



GGGI

Tonga

Country Planning Framework

2023-2027





Construction of Wind Farm
Credit: Tonga Power Limited

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Cover photo: Popua Solar Farm in Nuku'alofa. Credit: Tonga Power Limited

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Foreword by the Prime Minister and Acting MEIDECC Minister

The Global Green Growth Institute (GGGI) has been an important partner of the Government of Tonga since 2018. This Country Planning Framework establishes GGGI's strategic approach to continue this partnership with the Government of Tonga and its people. We truly appreciate the energetic collaboration with GGGI on important global, regional and national initiatives and policies that Tonga has adopted in support of the country's green growth, climate change mitigation and adaptation, and sustainable development.

As Tonga is both a large Ocean State and Small Island Developing Country and climate change continues to increasingly impact our ability to elevate and even maintain our Tongan lifestyles. We have always been a resilient people, but in the face of climate change, pandemics and natural disasters, continuous support from organizations like GGGI is critically needed to help discover, navigate, and implement a resilient pathway to our preferred future.

GGGI's dedicated support for the Government of Tonga policies has provided a solid foundation for a better equipped Tonga. The Second Nationally Determined Contribution (S-NDC), 2020, Long-Term Low-Emissions Development Strategy, 2021-2050, NDC Implementation Roadmap and Investment Plan with Project Pipelines, 2021, Tonga Energy Road Map 2021-2035 (TERMPLUS) and TERMPLUS Investment Plan are pillars on which we can re-imagine and build our country's resilience to climate change and to meet the challenges of the 21st century.

With the Country Planning Framework (2023-2027), we are confident that GGGI will continue to deliver focused and aligned support to our prioritized short-term and long-term goals. If the past is any indication of the future, we trust that this relationship will continue to expand in many new and related sectors to provide further momentum towards our green economic growth and a resilient Tonga.



.....
Hon. Siasoi 'Ofakivahafolau Sovaleni Hu'akavameiliku,

Prime Minister and Acting Minister of the Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change and Communications (MEIDECC)

Message from the GGGI Director General

It is an honour for the Global Green Growth Institute (GGGI), and for me personally, to further strengthen our relationship with the people of the Kingdom of Tonga with this Tonga Country Planning Framework (CPF) 2023-2027.

Tonga became a member of GGGI in 2018, and we have since built a partnership founded in supporting and promoting strong, sustainable, and inclusive green economic growth. In 2019, Tonga welcomed GGGI's presence in-country to initially support its climate action efforts and energy sector through policy and financing. This support will now be broadened to implement green growth projects and programs through the mobilization of climate finance and green investments in additional sectors of the economy.

GGGI supports its members in implementing their Nationally Determined Contributions under the Paris Agreement as well as their commitments under the 2030 Sustainable Development Agenda. In Tonga, GGGI actively supports the Government in the transition to a green economic development model. GGGI is embedded within the Department of Energy and Department of Climate Change of the Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change and Communications. GGGI will expand its services in key Government priority sectors and ministries, particularly with the strategically important Ministry of Finance, for inclusive green economic growth for Tonga through the 5-year CPF period.

This Tonga CPF 2023-2027 sets out GGGI's response to Tonga's climate change and economic challenges and green growth opportunities. The CPF presents GGGI's work focus over the next 5 years, guiding the strategic alignment of GGGI's vision and goals with Tonga's ambitions. The CPF provides GGGI the opportunity to evaluate its in-country advantage and identify the areas where it can make significant environmental, social, and economic impacts. With programs that focus on green investments through coastal resilience and nature-based solutions, green entrepreneurship, solar energy, electric mobility, and climate finance, the CPF 2023-2027 encapsulates GGGI's contribution to Tonga's future prosperity.

It gives me great pleasure to continue our work with the Government of Tonga, to ensure that there is on-going cooperation, partnership, and coordination to support Tonga and its people in achieving their ambitious green growth objectives.



.....
Dr. Frank Rijsberman

Director General

Global Green Growth Institute

Executive Summary

The Kingdom of Tonga is an Oceanic State that has demonstrated its commitment to mitigate and adapt to climate change by fulfilling its obligations to the 2030 Sustainable Development Goals (SDG's), the United Nations Framework Convention on Climate Change (UNFCCC), and other related development and resilience agendas such as the Sendai Framework for Disaster Risk Reduction. In recent years, Tonga has developed strong public policy incorporating climate change, mitigation, and disaster preparedness into the Tonga's Strategic Development Framework 2015-2025 (TSDF II), National Infrastructure Investment Plan 2013-2023 (NIIP III), Joint National Action Plan country-level on Climate Change and Disaster Risk Management 2018-2028 (JNAP 2), Tonga's Second National Determined Contribution (2020 NDC), the Tonga Low Emissions Development Strategy (LT-LEDS) 2021-2050, and the Tonga Energy Road Map 2021-2035 (TERMPLUS).

The Global Green Growth Institute (GGGI) has been providing technical assistance to the Government of Tonga (GoT) since 2019 to support the country's clean energy transition and climate actions. GGGI support includes the development of the TERMPLUS, LT-LEDS, and Second NDC, as well as the mobilization of green investments.

The Country Planning Framework (CPF) is a five-year country-level plan that sets out the priority areas where GGGI will contribute to advancing Tonga's climate action goals and green growth transformation. It is designed to ensure that Tonga's national development priorities remain at the center of GGGI interventions by aligning GGGI resources and interventions with Tonga's national ambitions, regional commitments, and international agreements. The CPF also serves to translate the implementation of GGGI's Strategy 2030 and the Pacific Regional Strategy 2023-2027 at the country program level in coordination with Tongan development policies.

At the conclusion of the CPF, GGGI will have helped Tonga accelerate its transition to green, resilient development by mobilizing USD 100 million in green investments for priority NDC and SDG actions, reducing Greenhouse Gases (GHG) emissions by 1.78MtCO_{2e}, creating 275 green jobs, assisting 62,000 people to access clean energy, and supporting 100,000 Tongans to adapt to the effects of climate change.

