowances for grassed V drains to direct overland flow/surface water away from buildings. Floor level of buildings set 200 millimeters (mm) above finished ground level. **Detailed within bidding documents.**
		High	External perimeter walls being damaged by wind driver debris and projectiles.	Walls are constructed out of reinforced masonry blockwork—all cores filled. **Detailed within bidding documents.**
		High	External fenestrations being damaged by debris.	Doors made from tongue-and-groove paneling and braced. Shutters are all plywood with cover strips to minimize rain, wind ingress, and prevent roof blow outs. **Detailed within bidding documents.**
		High	Roof structure—lifting off.	All rafters are tied down to the reinforced ring beam with threaded U-bolts and steel hold-down plate. **Detailed within bidding documents.**
		High	Roof purlins and roof sheeting being ripped away from trusses.	Purlins held down by cyclone straps and roof sheeting fixed down with roof screws complete with cyclone washes and seals. Reduced screw spacing for additional hold-down capacity on roof sheeting. **Detailed within bidding documents.**
		Medium	Roof guttering—potentially overloaded and damaged	Guttering provided over entry points and along one length of the building to direct water into water tanks. Overflows allowed if required. **Detailed within bidding documents.**
		High	Roof—fallen and airborne branches.	Buildings located away from tree dripline where possible. **Detailed within bidding documents.**
		High	Access—difficult access.	Improved paths to enable access to buildings. All buildings noted as accessible have been provided with 920mm doors, 5mm transitions

				steps and ramps into and out of the facility on to walkways/pathways. **Detailed within bidding documents.**
		High	Power—safety issues	Improve electrical safety where possible by adding stay cables and support cables. **Detailed within bidding documents.**
		High	Power—back up power, no power during event.	Allowance for backup generators and fuel storage cans to be used during times of disasters. **Detailed within bidding documents**
		High	Power—damage to solar panels or overhead wires.	Solar units are based on single panels with plug and play lighting and control units. Solar panel is light weight and can be removed from roof prior to a cyclone event. **Detailed within bidding documents.**
		Low	Communications	Allowance for conduit to roof level for installation of high-frequency radios. However, the island of Tanna has reasonable coverage, with two mobile phone companies.
		High	Evacuated people need housing.	Design of dormitories with adequate water, sanitation, power, and communications in accordance with National Disaster Management Office guidelines. Special signage painted on buildings designated as safe shelters. **Detailed within bidding documents.**
Storm surge	More than one per year during a cyclone event	Medium	Facilities inundated with storm generated waves.	Where schools are sited close to the coast. Consultation with community has allowed the project to place the school on higher ground further away from the breaking surf/ high tide mark. **Detailed within bidding documents.**
Coastal Erosion		Medium	Foundations undermined by erosion caused by wave action and or flooding.	All facilities are located away from the coastline and potential streams/river systems
Earthquake		High	Foundations and walls being damaged by earthquakes.	Foundations and wall are all reinforced with full cored filled blockwork. **Detailed within bidding documents.**
			Landslides due to quakes.	New facilities have been sited away from the toe of hillsides.

				Detailed within bidding documents.
Extreme temperatures	1 degree rise over the next 30 years.	Medium	Internal spaces becoming too hot to function in.	Roof sheeting with double sided foil insulation underneath, combined with an internal ceiling lining of roof sheeting plus air gap to allow roof cavity to be vented and kept cool. Large window openings allow for ventilation. **Detailed within bidding documents.**

Existing Buildings

Existing Buildings—Building-Back-Better				**Due to the age and construction of the existing buildings the focus has been to increase the resilience against future events.**
Hazard	**Frequency**	**Risk**	**Event/Failure Mechanism**	**Proposed actions to address**
Cyclone (wind and rain)	More than one per year	High	External fenestrations being damaged by debris.	Existing doors and windows replaced with new frames and panels. Doors made from tongue-and-groove paneling and braced. Shutters are all plywood with cover strips to minimize rain and wind ingress and prevent roof blow outs. **Detailed within bidding documents.**
		High	Roof structure—lifting off.	Where new roof structure has been added to existing buildings, these have been tied on to ring beams. New threaded tied down rods added to hold-down new rafters. Where ring beams are not structurally sound, existing beams cut down to top of window and new beams power with cast in U-bolts. All new rafters are tied down to the reinforced ring beam with threaded U-bolts and steel hold-down plate. **Detailed within bidding documents.**
		High	Roof purlins and roof sheeting being ripped away from trusses.	Where new purlins added, cyclone straps have been added. Where existing purlins remain, additional cyclone straps have been added. Where existing roof sheeting remains, old fixings removed and new roof screws with cyclone washers added. **Detailed within bidding documents.**
		High	Access—difficult access.	Improved paths to enable access for all to buildings with particular focus on those with disabilities.

Existing Buildings—Building-Back-Better				Due to the age and construction of the existing buildings the focus has been to increase the resilience against future events.
Hazard	**Frequency**	**Risk**	**Event/Failure Mechanism**	**Proposed actions to address**
				Where existing buildings have been changed from a dormitory to a classroom, 920mm wide doors have been added with 5mm transitions steps and ramps into and out of the facility if they are required to be accessible. **Detailed within bidding documents.**
		High	Power—safety issues.	Improve electrical safety where possible by adding stay cables and support cables. **Detailed within bidding documents.**
		High	Power—damage to solar panels or overhead wires.	Solar units are based on single panels with plug and play lighting and control units. Solar panel is light weight and can be removed from roof prior to a cyclone event. **Detailed within bidding documents.**
		High	Evacuated people need housing.	Existing buildings are to be used as post event shelter not primary safe shelter. **Detailed within bidding documents.**

Social/Community

Social/Community—Building-Back-Better			Build-back-better approach
Issue	**Risk**	**Event/Failure Mechanism**	**Proposed actions to address**
Facilities for both genders	High	Insufficient number of toilets and showers provided for women and men (including children/students at the school).	Separate gender facilities provided at all school sites. Showers, laundry and toilets provided. Separate facilities for persons with disability have been added. **Detailed within bidding documents.**
Disaster risk reduction and management	High	Women not consulted on matters related to disaster risk reduction and management.	Workshops on disaster preparedness conducted by the NGO at all four school sites and with MOET. Workshops on improving the resilience of existing building was also held on all four sites. Community participated in fitting of cyclone straps, roof screws, tie downs at rafters. NGO also conducted workshops on gender awareness and food security. **Detailed within scope of NGO.**
Personal Hygiene	High	Improper use of ablutions.	WASH workshops conducted at all four schools. Key focus on male and female

Social/Community—Building-Back-Better			Build-back-better approach
Issue	**Risk**	**Event/Failure Mechanism**	**Proposed actions to address**
			personal hygiene. Water tanks provided for all WASH stations. **Detailed within scope of NGO.**

General

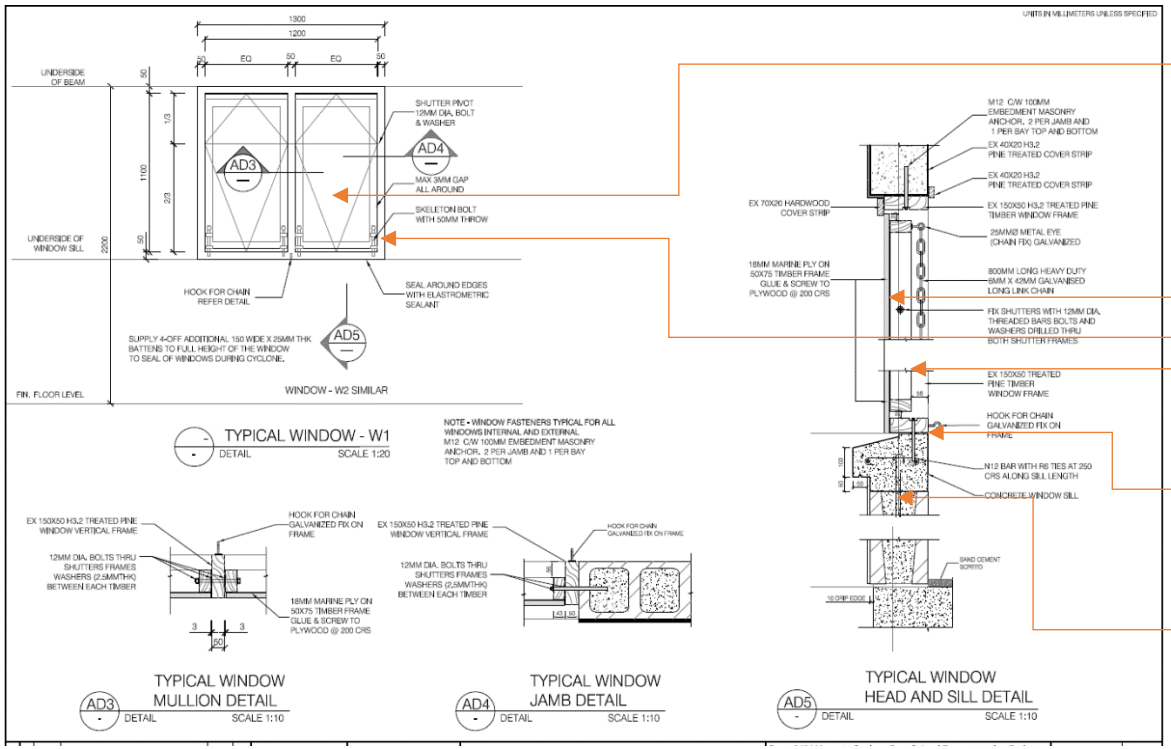
Issue	Event/ Failure mechanism	Build-Back-Better Approach
Suitability/quality of design	Unable to be certified as "safe" and withstand desired climatic events.	Design of new buildings to Building Code of Vanuatu and other codes and consistent with National Disaster Management Office's guidelines. Designs underwent quality assurance review by suitably qualified person in MOET and certified by structural engineer that the design is fit for purpose. Design of refurbishment adopted suitable materials and details to maximize resilience. All assets will be designed for low life cycle cost and minimal maintenance needs.
Quality of materials	Materials fail during an event or deteriorate quickly. Materials may detract from meeting design intent.	Selection and specification of cost-effective materials able to withstand the design event. Quality assurance review by MOET. Inspection and approval of materials on site.
Quality of construction	Poor construction may lead to inadequate structural capacity and non-conformance with design. Poor construction may also lead to premature deterioration of assets.	Selection of international contractor with suitable experience and capacity. Selection of design and consulting firm with suitable construction supervision experience.
Sustainability	Lack of ongoing maintenance may lead to premature deterioration of assets. Lead to inability to provide a safe place during future events.	All assets designed for low life cycle cost and minimal maintenance needs. Asset maintenance plan for each school was prepared, including budget framework for financing of maintenance.

MOET = Ministry of Education and Training, NGO = nongovernment organization, WASH = water, sanitation and hygiene.
Source: Design and Supervision consultant's report.

KEY DESIGN DISASTER RESILENCE FEATURES OF VARIOUS BUILDINGS

14. The following section outlines key disaster resilience features of the improved buildings within the project.

15. **Typical standard window detail.** The windows shutters provide ventilation and light infiltration for day-to-day use. In an emergency such as an approaching cyclone, the shutters could be closed and secured by releasing the chain and locking on to bolts. Each component from hinge to bolts are available through local hardware stores in Port Vila and Tanna.



18mm thick plywood for marine grade plywood protection against flying debris

Double pad bolts per window shutter to lock shutters in place

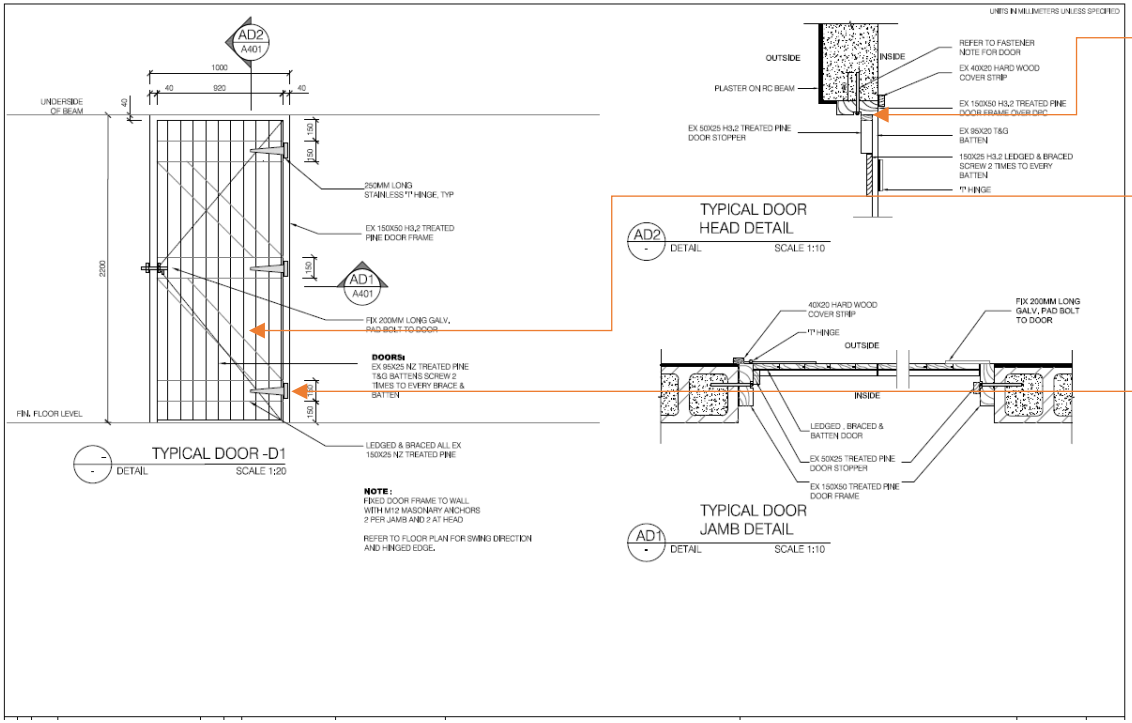
Shutter panel sub frame for added strength.
Window frame uses a deep member size (150 x 50) H3.2 treated frames bolted to reinforced walls, cills and head.

All concrete block cores are filled and reinforced.

Lessons Learnt:

- As an alternative, hinge the head of the shutter panel and to replace the chain with built in – drop down strut to hold the window open at various angles.

16. **Typical standard door detail.** The doors are designed in ledged and batten (tongue-and-groove) format using 25 millimeter treated H3.2 timber. In an emergency such as an approaching cyclone, the doors can be closed and secured by using the pad bolts. The doors then shut against a doorstop wrapping around the inside of the door frame. Each component from hinge to bolts are available through local hardware stores in Port Vila and Tanna.



Door frame use a deep member size (150 x 50) H3.2 treated frames bolted to reinforced walls, sills and head.

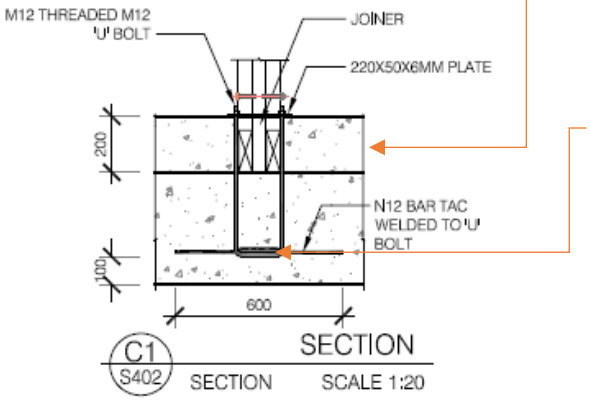
Door panels are 150 x 25 T&G H3.2 glued and screwed to braces size head.

Heavy duty hinges which extend across the door face, screwed into the panel.

Lessons Learnt:

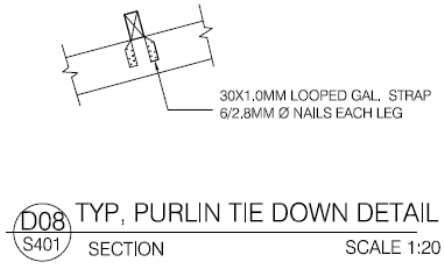
- As an alternative, build the door out of solid core timber. The issue will be obtaining doors with the correct termite treatment level of H3.2

17. **Typical truss hold-down and purlin fixing details.** The key components of the roof hold-down are the truss hold-down U-bolts and its links to the ring beam reinforcement. This detail ensures there is a sufficient tie down from foundation, to wall to ring beam and to roof.

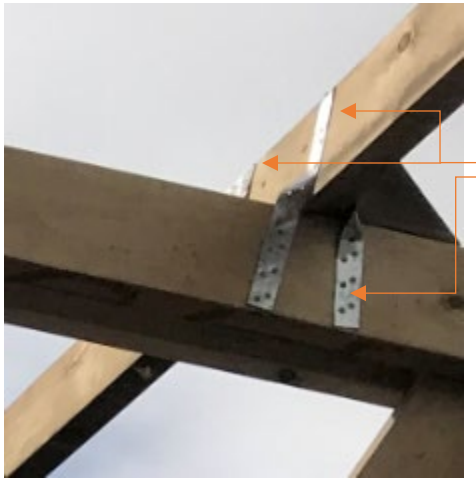


Concrete infill between top of ring beam to underside of purlin and prevents wind infiltration into the safe space.

Heavy duty Hot dip galvanized U bolt with bar tied into the ring beam reinforcement with bar extending above the truss double top chord



Cyclone strap to be a minimum of 1mm thick with pre-punched holes for a minimum of 6 nails each leg.

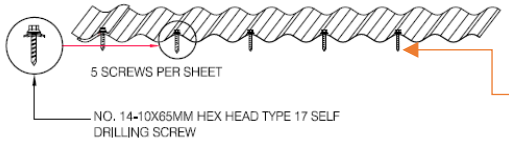


Mounting blocks, installed and cyclone strap installed both sides

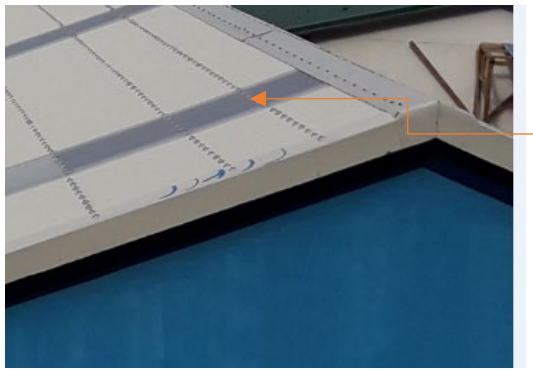
Lessons Learnt:

- During construction, additional support blocks were added to keep the purlins in the upright position whilst the purlin was fixed down.

18. **Typical roof screw fixings and ceilings.** The key components of the roof sheeting fastening is using the right treatment of roof sheeting and more importantly a suitable screw with seals and a heavy duty washer which cradles the crest of the roof sheet rib. This detail ensures there is a sufficient fastening of the roof at regular intervals.



