



# Report and Recommendation of the President to the Board of Directors

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Project Number: 48192  
May 2014

## Proposed Grant and Administration of Grant Kingdom of Tonga: Cyclone Ian Recovery Project

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Asian Development Bank



## CURRENCY EQUIVALENTS

(as of 29 April 2014)

Currency unit	–	pa'anga (T\$)
T\$1.00	=	\$0.5606
\$1.00	=	T\$1.7838
NZ\$1.00	=	\$0.8538
\$1.00	=	NZ\$1.1712

## ABBREVIATIONS

ADB	–	Asian Development Bank
CRSP	–	Climate Resilience Sector Project
km	–	kilometer
MET	–	Ministry of Education and Training
MFNP	–	Ministry of Finance and National Planning
MOI	–	Ministry of Infrastructure
OIREP	–	Outer Island Renewable Energy Project
PIU	–	project implementation unit
PMU	–	project management unit
TPL	–	Tonga Power Limited

## NOTE

In this report, "\$" refers to US dollars, unless otherwise stated.

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## CONTENTS

	<b>Page</b>
PROJECT AT A GLANCE	
I. THE PROPOSAL	1
II. THE PROJECT	1
A. Rationale	1
B. Impact and Outcome	4
C. Outputs	4
D. Investment and Financing Plans	5
E. Implementation Arrangements	6
III. DUE DILIGENCE	7
A. Technical	8
B. Economic and Financial	8
C. Governance	8
D. Poverty and Social	9
E. Safeguards	9
F. Risks and Mitigating Measures	9
IV. ASSURANCES	10
V. RECOMMENDATION	10
APPENDIXES	
1. Design and Monitoring Framework	11
2. List of Linked Documents	14

## PROJECT AT A GLANCE

<b>1. Basic Data</b>		<b>Project Number: 48192-001</b>	
<b>Project Name</b>	Cyclone Ian Recovery Project	<b>Department /Division</b>	PARD/PATE
<b>Country Borrower</b>	Tonga Kingdom of Tonga	<b>Executing Agency</b>	Ministry of Finance & National Planning (MFNP)
<b>2. Sector</b>		<b>ADB Financing (\$ million)</b>	
✓ Energy	Energy sector development and institutional reform		2.28
Education	Education sector development		2.24
		<b>Total</b>	<b>4.52</b>
<b>3. Strategic Agenda</b>		<b>Climate Change Information</b>	
Inclusive economic growth	Pillar 2: Access to economic opportunities, including jobs, made more inclusive	Climate Change impact on the Project	High
Environmentally sustainable growth	Disaster risk management		
<b>4. Drivers of Change</b>		<b>Gender Equity and Mainstreaming</b>	
Knowledge solutions	Pilot-testing innovation and learning	No gender elements (NGE)	✓
Partnerships	Bilateral institutions (not client government) Official cofinancing		
<b>5. Poverty Targeting</b>		<b>Location Impact</b>	
Project directly targets poverty	No	Rural	High
<b>6. Risk Categorization: Low</b>			
<b>7. Safeguard Categorization Environment: B Involuntary Resettlement: C Indigenous Peoples: C</b>			
<b>8. Financing</b>			
<b>Modality and Sources</b>		<b>Amount (\$ million)</b>	
<b>ADB</b>		<b>4.52</b>	
Sovereign Grant: Asian Development Fund		4.52	
<b>Cofinancing</b>		<b>4.27</b>	
New Zealand Grant		4.27	
<b>Counterpart</b>		<b>1.91</b>	
Government		1.91	
<b>Total</b>		<b>10.70</b>	
<b>9. Effective Development Cooperation</b>			
Use of country procurement systems		Yes	
Use of country public financial management systems		Yes	

## I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on (i) a proposed grant and (ii) proposed administration of a grant to be provided by the Government of New Zealand, both to the Kingdom of Tonga for the Cyclone Ian Recovery Project.<sup>1</sup>

2. The project will support the efforts of the Government of Tonga to reconstruct and climate- and disaster-proof the electricity network and school facilities in the Ha'apai islands that were damaged by Tropical Cyclone Ian in January 2014.

## II. THE PROJECT

### A. Rationale

3. Tonga is a country of 176 islands and four island groups—Tongatapu, where 75% of its 102,000 people and most of its islands with permanent settlements are found, as well as 'Eua, Ha'apai, and Vava'u. About 7.4% of the population lives in the Ha'apai island group, which was the area worst hit by Cyclone Ian. Ha'apai consists of 51 islands, 17 of which are inhabited. The two main islands are Lifuka and Foa, and the main villages are Pangai and Ha'ano.