The GGGI Tonga CPF will focus on delivering five GGGI Programmatic Solutions (PS) that were identified by Tongan stakeholders as critical to green growth, transformative to climate action, and having a positive socio-economic impact. The five PS and related actions for Tonga are described below:

Green Investments

GGGI will support addressing policy gaps, increasing private sector engagement, and green investment in Tonga, by developing green finance policies, growing institutional capacity and innovative partnerships, and rising direct access to climate finance through the development of bankable projects. GGGI aims to mobilize green investments of up to USD 100 million (Solar PV 57.5m, Coastal Resilience 22.5m, and other sectors 20m). Over the course of the CPF, green investments will create 275 green jobs by improving the flow of finance toward Tonga's development and climate goals. Likewise, green investments contribute to achieving the Second NDC targets by reducing GHG emissions by 1.78MtCO_{2e}.

Climate Action

GGGI will support Tonga achieve its Second NDC 2020 targets by linking global climate action to national climate action and vice versa supporting Tonga's policy and regulatory settings, Measurement, Reporting and Verification (MRV) and transparency requirements under the Paris Agreement and UNFCCC.

GGGI will build on its support to design Tonga's LT-LEDS and catalyze implementation by mobilizing investment and providing technical assistance for modeling and planning in critical sectors such as Energy and Agriculture, Forestry, and Other Land Use (AFOLU). As well as enhancing GHG emissions, MRV systems, and inventories,

GGGI will support close to 78,000 Tongans to adapt to the effects of climate change by contributing to the implementation of TERMPLUS and reaching its target of 70% generation of electricity from renewable sources, scaling up Nature-based Solutions (NbS) by bridging identified policy gaps in support of Second NDC and JNAP 2 targets. Through its climate action support, GGGI will also work to generate at least 15 green jobs and reduce 1.15 MtCO₂e of GHG emissions.

Coastal Resilience

GGGI will build on its growing capacity of developing NbS by identifying potential partnerships and leveraging financing mechanisms to support the need for assistance in coastal management to mitigate and adapt to climate threats. GGGI will contribute to Tonga's goal to restore 100% of mangrove forests and other coastal vegetation and to expand the Marine Protected Areas (MPA) and Special Management Areas (SMA) to 30% of Tonga's Exclusive Economic Zone (EEZ) by mobilizing USD 22.5 million to implement policies and relevant projects reducing the loss and damage effects of sea level rise. GGGI's work on coastal resilience will create at least 50 green jobs, and support over 22,000 Tongans to adapt to climate change.

Solar PV

GGGI will support Tonga to achieve its ambitious goals to generate 70% of its electricity from renewable sources by 2025 and 100% by 2035 by mobilizing USD 57.5 million in support of prioritized projects in the TERMPLUS Investment Plan. These investments will translate into 210 green jobs over 5 years, provide over 62,000 Tongans access to clean affordable energy, and reduce GHG emissions by 0.58 MtCO₂e. GGGI will leverage its solar mini-grid expertise to extend such solutions to Tonga's outer islands and build on its growing electric vehicle capacity to introduce sustainable land and maritime transport planning and technology in Tonga. Furthermore, GGGI will provide technical inputs and recommendations for Tonga's new National Energy Policy and a National Waste Plan, which includes waste-to-energy solutions. GGGI will also deliver pilot projects for energy efficiency in buildings that can support national-level planning and actions.

Poverty Eradication and Gender Equality

Mainstreaming gender, woman empowerment, poverty reduction, and social inclusion in its program of work in Tonga is a top priority for GGGI. In alignment with Tonga's TSDF II goal of a more inclusive, sustainable, and empowering human development with gender equality, GGGI seeks to identify and design projects that have the highest potential for poverty reduction, empowerment of women and girls and increased social and economic benefits for women participating in the development of environmental projects. Among other projects, GGGI will continue to deliver the Pacific Green Entrepreneurs Network (PGEN), which is aimed at catalyzing innovation and entrepreneurship of women and youth. GGGI expects to create 275 green jobs across all PS during the CPF 2023-2027 with at least 40% of these jobs taken up by women.

The outcomes achieved through these PS will support Tonga achieve its green growth, climate-resilient actions, and SDG's.

Acronyms and Abbreviations

ADB	Asian Development Bank
AFOLU	Agriculture, Forestry, and Other Land Use
CBIT	Capacity Building Initiative for Transparency
CPF	Country Planning Framework
EEZ	Exclusive Economic Zone
FPIC	Free, Prior, and Informed Consent
GDP	Gross Domestic Product
GEF	Global Environment Facility
GGGI	Global Green Growth Institute
GHG	Greenhouse Gas
GOP	Global Operations Priorities
GoT	Government of Tonga
HCA	Host Country Agreement
HDI	Human Development Index
HTHH	Hunga Tonga-Hunga Ha'apai disaster
ICT	Information and Communication Technology
IMF	International Monetary Fund
JNAP 2	Joint National Action Plan II on Climate Change and Disaster Risk Management 2018-2028
LT-LEDS	Long-Term Low Emission Development Strategy
MPA	Marine Protected Area
MAFF	Ministry of Agriculture and Food and Forests
MoF	Ministry of Finance
MEIDECC	Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change, and Communications
MPA	Marine Protected Areas
MRV	Measurement, Reporting and Verification
NbS	Nature-based Solution
NIIP III	National Infrastructure Investment Plan 2013-2023
NDC	National Determined Contributions
NEMO	National Emergency Management Office
PGEN	Pacific Green Entrepreneurs Network
PMO	Prime Minister's Office
PPP	Public Private Partnerships
PS	Programmatic Solution
SDG	Sustainable Development Goals