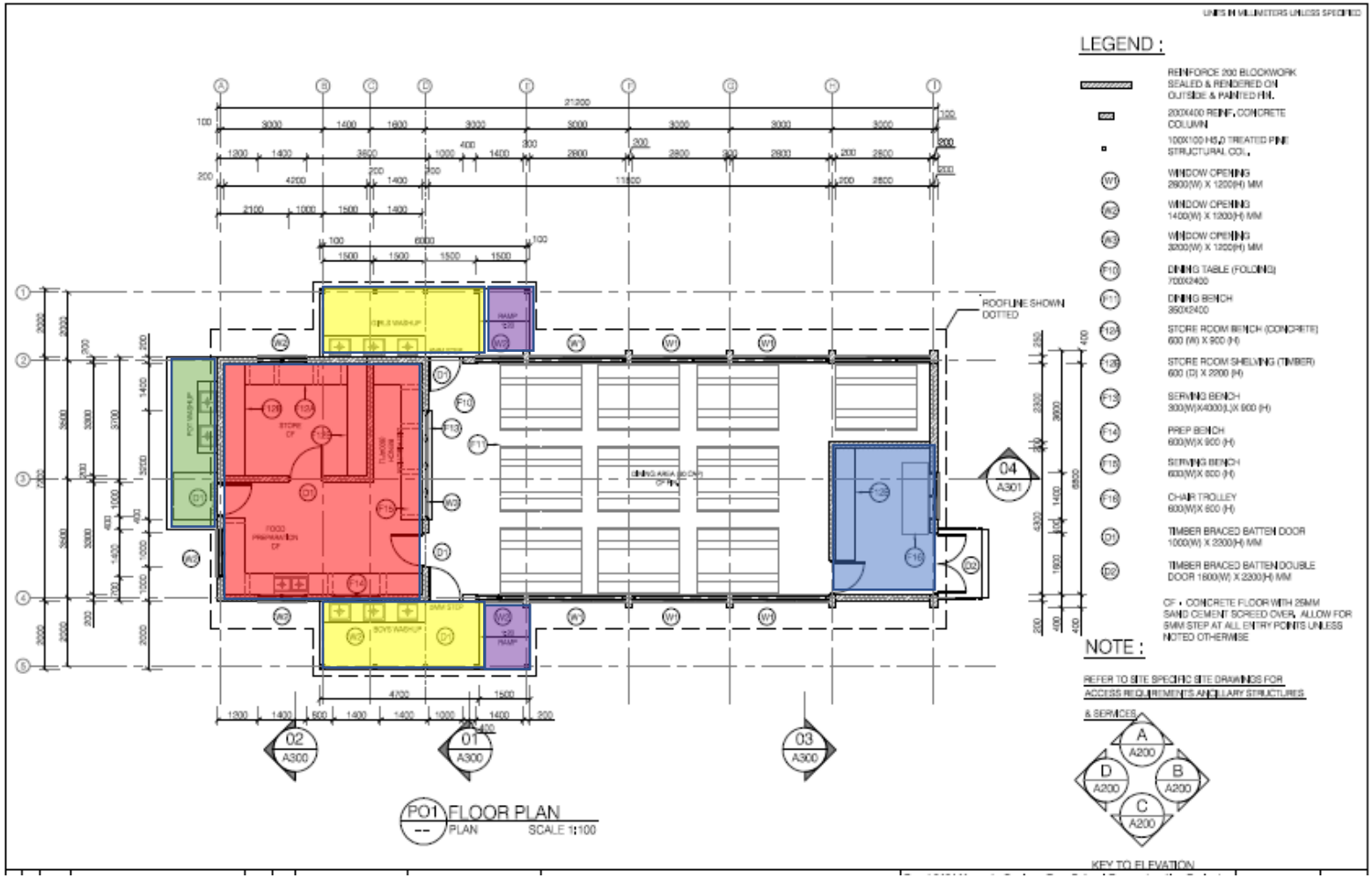
Cyclone grade high corrosion resistance self-drilling wood screws with EPDM seals top and bottom of the washer and screws fixed every second crest



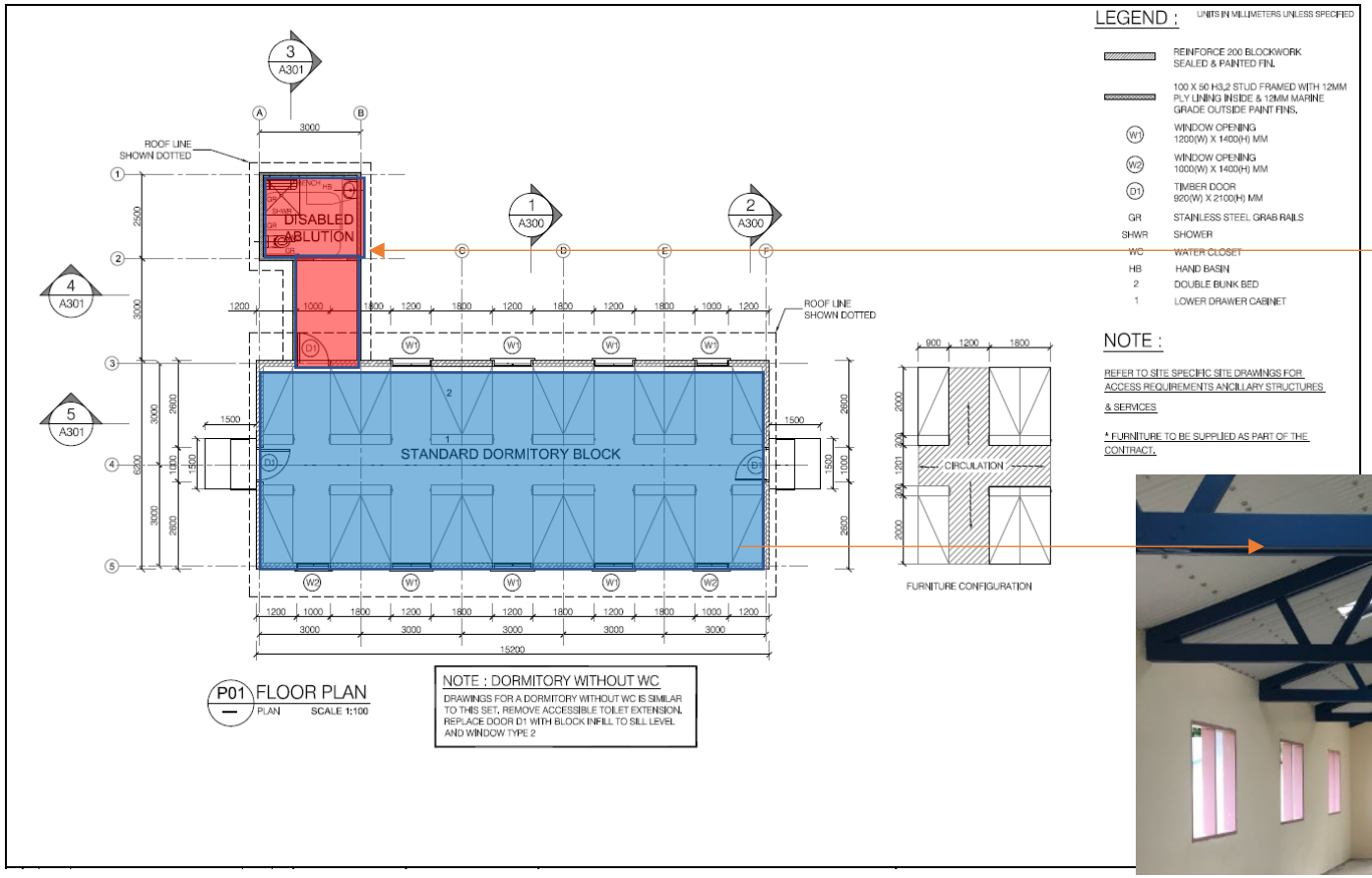
Reinforced Fiber Clear Roofing to allow natural light infiltration to buildings during the day time

Shelter Symbol on the roof and walls for visibility of safe shelters.

19. **Standard dining hall template design.** The ‘red’ highlighted room provided improved food storage, internal cooking area and bench space for food preparation. The ‘blue’ highlighted room designed as the emergency relief store and communications room. It houses the portable generator, fuel cans and water tank tie downs and is lined with shelving to store canned food, tarpaulins, and equipment. Separate pot wash (Green) and gender separated hand wash stations (Yellow) were also provided. Ramp access to the building was provided for persons with a disability.



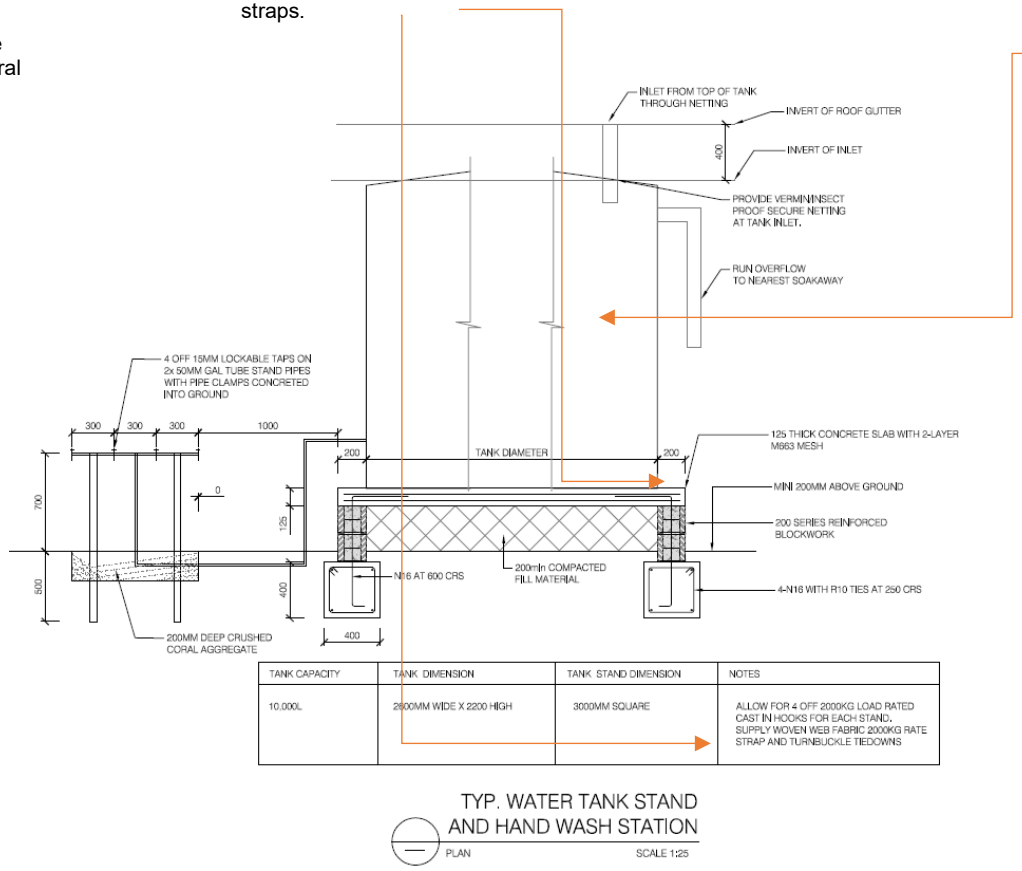
20. **Standard dormitory template design.** The ‘red’ highlighted room provided an internal accessible toilet for those with disabilities to use during usual school days and act as an amenity during a storm event. The accessible ablution provided sufficient room for a left-hand transfer from a wheelchair and space for showering. The ‘blue’ highlighted room was designed to hold up to 40 double bunk beds for school use or up to 60+ people seeking safe shelter during the cyclone event. The ceilings are corrugated roofing with a pre-finish not requiring painting and assist in reducing reflected sound internally. The ceiling cavity with a high preforming insulation provides reduced heat gain internally.



21. **Standard water tank design.** Water tanks were added as part of the water sanitation and hygiene initiative to improve access to clean potable water for general personnel hygiene, cooking, cloth washing and drinking for the school/community. Roof water is collected via a prefinished steel gutter and connected to each water tank via PVC pipes. Steel pipes carry water to the bucket pit (600mm deep with a crushed coral base) and standpipes. Each tank stand has 4 embedded hooks which can be tied down to the tank during a cyclone event should the tank be part empty.

Hand wash station, taps with simple gate valve set up. Deep crushed coral pit around the stand pipe area to reduce water ponding.

Tank securing hooks and straps.



TANK CAPACITY	TANK DIMENSION	TANK STAND DIMENSION	NOTES
10,000L	2600MM WIDE X 2200 HIGH	3000MM SQUARE	ALLOW FOR 4 OFF 2000KG LOAD RATED CAST IN HOOKS FOR EACH STAND. SUPPLY WOVEN WEB FABRIC 2000KG RATE STRAP AND TURNBUCKLE TIEDOWNS

TYP. WATER TANK STAND AND HAND WASH STATION
PLAN SCALE 1:25

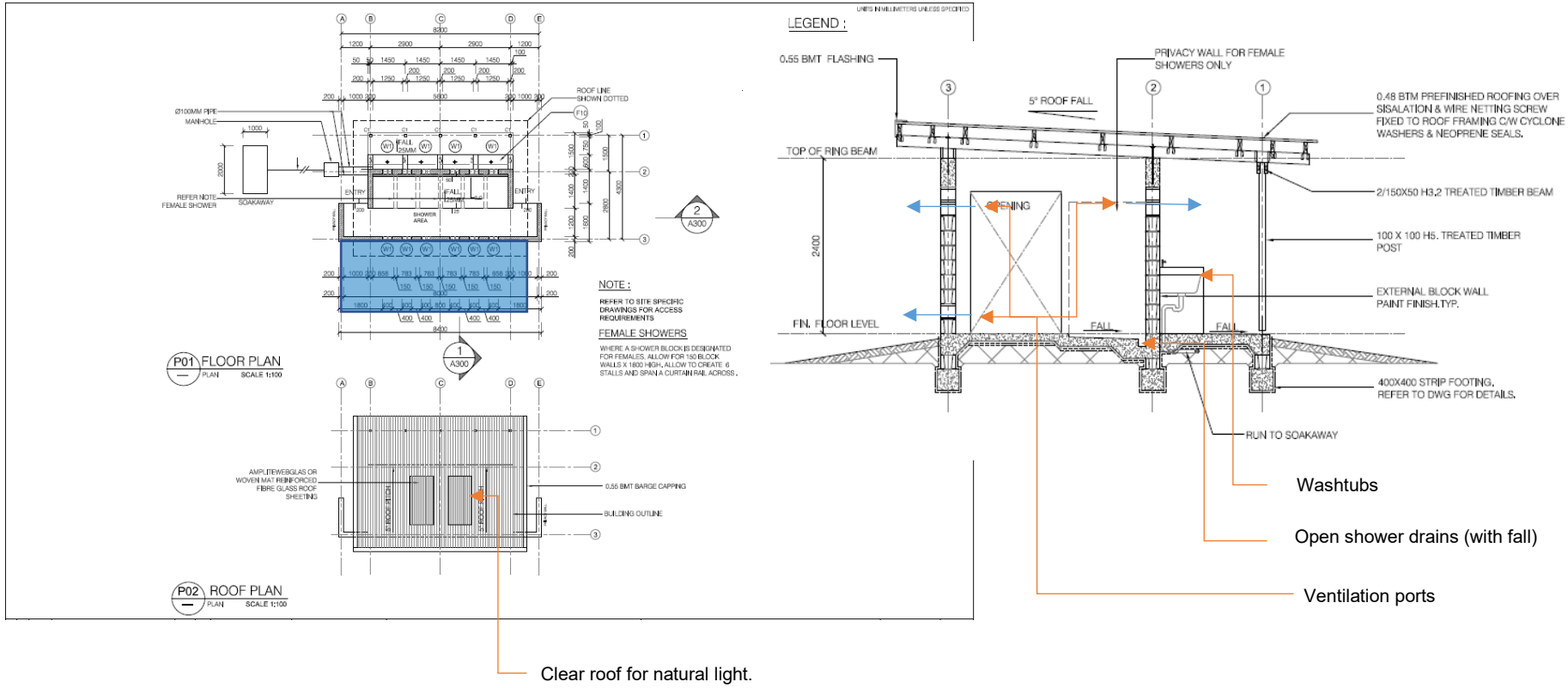
Inflow pipe from roof gutter through screen into 10,000 liter tank. Overlfow to soak well.

Each tank can provide clean drinking water for 60 occupants for 8 day plus.

Lessons Learnt:

- During construction a 600 x 600 x 600 deep concrete water bucket-pit was added between the standpipe and water tank to allow the complete contents of the tank to be utilized or have the tank drained and cleaned during maintenance.

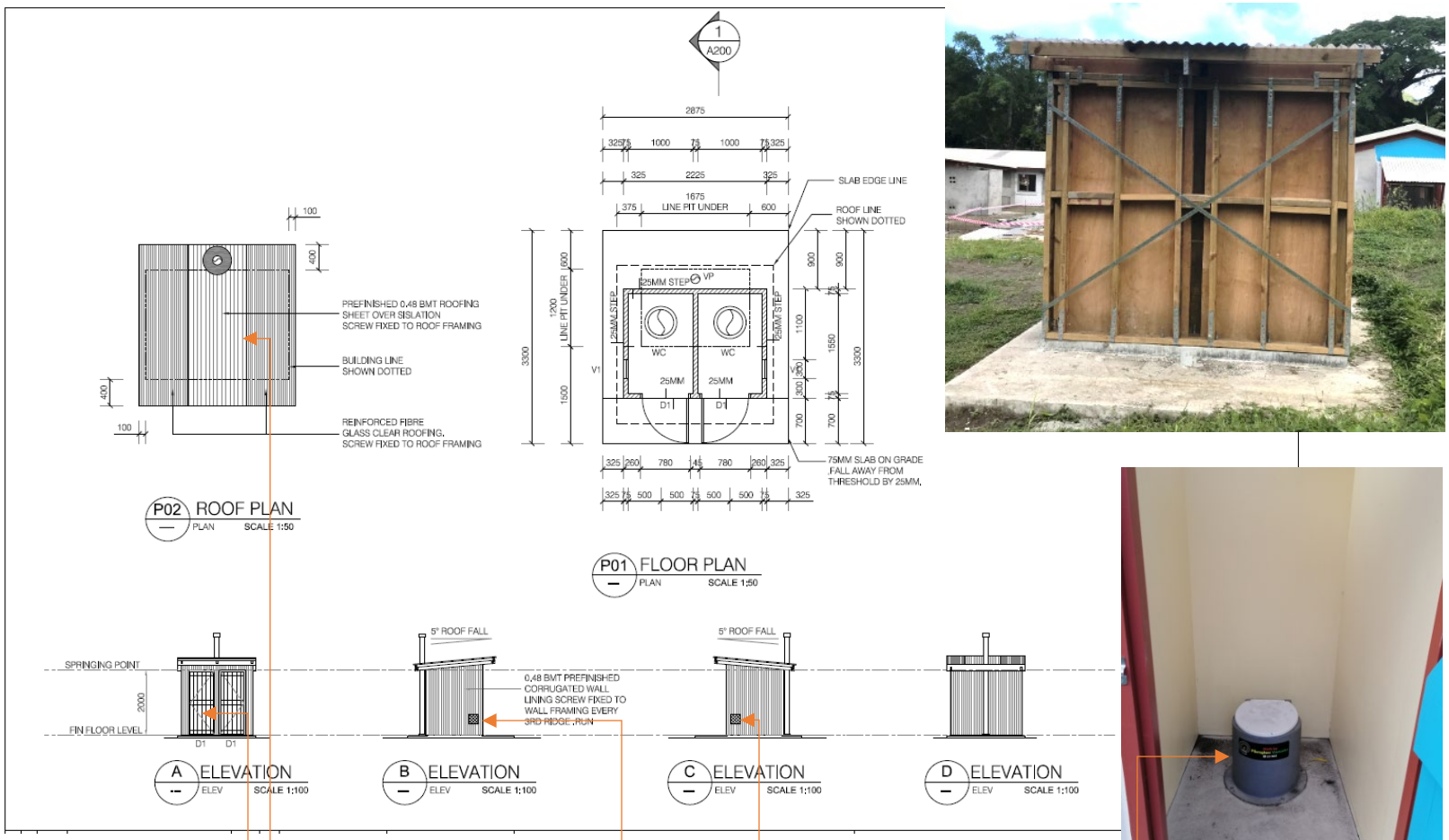
22. **Standard shower block design.** Each shower block is designed for low maintenance to ensure drains can be accessed and cleaned out. Vents are provided to help ventilation to reduce odors. Sheltered concrete washing tubs are provided for clothes washing. All water is supplied via personal buckets. Where possible and if water pressure permits, the shower blocks can be retrofitted with piped water and shower heads.



