



Fiji

Sovereign Green Bond

Impact Report 2018



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MESSAGE FROM THE PRIME MINISTER



Fiji is a Small Island Developing State ('SIDS') with big aspirations. We Fijians are determined to build an inclusive, prosperous, resilient and low-carbon future for ourselves, and so remain steadfast in the battle against climate change, the single greatest threat to our future.

Climate adaptation is an urgent priority for Fiji. We are confronting head-on the economic, social and environmental vulnerabilities we face from both the gradual and sudden effects of climate change aptly articulated in Fiji's Climate Vulnerability Assessment. Over the past decade, Fiji has carried out a consistent strategy of investing in the resilient development of the transport, education, housing, agriculture and water sectors. These strategic investments have been matched by investments in our people in the form of innovative social protection schemes for the poorest and most vulnerable and economic, legal and educational reforms to create greater opportunities and a more level playing field. We intend to continue investing in a resilient future for our people, and we intend to do so with financial innovation.

The first-ever Fiji Sovereign Green Bond ('FSGB') has helped encourage unprecedented private-sector climate finance, expedite climate action at the national and local levels and ensure fiscal stability. Our green bond is unique because it is largely adaptation-focused, with 90.6% of spending on adaptation-centric projects and 9.4% spending on mitigation-centric projects - a true reflection of our national priorities.

However, Fiji is aware that a more aggressive global effort to mitigate climate change now will reduce the need for adaptation in the future. The developed world must act, but we do not ask it to do anything that we are not willing to do ourselves. And so, to underscore our unwavering support for the Paris Agreement, Fiji continues to make economy-wide investments in renewable technology aimed at reducing our carbon footprint, with numerous fiscal incentives for private sector investment

Fiji is proud to have taken a leadership position in the fight against climate change as President of the 23rd Session of the Conference of Parties to the United Nations Framework Convention on Climate Change (COP23). As the leader of the first SIDS to preside over a COP, I am pleased to say that we have placed the spotlight squarely on the vulnerability of small island economies and their urgent need for greater access to adaptation finance. The FSGB is well aligned to the objective of the COP23 Presidency to raise adequate climate finance, particularly for SIDS adapting to climate change.

The IPCC 1.5°C report makes it clear that if the global emissions continue on their current trajectory, SIDS will face an increased risk of intense cyclones and suffer the effects of an irreversible rise in sea-levels. To confront this uncertain but surely ominous future, global investors are willing to make investments in sustainable projects, and Fiji is ready to capitalise on this interest through innovative market mechanisms. The time to act against climate change is now, and we must unlock unconventional sources of financing for a green and resilient future.

INTRODUCTION

NATIONAL POLICY CONTEXT

The FSGB focuses on climate change and environmental conservation that stems from national policies that focus on mainstreaming holistic sustainable development.

The 5-Year and 20-Year National Development Plan ('NDP') sets out overarching development aspirations to direct Fiji towards an inclusive, prosperous, resilient and low-carbon society. The NDP is informed by various frameworks, policies, roadmaps and assessments that guide Fiji's climate-centric development. The development aspirations articulated in the NDP are estimated to collectively cost approximately FJ \$50.0 billion.

The Green Growth Framework for Fiji and the National Climate Change Policy (currently being updated) underpins the need to ensure that all aspects of national development must be in harmony with economic, social and environmental objectives. This would require greater resource mobilisation, particularly through innovative financing, to combat climate and disaster risks and enhance Fiji's emissions reduction ambitions.

As a SIDS on the front lines of climate change, Fiji considers climate adaptation and resilient development to be its highest priority. The Climate Vulnerability Assessment highlights that Fiji would need an additional FJ \$9.3 billion over the next 10 years to fortify its development aspirations outlined in the NDP. The Fijian Government fully understands the need to have a coordinated approach to implementing national adaptation actions at the national and subnational levels. This has resulted in the development of the National Adaptation Plan Framework and the National Adaptation Plan to be launched at COP24 in Poland.

Fiji continues to increase and encourage economy-wide investments in renewable technology in line with its Nationally Determined Contributions ('NDC') targets. To operationalise Fiji's target of reducing emissions in the energy sector by 30% by 2030, the Fijian Government has developed the NDC Implementation Roadmap (2017-2030), which strives to eliminate 627,000 tonnes of CO₂ emissions annually by 2030 via strategic investments in energy supply, energy demand and the transportation sector. These investments are expected to cost approximately FJ \$6.0 billion.

These national documents highlight the increasing need for innovative financing options that have minimum implications for fiscal stability and incorporate private, bilateral and multilateral financing. The issuance of the FSGB is a crucial step towards venturing into market-based financing mechanisms and sends a positive signal to investors and development partners that Fiji is ready to invest its funds into green initiatives.