SMA	Special Management Area
TCCI	Tonga Chamber of Commerce and Industry
TERMPLUS	Tonga Energy Road Map 2021-2035
TPL	Tonga Power Limited
TSDF II	Tonga Strategic Development Framework 2015-2025
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention for Climate Change
WAL	Waste Authority Limited

Director General speaking on panel during Tonga Climate Change Week 2022
Credit: GGGI





Stakeholders at the Tonga Country Planning Framework Priority Sector Validation Workshop in 2023 Tonga Climate Change Week 2022
Credit: GGGI

1. Introduction

The GGGI Tonga Country Planning Framework (CPF) is a five-year country-level plan that sets out the priority areas for GGGI's interventions to support the transformation of Tonga's economy into a green growth model in line with the country's national ambitions, National Determined Contributions (NDC) and Sustainable Development Goals (SDG's). The CPF covers the period 2023 to 2027 and serves to translate the implementation of GGGI's Strategy 2030, and Pacific Regional Strategy 2023-2027 at the country program level in support of Tonga's Strategic Development Framework 2015-2025 (TSDF II), National Infrastructure Investment Plan 2013-2023 (NIIP III), Joint National Action Plan country-level on Climate Change and Disaster Risk Management 2018-2028 (JNAP 2), Tonga's Second National Determined Contribution (2020 NDC), the Tonga Low Emissions Development Strategy (LT-LEDS) 2021-2050, and the Tonga Energy Road Map 2021-2035 (TERMPLUS).

1.1 Strategy 2030 and Pacific Regional Strategy 2023-2027

GGGI's Strategy 2030 sets out the long-term ambitions of GGGI. It outlines how the organization will assist GGGI Member countries achieve environmentally sustainable and socially inclusive economic growth that is aligned with international obligations such as the SDG's and the United Nations Framework Convention for Climate Change (UNFCCC). GGGI Strategy 2030 is focused on the delivery of quantifiable 2025 and 2030 impacts and results based on six strategic outcomes (SOs) that will (directly and indirectly) support Tonga's green growth agenda and national development ambitions. These SOs will be achieved under 5 areas of Global Operational Priorities (GOPs) and 11 programmatic solutions (PS) (Table 1). Each PS is linked to a GOP. The Pacific Regional Strategy 2023-2027 further outlines the delivery of programmatic solutions in Pacific Islands Countries by growing GGGI operations and scaling up impact, including mobilizing USD 650 million in green investments by 2027 and setting regional targets for the SOs, including increasing access to sustainable energy, transport, and waste services to 7 million people, reducing 44.6 MtCO₂e of GHG emissions and supporting 360,000 people to adapt to climate change.

Box 1. Six Strategic Outcomes (SO) and Pacific Regional Strategy 2023-2027 Targets

STRATEGIC OUTCOME TARGETS (ATTRIBUTION)		GGGI Overall Target to 2025	Pacific Regional Target to 2025	Pacific Regional Target to 2027
1	GHG emission reduced (mtCO _{2e})	300	24.8	44.6
2	Direct Green jobs created (million jobs created)	0.5	0.08	0.1
3	People's access to sustainable services increased (million people)	40	3.9	7.0
3.1	People with increased access to clean affordable energy	10	0.9	1.6
3.2	People with increased access to improved sanitation	4	0.4	0.6
3.3	People with increased access to sustainable waste management	20	2.1	3.7
3.4	People with increased access to sustainable public transport	6	0.6	1.1
4	Air quality improvement	Not available	Not available	Not available
5	Enhanced natural capital protected (million hectares)	0.1	0.01	0.02
6	People with enhanced capacity for adaptation and resilience to climate change impacts (million people)	2	0.2	0.36

Table 1. Global Operational Priorities (GOP) and Programmatic Solutions (PS)

GLOBAL OPERATIONAL PRIORITIES	PROGRAMMATIC SOLUTIONS	
GOP 1 Catalyzing and accelerating access to climate finance/ green investments for Members' public and private sectors	PS 1 Green Investments (green bankable projects, investment proposals, NFVs, green and climate instruments, carbon-focused engagements)	PS11 Carbon Pricing (Carbon policy design, carbon trading through institutional strengthening, transaction structuring and knowledge sharing)
GOP 2 Supporting our Members in strengthening policy, planning and regulatory frameworks and institutional capacity to achieve green growth outcomes	PS 2 Climate Action (inclusive green growth plans, LT-LEDS, NDC support, MRV system design, climate diplomacy)	
GOP 3 Achieving a sustainable and circular bioeconomy while securing healthy natural systems	PS 3 Climate Resilient Agriculture (solar irrigation, RE application in agri-value chain, resilient cropping practices, resource conservation)	
	PS 4 Sustainable Forests (REDD+, landscapes financing mechanisms, innovation of natural capital markets)	
	PS 5 Coastal Resilience (mangroves as ecosystem for livelihoods, aquaculture, marine issues fisheries, flood protection and pollution)	
GOP 4 Making cities and communities sustainable liveable and resilient, supported through green jobs, services and green infrastructure capital markets innovations	PS 6 Waste Management (circular economies, urban and agricultural waste, wastewater, FSM, waste to resource)	
	PS 7 Sustainable Mobility (e-mobility, non-motorized transport)	
	PS 8 Green Buildings (green urban infrastructure norms/standards/policies, energy efficiency in residential & commercial buildings)	
	PS 9 Solar PV (energy transition access and productive use solar water pumping, solar PV auctions, rooftop, utility scale plants, storage)	
GOP 5 Accelerating progress in our country programs in poverty eradication and gender equality	PS 10 Green Industries (green industrial parks, green supply chains, EE in SMEs, labelling and standards)	
	Cross cutting in all programmatic solutions	

1.2 GGGI Operations in Tonga

GGGI welcomed Tonga as its 29th Member country and 5th member in the Pacific region in December 2018 and since 2019 GGGI has been providing technical assistance on key policies, green initiatives, and climate finance to the Government of Tonga and private sector stakeholders. The Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change and Communications (MEIDECC) is GGGI's counterpart as per the Host Country Agreement (HCA) signed in 2020.