Lessons Learnt:

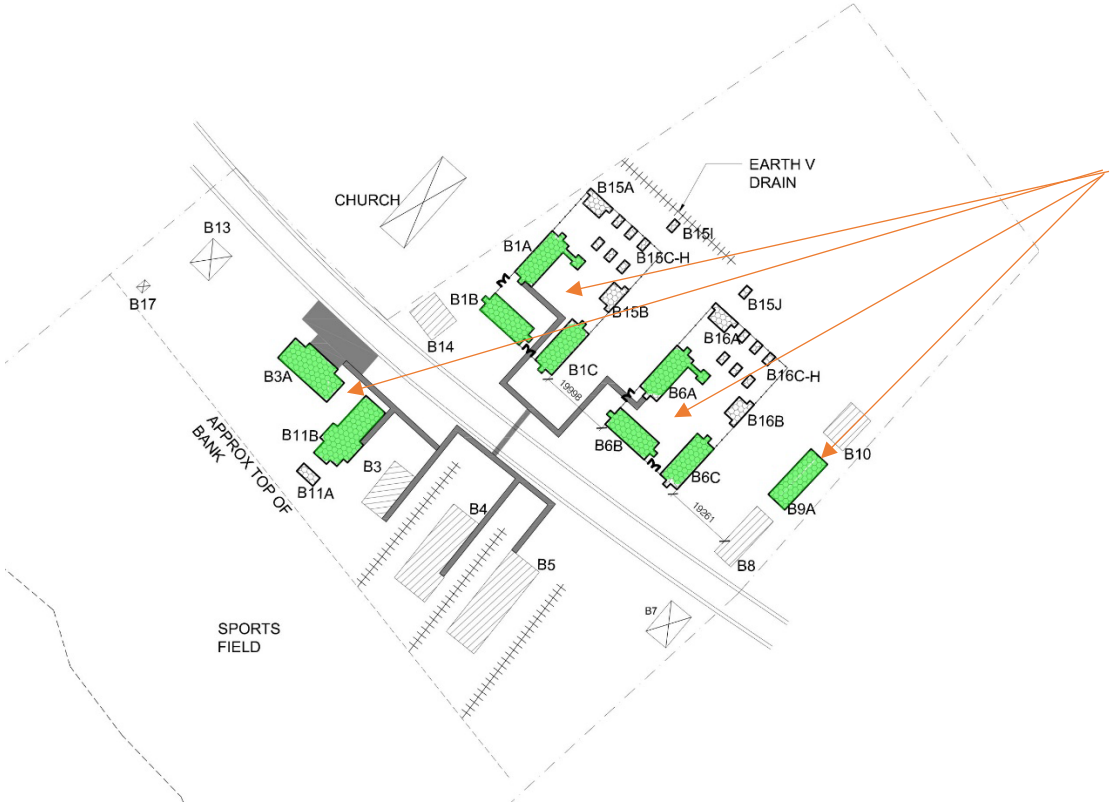
- Clothes lines are essential and a suggestion would be to extend the roof further (see marked area blue marked area) and add undercover clothes lines.

23. **Standard ventilated improved pit toilets**: Ventilated improved pit toilets are preferred over conventional flush toilets due to the low availability of water. The intended pit depths vary between 2.5 meters to 3.0 meters deep for increased capacity, the timber frames are built over concrete plinths and are bolted in place. The fixings allow the timber frame to be unbolted and moved to a new pit location with concrete pad. The timber frames are all H3.2 stress graded timber and are strapped and nailed for increased resilience and survivability during a cyclone event.



24. **Site Plans.** The following site plans compliment the information above and outline the location of each building which can be used as safe shelter. It is highly likely that the surrounding community and school will utilize each of the marked buildings for safe shelter during a disaster such as a cyclone event. Across all four sites, the capacity to shelter is approximately 1,086 people or maximum 1,100 people.

Kwataparen JSS Site Plan

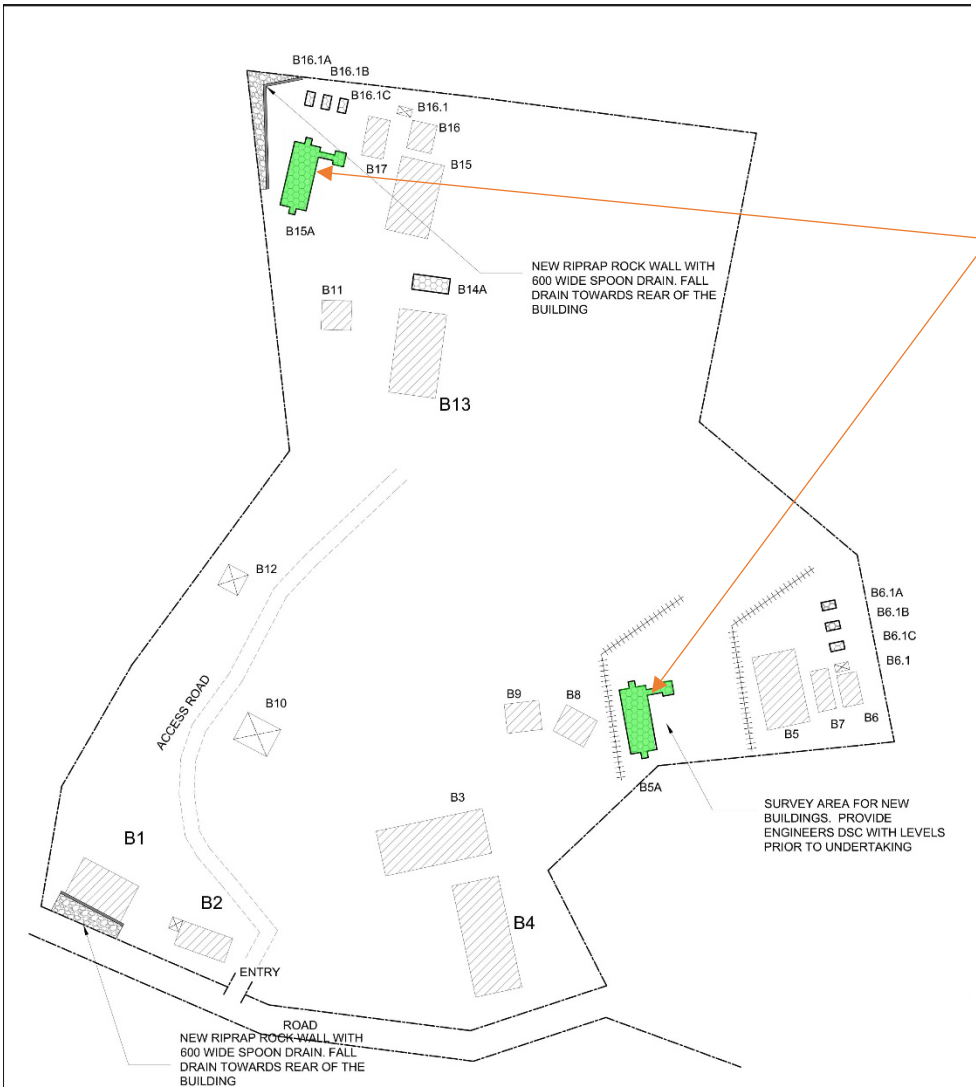


Buildings marked in 'Green' are safe shelters designed to the National Building Code for Vanuatu and NDMO evacuation center standards
Total safe area 971m^2
Approx. shelter capacity: 648 people

Ienaula JSS Site Plan: (Note no new dorms at Lowiepeng Site)

Buildings marked in 'Green' are safe shelters designed to the National Building Code for Vanuatu and NDMO evacuation center standards
Total safe area 446m^2
Approx. shelter capacity: 297 people

Imaki JSS Site Plan



Buildings marked in 'Green' are safe shelters designed to the National Building Code for Vanuatu and NDMO evacuation center standards
Total safe area 212m^2
Approx. shelter capacity: 141 people

PROJECT COST AT APPRAISAL AND ACTUAL
($ million)

Project Component and Cost	Appraisal Estimate			Actual		
	Foreign Exchange	Local Currency	Total Cost	Foreign Exchange	Local Currency	Total Cost
I. School Rehabilitation /Construction						
A. Investment Costs						
1. Civil works	2.75	0.27	3.02	3.86	0.53	4.39
2. Consulting services			1.58	1.02	0.13	1.15
a. Project management	0.98	0.10	1.08	0.87	0.12	0.98
b. Community capacity building	0.45	0.05	0.50	0.15	0.01	0.16
Subtotal (A)	**4.19**	**0.42**	**4.60**	**4.88**	**0.66**	**5.53**
B. Recurrent Costs						
1. Salaries	0.00	0.20	0.20	0.00	0.00	0.00
2. Accommodation	0.00	0.05	0.05	0.00	0.00	0.00
3. Equipment operation and maintenance	0.00	0.05	0.05	0.04	0.06	0.10
Subtotal (B)	0.00	0.30	0.30	0.04	0.06	0.10
Total Base Cost	4.19	0.72	4.90	4.91	0.72	5.63
C. Contingencies						
1. Physical	0.69	0.00	0.69	0.00	0.00	0.00
2. Price	0.12	0.00	0.12	0.00	0.00	0.00
Subtotal (C)	0.82	0.00	0.82	0.00	0.00	0.00
Total Project Cost (A+B+C)	**5.00**	**0.72**	**5.72**	**4.91**	**0.72**	**5.63**

Note: Numbers may not sum precisely because of rounding.
Source: Asian Development Bank estimates.

PROJECT COST AT COMPLETION BY FINANCIER
($ million)

Item		ADB		Government of Vanuatu		
		Amount	% of Cost Category	Amount	% of Cost Category	Total Cost
A.	**Investment Costs**					
1.	Civil works	3.86	69%	0.53	9%	4.39
2.	Consulting services	1.02	18%	0.13	2%	1.15
	a. Project management	0.87	15%	0.12	2%	0.98
	b. Community capacity building	0.15	3%	0.01	0%	0.16
	Subtotal (A)	**4.88**	**87%**	**0.66**	**12%**	**5.53**
B.	**Recurrent Costs**					
1.	Salaries	0.00	0%	0.00	0%	0.00
2.	Accommodation	0.00	0%	0.00	0%	0.00
3.	Equipment operation and maintenance	0.04	1%	0.06	1%	0.10
	Subtotal (B)	**0.04**	**1%**	**0.06**	**1%**	**0.10**
Total Base Cost		**4.91**	**87%**	**0.72**	**13%**	**5.63**
C.	**Contingencies**	**0.00**	**0%**	**0.00**	**0%**	**0.00**
	Total Project Cost (A+B+C)	**4.91**	**87%**	**0.72**	**13%**	**5.63**
	% Total Project Cost		**87%**		**13%**	

ADB = Asian Development Bank.
Note: Numbers may not sum precisely because of rounding.
Source: Asian Development Bank and the Government of Vanuatu.

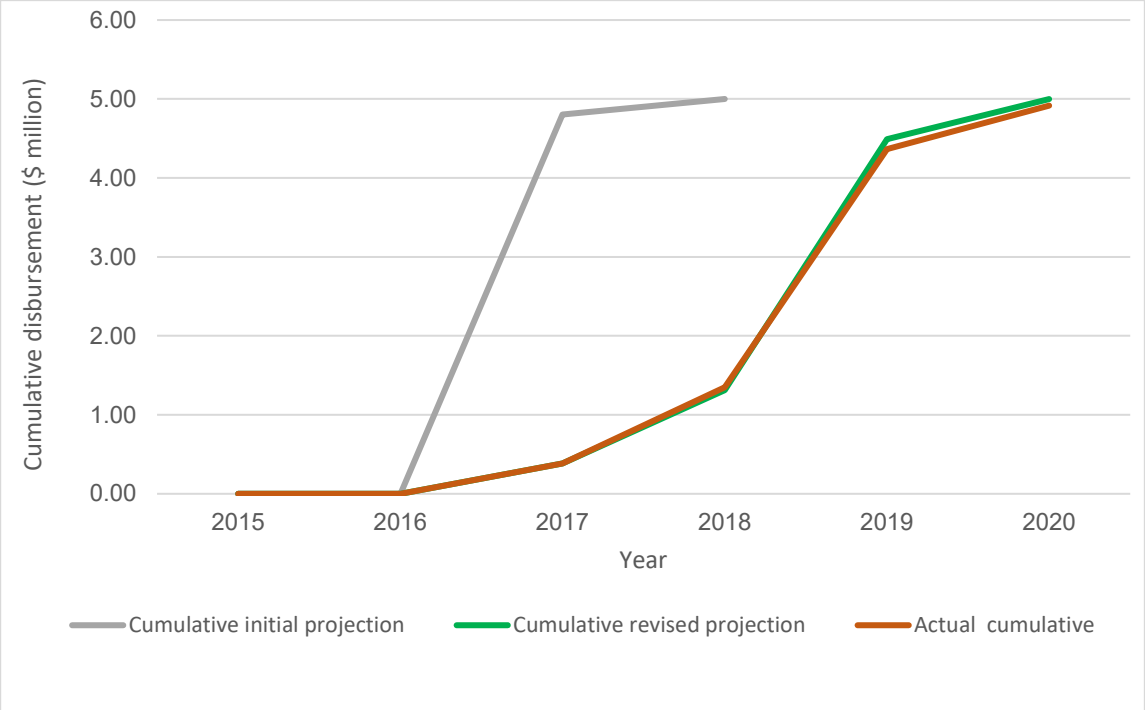
DISBURSEMENT OF ADB GRANT PROCEEDS

Table A7.1: Annual and Cumulative Disbursement of ADB Grant Proceeds
($ million)

Year	Annual Disbursement		Cumulative Disbursement	
	Amount ($ million)	% of Total	Amount ($ million)	% of Total
2015	0.000	0%	0.000	0%
2016	0.000	0%	0.000	0%
2017	0.384	8%	0.384	8%
2018	0.966	20%	1.350	27%
2019	3.014	61%	4.364	89%
2020	0.552	11%	4.916	100%
Total	**4.915**			

Source: Asian Development Bank.

Figure A7.1: Projection and Cumulative Disbursement of ADB Grant Proceeds
($ million)



Source: Asian Development Bank.

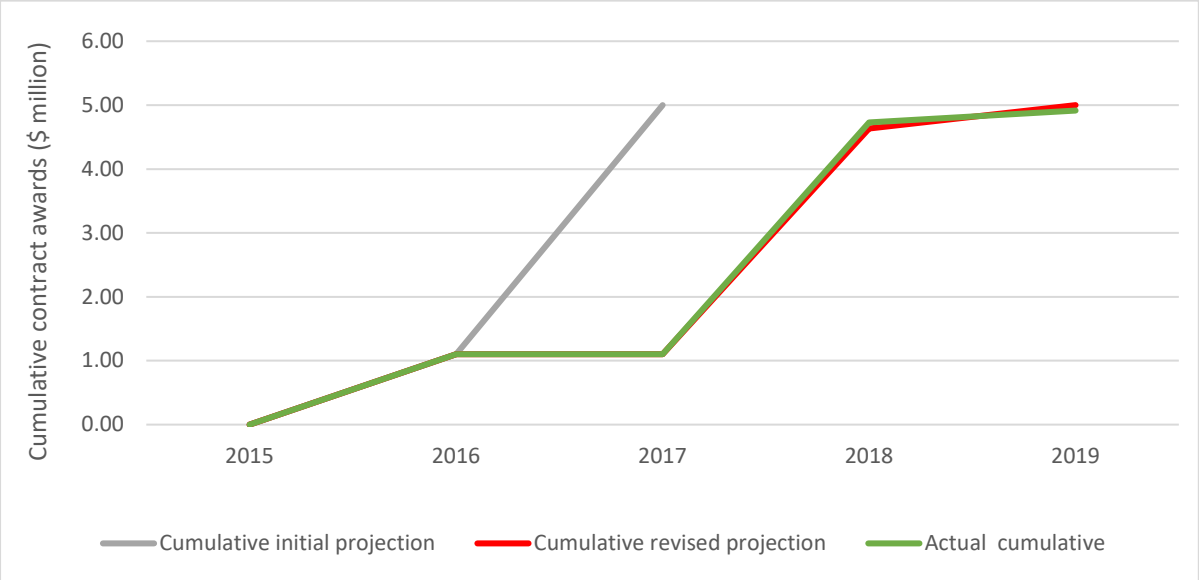
CONTRACT AWARDS OF ADB GRANT PROCEEDS

Table A8.1: Annual and Cumulative Contract Awards of ADB Loan Proceeds
($ million)

Year	Annual Contract Awards		Cumulative Contract Awards	
	Amount	% of Total	Amount	% of Total
2015	0.000	0%	0.000	0%
2016	1.100	22%	1.100	22%
2017	0.000	0%	1.100	22%
2018	3.630	74%	4.730	96%
2019	0.185	4%	4.915	100%
2020	0.000	0%	4.915	100%
Total	**4.915**			

Source: Asian Development Bank.

Figure A8.1: Projection and Cumulative Contract Awards of ADB Grant Proceeds
($ million)



Source: Asian Development Bank.

CHRONOLOGY OF MAIN EVENTS

Date	Event
2015	
12–14 March	Cyclone Pam struck Vanuatu as a Category 5 storm.
16 March	The Government of Vanuatu made a formal appeal for international emergency aid.
20 March	ADB approved $1 million grant from the Asia Pacific Disaster Response Fund for Vanuatu's immediate disaster recovery needs.
March	The government prepared a post-disaster needs assessment report with development partners' support, including technical input from ADB.
25 August	ADB received a government request for emergency assistance to support Vanuatu's post-cyclone recovery and rehabilitation efforts in the education sector.
16 November	ADB Board of Directors approved Cyclone Pam School Reconstruction Project ($5.00 million from the Japan Fund for Poverty Reduction grant).
20 November	Grant agreement signed.
2016	
3 March	Project grant became effective.
5 April	Single source selection cancelled.
22 April	Publishing of consultant services recruitment notice for DSC assignment.
10 May	Issuance of request for proposals to shortlisted consulting firms (DSC assignment)
27 October	DSC contract signed between Kramer Ausenco (Vanuatu) Ltd. And Ministry of Education and Training.
21 November	Inception site visits (5 schools—Tanna)
2017	
5 January	Date of the first disbursement.
16 January	Design and supervision consultants commenced assignment.
23 January	Mission visit and DSC Inception visit review.
29 January-6 February	Grant inception mission.
29 September	Finalization of design and costing.
2 November	Bidding Documents Issued to the market.
2018	
5 May	Contract with nongovernment organization signed (CARE International subcontracted by DSC).
11 May	Council of Ministers Approval of Civil Works Contractor for all lots.
5 June	Notice of Award Issued to Civil Works Contractor – China Civil Engineering Construction Corporation.
6 July	All Four Lots for school reconstruction works contract signed: MOET-ADB-2017-Lot_01 – G1968 Kwataparen JSS MOET-ADB-2017-Lot_02 – G1969 Ienaula JSS MOET-ADB-2017-Lot_03 – G1970 Lowiepeng JSS MOET-ADB-2017-Lot_04 – G1970 Imaki JSS
27–31 August	Midterm review mission fielded
2019	
30 November	Civil works completed and intended completion reached.
19 December	NGO completed assignment.
2020	
20 February	Official opening of Imaki Junior Secondary School.
20 February	Official opening of White Sands Bilingual College School (originally Ienaula and Lowiepeng JSSs).
21 February	Kwataparen JSS official opening.
30 June	Grant closed.
24 August	Project financially closed.