4. Based on its exposure, susceptibility, and coping and adaptive capacities, Tonga has been ranked second only to Vanuatu among the countries most at risk of disasters caused by natural hazards.<sup>2</sup> The country is already experiencing the effects of climate change, as increasing variability in rainfall patterns is causing flooding and droughts in some locations, rising ocean temperatures have led to coral bleaching and destruction of natural coastal barriers, and sea level rise is contributing to coastal erosion. These changes have increased the country's exposure to disasters caused by climatic events such as tropical cyclones and storm surges,<sup>3</sup> which have inflicted significant losses on Tonga's economy. For example, a cyclone in 2002 resulted in losses of \$60 million, and losses from another in 2010<sup>4</sup> reached \$22 million.<sup>5</sup> Tonga is also highly vulnerable to earthquakes and tsunamis because of its location and geology.<sup>6</sup>

5. **The emergency.** On 11 January 2014, the most powerful storm ever recorded in Tonga's waters passed directly over the northeast islands of Ha'apai. Cyclone Ian was a category 5 system, with winds of more than 200 kilometers (km) per hour and gusts of about 300 km per hour. Around 5,000 people were directly affected—66% of Ha'apai's population. The Prime Minister declared a state of emergency for Ha'apai on the same day, and the government formally requested international assistance on 23 January once the extent of damage was clearer.

6. **Poverty impacts.** Ha'apai's economy is based on subsistence agriculture. About 23.0% of the population lives below the basic needs poverty line, and 2.0% experience food poverty. The effects of Cyclone Ian are expected to result in a short-term increase in poverty because of

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<sup>1</sup> The design and monitoring framework is in Appendix 1.

<sup>2</sup> Alliance Development Works. 2012. *World Risk Report 2012*. Berlin.

<sup>3</sup> Government of Tonga. 2005. *Initial Communication to the United Nations Framework Convention on Climate Change*. Nuku'alofa.

<sup>4</sup> Government of Tonga. 2002. *Natural Disaster Management Report*. Nuku'alofa.

<sup>5</sup> Government of Tonga. 2010. *Initial Damage Assessment Report*. Nuku'alofa.

<sup>6</sup> Government of Tonga. 2010. *Joint National Action Plan on Climate Change Adaptation and Disaster Risk Management, 2010–2015*. Nuku'alofa.

(i) the destruction of subsistence agricultural crops, fishing opportunities due to damage to fishing boats, and inputs for handicraft production on which most households rely; and (ii) disruption to private businesses, including trade stores and tourism enterprises, with a consequent reduction in employment. Total losses through these channels are expected to reach almost \$8.0 million. The scale and impact of these losses relative to current incomes are substantial, since Ha'apai provides few other ways to generate income. Based on data from a 2009 household income and expenditure survey, the average annual household income was about \$11,548, and total subsistence and cash income is about \$11.6 million.<sup>7</sup> Without remedial action by the government and its development partners, the effects of the cyclone are likely to cause a significant increase in poverty and hardship.

7. **Damage and loss to property and infrastructure.** At the government's request, the Asian Development Bank (ADB) and the World Bank fielded a joint post-disaster scoping mission from 30 January to 4 February 2014. Based on its own rapid assessment and a review of the damage assessment conducted by the government with the support of the United Nations' Pacific Humanitarian Team, the mission's preliminary estimate of overall damage and losses was T\$99.1 million (or \$55.3 million)—equivalent to 12.1% of gross domestic product. Most of the damage was to housing (55% of total damage). The power and education sectors were also affected.<sup>8</sup> The projected costs of reconstruction significantly exceed the government's ability to meet them. Budgetary reallocation and deferral of some debt obligations could provide additional fiscal space, but the government has cash reserves of only about \$15.0 million—below the minimum of 2 months of recurrent spending considered a key fiscal anchor. The scoping mission concluded that the government could meet around \$5.0 million of emergency recovery needs without depleting cash reserves to unreasonably low levels.

8. The Tropical Cyclone Ian Response Plan, on which the government's post-disaster needs assessment is based, found that the cyclone caused significant damage to homes and crops. Most of the agricultural damage was to the cassava crop, which is a staple. In Ha'apai, 80% of the homes need to be rebuilt, and extensive replanting is required to replace the loss of or damage to 95% of the island group's crops. The World Bank is providing \$10 million for housing reconstruction, which will include (i) the provision of core housing, water supplies, and sanitation services; (ii) repairs to housing and key public buildings; and (iii) improvements to existing undamaged housing to make it more climate-resilient. Oxfam New Zealand, in association with a local nongovernment organization, is helping to implement livelihood recovery programs. The Ministry of Agriculture, Fisheries, and Forests is working with communities to quickly plant about 400 acres of local food crops—mostly taro and cassava—for local consumption.