FIJI'S GLOBAL CLIMATE AGENDA

Seeing the apparent need to voice the plight of SIDS struggling to combat climate change and the need to influence the developed world towards enhanced emissions reductions, Fiji took on the Presidency of the COP23.

Fiji received numerous accolades for its inclusive and non-confrontational style of leadership despite being the first developing nation and the first SIDS to preside over the COP. Through its presidency, Fiji maintained the momentum to develop the Paris Agreement 'Rule Book', created greater focus on climate adaptation and the need for enhanced adaptation finance, catalysed discussions on the nexus between climate and oceans and promoted inclusive and transparent discussions through the Talanoa Dialogue.

Article 2 of the Paris Agreement highlights the need make finance flows consistent with a pathway towards low greenhouse-gas emissions and climate-resilient development. Building on this, the Fijian COP23 Presidency has been championing better access to enhanced climate finance and resources for developing nations. In doing so, the Fijian Presidency also highlighted the need to explore innovative financing solutions that transcend the conventional dependence on donor-driven financing.

The FSGB is a testament to the numerous emerging financing solutions that can mobilise climate monies at unprecedented scale. Investors are diversifying their investment portfolios towards sustainable development investments. Investors are interested in paradigm-shifting projects that promise a new normal, and green bonds provide that opportunity.

“By issuing the first emerging country green bond, we are also sending a clear signal to other nations that we can be creative and innovative in mobilising funds and create win-win outcomes for countries and investors in adapting to the serious effects of climate change.”

COP23 President, Prime Minister Frank Bainimarama



FIJI SOVEREIGN GREEN BOND

EXPECTED OVERALL IMPACTS

Population Benefiting



129,300 Fijians

CO₂ Emissions Reduction



1,919 Tonnes per Annum

Enhanced Access To Treated Water



20,000 Litres/Day

School Buildings Rebuilt



1,283 Buildings

Annual Renewable Energy Generation



1.39 Million Kilowatts Hours

Trees Planted (Carbon Sinks Created)



2,001 Trees

Bridges Rehabilitated



176 Bridges

School Students Benefiting



33,209 Students

FINANCIAL ALLOCATIONS BY SECTOR

Clean Water Supply



FJ \$10.07 Million

Cyclone Rehabilitation



FJ \$45.9 Million

Emergency Road Works



FJ \$34.6 Million

Access To Green Energy



FJ \$6.3 Million

Forest Conservation



FJ \$0.31 Million

Sustainable Waste Management



FJ \$2.85 Million

GLOBAL RECOGNITION

GREEN BOND PIONEER AWARD

In October 2017, Fiji made history by becoming the first emerging economy to offer a sovereign green bond. The FSGB is worth FJ \$100 million and supports environmentally sustainable and climate change-related projects administered by the Fijian Government. Fiji's efforts to take up an international leadership role in green finance were recognised with the prestigious Green Bond Pioneer Award at the 2018 Climate Bonds Initiative's Conference in London in the category of 'New Countries Taking Green Bonds Global'. The awards recognize organisations, financial institutions, government bodies and individuals who have successfully utilised the green bonds market and green finance to move towards climate-resilient and low carbon investment.

Referring to this recognition, the Honourable Attorney General and Minister responsible for climate change Mr. Aiyaz Sayed-Khaiyum said, "Fiji is proud to accept this prestigious award for being the first emerging market to issue a sovereign green bond to help tackle the impacts of climate change. As President of COP23, we represent the interests of all climate-vulnerable nations, as well as our own people".

But the story of success does not end there. In April 2018, Fiji listed the FSGB on the London Stock Exchange International Securities Market. This helped the FSGB gain international recognition and exposure to a much larger pool of potential investors. The International Finance Corporation, a sister organisation of the World Bank and the largest global development institution focused on the private sector in emerging markets, provided technical assistance to Fiji's green bond issuance, supporting Fiji to take the lead to create a new market for climate finance.

Notably, Fiji has demonstrated that green capital markets can be created in emerging economies, and that all countries have an important role to play in facilitating climate solutions. By issuing the first emerging-economy green bond, Fiji is not only leading in climate advocacy but is also setting the precedent for other nations to pursue innovative market instruments to address climate change.



GREEN BOND ISSUANCE AND TIMELINE

Fiji needs to raise adequate climate capital not only to achieve its national emissions-reduction target, but also to build resilience to increasingly threatening climate conditions. As part of the 2017-2018 National Budget, the Fijian Government announced its plans to issue a FJ \$100 million green bond to finance projects that are sustainable, respect the environment and address the impacts of climate change.

Immediately after this announcement, a Green Bond Steering Committee ('GBSC') was established to spearhead the development of the Fiji Green Bond Framework ('FGBF'), undertake necessary preparatory work and administer the FSGB to eligible projects programmed in the 2017-2018 National Budget.

Following the development of the FGBF and the Fiji Green Bond Prospectus, a positive second opinion was obtained from Sustainalytics, an internationally recognised financial ratings entity, regarding the credibility of the FGBF and green bond offering.