ADB = Asian Development Bank, DSC = design and supervision consultant, JSS = junior secondary school, MOET = Ministry of Education and Training, NGO = nongovernment organization.
Sources: Asian Development Bank; Ministry of Education and Training.

PROJECT IMPLEMENTATION SCHEDULE—PLANNED VERSUS ACTUAL

Activity		2015	2016				2017				2018				2019				2020	
		Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
A. Project Readiness																				
1. Establish project management unit	P																			
	A																			
2. Consultant recruitment	P																			
	A																			
3. JFPR approval and grant agreement signing	P																			
	A																			
4. Government legal opinion provided and grant effectiveness	P																			
	A																			
5. Contract awards and consultant fielding	P																			
	A																			
B. Overall project implementation																				
1. Schools are built and upgraded in Tafea Province																				
1.1. Recruit design and supervision consultants	**P**																			
	A																			
1.2. Finalize engineering designs, costing, and bid documents	**P**																			
	A																			
1.3. Procurement of civil works contract	**P**																			
	A																			
1.4. Conduct community and school consultations	**P**																			
	A																			
1.5. Rehabilitate selected schools in Tafea Province/Tanna	**P**																			
	A																			
1.6. Carry out quality assurance activities	**P**																			
	A																			
1.7. Make schools operational	**P**																			
	A																			

Activity		2015	2016				2017				2018				2019				2020	
		Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
1.8. Monitor implementation of EMP	P																			
	A																			
1.9. Report on a gender action plan	P																			
	A																			
1.10. Prepare quarterly progress monitoring reports	P																			
	A																			
1.11. Arrange annual audit of project accounts	P																			
	A																			
2. Community and MOET management capacity in disaster preparedness strengthened																				
2.1. Conduct community awareness training and MOET capacity building activities	P																			
	A																			
2.2. Revise/prepare school disaster risk management plan	P																			
	A																			
2.3. Conduct school and community training	P																			
	A																			
2.4. Conduct/arrange gender awareness training	P																			
	A																			
2.5. Prepare school maintenance plan and conduct training	P																			
	A																			

A = actual, EMP = environmental management plan, MOET = Ministry of Education and Training, P = planned, Q = quarter.

Sources: Asian Development Bank; Government of Vanuatu Ministry of Education and Training.

ASSESSMENT OF GENDER INCLUSIVE RESULTS

A. Introduction

1. The Cyclone Pam Schools Reconstruction Project (CPSRP) was implemented with a $5.0 million grant from Japan Fund for Poverty Reduction (JFPR) to address the twin objectives of (i) rebuilding four junior secondary schools (JSSs) of Tanna Island, Tafea Province severely damaged by the tropical cyclone Pam in March 2015, thereby ensuring resilience to future disaster and climate change risks; and (ii) preparing schools and communities by building their capacities through climate change and disaster risk management. The Post Disaster Needs Assessment reported that Tafea Province was one of the most affected by the cyclone, with population concentration on Tanna Island. The overall outcome of the project was to ensure critical education services resumed in Tafea with disaster-resilient infrastructure. The project was categorized as *effective gender mainstreaming* and had a gender action plan (GAP) (Table A11.1).

2. It is noted that while the project completion report gender rating method is not required for JFPR grants, it is prudent to make an assessment along with the gender rating method for ADB's project completion reports. The following criteria are used for the gender success rating at completion of the CPSRP: (i) GAP actions: measured as at least 80% of activities are implemented and completed; (ii) GAP quantitative targets: either at least 80% of targets are fully (100%) met, or at least 80% of the numerical value of each target is achieved; and (iii) sex-disaggregated data on beneficiaries provided.

B. Gender Issues

3. While the destruction of critical infrastructure after Tropical Cyclone Pam affected everyone, women and girls were hardest hit while recovering from the disaster, due to women's social status in Vanuatu. The project identified several underlying reasons that disadvantage women's recovery from disaster and lower girls' participation rates in education:

(i) Traditional gender roles in society require that women primarily perform reproductive, care-giving, and non-paid roles, such as caring for children and the elderly, collecting water for the household, harvesting and selling crops at the markets, etc. Girls tend to drop out of school to meet these domestic labor demands.
(ii) Demands for family labor (e.g., house clearing, crop planting, and water collection) after a disaster are higher, and there is a sex preference in sending children back to school. Boys are encouraged to attend school while girls participate in domestic labor.[1]
(iii) The domestic burden disproportionately affects women and girls and exposes them to violence and sexually transmitted infections.
(iv) In the absence of appropriate ablution/toilet facilities, there are safety concerns, particularly for girls who tend to remain absent from schools, particularly during menstruation.
(v) The specific needs of women and girls are not met when women and girls are not involved in the decision-making and design of disaster response plans.

4. The project GAP activities aimed to remove gender barriers for women and girls by:

(i) providing rebuilt schools with adequate and appropriate facilities that address specific security, safety, access, and hygiene needs for girls to increase girls' participation and their retention in JSS;

[1] ADB. 2020. Country Performance Assessment. Manila; Government of Vanuatu. 2015. National Gender Equality Policy. Port Vila.

(ii) constructing structurally-sound and gender-appropriate emergency shelters and school buildings based on “build back better” concepts to decrease potential damage to the schools and increase resilience from future disasters and climate change, thus allowing children to return to school earlier; and
(iii) enhancing community and institutional capacity in building-back-better, disaster response and the development of disaster management plans to increase resilience in post-disaster situations;
(iv) building community capacity in sexual reproductive health, menstrual hygiene management, and water, sanitation and hygiene (WASH) to decreased adverse health effects that could prevent girls from attending school and women participating in their communities; and
(v) providing women and girls with an active voice and decision-making power so that all developed workshops, infrastructure, and plans addressed their needs specifically.

5. Increasing girls’ resilience and participation in education and training was identified as a key factor to be addressed by the GAP activities, as education of women promotes equal and thriving communities by improving their quality of life, promoting health, improving access to paid employment, and facilitating social and political participation. Traditionally, women and girls have had limited access to education, particularly in rural areas such as provinces.[2] Women’s participation in the formal labor market is significantly lower than men’s (40% versus 60%), with a lack of basic numeracy, literacy, and financial skills among the restrictions women face obtaining formal employment and establishing businesses (footnote 2). Compulsory education has been gradually introduced for girls and boys aged 6–14 years, but boys still tend to receive more education than girls. Despite similar attendance rates in early primary grades, proportionately fewer girls move to secondary grades. While in recent years, the enrollment of girls in secondary school has increased, the dropout rates for girls in grades 10 and 13 are particularly higher than those for boys, indicating disadvantages for girls in advancing to higher levels of schooling.[3] The GAP aimed to decrease barriers faced by girls completing their secondary education through the activities described above.

6. Another key aspect of the GAP activities was to increase the resilience of women and girls to disasters and climate change risks. Although disasters and climate change affect both men and women, the impacts and domestic burdens of caring for family and community are often borne heavily by women.[4] More women than men (49% versus 41%) are involved in the informal subsistence economy, making women more susceptible to poverty from climate change impact and other disasters (footnote 2). Increasing the community’s resilience to climate change and disasters directly improves women's and girls' quality of life by reducing their domestic burden and decreasing recovery time. To enable this, the GAP activities ensured that women and girls had equal opportunity to actively participate in the decision-making and design process of the rebuilt schools and emergency shelters to address their gender-specific needs.

7. Finally, capacity building of women and girls in the community and provincial institutions was identified as a key factor addressed by the GAP activities. Women in Vanuatu are traditionally underrepresented in decision-making (footnote 3). Capacity building of women and girls empowers women with knowledge to affect change in their spheres of influence. The training of Ministry of Education and Training (MOET) provincial staff, including active participation from women in build-back-better concepts allows the model to be replicated in other locations with gender-specific issues addressed, increasing resilience in Tafea Province.

[2] ADB. 2020. Country Performance Assessment. Manila; Government of Vanuatu. 2015. National Gender Equality Policy. Port Vila.
[3] ADB. 2020. *Country Performance Assessment.* Manila.
[4] Monash University. 2019. *Gender Responsive Alternatives to Climate Change: A Country Report on Vanuatu*. Melbourne.

Training and workshops on sexual reproductive health, WASH, and menstrual hygiene management provide women and girls with knowledge of how to decrease health and disease burdens in their communities. Overall, the project's GAP activities aimed to address some of the gender issues identified in Vanuatu.

C. Project Gender Features

8. To provide maximum positive gender impact, the CPSRP included a GAP focused on the following key factors:

(i) increasing girls' participation and retention in secondary education;
(ii) increasing the resilience of women and girls in the community to future disasters and climate change risks; and
(iii) capacity building provincial institutions and surrounding school communities.

9. Gender impact was achieved through the following key activities:

(i) providing girls and children with disabilities with better access to resources such as safe, accessible, and gender-inclusive school WASH facilities and emergency shelters;
(ii) ensuring women participate and have an active voice in decision-making, including the design of the school and emergency shelter infrastructure and disaster response plans, to address the specific needs of women and girls;
(iii) increasing resilience of women and girls to climate change risks and disasters through disaster preparedness training and gender-appropriate infrastructure and disaster response plans;
(iv) building the capacity of women and girls in sexual reproductive health, WASH, and menstrual hygiene management through gender-sensitive workshops and training delivered by women;
(v) ensuring implementation of gender policy of MOET by employing a gender and safeguard specialist;
(vi) collection of sex-disaggregated data for the evaluation of performance indicators and regular monitoring and reporting.

10. The implementation of GAP activities was the responsibility of the design supervision consultant, who engaged a national environmental safeguard specialist based in Port Vila and an international environmental social safeguard specialist with gender expertise based in New Zealand. Both specialists coordinated closely with the MOET gender focal to ensure all activities aligned with MOET gender policy.

Table A11.1: Gender Action Plan Achievements

Ref	Activities	Achievements	Implementation Status
Output 1: Schools in Tafea Province are rebuilt and upgraded			
O101	Ensure the design of ablution/toilet facilities caters to disabled children in terms of wheelchair access and support facilities.	All newly constructed dormitories have been designed with an accessible water closet linked to the dormitory building for children with disabilities. The accessible water closet includes a toilet, grab rails, bench seat for shower, and basin with a shelf. No standalone accessible water closets were constructed, as students would need to collect their toiletry kit from their dormitory or from the administration before accessing the water closets within the dormitories. MOET agreed to implement an administrative procedure for students with disabilities to be guided to the accessible water	Activity completed

Ref	Activities	Achievements	Implementation Status
		closet with assistance by a teacher or caregiver, as required. Placement and location of all newly constructed buildings, including accessible water closets, was discussed with the community. Following community feedback, the constructed site layouts allowed female students to access the facility within a secure compound for female students close to the school and via pathways for assisted wheelchair access. Wheelchair friendly pathways have been constructed from general classrooms, dining halls, and administration spaces to access the accessible compartments (water closets).	
O102	Ensure that the design of ablution/toilet facilities caters for the safety of girls and disabled children: e.g., adequate lighting and proper footpath access.	Concept Design Workshops held by MOET and the DSC with the communities raised a key concern for female student safety during the dormitories' after hours operation. A key aspect of the construction was to provide privacy and security and ensure ablutions, showers, and dormitories were within a short walk of each other. Separate facilities are provided for girls and boys. Dormitories for girls and boys are screened and provide security (including fences) around the dormitory facility. Footpaths are provided from classrooms, dining halls, and administration spaces to accessible toilets and showers. Solar power/battery pack lighting with USB charging was provided in classrooms, new or refurbished dormitories, and new dining halls. No lighting was provided in toilet or shower units as the facilities were used only in daylight hours through school administration to limit student movement after hours. Clear roofing panels were added in the ventilated improved pit latrines, showers, and dormitories to provide sufficient natural daylight.	Activity completed
O103	Ensure women's involvement in community consultations regarding infrastructure upgrades (at least 40% of women in consultation meetings).	Three consultation meetings were held in May 2017 during design development with the communities on proposed infrastructure works (i) Kwataparen, (ii) Lowiepeng/Ineula (one meeting for both schools given proximity), and (iii) Imaki. The attendance at all three meetings included 45% women and girls (244 out of total of 545 participants in consultation). Kwataparen had 48% attendance by women and girls (92 out of 193 attendees), Lowiepeng and Ineula joint session had 47% women and girls (138 out of 294 attendees), but Imaki only had 24% women and girls (14 out of 58 attendees). Women traditionally have critical roles to play within the family unit, such as caregiving and income-generation (selling crops at the market) making it challenging to schedule workshops and achieve high participation rates these workshops. MOET, the DSC, and the NGO focused on ensuring more	Quantitative target achieved

<table>
<tr><th>Ref</th><th>Activities</th><th>Achievements</th><th>Implementation Status</th></tr>
<tr><td></td><td></td><td>engagement of women and girls at Imaki for subsequent workshops.</td><td></td></tr>
<tr><td>O104</td><td>Education awareness on HIV/AIDS and prevention conducted for construction workers and the community during construction activities.</td><td>An NGO, CARE International, was commissioned to run several education awareness workshops. The NGO worked closely with the Vanuatu Family Health Clinic in Tanna to ensure that messaging regarding HIV/AIDS, sexually transmitted infections, and sexual health was consistent with government initiatives and culturally appropriate.

Four sexual reproductive health workshops were conducted at each school, including education and awareness for HIV/AIDS, sexually transmitted infections, sexual health, and risk awareness. They were conducted pre-construction for construction workers and community members, with 52% women’s representation. The construction staff was all men. The community workshops were held at each school.[a]

<table>
<tr><th>Participants</th><th>Male</th><th>Female</th><th>Total</th></tr>
<tr><td>Students</td><td>87</td><td>105</td><td>192</td></tr>
<tr><td>School staff</td><td>9</td><td>8</td><td>17</td></tr>
<tr><td>Community members</td><td>19</td><td>18</td><td>37</td></tr>
<tr><td>Construction staff</td><td>5</td><td>0</td><td>5</td></tr>
<tr><td>Total</td><td>120</td><td>131</td><td>251</td></tr>
</table>
</td><td>Activity completed</td></tr>
<tr><td>O105</td><td>Disaster preparedness materials provided to schools to include female hygiene kits.</td><td>Disaster preparedness materials were given to each school during the six-disaster preparedness and cyclone simulation workshops held from August to October 2019.[a] These disaster preparedness kits included flipcharts on risks, hazard posters, vests, and a loud hailer for natural hazard events.

Two hundred menstrual hygiene management kits were also distributed to women and girls at the three WASH and hygiene awareness workshops conducted at each school.[a] These workshops were held in October and November 2019 with 51% women’s representation.

The NGO worked with Vanuatu Family Health Clinic to ensure that the menstrual hygiene management training and kits were culturally appropriate and that training was delivered only to women and girls in a private space by only female presenters.

<table>
<tr><th>Participants</th><th>Male</th><th>Female</th><th>Total</th></tr>
<tr><td>Students</td><td>120</td><td>130</td><td>250</td></tr>
<tr><td>School staff</td><td>11</td><td>7</td><td>18</td></tr>
<tr><td>Community members</td><td>6</td><td>3</td><td>9</td></tr>
<tr><td>Total</td><td>137</td><td>140</td><td>277</td></tr>
</table>
</td><td>Activity completed</td></tr>
<tr><td>O106</td><td>Ensure employment of team member with gender expertise in the DSC team who will manage</td><td>DSC contract management team had a National Environmental Safeguard Specialist based in Port Vila and an International Environmental Social Safeguard Specialist with gender expertise based in New Zealand.</td><td>Process-oriented activity Completed</td></tr>
</table>

Ref	Activities	Achievements	Implementation Status
	implementation of gender action plan.	The DSC team ensured the GAP was implemented throughout the project by advising MOET and the NGO of key data to be collected and key targets within the GAP to be achieved and monitored throughout the project.	
O107	Establish sex-disaggregated baseline data for the GAP and design and monitoring framework performance indicators, if needed, and other gender-related indicators for regular monitoring and reporting during the project implementation period.	Sex-disaggregated baseline data for the GAP and design and monitoring framework performance indicators were collected during the implementation period.	Process-oriented activity completed
O108	Monitor GAP implementation progress.	There was ongoing monitoring of GAP implementation by the DSC team; however, periodic reporting on progress was irregular.	Process-oriented activity completed
O109	Coordinate with MOET Gender Focal Point to ensure project activities align with MOET gender policy.	MOET gender focal received all technical documents and designs for review and comment before bidding. Comments from the MOET gender focal were adopted in the final designs, including adjustments to building and site placements to improve gender equity and safety for female students and students with disabilities. The MOET Gender Equity in Education Policy 2005–2015 goal is to provide equal opportunities for everyone in education that are not determined by their gender. The project achieved this by providing female students with improved ablution facilities to allow female students to wash and dry reusable menstrual hygiene kits within a secure and private space. This enabled female students to comfortably attend school and remain in school during their menstruation periods, which was identified as a key factor in lower female participation in secondary education. The project also contributed to the gender policy objective of providing a safe learning environment for all students by improving the condition of existing classrooms and constructing new dormitories and support facilities (ablutions, water supply, dining halls, and cooking areas) with appropriate security and privacy fencing around female student dormitories.	Activity completed
Output 2: The capacity of communities and MOET management for disaster risk reduction and disaster preparedness is strengthened.			
O201	Disaster preparedness training materials and curriculums developed for delivery to schools and communities are gender-sensitive and include specific attention to women's	Six gender-sensitive preparedness workshops were conducted by the DSC from August to October 2019 at each school. Workshops included training material on women's role and importance, having safe spaces for women during a disaster, and how communities and disaster committees can ensure women and girls are thought of during emergencies.	Activity completed

<table>
<tr><th>Ref</th><th>Activities</th><th>Achievements</th><th>Implementation Status</th></tr>
<tr><td></td><td>needs in a disaster and post-disaster settings.</td><td></td><td></td></tr>
<tr><td>O202</td><td>Both men and women are involved in the delivery of training to schools and communities as trainers (at least one man and one woman deliver training together).</td><td>Fifteen workshops were delivered on sexual reproductive health topics, disaster preparedness, disaster risk reduction, cyclone simulation, and hygiene awareness. All workshops had at least one man and one-woman delivering training together.

<table><tr><th rowspan="2">Workshop</th><th rowspan="2">Number of workshops</th><th colspan="2">Trainers</th></tr><tr><th>Male</th><th>Female</th></tr><tr><td>SRH</td><td>4</td><td>3</td><td>1</td></tr><tr><td>Disaster preparedness (community)</td><td>3</td><td>3[a]</td><td>3[a]</td></tr><tr><td>Cyclone simulation</td><td>3</td><td>3[a]</td><td>3[a]</td></tr><tr><td>Disaster risk reduction (provincial MOET staff)</td><td>2</td><td>1</td><td>2</td></tr><tr><td>Hygiene awareness</td><td>3</td><td>3</td><td>4</td></tr></table>Note: Not all trainers attended every workshop (i) Kwataparen—1 female, 2 male trainers; (ii) Ineaula and Lowiepeng—3 female, 3 male; and (iii) Imaki—2 female, 1 male.</td><td>Quantitative target achieved</td></tr>
<tr><td>O203</td><td>Women and men participate in community disaster preparedness training (at least 40% female participation).</td><td>Two community disaster preparedness workshops were delivered at each school, including cyclone simulation exercises, totaling six workshops. Female participation was 51% in these workshops.