GGGI's work in Tonga has included programs to address critical development challenges such as energy security, access to electricity, and increased resilience to climate change and disasters. GGGI supported the Government of Tonga (GoT) to develop the Tonga LT-LEDS 2021-2050, Tonga's Second NDC 2020, the NDC Implementation Roadmap, Investment Plan and Project Pipeline in 2021, Measurement, Reporting and Verification (MRV) Procedural Guidelines, and the TERMPLUS and its Investment Plan in 2022. Additionally, GGGI has provided training and seed grant opportunities to Tongan entrepreneurs as part of the Pacific Green Entrepreneurs Network (PGEN) and has full-time staff embedded within MEIDECC's Department of Energy and Department of Climate Change.

1.3 Objectives of the CPF

The GGGI Tonga CPF communicates the sectors and initiatives that the GoT has prioritized and which GGGI will support as a trusted neutral adviser. The development of the CPF included a review of strategic policy documents, an economic analysis, consideration of social trends, and comprehensive consultations with Tongan stakeholders and development partners. To discuss and validate the findings of these activities, GGGI conducted a workshop held in February 2023 in Nuku'alofa (Tongatapu, Tonga). The overarching objectives of the CPF are outlined in Box 2.

Box 2. GGGI Tonga CPF 2023-2027 objectives

1. Ensure strategic alignment between country-level interventions and the GGGI Global Operational Priorities and Programmatic Solutions.
2. Deliver transformational and impactful programs with measurable, attributed, and contributed outcomes, serving as a framework for all GGGI projects in Tonga.
3. Focus on national development priorities, ensuring government ownership, commitment, and support to GGGI interventions in Tonga.
4. Develop stronger partnerships, facilitating resource mobilization to accelerate inclusive green growth adoption and transformational impact at scale.
5. Promote knowledge sharing by bringing together a cross-selection of GGGI experts to deliver a “One GGGI” approach.
6. Strengthen linkages with key global development agendas and the GGGI Strategy 2030.

Winners for the Pacific Green Entrepreneurship Network

Incubator Competition in 2023

Credit: GGGI





Nuku'alofa harbor
Credit: GGGI

2. Country Overview

The Kingdom of Tonga is an Oceanic State consisting of over 170 islands and four main island groups: Tongatapu, Vava'u, Ha'apai and 'Eua. Tongatapu, the main island, has about 75% of the population.

Tonga ranked 91 out of 189 countries in 2021 on the Human Development Index (HDI). Its value was 0.745 (2021), which put the country in the high human development category. However, according to the Tongan Statistics Department and the Asian Development Bank (ADB), over 27% of the Tongan population lives in poverty.

Tonga's location in the Pacific Ring of Fire and the Tonga Trench makes it prone to earthquakes and resultant tsunamis. Likewise, Tonga is susceptible to tropical cyclones that can have significant social and economic impacts. For example, Cyclone Ian (2014) affected 70% of the population of the Ha'apai island group (World Bank) while Cyclone Harold (2020) caused total damages of more than USD 111 (Ministry of Finance). The 2022 Hunga Tonga-Hunga Ha'apai (HTHH) underwater volcano eruption was the largest explosive eruption in over 130 years. According to NASA, the HTHH volcanic eruption was equivalent to the force of 100 simultaneous atomic bombs, and the resultant tsunamis and volcanic ash deposits affected 85% of Tonga's population causing over USD 182 million in economic damage (World Bank, 2022). The capital of Tonga, Nuku'alofa, is flat and low-lying, with some residential areas on reclaimed wetlands. According to the ADB, over 60% (3,600) of properties can be affected by flood waters, with approximately 1,100 of these properties flooded every time it rains. Those worst affected are located on land at or 1.6m below sea level. Also, Tonga is also exposed to drought, particularly during the dry months between May and October.

Tonga, like many other Pacific Island Countries, relies heavily on imported fossil fuels for electricity generation and transportation, with high, volatile import prices placing an increased burden on Tongan families and the entire economy, which is very dependent on Tongans living abroad. Remittances to Tonga are worth the equivalent of 37% of its Gross Domestic Product (GDP), which represents the highest figure of any nation in the world (World Bank, 2020).

Tonga's economic development plans emphasize growing the private sector, upgrading agricultural productivity, developing tourism, and improving communications, energy, and transport. Agriculture is well-developed and relevant in Tonga as it, alongside forestry, provides employment, food, and foreign trade for the Kingdom. While the tourist industry is relatively undeveloped, the GoT recognizes the significant role it can play in economic development.

Women's full participation in governance and leadership is still impacted by particular social and cultural considerations. While overall women's participation in economic activity is high, there is still a lack of widespread gender equality in decision making, leadership and ownership (e.g. land, businesses). As of April 2022, female

representation in Tonga's legislature was only 3.7%. Tonga has a high share of informal employment among female workers, estimated at 75% (World Bank, 2018).