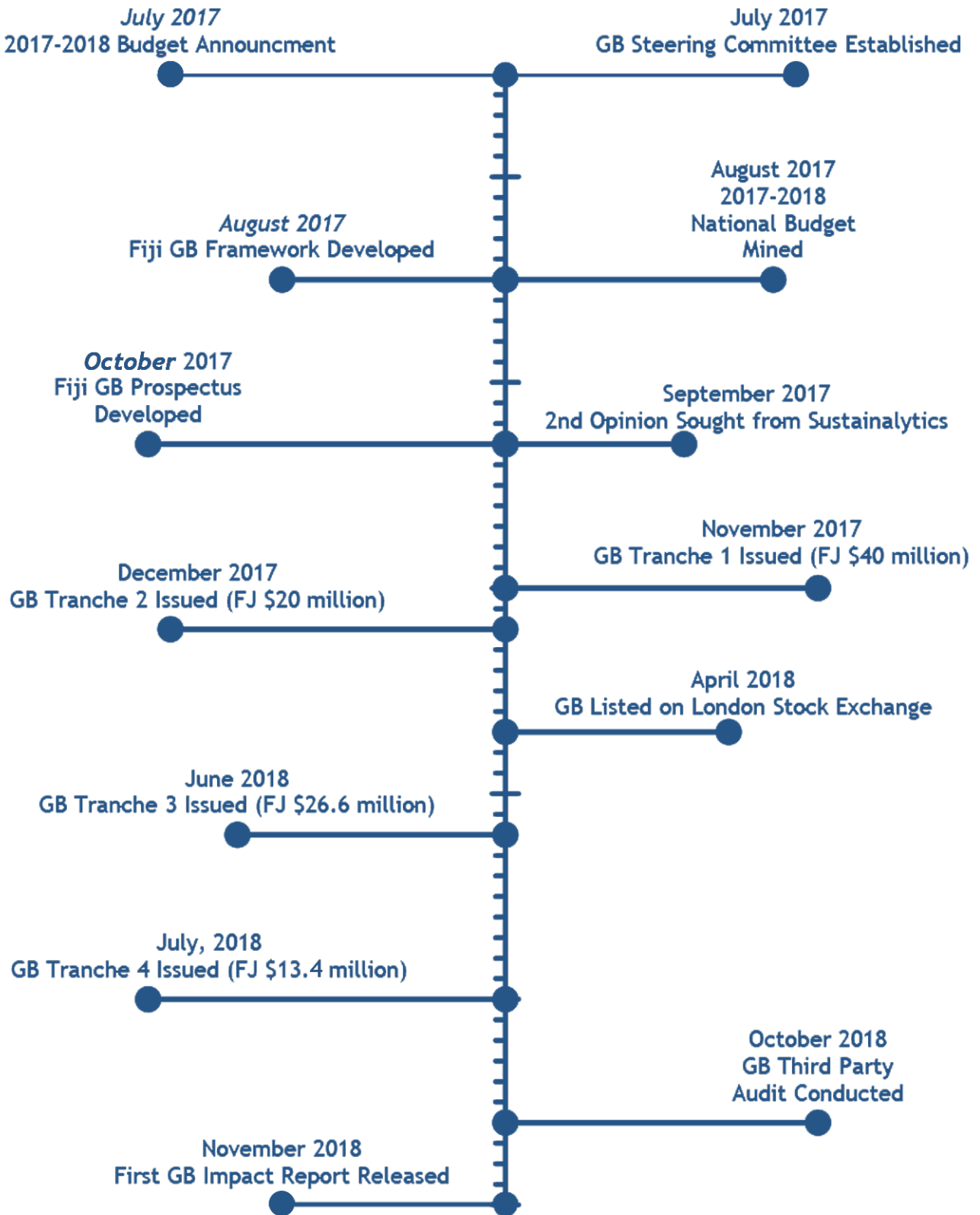
Upon completion of all preparatory works, the Reserve Bank of Fiji, on behalf of the Fijian Government, floated the first of four tranches of the FSGB on 25 October 2017, and Fiji became only the third country in the world—and the first developing country—to issue a green bond on 1 November 2017. Subsequent issuances of the other three tranches were completed by July 2018. In parallel to the float of the first tranche, a ring-fenced account was set up by the Ministry of Economy to transparently receive and disburse the FSGB proceeds.

As shown in **Table 1** below, the FSGB received overwhelming support from local and international investors alike, with more than FJ \$162.4 million worth of bids received for the FJ \$100 million green bonds issued. The issuances were split into two tenors, i.e., 5 years at 4% coupon rate and 13 years at 6.3% coupon rate. **Figure 1** below provides a timeline of the FSGB issuance and reporting process.