<table><tr><th rowspan="2">Workshop</th><th rowspan="2">Number of workshops</th><th colspan="2">Participants</th></tr><tr><th>Male</th><th>Female</th></tr><tr><td>Disaster preparedness (community)</td><td>3</td><td>22</td><td>22</td></tr><tr><td>Cyclone simulation</td><td>3</td><td>145</td><td>150</td></tr></table></td><td>Quantitative target achieved</td></tr>
<tr><td>O204</td><td>Both men and women are involved in the development of the disaster management plan (at least 40% of women).</td><td>Both men and women from the surrounding community and school staff were involved in the SDMC that developed the disaster management plan for each school, and 30% of the SDMC members were women. A lower female participation rate than originally envisaged related to women's multiple but critical roles within the family unit, such as caregiving and income-generation (selling crops at markets). Due to this constraint, it was challenging to schedule workshops and achieve women's higher participation rates, particularly in SDMC.
While the percentage target for women participants was not reached, the SDMC set up for this project was very successful. Disaster management plans were prepared for each school where none had existed before and used a participatory approach with the SDMC. The disaster plan consists of a list of SDMC members (with at least one woman representative), their roles and responsibilities,</td><td>Quantitative target not achieved</td></tr>
</table>

<table>
<tr><th>Ref</th><th>Activities</th><th>Achievements</th><th>Implementation Status</th></tr>
<tr><td></td><td></td><td>school risk assessment and hazard map, emergency contact list, and emergency response procedures.

<table>
<tr><th rowspan="2">SDMC</th><th colspan="4">Participants</th></tr>
<tr><th>Male #</th><th>Male %</th><th>Female #</th><th>Female %</th></tr>
<tr><td>Kwataparen</td><td>8</td><td>80%</td><td>2</td><td>20%</td></tr>
<tr><td>Ienaula and Lowiepeng[a]</td><td>6</td><td>67%</td><td>3</td><td>33%</td></tr>
<tr><td>Imaki</td><td>5</td><td>63%</td><td>3</td><td>38%</td></tr>
<tr><td>Total</td><td>19</td><td>70%</td><td>8</td><td>30%</td></tr>
</table></td><td></td></tr>
<tr><td>O205</td><td>Women’s specific needs addressed in the disaster management plan.</td><td>In the community workshops, women identified three specific needs for disaster management: (i) safe shelter for all, (ii) access to food and drinking water, and (iii) the ability to pass on information to others during a disaster.
Safe shelters were provided for the whole community and clearly identified using a symbol developed in consultation with NDMO which is now being used across other donor-funded shelter projects. The shelters’ structural integrity was certified, and all construction was as per NDMO guidelines, including installation of cyclone shutters and reinforced roof rafters.

Safe drinking water was provided through water tanks and nearby standpipes connected to the shelter buildings, allowing easy water collection. Emergency dry food was also provided to each school and placed in designated storage areas within the shelters.</td><td>Activity completed</td></tr>
<tr><td>O206</td><td>Women comprise at least 3 of the 20 MOET staff who receive training in disaster risk reduction technical approaches.</td><td>Forty MOET staff (25 males, 15 females) participated in eight provincial workshops to acquire skills in technical approaches to disaster risk reduction. Two workshops were held at each of the schools[a] and attended by office administration, teaching, and maintenance staff. An additional two workshops were held for MOET provincial staff in Tanna. On the advice of the stakeholders, the workshops focused on the provincial MOET staff rather than the inclusion of several other agencies.</td><td>Quantitative target achieved</td></tr>
<tr><td></td><td>OVERALL RATING FOR GAP</td><td>(i) 7 activities successfully implemented (100%)
(ii) 4 quantitative targets achieved; 1 quantitative target not achieved (80%)
(iii) 3 process activities achieved (not rated)
(iv) Sex-disaggregated data on beneficiaries provided to support the level of achievement</td><td>Successful</td></tr>
</table>

DSC = design and supervision consultant; GAP = gender action plan; MOET = Ministry of Education and Training; NDMO = National Disaster Management Office; NGO = nongovernment organization; SDMC = School Disaster Management Committee; SRH = sexual and reproductive health; WASH = water, sanitation and hygiene

[a] Ineula Junior Secondary School and Lowiepeng Junior Secondary School workshops were combined due to their geographic proximity and the plan to merge the schools under one administration.

Source: Asian Development Bank.

D. Evidence on Gender-Related Benefits from Cyclone Pam School Reconstruction Project

11. As detailed under the GAP achievement matrix, the activities carried out through the GAP improved gender equality and women's empowerment by (i) increasing girls' participation and retention in secondary education; (ii) increasing the resilience of women and girls in the community to future disasters and climate change risks; and (iii) capacity building provincial institutions and surrounding school communities. In addition to the GAP's key objectives, which were successfully achieved, the testimonials that were gathered show that the CPSRP also achieved significant gender-related benefits that were not anticipated.

12. It is evident that GAP activities' implementation contributed to the increased enrollment and retention of female students in JSSs in Tafea Province. Compared to enrolment data in 2015, there has been a 45% increase (195 girls in 2015, 282 girls in 2020) in female students enrolled at the four upgraded JSSs. The involvement of women and girls in the decision-making and design process of school infrastructure allows for the continued inclusion of girls within the education system by addressing the additional barriers to girls' education through adequate WASH facilities to cater for menstrual hygiene management and safer, gender-appropriate infrastructure. Community consultations on proposed infrastructure works during design development were attended by 45% women (244 out of 545, target: 40%). Important issues raised by the community resulted in modifications in the final project design and construction. One such issue was to provide privacy and security for female students by ensuring the location of girls' ablutions, showers, and dormitories were within a short walking distance of each other and provided with adequate lighting and privacy fencing. This was implemented at varying levels of success across the schools. Unfortunately, at Kwataparen, the girls' and boys' dormitories needed to be located adjacent to each other after additional land could not be acquired at the school site. This has raised some privacy and security concerns with school management, even though a privacy fence was erected between the two buildings. Conversely, at White Sands Bilingual College (the result of the merge between Ienaula and Lowiepeng JSS), testimonials reveal that girls' privacy and security have been much improved.

Box A11.1: Increase Girls' Participation and Retention in Secondary Education

Impact Story No.1
Bob Sanga, male school registrar, Kwataparen Secondary School
Bob has had a long history with the community and the school: he was a student for 8 years, became a teacher for a year, and is now the school registrar. Bob has noticed that the new classrooms, especially the furniture "increase the capabilities of the students and [their] academics... the students have shown a great deal of interest in their school attendance. One good example [is] a girl who belongs to a family of strong cultural practices, during the school shutdown, she would frequently come around and ask when classes would resume. Many, even boys, were anxious to get back to school during the COVID-19 school closures earlier this year."

Impact Story No.2
Adele Pel Nauka, female deputy principal, White Sands Bilingual College
Adele has been involved with the school for 7 years: she was a teacher, acting principal, and is now deputy principal. Adele states that "we now have new buildings, they are much better than the buildings [in] past years. We used to have ash fall through the roof, students would have to shake ash off their books every time they pick up their books from their tables when they get in … Girls have been more motivated to stay in schools, the ratio of boys to girls is much greater and the results from their academics is much higher, as seen from their mid-year results."

Impact Story No.3
Maliwan Kaspa, male boarding master, White Sands Bilingual College (formerly Ienaula and Lowiepeng Junior Secondary School)
Maliwan has been associated with the school since 2002 and worked as a construction laborer for the CPSRP. In his opinion, the school dropout rate for boys and girls has reduced due to the improved facilities and amenities provided by the project: "we used to have very bad furniture and as I see it, that caused students to lose interest. But now with the facilities and furniture I have noticed we have had an increase of students and the students seem more motivated. [The] new buildings and furniture provides the students with a fresh start and fresh mind to go about their studies … The fencing around the girls' dormitory has improved a lot – girls feel more secure and study much better, and [there has been] no theft [of clothing] from outsiders as experienced in the past. The increase in WASH facilities has made living more comfortable, toilets are closer to the dorms so I believe they are enjoying their studies a bit more."

Impact Story No.4
Jeffrey Lafa, male Principal, Kwataparen Secondary School
Jeffrey has been associated with the school for over 20 years as a teacher, school board member, and has served as Principal since 2013. Jeffrey has noticed that "the project has given equal opportunity for both girls and boys with respect to dormitory capacity and we have continued attendance of girls from the local community and from around Tanna, with the exception of COVID … which interrupted attendance at school." Jeffrey stated that although privacy and security for girls at school has been improved, the project could have gone further by not locating the girls and boys dormitories next to each other. When asked what could the project have done better, Jeffrey stated "consultation on the ground—I gave my input on arrangement of [the] dormitories and dining hall, to have the location swapped to avoid social issues … we are facing with this current set up" i.e. with the dormitories sharing a fence.

Impact Story No.5
Ignace Niroa, female principal, Imaki Junior Secondary School
Ignace was a teacher at the school for 3 years and has been principal since 2019. When asked if the project has provided a favorable environment for continued girls' education, she stated: "to be honest with you, we are in a place on Tanna where school was viewed as not important. Through encouragement given by my staff and I to the students every morning we have seen students, especially girls, gain more interest in school. The school improvements done by the project have motivated the students. We have seen the number of girls stabilize as a result of these [factors]. There are also interruptions of school with Customary practices and get togethers, we encourage the students to prioritize their education at this school over attending this and making time on the weekend to go attend these instead of skipping school for the purpose of attending customary get togethers."

Impact Story No.6
Alexis Kapalu, male Principal, White Sands Bilingual College
Alexis has been Principal at the school for 10 months. "The girls' dorm is more secure – in the past girls would go off and get married at an early age but now with this new development the students have a strong push to pursue their education."

Source: Interviews conducted in October 2020.

13. The inclusion of women participants in the development of the school disaster management plans and disaster preparedness workshops built capacity and resilience within the community to handle future disasters and ensured that women-specific needs are addressed in disaster events and post-disaster situations. Women were 30% of participants in developing disaster management plans (8 out of 27, target: 40%). Although the target percentage of women participants was only partially achieved, the school disaster

management plans were still able to effectively identify and address concerns brought up by female participants (outlined below). This is because the project team helped the community form a school Disaster Management Committee that required female community representatives and facilitated a participatory approach to developing the management plans. The inclusion of women in the committee will ensure that women have an ongoing active voice in decision-making during and after disasters. Six disaster preparedness workshops were also held at the schools with 51% female participation (172 out of 339, target: 40%) that built capacity and resilience of the broader community and allowed more women to raise specific concerns regarding disaster response. Through these workshops, women identified that having safe shelters, food, and emergency supplies; and a method of communicating information was important in a post-disaster situations. The CPSRP provided clearly marked, structurally sound emergency shelters, and project savings were used to provide each school with food and emergency supplies in dedicated storage areas.

Box A11.2: Increasing the Resilience Of Women And Girls in the Community to Future Disasters and Climate Change Risks

Impact Story No.7
Milène Héré Nirua, female year-10 day student, Imaki Junior Secondary School
Milène started studying at Imaki this year as a day schooler. Milène listed the following as benefits she has felt from the project:

- "[the project] came to build dormitories so now we have more space
- ADB provided food so now students don't complain for food
- ADB provides us some materials for the library [and] renovated the Year 8 and 9 classrooms
- CARE came to make awareness from natural disasters. If there was a disaster my family and I must protect ourselves, e.g. cyclone we must hide under a shelter
- There [are] two shelters that we can use during natural disasters—one for boys and one for girls."

Impact Story No.8
Adele Pel Nauka, female deputy principal, White Sands Bilingual College
Adele has been involved with the school for seven years: she was a teacher, acting Principal, and is now Deputy Principal. When asked what new perspectives she gained from being involved in the project, she replied "a workshop run by CARE International, especially the one on cyclone risk. We all came to realize the most valuable group that we should prioritize are the people with disabilities and lactating and pregnant mothers." She noted that "maybe something that we missed out on is training associated with volcano safety. The project was more focused on cyclones. This school is very close to an active volcano."

Source: Interviews conducted in October 2020.

14. The CPSRP recognized the importance of building capacity in women and girls at a school, community, and provincial level and integrated this throughout the GAP activities. Female participants comprised 51% (172 out of 339, target: 40%), 52% (131 out of 251, no percentage target), and 51% (140 out of 277, no percentage target) of disaster risk reduction, sexual reproductive health, and WASH workshops, respectively. 15 workshops were held with an overall female participation rate of 51% (443 out of 867).

Box A11.3: Capacity Building Provincial Institutions and Surrounding School Communities

Impact Story No.9
Adele Pel Nauka, female deputy principal, White Sands Bilingual College
Adele stated that the disaster management planning workshops helped build resilience of the school because "by getting the community involved it helps a greater population realize the importance of these planning (disaster planning)".

Impact Story No.10
Alexis Kapalu, male principal, White Sands Bilingual College
Alexis stated "CARE International had a workshop to encourage girls to be active participants in all areas of school life. We also went through WASH training so we could apply in the school and for students to take back to their respective homes. It helps us be more aware of gender equality and how to look after ourselves."

Impact Story No.11
Meian Loughman, female year-10 boarding student, Kwataparen Secondary School
Meian is a new student at the school this year and attended the NGO workshops run by CARE International. She states that "I feel I learnt a lot about gender norms and equality and also feel more appreciated and empowered as a female. I also took things I learnt, especially in the WASH programs, and taught my family at home."

Source: Interviews conducted in October 2020.

15. Gender-related benefits from the project not captured in the GAP matrix included the employment of nine ni-Vanuatu women by the construction contractor and the design and supervision consultant. The women were primarily employed as community liaison officers and safeguard specialists. The direct impact of the project on these women is the increased financial flows into their households and communities with increased spending through the local store, increase in payment of school fees, and the ability for families to procure new tools, seeds for gardens, and pay for transport to main markets in Lenakel.

Box A11.4: Additional Gender Related Benefits

Impact Story No.12
Ignace Niroa, female principal, Imaki Junior Secondary School
Ignace is very appreciative for the project as it "cut down a lot of the costs for [the school] so I could divert it to other areas of school operation."

Impact Story No.13
Joshua Komie, male year-9 boarding student, Kwataparen Secondary School
Joshua has stated he has appreciated the project's "new dining hall, new chairs, [and] we are not sleeping on the floor but on proper beds. I feel very fortunate to be at this school."

Source: Interviews conducted in October 2020.

E. Conclusions and Recommendations

16. The GAP implementation results reduced girls' barriers to attend school and empowered women and girls in the surrounding communities of the four rebuilt schools on Tanna Island. With 87% of the 15 GAP activities completed and supported by testimonials

from beneficiaries, the GAP contributed significantly to the effectiveness of the project and is rated *successful*.[5]

17. From the activities taken under the GAP, the following areas were identified as lessons learned:

(i) The GAP design could have included more quantitative indicators and targets for activities to allow for enhanced monitoring and evaluation. The lack of numerical indicators in the GAP in this project was a function of the nature of relief projects whereby projects are mobilized before all relevant baseline data being collected in order to provide urgent on-the-ground assistance. Most of the GAP activities could only be performed later in the project cycle. However, baseline data could have been collected mid-way, which would have enabled the refinement of the GAP targets during the midterm review;
(ii) Increased communication and consultation with school stakeholders, including the community: although consultation was held at each school to inform the school buildings' design, the testimonials indicate that some community members felt that the final design did not take their suggestions into consideration, resulting in poorer outcomes. Stronger communication planning integrating continued outreach throughout the project cycle would have strengthened two-way information flows. This would have made the communities feel more included in the project.

18. From the activities taken under the GAP, the following areas were identified as recommendations:

(i) Increased regular reporting and monitoring on progress across GAP activities and using this data to further strengthen project management;
(ii) Increased incentivization for women to attend community consultation sessions, including ensuring workshops are held on days where most women are not undertaking caretaking or income-generating activities;
(iii) Inclusion of quantitative indicators and targets for GAP outputs; and
(iv) It is not clear in the GAP how all activities align to achieve outputs in the design and monitoring framework. Although the activities might not have clear links, they are nevertheless important to create an enabling environment to achieve the project's gender-related outcomes. An example is that activity O104 (Education awareness on HIV/AIDS and prevention conducted for construction workers and the community during construction activities) may not clearly link to output 1 (Schools in Tafea Province are rebuilt and upgraded). Future GAPs may benefit from a theory of change that clearly links how activities align with achieving each outcome.

19. A large factor leading to the success of the project is the participatory approach of community consultation sessions with at least 40% women participation. Most stakeholder contributions were incorporated into the final design; however, few community members felt like their inputs were not adequately considered. Future projects should have better-designed communication and outreach plans to bridge this information gap to ensure that there is a constant flow of information and continuous dialogue.

[5] For purposes of rating the delivery of intended gender equality results, 7 activities were counted (O101, O102, O104, O105, O109, O201, O205—all completed) and 5 quantitative targets (4 achieved—O103, O202, O203, O206; 1 not achieved—O204). On the other hand, three activities (O106, O107, O108) were considered as process-oriented related to implementing the project GAP and which were not factored in the rating. This provided a rating of "successful".

20. Furthermore, projects with components of training, capacity building, or community consultation should engage consultants familiar with the local context and have experience delivering these workshops. The NGO engaged under this project (CARE International) had demonstrated ability to perform these functions in Vanuatu, which significantly contributed to the success of the project's gender outcomes.

STATUS OF COMPLIANCE WITH GRANT COVENANTS

No.	Covenant and Reference	Reference	Status at Project Completion
General			
1	The Recipient shall cause the proceeds of the Grant to be applied to the financing of expenditures on the Project in accordance with the provisions of this Grant Agreement	G9181, Sec. 3.01	**Complied.** The Ministry of Education and Training (MOET) followed the Grant Agreement and disbursed funds for approved project expenditure.
2	The proceeds of the Grant shall be allocated and withdrawn in accordance with the provisions of Schedule 2 to this Grant Agreement, as such Schedule may be amended from time to time by agreement between the Recipient and ADB	G9181, Sec. 3.02	**Complied.** $5.0 million of the Grant proceeds allocated for civil works and consulting services I in accordance with provisions of Schedule 2 and as per revised disbursement schedule following the midterm review
3	Except as ADB may otherwise agree, the Recipient shall procure, or cause to be procured, the items of expenditure to be financed out of the proceeds of the Grant in accordance with the provisions of Schedule 3 to this Grant Agreement.	G9181, Sec. 3.03	**Complied.** The design and supervision consultant (DSC) was selected based on quality and cost-based selection (QCBS) method due to unsuccessful efforts to engage a firm through single source selection. Change was approved by ADB.
4	Withdrawals from the Grant Account in respect of Goods, Works, and Consulting Services shall be made only on account of expenditures relating to:	G9181, Sec. 3.04	
5	(a) Goods which are produced in and supplied from and Works and Consulting Services which are supplied from such member countries of ADB as shall have been specified by ADB from time to time as eligible sources for procurement, and	G9181, Sec. 3.04(a)	**Complied.** The project procured all goods and services from eligible ADB member countries. Civil Works Contractor and DSC were fully aware of these requirements.
6	(b) Goods, Works and Consulting Services which meet such other eligibility requirements as shall have been specified by ADB from time to time.	G9181, Sec. 3.04(b)	**Complied.** All ADB eligibility requirements were met.
7	The Grant Closing Date for the purposes of Section 8.02 of the Grant Regulations shall be 30 June 2018 or such other date as may from time to time be agreed between the Recipient and ADB.	G9181, Sec. 3.05	**Complied.** On 12 December 2017, ADB approved two-year extension to the grant closing date of 30 June 2020.
	ARTICLE IV - Particular Covenants		
8	In the carrying out of the Project and operation of the Project facilities, the Recipient shall perform, or cause to be performed, all obligations set forth in Schedule 4 to this Grant Agreement.	G9181, Sec. 4.01	**Complied.** All environmental and social safeguards, labor standards, health and safety, gender and development requirements were incorporated into civil works bidding documents and contracts. An effective grievance redress mechanism (GRM) was implemented.
9	(a) The Recipient shall: (i) maintain separate accounts and records for the Project; (ii) prepare annual financial statements for the Project in accordance with accounting principles	G9181, Sec. 4.02(a)	**Partially Complied.** (i) All payments were made through direct payment procedure upon submission of withdrawal application by MOET (executing agency). MOET used

	acceptable to ADB; (iii) have such financial statements audited annually by independent auditors whose qualifications, experience and terms of reference are acceptable to ADB, in accordance with international standards for auditing or the national equivalent acceptable to ADB; (iv) as part of each such audit, have the auditors prepare a report (which includes the auditors' opinion on the financial statements, use of the Grant proceeds and compliance with the financial covenants of this Grant Agreement and a management letter (which sets out the deficiencies in the internal control of the Project that were identified in the course of the audit, if any); and (v) furnish to ADB, no later than 6 months after the end of each related fiscal year, copies of such audited financial statements, audit report and management letter, all in the English language, and such other information concerning these documents and the audit thereof as ADB shall from time to time reasonably request.		its Financial Management Information System (Smart stream) for financial record keeping. (ii), (v) A deferment request was approved by ADB for fiscal year 2016 audited project financial statement (APFS) as no expenses were incurred under the project during the financial year. The first APFS for 22 months ending 31 December 2017 was submitted on 2 July 2018. MOET and the independent auditor responded to ADB comments and the APFS was disclosed on ADB website. The 2018 APFS submission was delayed due to extra time required in compiling information for the auditors. ADB received the submission on 24 October 2019 and approved on 31 October 2019. Subsequently, it was disclosed on ADB website. Audited financial statements for 2019 were submitted on 15 September 2020, within the 6-month extension period provided by ADB due to global COVID-19 pandemic. The final APFS for 2020 providing reconciliation of overall grant expenditures has not been submitted yet (is due by 30 June 2021). For items (iii) and (iv) Independent auditors were appointed by the Auditor General's Office for external auditing and preparation of audit report (except 2020 audit report which is being prepared by the National Audit Office).
10	(b) ADB shall disclose the annual audited financial statements for the Project and the opinion of the auditors on the financial statements within 30 days of the date of their receipt by posting them on ADB's website.	G9181, Sec. 4.02(b)	**Complied.** ADB approved a request from MFEM for the first year of the project (i.e., 2016). First audited financial statements (for 2017) were provided in July 2018. ADB confirmed acceptance of the Auditors report for the project year ending 2017 in December 2018 after comments on APFS were suitably addressed and it was disclosed by ADB on 7 January 2019. The APFS for 2018 was received on 24 October 2019 and disclosed on 31 October. APFS for 2019 submitted within six-month extension period approved by ADB and disclosed timely on ADB website. The final APFS for 2020 has not yet been submitted to ADB (due by 30 June 2021).
11	(c) The Recipient shall enable ADB, upon ADB's request, to discuss the financial statements for the Project and the Recipient's financial affairs where they relate to the Project with the auditors appointed pursuant to	G9181, Sec. 4.02(b)	**Complied.** MOET has provided ADB access to the auditor.