Table 2. Tonga at a Glance

Indicator Name	Data	Year	Source
Population	100,179	2021	Tonga Statistics
GDP per capita, PPP (current international \$)	4,624.8	2020	World Bank
World Bank income group classification	UMI	2019	World Bank
Poverty headcount ratio at national poverty lines (% of population)	22.5	2009 ¹	World Bank
Unemployment total (% of total labor force)	4.0	2021	World Bank
Inflation, consumer prices annual %	3.3	2021	Tonga Statistics
ODA as a percentage of overall government budget	N/A	N/A	World Bank
Human Development Index (Rank)	0.75	2021	UNDP
Gini coefficient (index)	37.6	2015 ²	World Bank
CO2e emissions (metric tons per capita)	1.51	2021	World Data Atlas
Forest area (% of land area)	12.4	2020	World Bank
Agricultural land (% of land area)	48.6	2020	World Bank
Agriculture, forestry and fishing, value added (% of GDP)	17.7	2020	World Bank
Renewable energy consumption (% total final consumption)	1.77	2019 ³	World Bank
Urban population growth (annual %)	1.0	2021	World Bank
Urban population (% of total)	23	2021	World Bank
Sanitation facilities (% of population with at least basic access)	34	2020	World Bank
Environmental Performance Index (rank)	45.1	2020	Yale ⁴
ND-GAIN Adaptation Index (rank)	128	2020	ND-GAIN

2.1 Tonga's Green Growth Performance

GGGI assesses all Member countries for green growth performance in four dimensions: efficient and sustainable resource use, natural capital protection, green economic opportunities, and social inclusion. The indicators across all dimensions were benchmarked against sustainability targets including the SDG's, Paris Climate Agreement, and the Aichi Biodiversity Targets.

Figure 1 reflects the distance (progress) of the targets for 2021 in Tonga. Lack of data in green colored indicators reflects Tonga's low performance in green economic opportunities, particularly on green innovation (GN) and green employment (GJ). The blue colored indicators reflect low performance in efficient, and sustainable resource use, especially efficient and sustainable water use (EW) and material use efficiency (ME). By the end of the 5-year GGGI CPF, the efficient and sustainable energy (EE), and green employment (GJ) indicators will have improved.

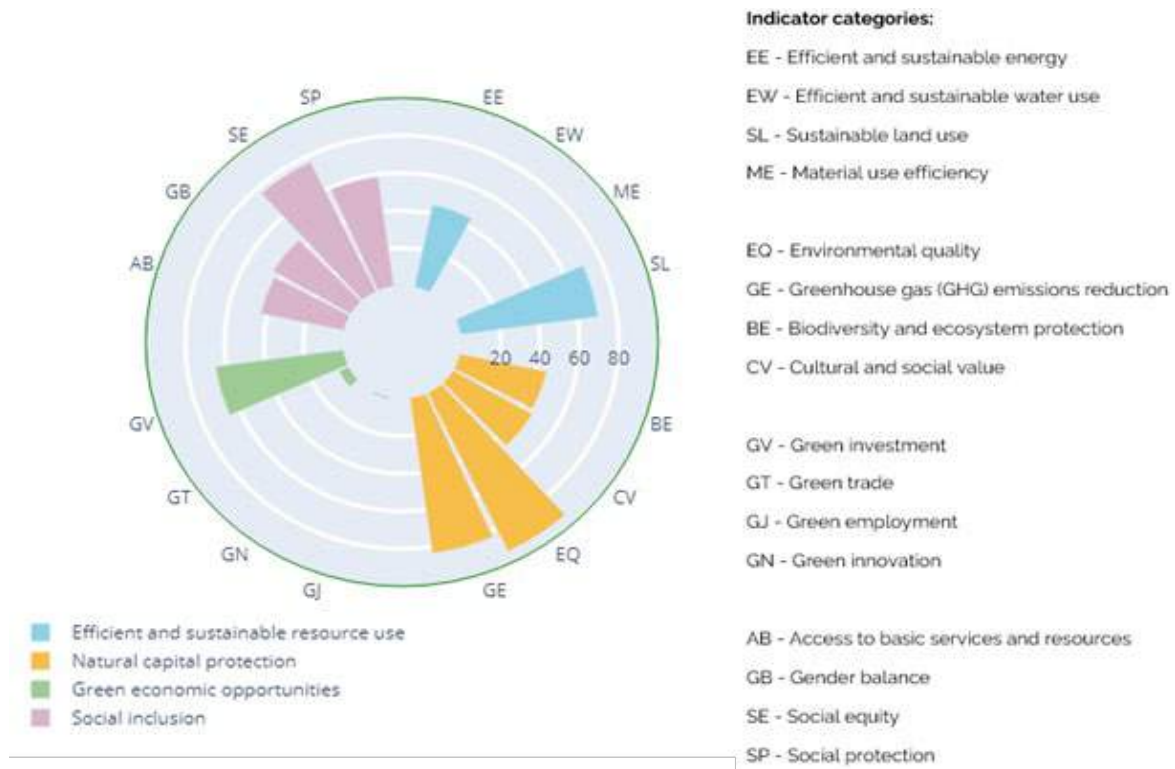
¹ No updated information later than 2009.

² Tonga is not on the list for the Gini Index 2022 <https://worldpopulationreview.com/country-rankings/gini-coefficient-by-country>.

³ No updated information later than 2019.

⁴ Yale Center for Environment Law & Policy, Environmental Performance Index.

Figure 1. Tonga's distance to sustainability targets for the green growth Indicators (GGGI, 2021)