Table 1: Summary of FSGB Issuance

Fiji Green Bond Issue No.	Tender Start Date	Tender End Date	Settlement Date	Total Amount Offered	Maturity Date		Total Bids Submitted		Total Successful Bids	
					5-year	13-year	5-year	13-year	5-year	13-year
2017-2018/1	25-Oct-17	31-Oct-17	1-Nov-17	40 million	1-Nov-22	1-Nov-30	60.10 million	27.61 million	20 million	20 million
2017-2018/1 R	26-Dec-17	27-Dec-17	28-Dec-17	20 million		1-Nov-30		31.50 million		20 million
2017-2018/1 R1	18-Jun-18	19-Jun-18	20-Jun-18	20 million		1-Nov-30		26.62 million		26.62 million
2017-2018/1 R2	16-Jul-18	17-Jul-18	18-Jul-18	13 million		1-Nov-30		16.60 million		13.38 million

Figure 1: FSGB Timeline 2017-2018



PROJECT SELECTION, MONITORING AND EVALUATION

The FGBF is an overarching document that has guided the issuance of the FSGB and the disbursements of bond proceeds to eligible projects.

As per the delegation of responsibilities stipulated in the FGBF, the Climate Change and International Cooperation Division of the Ministry of Economy undertook an extensive mining of the 2017-2018 National Budget and identified a tentative list of 39 projects that were eligible for green bond funding. These projects were selected in accordance with the following major criteria and were endorsed by the GBSC.

- 1) Eligible projects must be programmed in the 2017-2018 National budget in accordance with section 3 of the FGBF.
- 2) Eligible projects must fall under either one or more of the following eligible sectors in accordance with Section 1 of the FGBF:
 - a. Renewable Energy and Energy Efficiency;
 - b. Resilience to Climate Change for Highly Vulnerable Areas and Sectors;
 - c. Clean and Resilient Transport;
 - d. Reducing Pollution and Greenhouse Gas Emissions;
 - e. Water Efficiency and Wastewater Management;
 - f. Sustainable Management of Natural Resources; and
 - g. Eco-efficiency.
- 3) Eligible project components should not be funded by any other financing mechanisms of the Fijian Government.

Throughout the 2017-2018 financial year, the Ministry of Economy stringently monitored the list of 39 projects through its internal budget-monitoring and reporting processes. Of the 39 projects, seven were identified as using the allocated budget optimally relative to others and were selected, with endorsement from the GBSC, as the final list of projects to be financed using FSGB proceeds. This process is in accordance with section 4 sub-section titled 'Reporting'. **Table 2** provides the list of seven projects that were financed by the FSGB.

The Climate Change and International Cooperation Division, with assistance from the IFC, has developed a robust impact monitoring mechanism that helps track climate and environmental project indicators established after numerous consultations with project implementing Government ministries and agencies. These indicators are discussed in the project profile section of this report.

Table 2: List of Projects Financed Using the FSGB

ID	Project Name	Funds used by 31 July 2018
Water Authority of Fiji		
P1	Rural Water Supply Programme	6,311,789
P2	Rainwater Harvesting System	3,757,470
Ministry of Economy		
P3	Ongoing Rehabilitation and Construction of Schools Damaged by TC Winston (R3 - R5)	45,906,073
Fiji Roads Authority		
P4	Emergency Works	34,583,500
Department of Energy		
P5	SHS New Installations (Under Rural Electrification Programme)	6,280,998
Ministry of Forestry		
P6	Reducing Emissions from Deforestation and Forest Degradation (REDD +)	308,542
Ministry of Environment		
P7	Construction of Naboro Landfill - Stage 2	2,851,628
TOTAL		100,000,000





**THIRD PARTY AUDITOR OPINION
INDEPENDENT LIMITED ASSURANCE REPORT**



Independent Limited Assurance Report to the Ministry of Economy

Conclusion

Based on evidence obtained from the procedures performed, nothing has come to our attention that cause us to believe that the issuance of the Green Bond and the disbursement of the proceeds of the bonds to the Government Agencies who are responsible for using the proceeds for eligible projects included in the Fiji Sovereign Green Bond Impact Report 2018 (the 'Report') are not prepared, in all material respects, in accordance with the Fiji Green Bond Framework for the year ended 31 July 2018.

Information Subject to Assurance

We have performed a limited assurance engagement on the issuance of the Green Bond and the disbursement of the proceeds of the bonds to the Government Agencies who are responsible for using the proceeds for eligible projects as reported in the accompanying sections entitled: Green Bond Issuance and Timeline; Project Selection, Monitoring and Evaluation and Projects Financed Using Green Bonds as set out on pages 6 to 9 and 14 to 27 of the Fiji Sovereign Green Bond Impact Report 2018.

Basis for Conclusion

We carried out our work in accordance with the criteria established by International Standards on Assurance Engagements 3000 (Revised) – Assurance Engagement other than Audits or Reviews of Historical Financial Information ('ISAE 3000 Revised') issued by the International Auditing and Assurance Standards Board ('IAASB') applicable to limited assurance engagements.