	subsection (a) (iii) hereinabove, and shall authorize and require any representative of such auditors to participate in any such discussions requested by ADB. This is provided that such discussions shall be conducted only in the presence of an authorized officer of the Recipient, unless the Recipient shall otherwise agree		
12	The Recipient shall enable ADB's representatives to inspect the Project, the Goods and Works, and any relevant records and documents	G9181, Sec. 4.03	**Complied.** MOET welcomed ADB representative's inspection of the sites and shared relevant records and documents as requested.
13	The Recipient acknowledges and agrees that this Grant Agreement is entered into by ADB, not in its individual capacity, but as grant administrator for JFPR. Accordingly, the Recipient agrees that (i) it may only withdraw Grant proceeds to the extent that ADB has received proceeds for the Grant from the [trust fund/external funding source], and (ii) that ADB does not assume any obligations or responsibilities of [trust fund/external funding source] in respect of the Project or the Grant other than those set out in this Grant Agreement.	G9181, Sec. 4.04	**Complied.** The Recipient's submitted application for grant proceeds as per the Grant Agreement. No additional requests for funds were made for non-JFPR funds.
	ARTICLE V - Effectiveness		
14	A date 90 days after the date of this Grant Agreement is specified for the effectiveness of this Grant Agreement for the purposes of Section 9.04 of the Grant Regulations.	G9181, Sec. 5.01	**Complied.** The Grant Agreement was signed on 30 November 2015 and it became effective on 3 March 2016.
	ARTICLE VI Miscellaneous		
15	The Director General of the MFEM is designated as representative of the Recipient for the purposes of Section 11.02 of the Grant Regulations	G9181, Sec. 6.01	**Complied.** The Director General of MFEM represented the Recipient.
16	The following addresses are specified for the purposes of Section 11.01 of the Grant Regulations	G9181, Sec. 6.02	
	SCHEDULE 1: Description of the Project		
17	The objective of the Project is to resume critical social services with disaster-resilient infrastructure.	G9181, Sch. 1, Para. 1	**Complied.** The project supported reconstruction of school buildings severely damaged by the Cyclone Pam. The buildings at the four schools also serve as temporary shelters during emergencies.
18	The Project shall comprise: PART A: At least five junior secondary schools in Tafea Province are rebuilt and/or upgraded. PART B: Community and MOET management capacities for disaster risk reduction and preparedness are strengthened.	G9181, Sch. 1, Para. 2	**Complied.** Part A—During the midterm review the government and ADB agreed to revise the scope from five to four junior secondary schools, although the same volume of civil works was undertaken. Part B—A series of workshops and trainings were delivered. Details are in the design and monitoring framework and Gender Action Plan appendixes.

19	Consulting services will be provided to support the above activities.	G9181, Sch. 1, Para. 3	**Complied.** The recipient received consulting services with the recruitment of a DSC.
20	The Project is expected to be completed by 31 December 2017.	G9181, Sch. 1, Para. 4	Complied with delay. ADB approved an extension to the physical completion date to 30 June 2020 due to delay in the recruitment of DSC consultant.
	SCHEDULE 2 - Allocation and Withdrawal of Grant Proceeds		
21	The table attached to this Schedule sets forth the Category of the item of expenditure to be financed out of the proceeds of the Grant and the allocation of the Grant proceeds to such Category ("Table"). (Reference to "Category" in this Schedule is to a Category or Subcategory of the Table.)	G9181, Sch. 2, Para. 1	**Complied.** The grant proceeds were used for the procurement of goods and services for the approved category/subcategory only.
22	Except as ADB may otherwise agree, the proceeds of the Grant shall be disbursed on the basis of the withdrawal percentage for each item of expenditure set forth in the Table.	G9181, Sch. 2, Para. 2	**Complied.** Grant proceeds withdrawn in accordance with provisions of Schedule 2. No reallocation of funds was undertaken.
23	Except as ADB may otherwise agree, the Grant proceeds shall be disbursed in accordance with the *Loan Disbursement Handbook*.	G9181, Sch. 2, Para. 3	**Complied.** MOET and the DSC are familiar with the process and procedures within the Loan and Grant Disbursement Handbook. MOET followed the stated disbursement procedures.
	SCHEDULE 3 - Procurement of Goods, Works and Consulting Services		
24	The procurement of Goods, Works and Consulting Services shall be subject to and governed by the Procurement Guidelines, and the Consulting Guidelines, respectively.	G9181, Sch. 3, Para. 1	**Complied.**
25	All terms used in this Schedule and not otherwise defined in this Grant Agreement have the meanings provided in the Procurement Guidelines and/or the Consulting Guidelines, as applicable.	G9181, Sch. 3, Para. 2	**Complied.**
26	Except as ADB may otherwise agree, Goods and Works shall only be procured on the basis of the methods of procurement set forth below: (a) International Competitive Bidding; and (b) Shopping.	G9181, Sch. 3, Para. 3	**Complied.** The project administration manual and government procurement plan reflect these methods. The civil works contract was procured using International Competitive Bidding (ICB), while smaller items were procured using shopping.
27	The methods of procurement are subject to, among other things, the detailed arrangements and threshold values set forth in the procurement plan. The Recipient may only modify the methods of procurement or threshold values with the prior agreement of ADB, and modifications must be set out in updates to the procurement plan.	G9181, Sch. 3, Para. 4	**Complied.** The PAM and government procurement plan reflect the agreed methods and threshold values. PAM and procurement plan were reviewed and updated, with prior agreement of ADB, following the midterm review. Specifically, the shopping threshold was raised to $300,000 consistent with the country procurement assessment.
28	The Recipient shall not award any Works contract which involves environmental impacts until the executing agency has:	G9181, Sch. 3, Para. 5	**Complied.** The final version of the initial environmental examination (IEE), based on detailed design, was submitted to the Department of

	(a) obtained the final approval of the Environmental Assessment, and the issuance of the environmental permit, from the Department of Environmental Protection and Conservation of the Recipient; (b) updated the environmental management plan (EMP) based on the detailed design; and (c) incorporated the relevant provisions from the EMP into the Works contract.		Environmental Protection and Conservation. No environmental permit was required. Contracts for civil works included the Initial environment examination and EMP and references relevant provisions. The contractor were required to prepare and have the CEMP approved prior to taking possession of the site.
29	The Recipient shall apply the following method for selecting and engaging the specified Consulting Services, in accordance with, among other things, the procedures set forth in the procurement plan: Single Source Selection for Design and Supervision Consultants.	G9181, Sch. 3, Para. 6	**Not complied.** The DSC was selected based on QCBS, not single source selection due to unsuccessful attempt to recruit through single source selection method. Formal approval for this change was not required as the QCBS is a more competitive process (advised by ADB's Procurement, Portfolio, and Financial Management Department).
30	(a) The Recipient shall ensure that all Goods and Works procured (including without limitation all computer hardware, software and systems, whether separately procured or incorporated within other goods and services procured) do not violate or infringe any industrial property or intellectual property right or claim of any third party.	G9181, Sch. 3, Para. 7(a)	**Complied.** ADB did not find violation or infringement of property rights during the procurement process.
31	(b) The Recipient shall ensure that all contracts for the procurement of Goods and Works contain appropriate representations, warranties and, if appropriate, indemnities from the contractor or supplier with respect to the matters referred to in subparagraph (a) of this paragraph	G9181, Sch. 3, Para. 7(b)	**Complied.**
32	The Recipient shall ensure that all ADB-financed contracts with consultants contain appropriate representations, warranties and, if appropriate, indemnities from the consultants to ensure that the consulting services provided do not violate or infringe any industrial property or intellectual property right or claim of any third party.	G9181, Sch. 3, Para. 8	**Complied.** Standard harmonized consulting contract of Fédération Internationale Des Ingénieurs – Conseils' was adopted. ADB Small Works bidding documents were adopted as the basis of the civil works contract.
33	Contracts for Consulting Services shall be subject to prior review by ADB, unless otherwise agreed between the Recipient and ADB and set forth in the procurement plan.	G9181, Sch. 3, Para. 9	**Complied.** All consulting services and procurement of civil works were subjected to prior review by ADB in accordance with the PAM and the procurement plan. Shopping was subject to post review.
	SCHEDULE 4 - Execution of Project; Financial Matters		
34	The Recipient and the EA shall ensure that the Project is implemented in accordance with the detailed arrangements set forth in the PAM. Any subsequent change to the PAM shall become effective only after approval of such change by the Recipient and ADB.	G9181, Sch. 4, Para. 1	**Complied.** Changes to the original PAM identified during the inception phase reflected in PAM update approved by ADB in February 2017). The PAM was further updated during midterm review in Q3 of 2018.

	In the event of any discrepancy between the PAM and this Grant Agreement, the provisions of this Grant Agreement shall prevail		
35	The Recipient shall make available adequate and timely budgetary allocations of the required counterpart funds in respect of the Project, including for taxes and duties. The Recipient shall meet any financing shortfall to ensure that the Project is fully implemented.	G9181, Sch. 4, Para. 2	**Complied.** MOET is provided an office and project management services. The detailed cost estimates in the PAM required the government to provide $0.72 million in support of civil works, project management, community capacity building and recurrent costs for the PMU. At end of project in June 2020, MOET provided the specified amount ($0.72 million) equivalent of in-kind support and VAT exemptions.
36	The Recipient shall ensure, or cause the EA to ensure, that the preparation, design, construction, implementation, operation and decommissioning of the Project comply with (a) all applicable laws and regulations of the Recipient relating to environment, health, and safety; (b) the Environmental Safeguards; (c) the Environmental Assessment and Review Framework (EARF); and (d) all measures and requirements set forth in the respective Environmental Assessment and EMP, and any corrective or preventative actions set forth in a Safeguards Monitoring Report.	G9181, Sch. 4, Para. 3	**Complied.** All applicable laws and environmental requirements were referenced in the bidding documents. The IEE and EMP were approved by Department of Environmental Protection and Conservation. Safeguards monitoring and reporting requirements were clearly specified in the bidding documents. implementing agency with support of DSC closely monitored safeguards implementation and compliance.
37	The Recipient shall ensure, or cause the EA to ensure, that the Project shall not result in involuntary resettlement impacts.	G9181, Sch. 4, Para. 4	**Complied.** No involuntary resettlement was triggered by the project and it was categorized at Category C for social safeguards. MOET prepared a land due diligence report which was approved by ADB in Q3–2108 and disclosed on the ADB website. All sites had memorandum of agreement or existing lease signed. Three of the four schools' sites were leased from the community. No extension to existing land areas or leases was required. Outstanding lease payments were paid out for three sites. There is an ongoing court case related to land dispute associated with the Kwataparen Junior Secondary School. The Seventh Day Adventist Mission (which has the title to the land boundary where school is located and also manages the school) has assured ADB that it has budgeted the outstanding lease payments (cheque) and will settle the balance payments when the land dispute is settled by the court.
38	The Recipient shall make available, or cause the executing agency to make available, necessary budgetary and human resources to fully implement the EMPs.	G9181, Sch. 4, Para. 5	**Complied**. MOET relied on the contractual services of the DSC to support implementation of the environmental management plans. MOET's representatives provided support for community consultation and permits as required to fully implement the EMPs.

39	The Recipient shall ensure, or cause the executing agency to ensure, that all bidding documents and contracts for Works contain provisions that require contractors to: (a) comply with the measures and requirements relevant to the contractor set forth in the relevant Environmental Assessment, EMP and environmental permit, and any corrective or preventative actions set out in a Safeguards Monitoring Report; (b) make available a budget for all such environmental and social measures; (c) provide the Recipient with a written notice of any unanticipated environmental risks or impacts that arise during construction under the Project that were not considered in the relevant Environmental Assessment and EMP; and (d) adequately record the condition of roads, agricultural land and other infrastructure prior to starting to transport materials and construction.	G9181, Sch. 4, Para. 6	**Complied.** The bidding documents, including the contracts, cross referenced the relevant parts of the environmental assessment and review framework, IEE, environmental management plan, and the GAP. The documents were explicit in requiring clauses (a), (c) and (d) to be met, also requiring the contractor to make available a budget for such environmental and social measures. The contractor made such budget available and prepared construction environmental management plan to manage environmental impacts of the construction work. Contractor CEMP submitted Final Revision 6 CEMP in Q3–2018 which was approved and site possession was granted subsequently. Contractor had two persons at each site carrying out the roles of a community liaison officer and Safeguards officer. The DSC also carried out weekly to fortnightly safeguard audits. Pre- construction condition report for all sites were undertaken by the DSC and MOET to ensure an independent record is made prior to works being undertaken. However, due to weather events and frequent movement of public vehicles, the road condition was in a constant state of change. Condition surveys were also conducted by the contractor. Light vehicles were used by the contractor during construction to ensure minimal damage to access roads. No unanticipated environmental impacts occurred during project implementation.
40	The Recipient shall do the following, or shall cause the EA to do the following: (a) submit semiannual Safeguards Monitoring Reports to ADB and disclose relevant information from such reports to affected persons promptly upon submission; (b) if any unanticipated environmental risks and impacts arise during construction, implementation or operation of the Project that were not considered in the relevant Environmental Assessment and EMP, promptly inform ADB of the occurrence of such risks or impacts, with detailed description of the event and proposed corrective action plan; and (c) report any actual or potential breach of compliance with the measures and requirements set forth in the EMPs promptly after becoming aware of the breach.	G9181, Sch. 4, Para. 7	**Complied.** The bidding documents and contract included a requirement for contractors to advise on any unanticipated environmental risks or impacts during project implementation. The situation, however, did not arise during project implementation. The DSC monitored ongoing compliance against these requirements. Corrective actions were identified by DSC which were promptly addressed by the contractor. The first semiannual safeguards report was submitted to ADB in July 2018 for the period from Jan to June 2018. Semiannual safeguards monitoring reports were submitted generally timely and disclosed on ADB's website. The contractor's community liaison and safeguards officers disseminated relevant information to the community.
41	The Recipient shall ensure, or cause the EA to ensure, that no proceeds of the Grant are used to finance any activity included in the list of prohibited investment activities provided in Appendix 5 of the SPS.	G9181, Sch. 4, Para. 8	**Complied.** ADB is not aware of the use of grant proceeds to finance prohibited activities listed in the ADB's Safeguards Policy Statement (2009), Appendix 5.

42	The Recipient shall ensure that the core labor standards and the Recipient's applicable laws and regulations are complied with during Project implementation. The Recipient shall include specific provisions in the bidding documents and contracts financed by ADB under the Project requiring that the contractors, among other things: (a) comply with the Recipient's applicable labor law and regulations and incorporate applicable workplace occupational safety norms; (b) do not use child labor; (c) do not discriminate workers in respect of employment and occupation; (d) do not use forced labor; (e) allow freedom of association and effectively recognize the right to collective bargaining; (f) disseminate, or engage appropriate service providers to disseminate, information on the risks of sexually transmitted diseases, including HIV/AIDS, to the employees of contractors engaged under the Project and to members of the local communities surrounding the Project area, particularly women.	G9181, Sch. 4, Para. 9	**Complied.** The civil works contract required the contractor to comply with all relevant laws of Vanuatu covering the key areas from (a) to (f). Labour laws were clearly outlined within the contract documents. HIV/AIDS workshop and materials were delivered to the contractor and community, including women. Most workers at the sites were from the local community. All foreign workers were based at the main contractor's camp in town). Separate safeguards checklist - ensuring age of persons and any health issues was monitored regularly by the DSC.
43	The Recipient shall ensure that (a) the GAP is implemented in accordance with its terms; (b) adequate resources are allocated for implementation of the GAP; (c) the bidding documents and contracts include relevant provisions for contractors to comply with the measures set forth in the GAP; and (d) progress on implementation of the GAP, including progress toward achieving key gender outcome and output targets, are regularly monitored and reported to ADB.	G9181, Sch. 4, Para. 10	**Partially Complied** (a) 100% of GAP activities successfully completed and 80% targets fully met. (b) A locally-based international nongovernment organization (CARE International) was engaged for GAP implementation. MOET had gender focal point for the Project to monitor GAP implementation. (c)Bidding documents specifically included reference the requirements of the GAP. (d). The progress against the GAP was monitored through a GAP matrix to be included in the quarterly progress reports. However, the matrix was not included in the early monitoring reports (before the GAP activities were commenced) and reporting on GAP progress was irregular.
44	The Recipient, the EA and the IA shall (a) comply with ADB's Anticorruption Policy (1998, as amended to date) and acknowledge that ADB reserves the right to investigate directly, or through its agents, any alleged corrupt, fraudulent, collusive or coercive practice relating to the Project; and (b) cooperate with any such investigation and extend all necessary assistance for	G9181, Sch. 4, Para. 11	**Complied.** The EA and implementing agencies complied with ADB's Anticorruption Policy and they acknowledged ADB's right to investigate directly, or through its agents, any alleged corrupt, fraudulent, collusive or coercive practice related to the project. However, no circumstances

	satisfactory completion of such investigation.		triggering the need for investigation during project implementation.
45	The Recipient, the EA and the IA shall ensure that the anticorruption provisions acceptable to ADB are included in all bidding documents and contracts, including provisions specifying the right of ADB to audit and examine the records and accounts of the executing and implementing agencies and all contractors, suppliers, consultants, and other service providers as they relate to the Project.	G9181, Sch. 4, Para. 12	**Complied.** Standard harmonized consulting contract were adopted. ADB small works bidding documents were adopted as the basis of the civil works contract. These standard contracts included such provisions. Situation did not arise that called for ADB to audit and examine records and accounts of EA and IA.
46	Within six months after the Effective Date, the Recipient shall prepare a grievance redress mechanism, acceptable to ADB, and establish a special committee to receive and resolve complaints/grievances or act upon reports from stakeholders on misuse of funds and other irregularities, including grievances due to resettlement. The special committee will (a) make public of the existence of this grievance redress mechanism, (b) review and address grievances of stakeholders of the Project, in relation to either the Project, any of the service providers, or any person responsible for carrying out any aspect of the Project; and (c) proactively and constructively responding to them.	G9181, Sch. 4, Para. 13	**Complied.** A GRM committee comprising representatives from MOET and DSC was established in Q1 2017 and the project communicated the establishment to local communities during the first round of consultation in May 2017. The GRM was also included within the bidding documents and it outlined the reporting and notification requirements. Civil works contractor distributed GRM pamphlets and indicated on the project sign boards that the GRM for the project was active. Contractor had appointed community liaisons officer who recorded all grievances and ensured these records were kept up to date. The process for resolving the grievance were reiterated prior to the works commencement on sites and was discussed in the community orientation workshops. GRM was further enhanced during the project implementation, to improve reporting recording of complaints received from community and improved resolution through clear timelines established at each level and options for escalation to upper levels should complaints be of a more serious nature. The project received seven grievances all of which were resolved amicably.
47	The Recipient shall allocate and make available, on a timely basis, sufficient funds for the operation and maintenance of the Project facilities, and shall ensure that the Project facilities are adequately maintained in accordance with the applicable standards and best international practices.	G9181, Sch. 4, Para. 14	**Complied**. The contractor prepared an operation and maintenance (O&M) plan under the guidance of the DSC. MOET continues to allocate budget for all the schools annually, including for those supported by the project based on the O&M plan. The O&M budget to schools in the near term is deemed adequate.
48	Within six months after the Effective Date, the IA shall develop a project performance monitoring and reporting system, which shall monitor the Project implementation, and evaluate the impact, outcome, outputs and activities in relation to the targets and milestones established for the Project and the overall rehabilitation and reconstruction of the cyclone affected areas on Tanna island.	G9181, Sch. 4, Para. 15	**Complied.** A simple monitoring system was developed which was acceptable to ADB and MOET (included Gantt charts, monitoring of milestone/ key dates for delivery, gender data, safeguards etc.).