9. **Power sector damage.** According to Tonga Power Limited (TPL), the state-owned electricity utility, the cyclone damaged 90% of the Ha'apai power network's distribution lines, 40% of the high-voltage poles and 70% of the low-voltage poles, 65% of the transformers, 90% of the transformer structures, one of its two generators, and 95% of its streetlights. This left almost all of the island group without power and most of the streets without illumination at night.<sup>9</sup> Community-owned solar systems in Tonga's other outer islands were also damaged.

10. **Education sector damage.** The Ministry of Education and Training (MET), which administers all government schools in Ha'apai, reported that 16 of the island group's 31 primary

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<sup>7</sup> Government of Tonga. 2011. *2009 Household Income and Expenditure Survey Report*. Nuku'alofa.

<sup>8</sup> Government of Tonga. 2014. *Tropical Cyclone Ian Response Plan*. Nuku'alofa.

<sup>9</sup> TPL. 2014. *Ha'apai Restoration Investment Plan and Justification Report*. Nuku'alofa.

and secondary schools were damaged or destroyed. Ten of the damaged schools were government primary schools. A total of 1,293 students were affected. The extent of the damage varied. Some schools suffered broken windows and doors. Buildings and roofs were damaged or destroyed at others. While education supplies have been provided, as well as tents to serve as temporary learning spaces, students need to return to a safe, clean learning environment as soon as possible.

11. **Economic impact.** Tonga's aggregate economic output is expected to decline slightly as a result of Cyclone Ian. While the cyclone is projected to create a loss in output equivalent to 2.7% of gross domestic product, the disaster will also likely trigger additional economic activity that will partly offset this reduction. Reconstruction—mostly financed by Tonga's development partners—is expected to boost construction and services. Experience also suggests that remittances from expatriate Tongans living abroad will increase in response to the loss of livelihoods and declines in incomes and output in Ha'apai. The impacts on revenue and the balance of payments are also expected to be limited, reflecting the low level of formal economic activity in that group of islands.

12. **Government action and preliminary assessment of the country's capacity.** On 22 January, Tonga's National Emergency Operations Centre instructed government officials to develop a 3-month cyclone response plan, including immediate and short-term relief, recovery, and reconstruction needs. With the assistance of development partners, the plan was developed and endorsed by the cabinet on 31 January. It prioritized the rehabilitation of housing, schools, and the main electricity network. In assessing reconstruction needs, the plan adopted the building-back-better principle by requiring that damaged assets be rebuilt to a higher standard than before so that they could better withstand future weather events and disasters.

13. **Development coordination.** The governments of Australia, the People's Republic of China, France, Japan, New Zealand, and the United States have provided support for initial relief. The United Nations' Pacific Humanitarian Team mobilized relief items and technical support from several offices in the region. On 7 February, the Government of Tonga requested ADB support through the Disaster Response Facility for post-cyclone reconstruction in the power and education sectors, noting that ADB's comparative advantage and ongoing projects in these sectors would allow the rapid inception, scaling up, and implementation of the project.

14. **Structure and modality of ADB's emergency assistance.** In response to the government's request, ADB has prepared its emergency assistance as a stand-alone project, with distinct outputs to address the disaster response and recovery needs in the power and education sectors. The project will use the implementation arrangements established for two existing projects—the Outer Island Renewable Energy Project (OIREP)<sup>10</sup> for the power sector and the Climate Resilience Sector Project (CRSP)<sup>11</sup> for the education sector. The Ministry of Finance and National Planning (MFNP) will be the executing agency for both outputs. The project will be cofinanced by and coordinated with the Government of New Zealand, which has committed \$4.27 million equivalent for reconstruction of damaged schools.<sup>12</sup>

<sup>10</sup> ADB. 2013. *Report and Recommendation of the President to the Board of Directors: Proposed Grant and Administration of Grant to the Kingdom of Tonga for the Outer Island Renewable Energy Project*. Manila.

<sup>11</sup> ADB. 2013. *Report and Recommendation of the President to the Board of Directors: Proposed Administration of Grant to the Kingdom of Tonga for the Climate Resilience Sector Project*. Manila.

<sup>12</sup> This amount may be adjusted for currency fluctuations to match the grant amount received by ADB. The USD amount is \$4,266,000.



## B. Impact and Outcome

15. The impact of the project will be more climate- and disaster-resilient electricity and education services provided to the people of Ha'apai. The outcome will be the restored electricity supply in Ha'apai and normal education services resumed at pre-Cyclone Ian levels in schools.

## C. Outputs

16. The project will support the government's efforts to reconstruct and climate- and disaster-proof the main electricity network in Ha'apai and damaged schools (outputs 1 and 2), and remove asbestos from damaged buildings (output 3).

17. **Output 1: Reconstruction and climate- and disaster-proofing of the electricity network.** The project will restore access to the electricity supply network and make it more resilient to extreme weather and disasters. Repairing the damage to these utilities—assessed at more than 90% of the Ha'apai network on 13 January—and upgrading them requires considerable investment. After the Government of New Zealand contributed \$1.4 million for the initial emergency restoration of power lines in Ha'apai, TPL prepared a plan and cost estimates for repairing and climate-proofing the electricity network.

