



Global  
Green Growth  
Institute

# GGGI

## Vanuatu Country Planning Framework

2017-2021







GGGI  
Vanuatu Country  
Planning Framework  
2017-2021





# Foreword

Vanuatu is pursuing a pathway of green growth that underpins the country's cultural, societal and environmental values. Vanuatu's *National Sustainable Development Plan 2016-2030* (NSDP) states that "a more inclusive, equitable and balanced approach is needed to promote sustainability, eradicate poverty, and enhance well-being and happiness". The NSDP includes numerous goals and policies that are aligned to the principles of green growth. These are ambitions that the partnership between the Global Green Growth Institute (GGGI) and the Government of Vanuatu (GoV) are committed to accomplishing.

Nationwide access to reliable, secure and sustainable energy is key to unlocking Vanuatu's development potential and strengthening its resilience to climate change. The GoV has pledged to achieve 100% rural electrification and 100% renewable electricity by 2030. The NSDP recognizes the importance of transforming Vanuatu's energy sector and includes the objective of increasing access to safe, reliable and affordable modern energy services for all. Increasingly generated from renewable sources, these energy services aim to support rural livelihoods by increasing the productivity and opportunities of the people who have access to it.

Vanuatu became a member of GGGI in 2014 and GGGI began its operations in Vanuatu in 2015. From 2015-2016, GGGI supported the GoV in its effort to update the National Energy Roadmap 2016-2030, develop the National Green Energy Fund, and plan for implementing its green energy transition.

Given the centrality of energy to green growth in Vanuatu, GGGI and the GoV have committed to jointly implement the country's renewable energy and energy efficiency targets and rural development policies. Over the next five years, GGGI and Vanuatu will work together to reach the targets laid out in their Nationally Determined Contribution and meet the Sustainable Development Goals.

Against this background, GGGI and the GoV have agreed to pursue the strategic objectives outlined in this Country Planning Framework (CPF) for 2017-2021 as a foundation to achieve Vanuatu's development ambitions. The CPF is aligned with Vanuatu's action plans for climate change and the NSDP. It is designed to direct strategic support to the GoV where it is most needed, maximize value and promote long-term impacts. The joint commitment by GGGI and the GoV over the period of this CPF will build on the considerable successes made in Vanuatu over the past decades by ensuring that future development is increasingly inclusive and sustainable.

Affirming our partnership and commitment, both parties extend their appreciation to the line ministries, local partners and global stakeholders for their support and contribution to this CPF.

Signed by two parties,



**Dr. Frank Rijsberman**  
Director General  
Global Green Growth Institute



**Hon. Ham Lini Vanuaroroa**  
Minister of Climate Change Adaptation, Meteorology,  
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# Abbreviations and Acronyms

<b>CO<sub>2</sub>e</b>	Carbon Dioxide Equivalent
<b>CPF</b>	Country Planning Framework
<b>GDP</b>	Gross Domestic Product
<b>Gg</b>	Giga-grams (10 <sup>9</sup> grams or one billion grams)
<b>GGGI</b>	Global Green Growth Institute
<b>GHG</b>	Greenhouse Gas
<b>GNI</b>	Gross National Income
<b>GoV</b>	Government of Vanuatu
<b>LDC</b>	Least Developed Country
<b>NDC</b>	Nationally Determined Contribution
<b>NERM</b>	National Energy Roadmap
<b>NGEF</b>	National Green Energy Fund
<b>NSDP</b>	National Sustainable Development Plan
<b>SDG</b>	Sustainable Development Goal
<b>SIDS</b>	Small Island Developing States
<b>UNDP</b>	United Nations Development Programme
<b>USD</b>	United States Dollars

# Executive Summary

## Background

Vanuatu is a least developed country dedicated to a pathway of green growth that underpins its cultural, societal and environmental values. Vanuatu has a narrow economic base and is highly dependent on the tourism and agriculture sectors for economic development. The country has been ranked as the world's most vulnerable country to climate change and natural disasters.<sup>1</sup> In addition, the economy is characterized by distance from markets, lack of economies of scale and high dependence on petroleum fuel imports.

While gross domestic product growth has been relatively strong in the post-2008 crisis era, this has not translated to significant reductions in poverty. A large proportion of the population remains close to the poverty line and is vulnerable to becoming poor due to economic shocks, such as natural disasters and fuel price rises. Poverty among the rapidly growing rural population is the result of a lack of both stable economic conditions and access to basic services, including energy. Without access to clean, reliable energy, rural populations will continue to suffer from poor access to clean water, health services and education, and lack of opportunities for creation of income-generating activities.

## National Priorities

Vanuatu's *National Sustainable Development Plan 2016-2030* (NSDP) expresses a clear dedication to green growth, stating that "a more inclusive, equitable and balanced approach is needed to promote sustainability, eradicate poverty, and enhance well-being and happiness".

Access to reliable, secure and sustainable energy is key to unlocking Vanuatu's development potential. Energy access helps to improve livelihoods and welfare, and diversify incomes. Vanuatu's Nationally Determined Contribution (NDC) commits to generate 100% of its electricity with renewable resources by 2030. The *National Energy Roadmap 2016-2030* (NERM) sets out a framework for providing electricity to a much higher percentage of ni-Vanuatu<sup>2</sup>, includes targets on renewable energy and energy efficiency, and supports the establishment of the National Green Energy Fund (NGEF).