49	If ADB determines that an amount of the Grant has been used in a manner inconsistent with the provisions of this Grant Agreement, the Recipient shall, upon notice by ADB to the Recipient, promptly refund such amount to ADB. Except as ADB may otherwise determine, ADB shall cancel all amounts refunded pursuant to this provision.	G9181, Sch. 4, Para. 16	Complied. The situation did not arise.
50	The Recipient shall comply with the Communication and Visibility Guidelines of JFPR; and in particular, the Recipient shall include JFPR logos in all relevant Project publications and on any equipment or facility funded by JFPR.	G9181, Sch. 4, Para. 17	**Complied.** JFPR and Japan International Cooperation Agency logo stickers were placed on project vehicle and all project design drawings, bid documents reports, and publications demonstrated adequate visibility of JFPR logos. The project also acknowledged JFPR support during community and government meetings. The JFPR logos were also displayed during school inauguration ceremonies.

APFS = audited project financial statement; CEMP = construction environmental management plan; DSC = design and supervision consultant; EARF = environmental assessment and review framework; EMP = environmental management plan; FY = fiscal year; GAP = gender action plan; GRM = grievance redress mechanism; HIV/ AIDS= human immunodeficiency virus/ acquired immunodeficiency syndrome; IA = implementing agency; ICB = international competitive bidding; IEE = initial environmental examination; JFPR = Japan find for poverty reduction; JSS = junior secondary school, MOET = Ministry of Education and Training, MFEM = ministry of economic and financial management; O & M = operation and maintenance; PAM = project administration manual; PMU = project management unit; SPS = safeguards policy statement; Q = quarter QCBS= quality and cost-based selection.
Source: Asian Development Bank.

ECONOMIC REEVALUATION

A. Introduction

1. The project appraisal assumed that the project would significantly benefit the population in Tafea Province affected by Cyclone Pam. There was an understanding that economic analysis would be carried out after project approval by the Asian Development Bank (ADB) but before the commencement of implementation.[1] The project completed the required analysis in 2019 in line with ADB's *Guidelines for the Economic Analysis of Projects* and the 1994 Framework and Criteria for the *Appraisal and Socioeconomic Justification of Education Projects*.[2] The analysis followed the guidelines for education projects and adopted unit cost analysis because the project outcomes cannot be adequately valued in monetary terms.

B. Methodology

2. At project completion, updated and actual parameter values were applied to arrive at the economic analysis results. It involved the computation of unit costs per student enrolled and cost per graduate. The costs are identified in nominal terms and the net present value (NPV) of costs is computed using a social discount rate of 6%.[3] As envisaged, the project benefits comprised three areas: (i) resumption of junior secondary education services at the selected schools following their restoration, (ii) provision of "safe" emergency shelters to strengthen the resilience of communities during any subsequent emergencies (cyclones or other disasters including seismic events), and (iii) strengthening the capacity of both communities and Ministry of Education and Training (MOET) management to reduce disaster risks and enhance disaster preparedness in the future. The restoration works were carried out at four junior secondary schools (JSSs) on Tanna Island—Kwataparen, Lowiepeng, Ineaula, and Imaki, which were severely damaged by the cyclone.

C. Benefits

3. As envisaged in the initial analysis, due to proximity and government policy to merge the English and French medium schools into a bilingual school, the Lowiepeng and Ineaula JSSs were merged under a single administration. Due to construction activities, 142 students enrolled in Kwataparen JSS were moved temporarily to 14 other schools in 2018 and 2019 based on parents' preferences, while 60 students dropped out of school due to economic or other reasons. The student enrolment in the project schools increased from 451 at the pre-cyclone level in 2015 to 634 in 2020, suggesting an increase of approximately 41% (38% for male and 45% for female students). Overall, current enrolment in project supported JSSs slightly exceeded the total design capacity (634 versus 620 students) (Table A13.1). However, enrolment at the combined school (Lowiepeng and Ineaula) far exceeded the planned capacity, while there is adequate room for additional enrolment at Kwataparen JSS. Details are provided in Table A13.2. Also, the 2020 enrolment at the project supported schools exceeded the 2017 enrolment numbers (post-cyclone) by 17.6%, which is slightly less than what was originally envisaged in the initial economic analysis, that is, 24%.

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[1] ADB. 2015. *Report and Recommendation of the President for the Proposed Administration of Grant Republic of Vanuatu: Cyclone Pam School Reconstruction Project*. Manila (para. 25).

[2] ADB. 1997. Guidelines for the Economic Analysis of Projects. Manila; and ADB. 1994. *Framework and Criteria for the Appraisal and Socioeconomic Justification of Education Projects.* Manila.

[3] The original analysis also had applied a social discount rate of 6%.

Table A13.1: School Enrolment 2017 and Planned Capacity by School

Junior Secondary School	Enrolment in 2015	Planned Design Capacity in 2020	Actual Enrolment 2020	Change in Actual Enrolment in 2020 over 2015 (%)	Enrolment Capacity Utilization in 2020 (%)
Kwataparen	144	260	160	11.1	–38.5
Lowiepeng/Ineaula	210	220	352	67.6	+60.5
Imaki	97	140	122	25.8	–12.9
Total	**451**	**620**	**634**	**40.6**	**2.3**

Source: Ministry of Education and Training enrolment statistics and economic analysis done during project implementation.

4. Under the project, new school buildings provide safe emergency shelters for the general community in the event of a disaster. These new school buildings designed to serve as shelters were built in accordance with the emergency shelter standards set by Vanuatu's National Disaster Management Office (NDMO). The original economic analysis projected that these buildings would provide shelter to about 24.3% of the population (1,086 persons) within a three-kilometer radius of the project-supported schools. This target was successfully achieved at completion (Table A13.2).

Table A13.2: Capacity of Project Schools to Provide Shelter during Emergencies to the Local Population

JSS	Community Population (number)	Area of Safe Shelter Buildings (square meters)		Shelter (no. of people)		Population Coverage (%)	
		Planned	Achieved	Planned	Achieved	Planned	Achieved
Kwataparen	1,855	971	971	648	648	34.9	34.9
Lowiepeng/Ineaula	1,799	446	446	297	297	16.5	16.5
Imaki	823	212	212	141	141	17.2	17.2
Total	4,477	1,629	1,629	1,086	1,086	24.3	24.3

JSS = junior secondary school.
Source: Ministry of Education and Training. Cyclone Pam School Reconstruction Project Completion Report. Port Vila; ADB. 2019. Consultant's Report on Economic and Sustainability Analysis of the Proposed Tropical Cyclone Pam School Reconstruction Project in Vanuatu Financed by the Asian Development Bank. Manila.

5. The project has helped to enhance disaster resilience in several ways. Efforts have included the "build-back-better" concept for the design and construction of buildings, active involvement of local communities and the Ministry of Education and Training staff in the design process, and information campaigns in schools and surrounding communities on responding to disasters, safer construction techniques and setting standards for school maintenance.

Table A13.3: Student Enrolment at Project Schools, 2014–2020

(student enrolment, number of students)

	2014			2015			2016			2017			2018*			2019*			2020		
School	**M**	**F**	**T**	**M**	**F**	**T**	**M**	**F**	**T**	**M**	**F**	**T**	**M**	**F**	**T**	**M**	**F**	**T**	**M**	**F**	**T**
Kwataparen Combined School	97	67	164	82	62	144	105	105	210	115	87	202	0	0	0	0	0	0	95	65	160
Lowiepeng/ Ineaula	116	105	221	123	87	210	115	105	220	118	100	218	129	101	230	129	106	235	198	154	352
'--Lowiepeng	50	54	104	80	49	129	45	35	80	43	44	87	52	46	98	25	23	48			0
'--Ineaula	68	51	119	43	38	81	70	70	140	75	56	131	77	55	132	104	83	187	n.a.	n.a.	0
Imaki	51	56	107	51	46	97	45	50	95	66	53	119	59	50	109	64	58	122	59	63	122
Total	**264**	**228**	492	**256**	**195**	451	**265**	**260**	525	**299**	**240**	539	**188**	**151**	**339**	**193**	**164**	**357**	**352**	**282**	634
Female, % of total			46			43			50			45			45			46			44

F = female, M = male, n.a= not applicable, T = total (male and female).
Note: In 2018 and 2019, the Kwataparen JSS was closed for reconstruction. During the closure, 142 students were sent to other schools and 60 dropped out.
Source: Ministry of Education and Training OPEN VIEMS public domain, Port Vila.

D. Costs

6. Overall, total actual capital costs for the project remained within the approved amount with about 7.4% savings from the estimated capital cost (Table A13.4). The refurbishment costs exceeded the estimates by about 40% while new construction costs remained about 29% less than the estimate. Higher refurbishment cost reflected the severity of damages caused by Tropical Cyclone Pam. The degree of savings in construction and additional costs for refurbishments of schools, however, varied significantly across the four schools, which indicated the varying intensity of damages encountered. The initial estimate allocated 10.8% of the capital costs to design and supervision, which doubled to 21.5% at completion. Likewise, the varying extent of damages due to the cyclone led to the reallocation of capital costs across the four schools. Most significantly, the share of the total capital cost for Kwataparen JSS declined by 22% from the estimates. Furthermore, the initial estimate for the construction cost (except design and supervision) also differed at completion. It was expected that 15% of the construction cost would be spent on refurbishments and 85% on new buildings. During implementation, the extent of refurbishment works required meant that the share of cost incurred for new construction declined to 74% at completion. The variation was related to difficulties in adequately assessing the level of damage to existing buildings at the time of the appraisal due to the remote locations of the schools.

Table A13.4. School Refurbishment and Reconstruction Costs (appraisal versus actual)

School Name and Cost Type	Appraisal Estimate ($)	Actual Cost ($)	Deviation from Estimate ($)	Deviation from Estimate (%)
Kwataparen JSS				
Refurbishments	92,553	103,760	11,207	12.1
New buildings	2,057,447	1,373,563	(683,884)	(33.2)
Total construction costs	2,150,000	1,477,323	(672,677)	(31.3)
Design and supervision Costs	259,605	405,679	(146,074)	(56.27)
Total capital costs	**2,409,605**	**1,883,002**	(932,282)	(21.9)
Lowiepeng JSS				
Refurbishments	181,486	279,176	97,690	53.8
New buildings	181,514	216,986	35,472	19.5
Total construction costs	363,000	496,162	133,162	36.7
Design and supervision Costs	43,831	136,248	(43,831)	210.8
Total capital costs	**406,831**	**632,410**	89,331	55.4
Ineaula JSS				
Refurbishments	277,899	335,307	57,408	20.7
New buildings	1,048,301	722,728	(325,573)	(31.1)
Total construction costs	1,326,200	1,058,035	(268,165)	(20.2)
Design and supervision Costs	160,134	290,541	(160,134)	81.4
Total capital costs	**1,486,334**	**1,348,576**	(428,299)	(9.3)
Imaki JSS				
Refurbishments	137,246	243,724	106,478	77.6
New buildings	578,554	434,496	(144,058)	(24.9)
Total construction costs	715,800	678,220	(37,580)	(5.3)
Design and supervision Costs	86,430	186,242	(86,430)	115.5
Total capital costs	**802,230**	**864,462**	(124,010)	7.8
Total Four Schools				
Refurbishments	689,184	961,967	272,783	39.6
New buildings	3,865,816	2,747,772	(1,118,044)	(28.9)
Total construction costs	4,555,000	3,709,739	(845,261)	(18.6)
Design and supervision Costs	550,000	1,018,710	468,710	85.2
Total capital costs	**5,105,000**	**4,728,449**	(376,551)	(7.4)

( ) = negative, JSS = junior secondary school.
Source: ADB calculations based on data received from the Ministry of Education and Training.

7. The economic analysis is undertaken consistent with earlier analysis during project implementation and unit cost is assessed based on capital costs per student and per graduate (4-year education in Grade 7 to 10) as benefits of the restoration of school buildings over a 30-year economic life of the project. The computations appear in Table A13.5.

Table A13.5: Capital Cost Estimate Scenarios Per Student and Per Graduate over 30 Years (Nominal Value)

School	Enrolment (no.)		Capital Cost of Refurbishment and New Construction ($)		Cost per Student over 30 years ($)		Cost per Graduate over 30 Years ($)	
	Estimated	Actual	Estimated	Actual	Estimated	Actual	Estimated	Actual
Kwataparen	260	160	2,409,605	1,883,002	309	392	1,236	1,569
Lowiepeng/Ineaula	220	352	1,892,165	1,980,986	287	188	1,147	750
Imaki	140	122	802,230	864,462	191	236	764	945
Total	620	634	5,104,000	4,728,449	274	249	1,098	994

Source: Data collected by the project completion report mission from the implementing agencies and the Ministry of Education and Training.

8. The capital cost per student in nominal terms for works undertaken in the project over 30-year economic life is assessed to be $249 with wide variation between $188 for Lowlepeng/Ineaula combined JSS (reflected by significantly higher enrolment than planned) and $392 for Kwataparen JSS due to a lower enrolment number. Likewise, the cost per graduate (4-year schooling) over 30 years averages to $994, ranging from $750 for the Lowlepeng/Ineaula JSS to $1,569 for Kwataparen JSS. Overall, the actual unit costs are lower than originally estimated. These are deemed reasonable since these also cover the cost of boarding facilities at each school, which are critical for the education of students from remote and sparsely populated areas with poor infrastructure and connectivity.

9. Table A13.6 shows the net present value of capital and maintenance costs for each of the schools and the overall. The analysis assumes an economic life of 30 years and a discount rate of 6%. The capital costs are distributed over 3 years as reflected in the actual project disbursement schedule. The capital costs include both construction and design/supervision costs. Table A13.6 shows the two unit cost measures based on NPV of costs per student per year and NPV of cost of per graduate (assuming 4 years taken to complete the JSS in grades 7 to 10), respectively. The analysis has included the maintenance costs estimated during implementation. The NPV of school refurbishment/construction cost (capital and maintenance) is assessed to be $4.46 million comprising $4.29 million in construction and $203,253 (4.7%) as maintenance costs. The overall NPV of cost per student over 30 years of economic life is estimated at $237 and per graduate as $946 (Table A13.6). Overall, unit cost both in terms of per student and per graduate was 15.1% less compared to appraisal scenario estimates.

Table A13.6: Net Present Value of School Project Costs and Two Unit Cost- Measures

School	Enrolment	At Completion NPV of Total Costs ($)	NPV Cost per Student ($)		NPV Cost per Graduate ($)	
			Appraisal Scenario	At Completion	Appraisal Scenario	At Completion
Kwataparen	160					
Construction		1,711,319	300	357	1,201	1,426
Maintenance		88,272	12	18	48	74
Total		**1,799,590**	312	375	1,249	1,500

School	Enrolment	At Completion NPV of Total Costs ($)	NPV Cost per Student ($)		NPV Cost per Graduate ($)	
			Appraisal Scenario	At Completion	Appraisal Scenario	At Completion
Lowiepeng/Ineaula	352					
Construction		1,800,369	236	170	944	682
Maintenance		82,353	11	8	44	31
Total		**1,882,722**	**247**	178	988	713
Imaki	122					
Construction		785,644	186	215	744	859
Maintenance		33,863	9	9	38	37
Total		**819,507**	**195**	224	780	896
Total All Schools	634					
Construction		4,297,332	267	226	1,067	904
Maintenance		203,253	12	11	47	43
Total		**4,500,583**	**279**	237	1,114	946

NPV = net present value.
Source: Ministry of Education and Training and ADB records.

10. One of the key objectives of the school refurbishment/construction was also to provide safe shelter during emergencies to the local population. Initially, it was expected that new school buildings would provide safe shelter in the event of a disaster to 1,086 people, representing 24.3% of the communities' population surrounding the schools. The shelters have been designed to withstand a category 5 cyclone in line with NDMO standards. At completion, it is estimated that that the coverage would indeed be 100% of the target. Table A13.7 shows that the NPV cost per head of protected population overall is $3,273, which translates into $109 per person per year. At completion, the overall NPV cost per person protected was 21.0% less than the appraisal estimates. The unit NPV cost varied across the three schools with $2,605 for the Kwataparen JSSs, $4,071 for the Imaki JSS, and $4,350 for the joint Ineaula/Lowiepeng JSS.

Table A13.7: Net Present Value of School Project Costs per Head Protected Population

School	Protected Population	NPV of Total Costs ($)	NPV Cost per Protected Population ($) NPV Cost At Appraisal	NPV Cost At Completion	Deviation from Appraisal (%)	NPV per Head Protected NPV per head per Year Population/Year at Completion
Kwataparen	648					
Construction		1,609,285	3,467	2,483	(28.4)	83
Maintenance		79,020	127	122	(3.7)	4
Total		**1,688,304**	3,593	2,605	(27.5)	87
Lowiepeng/ Ineaula	297					
Construction		1,234,154	4,679	4,155	(11.2)	139
Maintenance		57,739	206	194	(5.6)	96
Total		**1,291,893**	4,885	4,350	(11.0)	145
Imaki	141					
Construction		560,757	4,579	3,977	(13.1)	133
Maintenance		13,318	98	94	(3.8)	3
Total		**574,075**	4,677	4,071	(12.9)	192
Total All Schools	1,086					
Construction		3,404,195	3,943	3,135	(20.5)	104
Maintenance		150,077	201	138	(31.2)	5
Total		**3,554,272**	4,144	3,273	(21.0)	109

( ) = negative, NPV = net present value.
Source: Ministry of Education and Training enrolment statistics and project records.