18. The project will reconstruct the distribution network and upgrade its capacity from 6.6 kilovolts to 11.0 kilovolts. This will include (i) construction of around 15.2 km of high-voltage overhead bundle lines, (ii) construction and installation of around 32 km of low-voltage overhead lines, (iii) reconnecting the underground cables of about 1,000 households and 30 commercial and government buildings to the TPL network, and (iv) construction and climate proofing of around 2 km of underground cables. The project will also restore and climate-proof about 161 streetlights and purchase temporary solar lanterns and community solar chargers for about 100 households in the outer Ha'apai islands. This output will use the implementation arrangements established for the OIREP, which is being implemented by TPL.

19. **Output 2: Reconstruction and climate- and disaster-proofing of schools.** The project will support the reconstruction, restoration, and climate- and disaster-proofing of 10 primary school buildings and up to 6 secondary schools that were damaged in Ha'apai.<sup>13</sup> The reconstruction will include (i) constructing improved building structures (classrooms and staff quarters); (ii) providing appropriate water and sanitation facilities for schools; and (iii) installing necessary fixtures and furniture, such as blackboards, desks, and chairs. This will allow classes to resume in a safe environment that is conducive to learning; in the future, it will reduce the number of days that schools are closed because of extreme weather and natural disasters. The reconstruction will be implemented in two phases. Primary schools will be rebuilt first as most of them are government owned, were severely damaged, and serve half of the affected student population. Secondary schools will be selected for reconstruction in line with the government's secondary school rationalization policy and with the agreement of ADB. MET has provided a preliminary assessment of the damage, and the cost of reconstruction and building back better, including demolition and removal of debris. The government shall ensure that all rehabilitated schools, including privately run schools, will continue to be used as schools. This output will use the implementation arrangements set up under the CRSP.

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<sup>13</sup> The damaged government primary schools are Ha'ano, Fakakai, Mo'unga'one, Mata'aho, Lofanga, Faleloa, Fotua, Koulo, Pangai, and Tongoleleka. The damaged secondary schools are Ha'apai High School, Taufa'ahau Pilolevu College, St Joseph's Community College, Tailulu College, 'Ofamo'oni School, and Petani Christian Bilingual Side School.

20. **Output 3: Removal of asbestos from damaged buildings.** The project will support the removal of material containing asbestos from Niu'ui Hospital, and damaged schools, government offices, and residential buildings. An assessment by the World Bank identified the presence of asbestos in these buildings.<sup>14</sup> Since local knowledge on safe handling of asbestos is limited and Ha'apai does not have a site to dispose of asbestos, it will be removed to Tongatapu. This output will allow reconstruction works to be carried out safely.

#### D. Investment and Financing Plans

21. The project is estimated to cost \$10.70 million (Table 1).

**Table 1: Project Investment Plan**  
(\$ million)

Item	Amount <sup>a</sup>
<b>A. Base Cost<sup>b</sup></b>	
1. Output 1: Reconstruction and climate-proofing of electricity network	3.04
2. Output 2: Reconstruction and climate-proofing of schools	6.36
3. Output 3: Removal of asbestos from damaged buildings	0.22
<b>Subtotal A</b>	<b>9.61</b>
<b>B. Contingencies<sup>c</sup></b>	<b>1.08</b>
<b>Total (A+B)</b>	<b>10.70</b>

<sup>a</sup> Includes government contribution to taxes and duties of \$1.59 million to be financed by exemption.

<sup>b</sup> January 2014 prices.

<sup>c</sup> Calculated considering physical, price, and currency contingencies at 14% of base cost for civil works, and 5.0% of base cost of equipment for price and currency fluctuations.

Source: Asian Development Bank estimates.

22. The Government of Tonga has requested grants totaling \$8.78 million equivalent to finance goods, works, and services.<sup>15</sup> The Government of New Zealand will provide grant cofinancing of NZ\$5.0 million for activities under output 2. ADB will administer the grant, equivalent to \$4.27 million, at the exchange rate prevailing during fact finding (footnote 12). The funds will be denominated in US dollars pursuant to ADB's standard accounting practices. The Government of New Zealand will cofinance the cost of civil works and equipment with ADB, based on different ratios for each cost category. ADB will provide \$4.52 million from its Disaster Response Facility.<sup>16</sup> The government will provide the equivalent of \$1.67 million as an in-kind contribution toward administrative costs and exemption from taxes and duties. TPL will provide the equivalent of \$0.24 million as in-kind contribution towards staff time for the design, supervision, and installation of works, as well as management and administration of output 1 of the project. The government will make some of the proceeds of the grants available to TPL under subsidiary grant agreements on terms and conditions satisfactory to ADB. The financing plan is in Table 2.