In accordance with the standard we have:

- used our professional judgement to plan and perform the engagement to obtain limited assurance about whether the Report is free from material misstatement, whether due to fraud or error;
- considered relevant internal controls when designing our assurance procedures, however we do not express a conclusion on their effectiveness; and
- ensured that the engagement team possess the appropriate knowledge, skills and professional competencies.

Summary of Procedures Performed

Our limited assurance conclusion is based on the evidence obtained from performing the following procedures:

- Analysing the second party opinion which addresses the applicability of the eligible projects used in the preparation of the use of proceeds set forth in the Fiji Green Bond Framework;
- Evaluating the design and implementation of the processes and controls for the issuance of the Green Bond by the Reserve Bank of Fiji;
- Evaluating the design and implementation of the processes and controls for the receiving of the Green Bond proceeds by the Ministry of Economy;
- Interviewing relevant staff responsible for the Green Bond management and reporting;
- Evaluating internal and external documentation, based on sampling, to determine whether the use of proceeds is supported by sufficient evidence in line with the eligible projects outlined in the Fiji Green Bond Framework; and
- Evaluating the design and implementation of the controls regarding the disbursement of the Green Bond proceeds to the Government Agencies who are responsible for using the proceeds for eligible projects.



Independent Limited Assurance Report to the Ministry of Economy (continued)

How the Standard Defines Limited Assurance and Material Misstatement

A limited assurance engagement is less in scope than a reasonable assurance engagement carried out in accordance with ISAE 3000 Revised, and consequently does not enable us to obtain assurance that we would become aware of all significant matters and events that might be identified in a reasonable assurance engagement.

Misstatements, including omissions, are considered material if, individually or in the aggregate, they could reasonably be expected to influence relevant decisions of the readers of the Report.

Use of this Assurance Report

This assurance report has been prepared for the Ministry of Economy for the purpose of providing an assurance conclusion on the issuance of the Green Bond and the disbursement of the proceeds of the bonds to the Government Agencies who are responsible for using the proceeds for eligible projects and may not be suitable for another purpose.

Our procedures were limited to verifying that process requirements had been followed. They did not extend to assessing whether the Steering Committee correctly established that a proposed or Eligible Project will in fact have a positive environmental impact, as this is a matter for climate change experts and was outside the scope of our engagement. Additionally, the scope of our work did not include the expenditure verification or audits of the eligible projects.

Responsibilities of the Ministry of Economy and Management for the Report

The Ministry of Economy and management are responsible for the preparation of the Report in accordance with the Fiji Green Bond Framework. In particular the Ministry of Economy and management are responsible for the issuance of the Green Bond and the disbursement of the proceeds of the bonds to the Government Agencies who are responsible for using the proceeds for eligible projects, in accordance with the Fiji Green Bond Framework.

Management are also responsible for such internal controls as they determine are necessary to enable the preparation of a Report that is free from material misstatements, whether due to fraud or error. It also includes preparing and presenting the content of the Report and determining that the content is appropriate to meet the needs of the readers of the Report.

Our Responsibility

Our responsibility is to perform a limited assurance engagement and express a conclusion, based on the procedures performed over the issuance of the Green Bond and the disbursement of the proceeds of the bonds to the Government Agencies who are responsible for using the proceeds for eligible projects in accordance with the use of proceeds for Eligible Projects as described in the Fiji Green Bond Framework.

Our Independence

We have complied with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standard Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentially and professional behavior.

KPMG
KPMG

3rd December , 2018

Suva, Fiji

PROJECTS FINANCED USING GREEN BONDS

RURAL WATER SUPPLY PROGRAMME

Access to clean and safe water is a basic right for all Fijians under the Constitution of the Republic of Fiji and a key priority of Fiji's 5-Year and 20-Year National Development Plan. The Rural Water Supply Programme has become a crucial deliverable for the Water Authority of Fiji, helping provide access to water for consumption and sanitation in rural communities.

Rural communities that depend on rivers, streams and unsafe sources of water are the most vulnerable to climate-induced water-borne diseases, particularly in the aftermath of climate adversities. These communities are either far away from a reliable water source or cannot be connected economically to the national water-reticulation system.

As 22% of the population, largely rural, are living without access to treated or reticulated water, the Rural Water Supply Programme enables community-based, tailor-made reticulation solutions that include modern catchment systems, portable treatment plants and innovative ecological purification systems ('EPS'). The Programme is eligible for green-bond funding under the "Water Efficiency and Wastewater Management" thematic area of the FGFB.

The Fijian Government used FJ \$6,311,789 from the FSGB proceeds for the Rural Water Supply Programme in the 2017-2018 financial year. The funds were used to implement 120 rural water schemes and to install 2 EPS throughout Fiji.