## About the Country Planning Framework

In line with the NSDP and NERM, Vanuatu's 2017-2021 program of the Global Green Growth Institute (GGGI) will focus on rural energy access and the deployment of renewable energy technologies to stimulate rural livelihood creation and economic growth in the agriculture, fisheries and tourism sectors. Energy access must be increased to provide basic economic and social conditions that can lead to improved livelihoods and reduced poverty in all its forms.

## Theory of Change

The energy sector in Vanuatu is characterized by extreme dependency on petroleum fuel imports—placing the country among the ten most vulnerable to oil price volatility in the Asia-Pacific region. Energy services are unreliable and unaffordable, particularly in rural communities, where only 10% of households, 42% of schools and 25% of health facilities have access to electricity.<sup>3</sup>

GGGI's central goal in Vanuatu is to support the country's transition to a green economy through sustainable energy provision. There are two specific outcomes that are interlinked, and are aligned with the GGGI energy thematic strategy.

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## Strategic Outcome 1: Expanded access to affordable and sustainable energy services for rural households, businesses and public institutions through renewable energy

**GGGI's interventions under this outcome will support the following goals of the Government of Vanuatu (GoV):**

- 60% rural electrification by 2020, and 100% by 2030;
- 80% of public institutions have access to electricity by 2020;
- 100% of electricity generated from renewable resources by 2030;
- Reduce energy sector GHG emissions to 72Gg by 2030 (compared to a baseline of 130Gg in 2010).

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1 United Nations University, *World Risk Report* (2016).

2 "ni-Vanuatu" broadly refers to nationals and citizens of Vanuatu

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3 GoV, *Updated Vanuatu National Energy Roadmap* (2016).



In April 2016, the Council of Ministers, the Cabinet of Vanuatu, approved the establishment of the NGEF to support green energy project proposals and channel climate finance into projects identified by and in line with the NERM. GGGI will support these efforts by:

- Strengthening energy sector policymaking, planning, economic assessments and regulatory capacity within the GoV to develop an enabling environment conducive to sustainable energy project development and private sector investment;
- Providing technical assistance to mobilize finance for sustainable energy projects, including – (1) designing and establishing the NGEF; (2) developing an appropriate legislative, policy and regulatory framework for operationalization and integration of the NGEF into the GoV's financial systems; and (3) providing recommendations to the GoV on establishing mechanisms for achieving and financing long-term operational sustainability;
- Developing a pipeline of green energy projects to support the GoV's attainment of objectives related to renewables-based energy access to households and improved end-use energy efficiency. This pipeline of projects will be prioritized and developed into bankable projects, and financing will be assessed and identified.

These interventions will support Vanuatu in making important institutional improvements in the renewable energy and energy efficiency investment environment, and prepare the GoV for a longer-term scale up beyond 2021. GGGI will contribute to the achievement of NERM, NSDP and NDC objectives and assist in reaching Sustainable Development Goal (SDG) 7 on affordable and clean energy.

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## Strategic Outcome 2: Sustainable energy services power rural livelihood creation and economic growth in the agriculture, fisheries and tourism sectors

GGGI's interventions under this outcome will support the following GoV goals:

- 25% of rural tourism bungalows use renewable electricity by 2020, and 65% by 2030;
  - 100% of households have year-round access to drinking water as per agreed standards by 2030;
  - At least 8 mini-grid systems are operational with the potential to develop farm, forest and fisheries businesses by 2020;
  - Promote the use of renewable energy and application of energy efficiency in rural bungalows and tourism resorts, and promote the use of renewable energy to enhance income generation and raise productivity in the agriculture and fisheries sectors.
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The NSDP articulates a set of rural development objectives, including: (1) development of productive rural sectors; (2) improvement of access to markets; and (3) provision of public services. In tandem with efforts to promote rural electrification, GGGI will support livelihood creation and economic growth in rural areas, as follows:

- Carry out policy development, planning and economic assessments to identify areas where improved energy and water services and integrated planning can improve outcomes for the productive sectors (agriculture, fisheries and tourism);
- Mainstream energy sector objectives and targets into sectoral policy and planning, build capacity, integrate rural development and sustainable energy investment planning, and develop integrated investment plans, including a pipeline of energy and water projects focused on boosting the productive sectors;
- Emphasize the creation of income opportunities for low-income households, female-headed households and women's businesses and cooperatives, and assist vulnerable groups in catalyzing inclusive green growth in Vanuatu's rural communities.

Through improved planning, finance for energy projects will be obtained, with the goal of bringing about growth in the agriculture, fisheries and rural tourism sectors. Prioritization will be placed on energy and water projects that stimulate rural businesses, improve livelihoods and increase income generation. This in turn will improve the resilience of rural communities to climate and disaster shocks.