E. Summary

11. As this was an emergency assistance project, the economic analysis was conducted during project implementation (September 2019) by the project team. The new school buildings were designed based on build back better principles and to design standards enabling them to withstand Category 5 cyclones.

12. The project provided an improved and safer learning environment for students in the target schools. Against the target of 620 students, total enrolment reached 634 in 2020. Based on 1.5m^2 per person of space required by the NDMO prescribed standards, the school shelter facilities can accommodate 1,086 individuals during a disaster event, meeting the appraisal target. Overall, the results from the economic analysis at completion remained consistent with the *ex-ante* analysis. However, there was significant variation at the individual school level.

13. The unit costs are influenced by the number of beneficiaries (students/community residents) reflected by variation in unit NPV costs. The high number of students enrolled at the combined school (Loweipeng and Ineaula JSS) contributed to a lower unit cost. Overall, the project was successfully completed within the available funds and by the approved extended project implementation period. Project performance is hence rated as *efficient.*

SUSTAINABILITY ANALYSIS

A. Education Sector Strategy

1. The Vanuatu Education and Training Sector Strategy[1] was guided by the country's National Sustainable Development Plan (NSDP) 2016–2030.[2] This focuses on NSDP Goal Society Pillar 2 of 'quality education calling for an inclusive, equitable, and quality education system with lifelong learning for all.' Of the four specific policy objectives of the goal, Objective 2.1 is of direct relevance in the project context and it seeks to ensure every child, regardless of gender, location, education needs, or circumstances has access to the education system.[3] The Education Sector Strategy 2001–2016 sought to address long-term issues such as (i) increasing the proportion of students entering and completing both primary and secondary education, (ii) improving the quality and relevance of education and improving the quality of teachers in the system, (iii) integrating English and French language schools,[4] and (iv) decentralizing responsibility for delivery of education to provinces. The government's Post-Disaster Needs Assessment for Cyclone Harold and COVID-19 shows the recovery needs in the education sector requires 10.5% of the overall recovery budget of $358.12 million, second only to the housing and settlement sector at 15.2%.[5] Accordingly, education is identified as a priority under the government's recovery program.

B. Operation and Maintenance

2. The reassessment of the likely sustainability of the project follows ADB evaluation guidelines that seek to ensure that the financial, institutional, and other resources are sufficient to sustain the project's outcome over its economic life in an environmentally and socially sustainable way.

3. The project during appraisal identified that a significant share of the school buildings damaged by Cyclone Pam did not meet Category 5 cyclone standards and the buildings were not adequately maintained to withstand major weather events. Besides, no preventative maintenance was being undertaken at the project supported junior secondary schools (JSSs). Project design recognized this challenge and focused on strengthening the capacity of new buildings to withstand cyclones, reduce disaster risks, and enhance disaster preparedness. The specific measures included (i) the design of new school buildings which double up as emergency shelters and can withstand Category 5 cyclones (build-back-better); and (ii) training of Ministry of Education and Training (MOET) provincial office staff and communities on the principles of building to cyclone standards. This also included information campaigns and training of communities and school authorities on safer construction techniques and standards overall disaster preparedness, the critical need for and clear benefits of sound school preventative maintenance planning and highlighting the importance of timely maintenance when damage or wear-and-tear determines the need for maintenance.

4. The contractor provided practical training in building maintenance to school and community representatives during project implementation. The contractor also developed a

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[1] Ministry of Education and Training. 2017. *Interim Vanuatu Education and Training Strategy 2017–2018.* Port Vila.

[2] Government of Vanuatu. 2016. V*anuatu 2030: The People's Plan (National Sustainable Development Plan 2016–2030).* Port Vila.

[3] These policies are developed within the context of (i) a rapidly growing population which is increasing the demand (need) for education services; and (ii) increased expectations of parents, and the community more generally, for significantly improved access to quality education.

[4] The dual language education system had been deemed costly, institutionally divisive, and inequitable.

[5] The Government of Vanuatu. *2020. Post Disaster Needs Assessment, TC Harold and COVID-19- Volume A Summary Report.* Port Vila.

technical operation and maintenance (O&M) plan and budget framework for each of the schools. The schools and MOET have adopted the O&M plan and the budget framework, which also includes maintenance costs. The schools' annual budget also includes development expenditure in addition to O&M (Table A14.1). The development expenditure includes additional costs of developing school buildings and facilities or any other school projects or activities, as approved by the school council or school community association. The schools were handed over to MOET and school administrations in February 2020. A significant departure from the 2018 and 2019 budget is that the allocation for maintenance in 2020 is significantly higher than for the previous 2 years. Also, the development expenditure allocation features prominently in 2020 as well. The per-student O&M and development expenditure is guided by the number of students enrolled. Over time, it is reasonable to expect that the enrolment numbers in these three schools will increase, leading to lower per-student costs. Building the schools back with climate-proof and disaster-resilient features is likely to ease the strain on the O&M budget in the first 3–5 years. Given the government's commitment to the education sector, the project benefits are likely to be sustained over the economic life of the buildings supported by the project.

Table A14.1: Annual Operation and Maintenance and Development Expenditure of Project Schools

	Annual Expenditure ($)			Per-Student Expenditure ($)		
	Year			Year		
School	2018	2019	2020	2018	2019	2020
Kwataparen						
O&M			7,284			46
Development			3,608			23
Ienaula/Lowiepeng						
O&M	10,313	13,288	24,640	45	57	70
Development	0	788	142,560	0	3	405
Imaki						
O&M	0	3,070	8,404	0	25	69
Development	0	0	21,120	0	0	173

O&M = operations and maintenance.
Note: The Kwataparen JSS was closed during 2018 and 2019 for refurbishment and reconstruction works. Figures for 2020 reflect the budgeted amount.
Source: Government of Vanuatu Ministry of Education and Training.

C. Income and Expenditure of Project Schools

5. The schools' overall financial viability supported by the project is assessed based on their respective income and expenditure projections. Overall, Kwataparen JSS would have incurred a deficit of $35,629 in 2020 partly due to lower enrolment numbers (not yet reached full enrolment capacity). This is expected to change as the students temporarily enrolled in other schools due to ongoing construction works eventually decide to return and more new students enroll in the coming years. The Ienaula/Lowiepeng and Imaki JSS were expected to generate surpluses of $16,373 and $1,021, respectively in 2020. These results are net of the O&M and development expenditure discussed above. The Ienaula/Lowiepeng JSS surplus in 2020 appears far less than the previous 2 years, largely because of the $71,280 allocation for the merged school's development expenditure.

Table A14.2 Revenue and Expenditure of the Schools Supported by the Project

Kwataparen Junior Secondary School (Temporarily closed in 2018 and 2019)

										Per Student Revenue and Expenditure ($)		
	2018	2019	2018	2018	2019	2019	2020*	2020	2020	2018	2019	2020
School Revenues	(Vatu)	(Vatu)	($)*	%	($)*	%	(Vatu)	($)	%			
Student							5,880,000	51,744	35			323
Government							9,380,000	82,544	56			516
Others							1,352,708	11,904	8			74
Total revenues							16,612,708	146,192	100			914
School Expenses												
Personnel expenses							7,263,080	63,915	35			399
Administration							7,140,692	62,838	35			393
Boarding							4,300,000	37,840	21			237
Education supplies							720,000	6,336	3			40
Operation							827,732	7,284	4			46
Development							410,000	3,608	2			23
Total expenditures							20,661,504	181,821	100			1,136
Surplus/(Deficit)							(4,048,796)	(35,629)				(223)

* = budgeted

Ienaula/Lowiepeng Junior Secondary School

										Per Student Revenue and Expenditure ($)		
	2018	2019	2018	2018	2019	2019	2020*	2020	2020	2018	2019	2020
School Revenues	(Vatu)	(Vatu)	($)*	%	($)*	%	(Vatu)	($)	%			
Student	9,312,357	3,537,972	81,949	51	31,134	20	20,267,000	178,350	83	356	132	507
Government	4,722,500	12,915,099	41,558	26	113,653	74	2,643,500	23,263	11	181	484	66
Others	4,371,857	1,017,000	38,472	24	8,950	6	1,500,000	13,200	6	167	38	38
Total revenues	18,406,714	17,470,071	161,979	100	153,737	100	24,410,500	214,812	100	704	654	610
School Expenses												
Personnel expenses	2,701,770	2,609,413	23,776	26	22,963	18	3,200,000	28,160	14	103	98	80
Administration	3,706,189	7,045,914	32,614	36	62,004	49	2,050,000	18,040	9	142	264	51
Boarding	1,713,930	2,449,995	15,083	16	21,560	17	5,000,000	44,000	22	66	92	125
Education supplies	1,116,602	560,627	9,826	11	4,934	4	2,800,000	24,640	12	43	21	70
Operation	1,171,890	1,509,965	10,313	11	13,288	11	1,400,000	12,320	6	45	57	35
Development	0	89,500	0	0	788	1	8,100,000	71,280	36	0	3	203
Total expenditures	10,410,381	14,265,414	91,611	100	125,536	100	22,550,000	198,440	100	398	534	564
Surplus/(Deficit)	7,996,333	3,204,657	70,368		28,201		1,860,500	16,373		306	120	47

* = budgeted

Imaki Junior Secondary School

										Per Student Revenue and Expenditure ($)		
	2018	2019	2018	2018	2019	2019	2020*	2020	2020	2018	2019	2020
School Revenues	(Vatu)	(Vatu)	($)*	%	($)*	%	(Vatu)	($)	%			
Student	2,875,950	3,976,320	25,308	56	34,992	51	4,312,000	37,946	40	232	287	311
Government	2,271,625	3,770,201	19,990	44	33,178	49	6,260,000	55,088	59	183	272	452
Others	0	3,000	0	0	26	0	99,000	871	1	0	0	7
Total revenues	5,147,575	7,749,521	45,299	100	68,196	100	10,671,000	93,905	100	416	559	770
School Expenses												
Personnel expenses	229,220	693,760	2,017	12	6,105	15	2,700,000	23,760	26	19	50	195
Administration	1,689,585	1,648,360	14,868	88	14,506	35	1,000,000	8,800	9	136	119	72
Boarding	0	1,490,950	0	0	13,120	32	2,500,000	22,000	24	0	108	180
Education supplies	0	464,186	0	0	4,085	10	1,000,000	8,800	9	0	33	72
Operation	0	348,919	0	0	3,070	8	955,000	8,404	9	0	25	69

Development	0	0	0	0	0	0	2,400,000	21,120	23	0	0	173
Total Expenditures	1,918,805	4,646,175	16,885	100	40,886	100	10,555,000	92,884	100	155	335	761
Surplus/(Deficit)	3,228,770	3,103,346	28,413		27,309		116,000	1,021		261	224	8

( ) = negative.
Note: Enrolment numbers for 2018, 2019, and 2020 are based on data available from the Ministry of Education and Training. In 2018 and 2019, students at Kwataparen Junior Secondary School (JSS) were temporarily moved to other schools due to construction. In 2020, there were 160 students at this school. At the Ienaula/Lowiepeng joint JSS, there were 230, 235, and 353 students in 2018, 2019 and 2020, respectively. At Imaki Junior Secondary School, 109 students attended in 2018 and 122 students in both 2019 and 2020.
Source: The 2018 data is based on the Provincial Education Office Tafea's compiled annual financial reports for schools; the 2019 data are based on Open VEMIS and 2020 data is obtained from the schools.

6. The actual and budgeted income and expenditure for the past three years as well as projections for next five years suggests that the project outcomes will be sustained. Based on the revenue and expenditure of the three project supported schools for 2020, the projections made by ADB indicates that the schools' financial conditions are likely to improve over the next five years as depicted in Table A14.3. The projections assume government's continued support for the schools aimed at improving the teaching and learning environment. The government's annual contribution to school revenues is set at Vt50,125 per student.[6] The projection estimates suggest that the schools would have adequate means to meet the recurrent and unforeseen expenses because of their financial positions, including resources for operation and maintenance as well as for development activities.

Table A14.3. Projected Student Number, Revenues and Expenditure (2020–2025)

Number of Students Enrolled						
JSS	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
Kwataparen	160	195	225	260	273	287
Ienaula/Lowiepeng	352	370	388	407	428	449
Imaki	122	128	135	141	148	156
Total Number of Students	**634**	**693**	**727**	**764**	**802**	**842**
Projected Revenue and Expenditure of Project Schools						
Kwataparen JSS						
Total revenues	16,612,708	18,360,968	21,038,236	24,153,429	25,361,100	26,629,155
Total expenditures	20,661,504	21,281,349	21,919,790	22,577,383	23,254,705	23,952,346
Surplus/(Deficit)	**(4,048,796)**	**(2,920,381)**	**(881,554)**	**1,576,045**	**2,106,395**	**2,676,809**
Operation	827,732	852,564	878,141	904,485	931,620	959,568
Development	410,000	422,300	434,969	448,018	461,459	475,302
Ienaula/Lowiepeng JSS						
Total revenues	24,410,500	22,876,875	24,020,719	25,221,755	26,482,842	27,806,985
Total expenditures	22,550,000	20,958,500	21,587,255	22,234,873	22,901,919	23,588,976
Surplus/(Deficit)	**1,860,500**	**1,918,375**	**2,433,464**	**2,986,882**	**3,580,924**	**4,218,008**
Operation	1,400,000	1,442,000	1,485,260	1,529,818	1,575,712	1,622,984
Development	8,100,000	6,075,000	6,257,250	6,444,968	6,638,317	6,837,466
Imaki JSS						
Total revenues	10,671,000	11,052,563	11,605,191	12,185,450	12,794,723	13,434,459
Total expenditures	10,555,000	10,871,650	11,197,800	11,533,733	11,879,745	12,236,138
Surplus/(Deficit)	**116,000**	**180,913**	**407,391**	**651,717**	**914,777**	**1,198,321**
Operation	955,000	938,650	1,013,160	1,043,554	1,074,861	1,107,107
Development	2,400,000	2,472,000	2,546,160	2,622,545	2,701,221	2,782,258

( ) = negative, JSS = junior secondary school.
Notes:

[6] Under the Education Regulation (Amendment) order 107 (2019) the government pays, in the form of grant, for each student enrolled in JSS in each government and non-government assister school per year the following: (i) a tuition fee of Vt42,000 and (ii) and operational fee of Vt8,125.

1. The total expenditures includes operation and development costs.
2. The number of students is assumed to increase at the rate of 5% per year every year for Ineula/Loweipeng and Imaki JSSs. For Kwataparen, the school capacity is 260 which is expected to reach in 2023 and increase at 5% annually thereafter. The contribution from students is assumed at 2020 base rate of Vt36,750 for Kwataparen, Vt7,510 for Ienaulau/Lowiepeng, and Vt35,344 for Imaki JSS, respectively.

Source: Asian Development Bank estimates.

7. The demand for education remains strong, including in junior secondary schools, and with resilient buildings in all three schools, it is likely to further boost enrolment in the project-supported schools. Tanna island's population accounted for approximately 11.87% of Vanuatu's population in 2016, and it increased by 12.34% between 2009 and 2016.[7] It should be noted that the Secretariat of the Pacific Regional Environment Program report also recognized that in the aftermath of the cyclone Pam, 44,000 people resided on the island compared to 32,280 reported by the Vanuatu National Statistics Office. There is a recognition that access to schooling will help the growing population of the island to access alternate cash income opportunities, thereby contributing to the overall economic development of the community.

8. The field interviews at project completion revealed that there is strong community ownership for the building infrastructure. People are committed and proactively willing to give time and contribute toward the maintenance of local infrastructure, including schools and health facilities. The MOET also assured regarding the continued budget allocation to the sector in the form of school grants supporting tuition fee subsidies and operation and maintenance support (footnote 6).

D. Overall Likely Sustainability

9. Available evidence suggests that the project outcomes are likely sustainable. There is adequate ownership among the key stakeholders, including MOET, at the central and provincial levels, and the local communities surrounding the project schools. Increasing the enrolment of students to its full capacity at Kwataparan JSS will help the school to revert to a positive balance sheet from 2023 onwards. Overall, the schools and MOET have a mechanism to set aside part of their revenues for maintenance and development works. Furthermore, the government's commitment to increase the allocation for schools to cover fees as well as maintenance (as indicated during the project completion report mission) is encouraging. The government also has encouraged schools to generate additional income by renting school facilities during non-teaching periods as well as using other innovative revenue generating methods in partnership with the local communities.

[7] 2017. Mackey; Brendan, Ware; Daniel, Nalau; Johanna, Sahin; Oz, Fleming; Christopher M; Smart, James C.R.; Connolly, Rod; Hallgren, Willow; Buckwell, Andrew. Vanuatu Ecosystem and Socio-Economic Resilience Analysis and Mapping (ESRAM). Apia, Samoa: SPREP. https://www.griffith.edu.au/__data/assets/pdf_file/0023/528080/vanuatu-ecosystem-socio-economic-resilience-analysis-mapping.pdf

JAPANESE VISIBILITY (PICTURES)

Photograph 1: Project Billboard: Imaki Junior Secondary School. Photo credit: Contractor: China Civil Engineering Construction Corporation (CCECC).

Photograph 2: Unveiling of plaque at Imaki Junior Secondary School. From left to right, ADB Senior Country Coordination Officer Nancy Wells; Ambassador of Japan Her Excellency Harumi Katsumata; Minister of Education and Training Government of Vanuatu Jean-Piere Niroa. Photo credit: Contractor (CCECC).

Photograph 3: Unveiling of plaque at Kwataparen Junior Secondary School. From left to right: Jean Pierre Niroa, Minister of Education and Training; Mr. Naoki Takechi, Japan International Cooperation Agency (JICA) representative. Photo credit: Contractor (CCECC).

Photograph 4: Unveiling of plaque at Kwataparen Junior Secondary School. From left to right: Jean Pierre Niroa, Minister of Education and Training; Naoki Takechi, JICA representative; ADB Country Coordinator Nancy Wells. Photo credit: Contractor (CCECC).

Photograph 5: Plaque unveiled at Kwataparen Secondary School: From left to right: Project Management Consultant Troy Mahuk; Design and Supervision Consultant (DSC) Project Supervisor from Kramers Ausenco Nicholson Garae; DSC Project Architect, and Manager from Kramers Ausenco, Saju Abraham; Minister of Education and Training Jean Pierre Niroa; Seventh Day Adventist Mission President Pr. Nos Terry; JICA representative Naoki Takechi; ADB Senior Country Coordination Officer Nancy Wells; Contractor's (CCECC) General Manager Liang Xing; Project Manager at Ministry of Education and Training Gordon Craig; Contractor's (CCECC) Site Supervisor Fu Xin Yu. Photo credit: Contractor (CCECC).

Photograph 6: Delegation during welcoming and appreciation ceremony at Imaki Junior Secondary School. Photo credits: Contractor (CCECC).

Photograph 7: Whitesands Bilingual College (former, Ienaula - Lowiepeng) Dining Hall. Photo credit: MOET

Photograph 8: Whitesands Bilingual College (former, Ienaula - Lowiepeng) Dining Hall. Photo credit: MOET

Photograph 9: Whitesands Bilingual College (former, Ienaula - Lowiepeng) school buildings. Photo credit: MOET

Photograph 10: Kwataparen administration building. Photo credit: MOET

Photograph 11: Kwataparen administration building. Photo credit: MOET

Photograph 12: Administration building at Imaki Junior Secondary School. Photo credit: MOET

Photograph 13: ADB Project vehicle parked near the base of Mount Yasur (active volcano in the background. Troy Mahuk ADB/MOET Project Management Consultant (left), Nicholson Garae, project design and supervision consultant. Photo credit: MOET