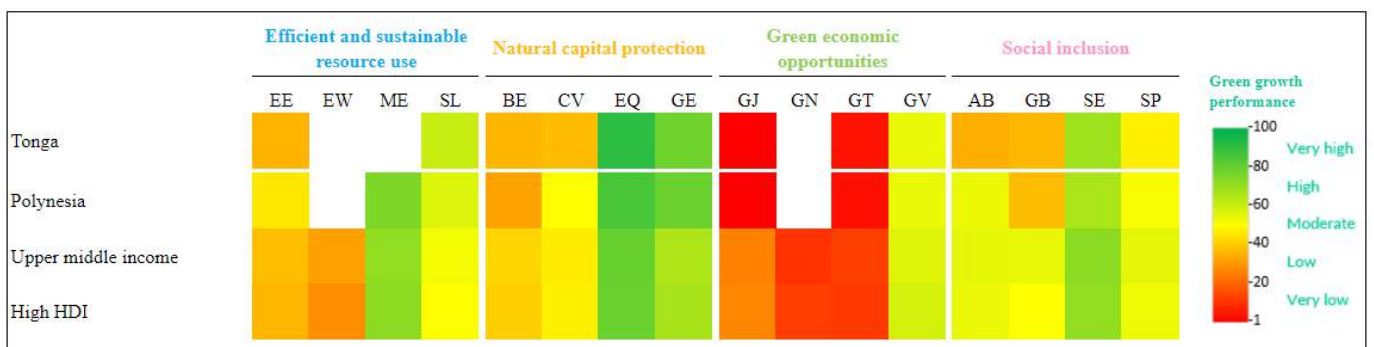


The dashboard for green growth indicators compares Tonga's performance with other Polynesian countries (American Samoa, Samoa, and Nauru). Natural capital protection provides the highest-ranked category for Tonga, with environmental quality (EQ) slightly higher than in other Polynesian countries. For social inclusion, Tonga's performance is like other countries in the region. For efficient and sustainable resource use, Tonga ranks lower than the region and Tonga's economic opportunities rank very low in green jobs (GJ) and green trade (GT).

In comparison to other Polynesian countries Tonga overall performs better in sustainable land use, biodiversity, and ecosystem protection, and is on par with its country peers in terms of environmental quality, GHG emissions reduction, and social equity. Compared to its Polynesian peers, Tonga underperforms in efficient and sustainable energy and access to services and resources. Tonga's highest-performing areas are sustainable land use (SL), social equity (SE), GHG emissions reduction (GE), and environmental quality (EQ).

Figure 2 also compares green growth performance with other relevant groups of countries including upper-middle income and High-HDI countries. Overall, Tonga performs similarly to other upper-middle-income countries and relatively the same as in other High-HDI countries.

Figure 2. Tonga's performance dashboard of indicators for the green growth indicators (GGGI, 2021)





Off-grid solar freezer system
Credit: Department of Energy

3. Programmatic Solutions

3.1 Green Investments

GGGI aims to address policy gaps, finance priority projects, and enable increased private sector engagement in climate change and green investment in Tonga by mobilizing at least USD 100 million over the course of the CPF. The International Monetary Fund estimates Tonga needs USD 671 million in climate-related investments over a 10-year period (IMF, 2020). GGGI's green investment target will guide the work to mobilize finance for a range of Tongan development policies and plans including JNAP 2, which requires USD 147 million, NIIP III, which outlines USD 236 million in resource needs, and the TERMPLUS, which identifies USD 550 million in required investments through 2035.

GGGI will develop inclusive green policies, support relevant fiscal reforms, increase institutional capacity to access and absorb climate finance, facilitate engagement with the private sector, and promote innovative partnerships to close the finance gap through the development of bankable projects. By delivering this support, GGGI aims to mobilize green investments of up to USD 100 million (Solar PV USD 57.5 million, Coastal Resilience USD 22.5 million, and other sectors USD 20 million). GGGI will strengthen the enabling environment for green and climate finance through support to identify and maintain investment pipelines such as the TERMPLUS Investment Plan; develop and operationalize green financing vehicles such as the Tonga Climate Change Fund; and develop policies such as a National Climate Finance Strategy. To enable direct access to climate finance and enhance capacity to absorb allocated investment, GGGI will continue its work with MEIDECC to update and implement the TERMPLUS Investment Plan, the NDC Investment Plan and strengthen the operations of the Tonga Climate Change Fund to attract and disburse international climate finance.

A Climate Finance Advisor has been deployed to MEIDECC since 2022 to increase the effectiveness, and the volume of climate finance flows, increase project approval rates, and structure climate finance to support multiple proposals per year. GGGI will work to expand this advisory support to the Ministry of Finance by embedding another Climate Finance Advisor to build the institutional capacity to coordinate across ministries and sectors, as well as develop a National Climate Finance Strategy.

Continued support will be provided to increase Tonga's engagement with the private sector through Public Private Partnerships (PPP) and programs like the Pacific Green Entrepreneurs Network (PGEN). A well-formed PPP and entrepreneurial atmosphere will enable growth and innovation, which by extension, create employment for people and revenue for the GoT. These interventions will contribute to an increase in local climate finance, accredited entities and the amount of climate finance accessed, absorbed, and implemented by Tonga.

Strategic Outcomes

Over the next 5 years, the Green Investments PS aims to commits to the following government **contributed** impact outcomes:

- SO1 Reduced GHG emissions- 0.016MtCO₂e (13%) reduction in GHG emissions in the Energy Sector by 2030.
- SO3.1 Access to clean energy- 70% of electricity produced from renewable resources by 2025 and 100% by 2035.
- SO5 Natural capital- 100% of mangrove forests and other coastal vegetation restored.

And the following **attributed** impact outcomes:

- SO1 Reduced GHG emissions – overall 1.78MtCO₂e.
- SO2 Green jobs – overall 275 people will have access to green jobs.

3.2 Climate Action

GGGI will support the GoT to link global climate initiative to national climate actions through support to Tonga's policy and regulatory settings, Measurement, Reporting and Verification (MRV) and transparency requirements under the Paris Agreement and UNFCCC.

To assist the achievement of Tonga's mitigation goals, GGGI will build on the support provided to develop the LT-LEDS by providing additional technical assistance for modeling and planning in critical sectors such as Energy and Agriculture, Forestry, and Other Land Use (AFOLU). By mobilizing finance and assisting in the implementation of TERMPLUS projects GGGI will support close to 78,000 people to adapt to the effects of climate change. GGGI will contribute to meeting adaptation goals and targets stated in the Second NDC and the JNAP 2 by assisting in the development of policies and action plans for NbS and coastal resilience.