This spend has provided 42,670 people in 120 rural communities throughout Fiji with access to water from a clean and managed water source. Of this number, 6,122 people have access to 20,000 litres of clean, treated water through EPS installations, while the remaining households will have this benefit by August 2020.

The subsequent socio-economic benefits resulting from this programme are expected to far outweigh the initial spending. Communities will be less prone to diseases and germs, productive time will increase as fetching water becomes unnecessary, and overall community well-being and productivity will improve. To create a sense of community ownership for the water solutions implemented, the Water Authority of Fiji trained communities to manage the systems and undertake periodic minor maintenance.



FJ \$6.3 million
used from
Green Bonds



42,670 people
benefiting



20,000 litres of
clean supplied
water per day



RAINWATER HARVESTING PROGRAMME

Radical changes to weather patterns exacerbated by climate change are putting pressure on natural water reserves around the world. Certain rural and urban areas throughout Fiji continue to face irregular or no water supply during water shortages, droughts and heavy peak usage. The Fijian Government is committed to instituting sustainable management of the national water resource rather than spending haphazardly to increase the supply of piped water.

Based upon sustainable housing practices, the Rainwater Harvesting Programme encourages households facing water shortages to install 5,000-litre water tanks through a cost sharing initiative with the Fijian Government. The programme subsidises 70% –or FJ \$875– of the total installation cost of the harvesting system, which includes the water tank and delivery costs. The remaining 30% is borne either by individuals or collective contributions by a community to install the guttering system and construct a base for the water tank. The programme has received overwhelming support from communities, particularly those in rural areas who appreciate the means to hygienically store water at a fraction of the current cost.

The programme is eligible for green-bond funding under the “Water Efficiency and Wastewater Management” thematic area of the FGFB.

In the 2017-2018 financial year, the Fijian Government used FJ \$3,757,470 from the FSGB proceeds to finance the Rainwater Harvesting Programme. The funds were used to deliver and install 8,049 water tanks. Approximately 66% have been delivered to the Western and Northern Divisions of Fiji, that have been facing extended periods of drought since January 2018.

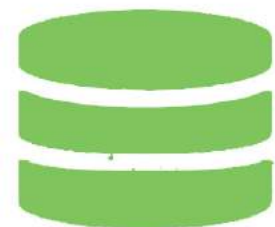
The installation of water tanks has enabled hygienic storage of at least 40.2 million litres of water benefitting more than 40,245 people throughout Fiji. The socio economic impact of this spend is expected to improve the overall hygiene and health of communities, increase productivity by reducing time taken to source water, encourage water conservation and avoid unnecessary infrastructure spending.



**FJ \$3.8 million
used from
Green Bonds**



**40,245 people
benefiting**



**40.2 million
litres of water
storage created**



ONGOING REHABILITATION AND CONSTRUCTION OF SCHOOLS DAMAGED BY TROPICAL CYCLONE WINSTON

Amongst widespread damages to homes, infrastructure and livelihoods done by Tropical Cyclone Winston in February 2016 was the mammoth damage to more than 196 (R3-R5) schools throughout Fiji. Education was interrupted for many Fijian children, and the overall learning environment was damaged as children were forced to attend makeshift facilities. In a true spirit of resilience and resolve, the Fijian Government undertook the largest cyclone-reconstruction initiative in the South Pacific to rebuild and repair those 196 severely damaged schools.

Based on the “Build Back Better” principle, the Fijian Government rolled out its Cyclone Rehabilitation for Schools Programme administered by the Construction Implementation Unit (‘CIU’) of the Ministry of Economy. The CIU formed a robust partnership with the Fiji Institution of Engineers (‘FIE’) to rapidly assess damages suffered by the schools. Most schools were built many years ago and did not have proper construction plans. The FIE was instrumental in developing engineering plans for each school and establishing cyclone-resilient engineering standards that are being strictly followed for all reconstruction activities under the rehabilitation programme.

The programme is eligible for green-bond funding under the “Resilience to Climate Change for Highly Vulnerable Areas and Sectors” thematic area of the FGBF.

Approximately FJ \$45,906,073 has been used from the FSGB proceeds to build back 101 schools in the 2017-2018 financial year. The rebuild has benefited approximately 33,209 students, as approximately 1,283 structures consisting of school blocks, staff quarters, dormitories, ablution blocks and dining halls have been rebuilt.

Of the 1,283 structures, 352 meet the Category 5 resilient standard and 931 meet the Category 2 resilient standard, in accordance with the National Building Code of Fiji. Moreover, 65 of these structures can be used as evacuation centres during disasters. The rehabilitation program also instigated private-sector involvement, with 17 local companies being part of the program, leading to more employment opportunities as well as growth opportunities for the private sector in Fiji.