<sup>14</sup> World Bank. 2014. *Asbestos Assessment Report, Cyclone Ian*. Nuku'alofa. Commissioned by the Government of Tonga.

<sup>15</sup> ADB and any ADB-administered financing may finance transportation and insurance costs under the project.

<sup>16</sup> ADB's policy on Piloting a Disaster Response Facility became effective on 1 January 2013.

**Table 2: Financing Plan**

<b>Source</b>	<b>Amount (\$ million)</b>	<b>Share of Total (%)</b>
Asian Development Bank		
Disaster Response Facility (grant)	4.52	42.24
Government of New Zealand (grant) <sup>a</sup>	4.27	39.91
Government of Tonga <sup>b</sup>	1.67	15.61
Tonga Power Limited	0.24	2.24
<b>Total</b>	<b>10.70</b>	<b>100.00</b>

<sup>a</sup> The Government of New Zealand's contribution was calculated at the exchange rate prevailing during fact finding. This amount includes a provision of 5.0% of the Asian Development Bank's administration fee, audit costs, bank charges, and a provision for foreign exchange fluctuations (if any), to the extent that these items are not covered by the interest and investment income earned on this grant, or any additional grant from the Government of New Zealand.

<sup>b</sup> The Government of Tonga's contribution will comprise (i) in-kind contribution for administration costs, such as those for office space and counterpart time totaling \$78,000; (ii) exemption from duty and tax on equipment and income taxes on salaries (other than for citizens or nationals of the recipient country) totaling \$1,595,649; and (iii) waiver of the 1.0% fee based on the capital cost of the project, and defined under the Environmental Impact Assessment Regulation 2010.

Source: Asian Development Bank estimates.

## **E. Implementation Arrangements**

23. The MFNP will be the executing agency. TPL and the Ministry of Infrastructure (MOI) will be the implementing agencies, with the MET, the Ministry of Public Enterprises, and the Tonga Energy Road Map Implementation Unit providing oversight.

24. **Output 1.** TPL, through the project management unit (PMU) established under the OIREP, will be the implementing agency. TPL will conduct the final technical and engineering designs and bidding process. TPL staff will carry out the design, supervision, and installation work. ADB will finance the incremental labor costs TPL incurs in carrying out the project civil works, using force account, that is, its own resources to finance approved civil works required for the project. TPL will use ADB disbursement procedures and financial management guidelines. TPL will maintain separate accounts for the project, which will be audited by an independent auditor. ADB will review the design and works periodically. The Ministry of Public Enterprises and the Tonga Energy Road Map Implementation Unit will provide national policy oversight for output 1. Repeat orders will be used for procuring miscellaneous electrical equipment, high-voltage cables, and the supply of power poles from TPL's existing suppliers that were selected using competitive procedures. This will allow TPL to start reconstruction works immediately following approval.

25. **Output 2.** MOI, through the project implementation unit (PIU) established under CRSP will be the implementing agency. The CRSP PMU under the Ministry of Land, Environment, Climate Change, and Natural Resources will assist in coordinating and overseeing implementation of output 2, with advice from MET. The CRSP procurement project committee, chaired by the MFNP, will oversee procurement. The MET will provide national policy oversight on the design of schools. The MOI will carry out the technical specifications and detailed designs for the schools with support from the PIU and two architects funded under this recovery project.

26. **Output 3.** MOI will be the implementing agency and the implementation arrangements for output 2 will be adopted. A single contractor will be hired to undertake the removal of material containing asbestos. The implementation arrangements are summarized in Table 4 and

described in detail in the project administration manual.<sup>17</sup>

27. All procurement of goods and works will be undertaken in accordance with ADB's Procurement Guidelines (2013, as amended from time to time).<sup>18</sup> The recruitment of consultants will be undertaken in accordance with ADB's Guidelines on the Use of Consultants (2013, as amended from time to time). The project will be implemented over 3 years and 7 months, which is longer than the typical period of 2 years for emergency assistance projects. This extended implementation period is justified because the project will not only assist with reconstruction and restoration, but will also build back better and provide assets with improved climate change and disaster resilience.