GGGI will deliver assistance for MRV, GHG emissions and a national GHG inventory for the Forestry Sector to support the implementation of JNAP 2, NDC Roadmap and Investment Plan, and Second NDC target of planting one million trees. To enhance MRV capacity at the national level, GGGI will conduct a Capacity Building Initiative for Transparency (CBIT) project funded by Global Environment Facility (GEF) providing relevant tools, training, and assistance that will enable Tonga to meet the provisions of the Paris Agreement. The work will pilot forest inventory methodologies and practices, train government officials, and assist in determining Tonga's potential to use its forests as a carbon sink and carbon trading.

Strategic Outcomes

Over the next 5 years, the Green Investments PS aims to commit to the following government **contributed** impact outcomes:

- SO1 Reduced GHG emissions- .016MtCO₂e (13%) reduction in GHG emissions in the Energy Sector by 2030.
- SO5 Natural capital- plant one million trees.
- SO6 Adaptation- 78,000 people will be supported in adapting to the effects of climate change.

And the following **attributed** impact outcomes:

- SO1 Reduced GHG emissions – 1.15 MtCO₂e.
- SO2 Green jobs- at least 15 people will have access to green jobs.

3.3. Coastal Resilience

GGGI will work to support Tongan national policies that emphasize the need to ensure and enhance coastal management to combat climate change-related threats, like sea-level rise, and build resilience of communities exposed to possible disasters. GGGI will work to develop a GHG inventory for the forestry sector supporting Tonga's Second NDC target to plant one million trees and protect and restore 100% of mangrove forests and other terrestrial and coastal vegetation in support of the Second NDC targets to expand Marine Protected Areas (MPA) and Special Management Areas (SMA).

In coordination with appropriate government partners, GGGI will assist in strengthening the enforcement of MPA and SMA regulations while improving community ownership and preparedness. In support of coastal resilience protection, GGGI will seek to implement Tonga's Zero Waste Plan, which includes circular economy actions and biodiversity protection. GGGI will apply its policy development expertise and growing capacity in NbS know-how to support the design and implementation of mangroves and MPA initiatives. GGGI will provide support by identifying strategic partnerships, developing NbS strategies, and leveraging financing mechanisms to structure impactful investments.

GGGI will also take the learnings generated from a green buildings assessment that GGGI is undertaking on Tonga's Eua Island to improve current resilient housing designs. These inputs will contribute to the development of an Urban Land Use Framework, Resilient Green Building Standards, Resilient Coastal Community Strategies, Mangrove Master Plan, National Waste Plan, and a Nuku'alofa Coastal Resilience Master Plan.

GGGI work on coastal resilience will contribute to the expansion of MPAs and SMAs by 30% of Tonga's Exclusive Economic Zone, support over 22,000 Tongans to adapt to the effects of climate change, and create at least 50 green jobs.

Strategic Outcomes

Over the next 5 years, the Green Investments PS aims to commits to the following government **contributed** impact outcomes:

- SO5 Natural capital- 100% of mangrove forests and other coastal vegetation restored.
- SO6 Adaptation- expansion of the Marine Protected Area (MPA) and Special Management Areas (SMA) to 30% of Tonga’s Exclusive Economic Zone (EEZ) and 22,000 people will be supported in adapting to the effects of climate change.

And the following **attributed** impact outcomes:

- SO2 Green jobs- at least 50 people will have access to green jobs.

3.4 Solar PV

Accessible, affordable, and sustainable energy is a high priority for the GoT. Moving Tonga towards renewable sources of energy and transitioning away from fossil-fueled generated electricity is not only a sustainable measure in the long-term, but also benefits Tongans in the short term by helping to reduce the price volatility of electricity rates and increase energy security.

GGGI will build on its work that resulted in the LT-LEDS and TERMPLUS by supporting the implementation of these policies and their investment plans to help Tonga achieve its goal to generate 70% of its electricity from renewable sources by 2025 and 100% by 2035. Additionally, GGGI will contribute to reducing dependence on petroleum product imports by 10% by 2035, limiting growth in oil consumption for road transport to 25% between 2019 and 2035, installing solar water heaters for 50% of residential and commercial buildings by 2030, and achieving Second NDC 2020 target of reducing GHG by 13% (0.016MtCO₂e). To achieve these ambitious goals, GGGI will mobilize USD 57.5 million for projects prioritized by the GoT.

GGGI will provide further policy and technical support to Tonga by developing implementation plans for the existing LT-LEDS and Energy Act, and contribute to improving Energy Efficiency Standards for Resilient Green Buildings and deliver Low-Emissions and Vehicle Policy Standards. GGGI energy sector capacity could also be applied to support the National Waste Plan, which includes waste-to-energy solutions, as well as the enhancement of Tonga Building Codes and Standards through updated efficiency measures and the development of minimum energy performance standards for appliances. These measures to transition to cleaner energy use will help provide approximately 62,000 people with access to clean electricity and create at least 210 green jobs.

Strategic Outcomes

Over the next 5 years, the Green Investments PS aims to commits to the following government contributed impact outcomes:

- SO1 Reduced GHG emissions- 13% (0.016MtCO₂e) reduction in GHG emissions in the Energy Sector by 2030.
- SO3.1 Access to clean energy- 70% of electricity produced from renewable resources by 2025 and 100% by 2035, and 62,000 people have access to clean energy.

And the following attributed impact outcomes:

- SO1 Reduced GHG emissions- 0.58 MtCO₂e.
- SO2 Green jobs- at least 210 people will have access to green jobs.

3.5 Cross-cutting Poverty Eradication and Gender Equality

Advocating gender, women’s economic empowerment, poverty reduction, and social inclusion mainstreaming is of high priority for GGGI work in Tonga, and is closely aligned to the TSDF II goal to achieve a more inclusive, sustainable, and empowering human development with gender equality by applying the “do no harm” approach and adheres to the principle of free, prior, and informed consent (FPIC). GGGI seeks to identify opportunities for project development that consider these topics, alongside technical components.