FJ \$45.9 million
used from
Green Bonds



33,209 students
benefiting



1,283 structures
rebuilt



EMERGENCY ROAD WORKS

Communities affected by natural disasters can receive emergency assistance and be rehabilitated relatively quickly if the road infrastructure remain accessible. This is particularly important for rural communities that are most vulnerable to climate and disaster risk.

To maintain crucial road access to most parts of Fiji, the Fiji Roads Authority has an Emergency Road Works programme that helps rapidly rehabilitate damaged roads, bridges, crossings and jetties in the aftermath of climate adversities. This programme also improves drainage facilities to and around affected road infrastructure to make it more resistant to flooding and the damaging effects of water.

Moreover the Emergency Road Works programme has a coastal erosion protection component that helps protect roads near the sea that are at risk of being washed away due to sea-level rise, king tides and swells. These roads, mainly on maritime islands, are critical pieces of infrastructure that help people safely connect from one point of the island to another.

The programme is eligible for green-bond funding under the “Resilience to Climate Change for Highly Vulnerable Areas and Sectors” thematic area of the FGFB.

Approximately FJ \$34,583,500 has been used from the FSGB proceeds in the 2017-2018 financial year. This spend has resulted in 1,177 roads being restored, 176 bridges rehabilitated, more than 1,200 kilometres of drainage improved, one jetty rehabilitated and up to three kilometres of coastal protection measures constructed.

The damaged road assets are largely those that have aged or are subject to serious climate forces due to their location. The Emergency Road Works programme uses modern engineering solutions to repair road assets to make them more resilient and safe.

As the intensity and relative frequency of cyclones are expected to grow due to climate change, this funding allocation helps to improve resilience to natural disasters, ensure reliable access to emergency services and ensure a constant connection to markets.



**FJ \$34.6 million
used from
Green Bonds**



**176 Bridges
restored**



**1,200 kilometres of
road drainage
improved**



NEW INSTALLATIONS OF SOLAR HOME SYSTEMS

Through its 5-Year and 20-year National Development Plan, the Fijian Government is committed to provide access to energy for all Fijians by 2030. This in line with Fiji's NDC commitment to reduce national carbon emissions by 30% in the lead-up to 2030, by endeavouring to achieve 100% renewable energy power generation through economy wide-energy efficiency. These dual objectives are aimed at easing the heavy reliance on fossil-fuel imports, transitioning Fiji towards a low carbon future and creating greater socio-economic equality by providing access to basic needs.

As solar power projects displace electricity generated from the burning of fossil fuels, they achieve savings in greenhouse-gas emissions that are proportionate to the carbon intensity of local grids.

To provide access to clean energy for rural communities and achieve Fiji's emission-reduction targets, the Fijian Government has used FJ \$6,280,998 from the FSGB proceeds to install 2,635 cyclone-resilient solar home systems across the Western, Northern and Eastern parts of Fiji.

The installations are expected to reduce up to 1,038 tonnes of CO₂ emissions annually. These panels will generate 3,820 kilowatt hours of renewable energy per day (1.39 million kilowatt hours per year), giving access to clean and safe energy to approximately 13,175 people across rural communities throughout Fiji. With these results, the Solar Home System Project qualifies as a green project under the "Renewable Energy and Energy Efficiency" thematic area of the FGBF.

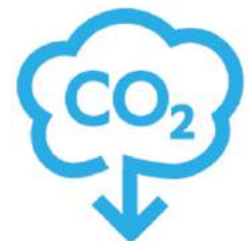
Through this project, Fijian families will have access to clean energy to enable children to study after dark, extend commercial hours and provide more opportunities to socialise.



FJ \$6.3 million
used from
Green Bonds



13,175 people
benefiting



1,038 tonnes of
CO₂ emissions
reduced annually



1.39 million kWh
of solar energy
created annually



REDUCING EMISSIONS FROM DEFORESTATION AND FOREST DEGRADATION (REDD+)

The Fiji REDD+ pilot project started in 2012 with the objective to support Fiji's participation in the Clean Development Mechanism ('CDM') under the World Bank funded REDD+ initiative, provide Fiji with a financial incentive to reduce deforestation and forest degradation and increase forest stocks. About 7,347 hectares of primary forests belonging to Mataqali Emalu (Navosa) comprise the pilot site for demonstrating REDD+ intervention activities.

The REDD+ has created an important opportunity to contribute towards global climate-change mitigation while strengthening the socio-economic situation of its forest resource owners and protecting and restoring its forest ecosystems. Fiji's emphasis on REDD+ co-benefits, lessons learnt from pilot-site activities and stakeholder consultation will be necessary when implementing REDD+ on the national level.

The programme is eligible for green-bond funding under the "Sustainable Management of Natural Resources" thematic area of the FGFB.