**Table 3: Implementation Arrangements**

Aspects	Arrangements		
Implementation period	1 May 2014—31 December 2017		
Project completion date	31 December 2017		
<b>Management</b>			
(i) Oversight body	Output 1: Tonga Energy Road Map Implementation Unit and Ministry of Public Enterprises Output 2: Ministry of Education and Training Output 3: Ministry of Infrastructure		
(ii) Executing agency	Ministry of Finance and National Planning		
(iii) Implementing agencies	Tonga Power Limited and Ministry of Infrastructure		
(iv) Implementation units	Tonga Power Limited, with support from the OIREP project management unit, will implement output 1. The Ministry of Infrastructure, with support from the CRSP project implementation unit, will implement outputs 2 and 3.		
Procurement	International competitive bidding	2 contracts	\$4,571,983
	National competitive bidding	2 contracts	\$843,000
	Shopping	12 contracts	\$909,400
	Direct contracting (World Bank housing reconstruction project performing contractors)	4 contracts	\$698,000
	Direct contracting Transnet (Repeat order)	4 contracts	\$1,520,000
	Direct contracting Tonga Timber (Repeat order)	1 contract	\$300,000
	Force account	1 contract	\$190,000
Consulting services	Individual selection	17 person-months	\$240,000
Advance contracting	Advance contracting will be undertaken to recruit the individual consultants and to procure services and goods.		
Disbursement	Grant proceeds from ADB and the Government of New Zealand will be disbursed in accordance with ADB's <i>Loan Disbursement Handbook</i> (2012, as amended from time to time) and detailed arrangements agreed upon between the government and ADB.		

ADB = Asian Development Bank, CRSP = Climate Resilience Sector Project, OIREP = Outer Island Renewable Energy Project.

Source: Asian Development Bank.

<sup>17</sup> Project Administration Manual (accessible from the list of linked documents in Appendix 2).

<sup>18</sup> Since the project is financed with ADB-administered cofinancing as well as resources from the Disaster Response Facility, universal procurement will apply. ADB. 2013. *Blanket Waiver of Member Country Procurement Eligibility Restrictions in Cases of Cofinancing for Operations Financed from Asian Development Fund Resources*. Manila.

### III. DUE DILIGENCE

28. The project is technically viable. It supports activities that respond to critical post-cyclone reconstruction priorities, as well as Tonga's national climate change adaptation and disaster risk management strategy (footnote 6). The investment activities have been screened and found appropriate. Implementing the project activities will allow for learning through monitoring and evaluation and for replication elsewhere in Tonga. The project is coordinated with and supported by other development partners. The government's Tropical Cyclone Ian Response Plan is the basis for selection of project outputs (footnote 8). Alternative technical configurations were considered. The proposed configuration is considered technically optimal under the local conditions to climate-proof the electricity network and school facilities.

#### A. Economic and Financial

29. In accordance with ADB's Disaster and Emergency Assistance Policy (2004), economic analysis for outputs 1 and 2 will be conducted before project implementation. The analysis will be carried out in accordance with ADB's Guidelines for the Economic Analysis of Projects.<sup>19</sup> The economic analysis will include demand analysis, alternatives and least-cost analysis, benefit-cost analysis, sustainability analysis, distribution analysis, and sensitivity and risk analyses.<sup>20</sup> The economic analysis will include a clear discussion of the without- and with-project scenarios. Financial analyses and evaluations will be undertaken to determine whether the project is financially viable and sustainable. Financial analyses will be conducted of (i) TPL, including the preparation and assessment of TPL's historical and projected financial statements and an analysis of key financial performance indicators; and (ii) projected incremental recurrent costs associated with output 2, including an assessment of capacity to cover these costs. A financial evaluation (benefit-cost analysis) will assess the financial viability of output 1.<sup>21</sup> Sufficient consultancy resources will be allocated to undertake the economic and financial due diligence.

#### B. Governance

30. A public expenditure and accountability report financed by the Australian Aid Program in 2010 concluded that Tonga's public finance management system was well-developed and that the legal and regulatory framework for public finance management provided a solid basis for budgeting, spending, and accountability.<sup>22</sup> A 2011 assessment by the Government of Australia of national systems identified only moderate fiduciary and corruption risks associated with using partner government systems, and recommended their use in aid programming.<sup>23</sup> ADB's policy and institutional assessment indicates that Tonga is performing better than the regional average under the criteria for economic management and public sector management and institutions, and better than most other Pacific developing member countries for quality of budgetary and financial management. Overall governance risks associated with project management, including procurement and disbursement, will be mitigated by (i) providing consultants to advise and assist in procuring goods and services, (ii) requiring that civil works contracts include a condition for contractors to adhere to ADB's Anticorruption Policy (1998, as amended to date), and (iii) periodic inspections by the CRSP PIU and the OIREP PMU of contractor fund withdrawals

<sup>19</sup> ADB. 1997. *Guidelines for the Economic Analysis of Projects*. Manila.

<sup>20</sup> In case it is not possible to undertake an accurate benefit-cost analysis for output 2, least-cost analysis will be used to ensure efficient use of project resources.

<sup>21</sup> ADB. 2014. *Financial Management, Cost Estimates, Financial Analysis, and Financial Performance Indicators. Operations Manual*. OMG2/BP. Manila.

<sup>22</sup> Government of Tonga. 2010. *Public Financial Management Performance Report*. Nuku'alofa.