GGGI will promote approaches that make green and climate finance work for women, poor and marginalized groups by leveraging scarce public funding and promoting financial innovations toward inclusive growth goals. This includes support for the implementation of the gender principles and actions under the TERMPLUS, and support GoT initiatives like the Energy and Climate Action Awareness Program.

GGGI will continue to support the growth of Tonga’s entrepreneurial ecosystem through the Pacific Green Entrepreneurs Network (PGEN) program, a free virtual incubator supporting people to develop social enterprise solutions that address sustainability and climate change issues in community-based settings. It is aimed at catalyzing innovation and entrepreneurship in the private sector to contribute to the region’s development goals such as a green and inclusive jobs for women and youth. Women make up over half of the applicants overall and the sectors include manufacturing (wellness-related), agribusiness, tourism/hospitality, information and communication technology (ICT), waste, renewable energy, and circular economy. GGGI is working with the Tonga Chamber of Commerce and Industry (TCCI) to deliver this program and provide support to the country’s entrepreneurs.

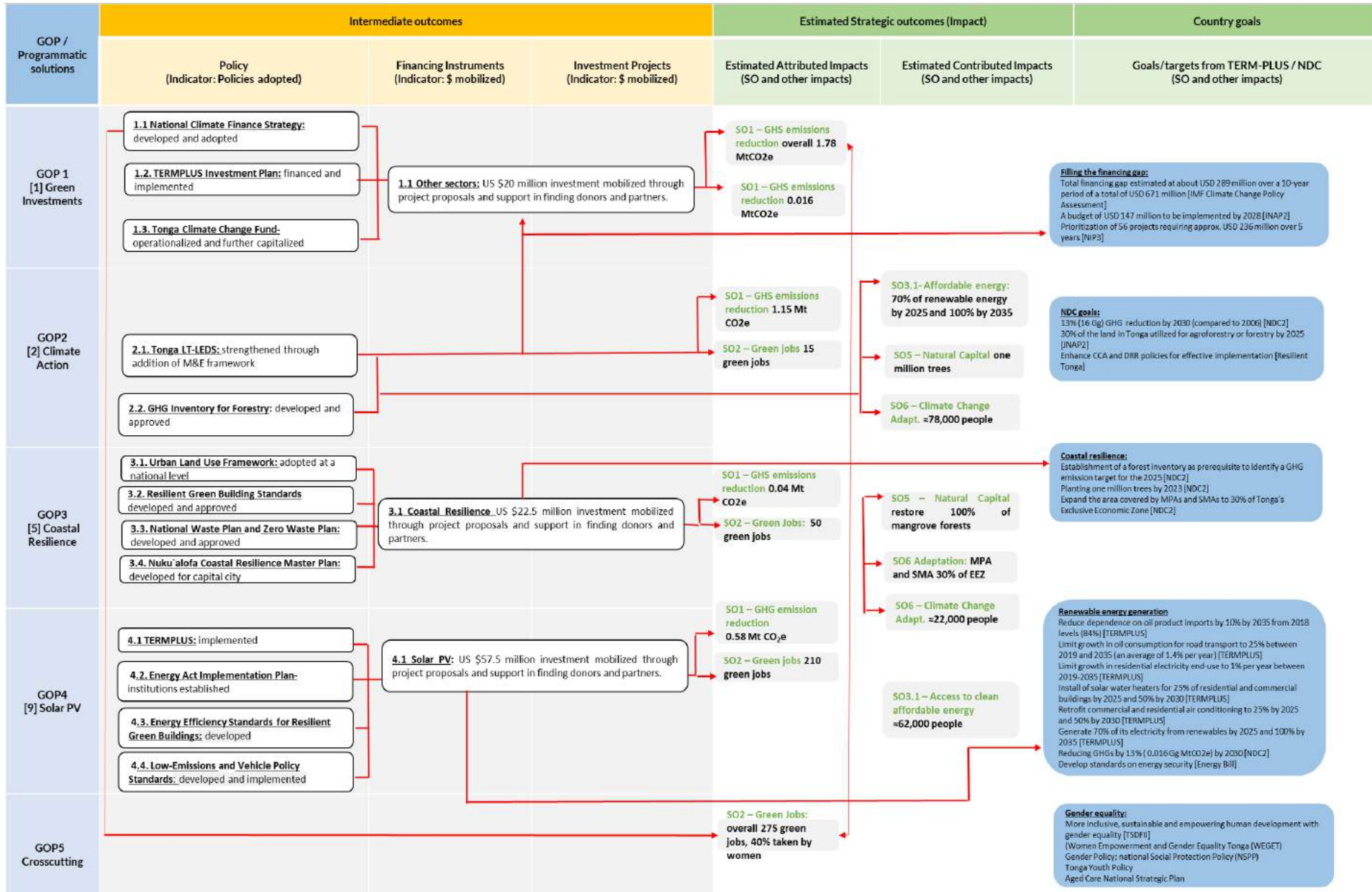
Overall, GGGI will attribute to its work in Tonga 275 people accessing green jobs, 110 people owning these jobs will be women, which represents 40% of the total.

Strategic Outcomes

Over the next 5 years, the Green Investments PS aims to commits to the following government attributed impact outcomes:

- SO2 Green jobs- overall 275 people will have access to green jobs with 40% of these jobs being taken up by women.

4. Tonga Impact Pathway



Annexes

1. List of Stakeholders Consulted

Organization	Date of Consultation
MEIDECC	30/11/2022
MAFF	01/12/2022
Australian High Commission	01/12/2022
New Zealand High Commission	06/12/2022
ADB	08/12/2022
Dept of Energy, MEIDECC	09/12/2022
Dept. of Climate Change, MEIDECC	16/12/2022
NEMO, MEIDECC	16/12/2022
UNDP	16/12/2022
PMO	21/12/2022
MoF	22/12/2022
TPL	18/01/2023
WAL	08/05/2023

Grid modernization for renewable energy in Nuku'alofa

Credit: Tonga Power Limited





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