A total of FJ \$308,542 was used from the FSGB proceeds as Fiji's contribution to the REDD+ in 2017-2018, which included Emalu REDD+ Pilot Site research, setting up awareness and capacity-building campaigns and planting 2,001 native and exotic trees. The tree planting is envisaged to have a carbon capture potential of 881.24 tonnes of carbon dioxide (CO₂) per annum upon maturity of trees. This could be offered as carbon credits to the CDM Fund. Employment was also created in terms of construction and operations, with around 35 people being trained to acquire new skills in relation to the programme.

The co-benefits for this programme include enhanced carbon sinks, biodiversity conservation, environmental services protection, decreased vulnerability to natural disasters through soil retention and water and food security.

Moving forward, through an ecosystem valuation of forests, Fiji hopes to generate a better understanding of the economic importance of forests beyond their value for timber. In future the project will carry out assessments based on the benefits provided by standing and healthy forests, which will promote implementing REDD+ activities.



FJ \$0.31 million
used from
Green Bonds



2001 Trees
planted



1,919 Tonnes CO₂
per Annum



CONSTRUCTION OF NABORO LANDFILL - STAGE 2

The Naboro Landfill is the largest waste-disposal facility in Fiji, serving the municipalities of Suva, Lami and Nausori, or approximately one-third of Fiji's population. Commissioned in 2005, the landfill is divided into four stages consisting of a total land area of 31.1 hectares. In 2017, the landfill handled approximately 92,846 tonnes of waste, and accumulation has been increasing at an average of 6.9% per year since 2010.

The municipal solid waste deposited in the landfill is deposited into land cells (pits) lined with protective liners and a leachate collection system. As the cells reach capacity, they are covered with soil to catalyse anaerobic decomposition. During decomposition the methane gas generated escapes into the air and contributes to greenhouse-gas emissions. This indicates promising potential for methane-capture systems that could ultimately be used to generate electricity.

Stage 1 (7.09 hectares) of the landfill has nearly reached its capacity at 900,000 tonnes of waste, and works have begun on Stage 2 (8.47 hectares). Studies have indicated that waste collected from stage 1 alone does not provide economies of scale to invest in a methane-capture and electricity-generation system. The construction of Stage 2 is expected to provide the required scale by adding up to 500,000 tonnes of capacity.

There is a promising opportunity to create the enabling environment for renewable investments in the landfill by expanding its capacity to achieve economies of scale. This is in line with the Fijian Government's decision to expand town and city boundaries, enabling more waste collection.

The Stage 2 construction of the Naboro Landfill qualifies for green-bond funding under the "Reducing Pollution and Greenhouse Gas Emissions" of the FGFB. It not only provides an opportunity for future climate-mitigation investment but also enables effective management of waste that would have otherwise ended up in the environment.

The Fijian Government used FJ \$2,851,628 from the FSGB proceeds for Stage 2 Construction of the Naboro Landfill in the 2017-2018 financial year. The funds have been used to clear vegetation and construct a 42-metre culvert, compact waste pits and lay liners, leachate pipes and leachate aggregates at the landfill.



**FJ \$2.85 million
used from
Green Bonds**



**Approximately
300,000 people
benefiting**



**500,000 tonnes
of potential
waste treatment**



ANNEXES

IMPACT REPORTING POLICY

The Fijian Government values the need to uphold transparent reporting of its green bond programme in line with the FGBF.

Interpreting Reported Results

This Impact Report has been developed to help investors comprehend the details of the seven projects on which the FSGB proceeds were spent and the subsequent impacts that have either occurred or will occur in the future. Thirteen key results indicators have been selected and where possible quantified, but it is important to appreciate the inherent limitations of data reported. The main considerations to adequately interpret results are:

- **Scope of results:**
Reporting is based on “ex-ante” estimates at the time of project appraisal and mostly for direct project effects.
- **Uncertainty:**
Impact indicators may be based on a number of assumptions. Sound and conservative assumptions that are reasonable based on the information available at the time for the actual environmental impact of the projects may diverge from initial projections. Minor changes in project implementation or shifts in baseline conditions can cause deviations from projections.
- **Partial project eligibility:**
In cases where a project is only partially green bond eligible, the committed amount reported reflects only that portion that is green bond eligible.
- **Omissions:**
Projects may display benefits across a much wider range of indicators than captured in the impact assessment. On the other hand, there may be some projects for which the proposed indicators are either not applicable or the data is not available.
- **Source of Data:**
All reported results are from a combination of internal and publicly available sources.

LIST OF ABBREVIATIONS

BAU	Business as Usual
CDM	Clean Development Mechanism
CIU	Construction Implementation Unit
COP23	23 rd Conference of the Parties of the United Nations Framework Convention on Climate Change
EPS	Ecological Purification System
FGBF	Fiji Green Bond Framework
FSGB	Fiji Sovereign Green Bond
FIE	Fiji Institution of Engineers
FJ	Fijian Dollars
GBSC	Green Bond Steering Committee
IFC	International Finance Corporation
NDP	National Development Plan
NDC	Nationally Determined Contributions
SIDS	Small Island Developing States





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