<sup>23</sup> Government of Australia. 2011. *Tonga-Assessment of National Systems*. Canberra.

and settlements.<sup>24</sup> A financial management assessment concluded that pre-mitigation financial management risks for the project were moderate and financial management systems were satisfactory.

31. ADB's Anticorruption Policy (1998, as amended to date) was explained to and discussed with the government, the MFNP, the MOI, and TPL. The specific policy requirements and supplementary measures are described in the project administration manual (footnote 17).

### C. Poverty and Social

32. In a social survey conducted under the OIREP project preparatory technical assistance in April and July 2012, communities in the outer islands identified the lack of employment and other income-earning opportunities as the main cause of hardship.<sup>25</sup> The groups most vulnerable to hardship include children, youths, women, the disabled, and the elderly. The project will contribute to social and human resource development and reduce hardship by mitigating the adverse impacts of Cyclone Ian on communities in Ha'apai. It will help protect lives and assets from erosion, floods, and storm surges, as well as improve opportunities for business, jobs, and social development on Ha'apai.

### D. Safeguards

33. **Environment (category B).** The project is expected to have only small, temporary, and localized adverse impacts on the environment. These can be readily managed by proposed mitigation measures in the environmental assessment and review framework prepared for the project and the follow-up project-specific initial environment examinations.<sup>26</sup> ADB will post the framework and any other final or updated assessments on its website upon receipt.

34. **Involuntary resettlement (category C).** The implementation of the project is not expected to involve land acquisition or restrictions on land use or access to designated parks or protected areas. No third party or persons are expected to be adversely affected. If any unanticipated land acquisition and resettlement impacts arise during implementation, a resettlement plan will be prepared following the resettlement framework prepared for the project to address unanticipated impacts.<sup>27</sup>

35. **Indigenous peoples (category C).** The project is not expected to impact any distinct or vulnerable group of indigenous peoples as defined under ADB's Safeguard Policy Statement (2009). The beneficiaries are part of mainstream Polynesian society and are not discriminated against because of their language, skin color, or traditional practices.

### E. Risks and Mitigating Measures

36. The project's design assumes that the electricity supply and primary education services and teachers will be available once the reconstruction has been completed. The project has

<sup>24</sup> Risk Assessment and Risk Management Plan (accessible from the list of linked documents in Appendix 2).

<sup>25</sup> ADB. 2012. *Technical Assistance to the Kingdom of Tonga for Preparing the Outer Island Renewable Energy Development Project*. Manila (TA 7940-TON, \$500,000 approved on 2 December 2011, financed by the Japan Fund for Poverty Reduction).

<sup>26</sup> Environmental Assessment and Review Framework (accessible from the list of linked documents in Appendix 2).

<sup>27</sup> Resettlement Framework: Land Acquisition and Resettlement Framework (accessible from the list of linked documents in Appendix 2).

three main risks that are rated low to medium, but are considered manageable and will be largely mitigated during implementation (Table 4).

**Table 4: Summary of Risks and Mitigating Measures**

<b>Risks</b>	<b>Mitigating Measures</b>
More frequent or intense tropical cyclones or other natural hazards in the future	The project will ensure that infrastructure investments meet standards for cyclone and earthquake resilience.
Poor coordination between executing and implementing agencies and the agencies with oversight roles (Ministry of Public Enterprises, Ministry of Education and Training, and Tonga Energy Road Map Implementing Unit)	The implementing agencies regularly update the executing agency and the relevant agencies with oversight roles through a rigorous monitoring, reporting, and evaluation framework.
Stretched administrative capacity and resources of the government, adversely affecting the implementation and effectiveness of the emergency assistance	Adding capacity to the OIREP and CRSP implementation arrangements (project management unit and project implementation unit) will strengthen implementation and coordination capabilities, thereby ensuring effective delivery of the emergency assistance.

CRSP = Climate Resilience Sector Project, OIREP = Outer Island Renewable Energy Project.  
Source: Asian Development Bank.

#### **IV. ASSURANCES**

37. The government and TPL have assured ADB that implementation of the project shall conform to all applicable ADB policies including those concerning anticorruption measures, safeguards, gender, procurement, consulting services, and disbursement as described in detail in the project administration manual and grant documents.

38. The government and TPL have agreed with ADB on certain covenants for the project, which are set forth in the grant and project agreements.

#### **V. RECOMMENDATION**

39. I am satisfied that the proposed grant would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve

- (i) the grant not exceeding \$4,520,000 to the Kingdom of Tonga from ADB's Special Funds resources for the Cyclone Ian Recovery Project, on terms and conditions that are substantially in accordance with those set forth in the draft grant agreement presented to the Board; and
- (ii) the administration by ADB of a grant not exceeding the equivalent of NZ\$5,000,000 to the Kingdom of Tonga for the Cyclone Ian Recovery Project, to be provided by the Government of New Zealand.

8 May 2014

Takehiko Nakao  
President

## DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
<p><b>Impact</b> More climate and disaster resilient electricity and education services provided to the people of Ha'apai</p>	<p>By end of 2020:</p> <p>100% of Ha'apai electricity network functioning (Baseline: 90%–95% of the Ha'apai network damaged in 2014)</p> <p>100% of students enrolled in schools attend classes in a safe and clean environment (Baseline: all 1,293 students enrolled in 16 affected schools receiving classes in temporary shelters in 2014)</p>	<p>Tonga Power Ltd (TPL) reports</p> <p>Ministry of Education and Training (MET) reports</p> <p>Tropical Cyclone Ian Response Plan</p>	<p><b>Assumption</b> Electricity and education services will be restored and maintained.</p> <p><b>Risk</b> More intense cyclones will increase the vulnerability of the education and power sectors.</p>
<p><b>Outcome</b> Electricity supply restored and normal education services resumed at pre-Cyclone Ian levels for the people of Ha'apai</p>	<p>By end of 2018:</p> <p>Main electricity grid on Ha'apai reconstructed and upgraded and electricity supply resumed</p> <p>Education services resumed in the rebuilt and climate-proofed school buildings on Ha'apai</p> <p>Materials containing asbestos removed from damaged buildings and disposed</p>	<p>TPL reports</p> <p>MET reports</p>	<p><b>Assumption</b> School services and teachers will be available once the reconstruction has been completed.</p> <p><b>Risk</b> Poor coordination between implementing and executing agencies and the agencies with oversight roles will adversely affect project implementation.</p>



Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
<p><b>Outputs</b></p> <p>1. Ha'apai electricity network reconstructed and climate- and disaster-proofed</p> <p>2. School buildings reconstructed and climate- and disaster-proofed</p> <p>3. Removal of asbestos from damaged buildings</p>	<p>By end of 2017:</p> <p>Ha'apai distribution network upgraded from 6.6 kilovolts to 11.0 kilovolts</p> <p>15.2 kilometers of high-voltage overhead distribution lines restored and climate-proofed</p> <p>1,000 houses and 30 commercial and government buildings reconnected using climate-proofed underground connections</p> <p>161 LED streetlights installed and climate-proofed</p> <p>100 households in outer islands provided with temporary solar lanterns and community solar chargers</p> <p>2 kilometers of cables constructed and climate-proofed</p> <p>Damaged school buildings reconstructed and climate-proofed Staff quarters of agreed primary and secondary schools renovated or reconstructed</p> <p>Damaged schools equipped with furniture and materials required for an environment conducive to learning</p> <p>Reconstructed school, government, and residential buildings made safer by removal of asbestos-containing materials</p>	<p>TPL reports</p> <p>Ministry of Infrastructure (MOI) and MET reports</p> <p>MOI and MET reports</p>	<p><b>Risk</b></p> <p>The government's administrative capacity and resources may be stretched, limiting implementation capabilities of the emergency assistance.</p>

<b>Activities with Milestones</b>	<b>Inputs</b>
<b>1. Reconstruction and climate- and disaster-proofing of the electricity network</b>	Asian Development Bank (Disaster Response Facility): \$4.52 million Government of New Zealand: \$4.27 million Government of Tonga: \$1.67 million Tonga Power Limited: \$0.24 million
1.1. Provide temporary solar lanterns and chargers to communities not connected to the grid (by December 2014)	
1.2. Restore 161 streetlight fixtures and streetlight feeders (by December 2015)	
1.3. Complete underground electrical reticulation of the proposed new hospital location (by June 2017)	
1.4. Restore access to electricity, upgrade distribution network, and climate- and disaster-proof it against future events (by June 2017)	
<b>2. Reconstruction and climate- and disaster-proofing of school buildings</b>	
2.1. Replace furniture and materials for a conducive learning environment (by December 2016)	
2.2. Rebuild damaged teacher staff quarters (by June 2017)	
2.3. Reconstruct and climate- and disaster-proof damaged school buildings (by December 2017)	
<b>3. Removal of asbestos from damaged buildings</b>	
3.1. Remove and dispose of asbestos-containing materials from damaged school, government, and residential buildings (by December 2014)	

Source: Asian Development Bank.

### **LIST OF LINKED DOCUMENTS**

<http://www.adb.org/Documents/RRPs/?id=48192-001-2>

1. Grant Agreement
2. Project Agreement
3. Sector Assessment (Summary): Energy and Education
4. Project Administration Manual
5. Contribution to the ADB Results Framework
6. Development Coordination
7. Country Economic Indicators
8. Summary Poverty Reduction and Social Strategy
9. Environmental Assessment and Review Framework
10. Resettlement Framework: Land Acquisition and Resettlement Framework
11. Risk Assessment and Risk Management Plan