Over the longer term, the positive impacts are expected to include increased green job opportunities in the rural economy, diversification and growth of the rural economy, and poverty reduction, which are in line with NSDP goals. These impacts are also expected to contribute to the achievement of the SDGs, particularly, SDG 1 (end poverty and build resilience of the poor), SDG 6 (clean water and sanitation), SDG 7 (affordable and clean energy), and SDG 8 (economic growth and the development of micro and small enterprises).







# 1. Introduction to the Country Planning Framework

The Country Planning Framework (CPF) presents the objectives and interventions that the Global Green Growth Institute (GGGI) aims to pursue in partnership with the Government of Vanuatu (GoV) over the period 2017 to 2021.

The CPF objectives are derived from the GGGI *Strategic Plan 2015-2020*,<sup>4</sup> reflect GGGI's comparative advantage, and are in alignment with national goals and priorities of economic growth, poverty reduction, social inclusion and environmental sustainability as laid out in *Vanuatu 2030 The People's Plan, National Sustainable Development Plan 2016 to 2030*. The CPF is also aligned with Vanuatu's Nationally Determined Contribution (NDC) and the *National Energy Roadmap 2016-2030 (NERM)*, and contributes to the achievement of the Sustainable Development Goals (SDGs), particularly SDG 7 on universal energy access and increase use of renewable energy.

The CPF is aligned to GGGI's corporate values, demonstrating:

- **Joint ownership** – The CPF formulation is undertaken by GGGI's country team in close dialogue with government counterparts and other stakeholders. The document is co-owned and endorsed by the GoV, demonstrating commitment among both parties to collaborate on the mutual goals;
- **Transformational outcomes** – GGGI takes a long-term outlook and aims for catalytic CPF outcomes that can trigger transformational change. The achievement of these outcomes is enhanced through partnership and synergy with other development actors;
- **Boldness** – GGGI responds to challenges with optimism. CPF outcomes seek to design and scale up creative new solutions, and continually learn and adapt to evolving local contexts;
- **Excellence** – The CPF process is underpinned by technical rigor, demonstrating thought leadership and drive toward continuous improvement;
- **Inclusiveness** – GGGI respects and prioritizes diversity, information sharing among a broad set of stakeholders, and equal opportunity in its collaboration and interventions. CPFs are designed to respond to national poverty reduction and social inclusion challenges;
- **Integrity** – GGGI upholds high standards for transparency and accountability. CPF analysis balances the findings of analytical reports and data with stakeholder feedback.

GGGI's ability to accomplish the long-term outcomes of the CPF will depend on resource mobilization and the anticipated cooperation and support of the GoV and other relevant stakeholders.

## About GGGI

GGGI was founded to support and promote a model of economic growth known as “green growth”, which targets key aspects of economic performance such as poverty reduction, job creation, social inclusion and environmental sustainability.

GGGI envisions a resilient world achieved through strong, inclusive and sustainable green growth, and is dedicated to supporting the transition of GGGI partner countries toward a green growth model. In pursuit of these goals, GGGI works with developing and emerging countries to design and deliver programs and services that demonstrate new pathways to pro-poor economic growth.

GGGI supports stakeholders through two complementary and integrated work streams—Green Growth Planning & Implementation, and Investment & Policy Solutions—that deliver comprehensive products and services designed to assist in developing, financing and mainstreaming green growth into national economic development plans.

GGGI's interventions emphasize change in four priority areas considered to be essential to transforming countries' economies including energy, water, land use and green cities.

Headquartered in Seoul, Republic of Korea, GGGI also has representation in a number of partner countries.

The Vanuatu CPF is developed on the basis of in-depth consultations with key stakeholders from the GoV, the private sector and civil society, as well as development partners.

Consultations were held from May 30 to June 10, 2016 in Port Vila with senior GoV officials, key development partners, the private sector (petroleum companies, power utilities, renewable energy suppliers), the Utilities Regulatory Authority and non-governmental organizations. About 15 members of the National Advisory Board on Climate Change and Disaster Risk Management were consulted on June 3, 2016. At the regional level, discussions were held between February 29 and June 30, 2016 with multiple development partners active in Vanuatu. In total, over 45 individuals and 28 organizations were consulted.

<sup>4</sup> GGGI, *GGGI Strategic Plan 2015-2020: Accelerating the Transition to a New Model of Growth* (Seoul, 2015).



## 2. Vanuatu's Green Growth Context

### 2.1 Economic Growth

Vanuatu is a country in the South Pacific Ocean made up of 83 islands. It shares common features of vulnerability with other Pacific Island countries: a narrow resource base; considerable distance from markets; lack of economies of scale; small domestic markets; aid dependence; extreme dependence on petroleum fuel imports; and vulnerability to natural disasters, which is being exacerbated by climate change impacts. Vanuatu has a thin economic base, which depends primarily on tourism and agriculture—both volatile sectors. Achieving sustained economic growth in Vanuatu will require a strengthening of the economic base while building resilience to climate change impacts and natural disasters.

**Vanuatu has experienced volatile economic growth since independence.** The most recent period of sustained economic growth was from 2003 to 2014, which was driven by favorable agricultural export markets, aid-funded infrastructure investment, foreign investment in tourism and real estate, and sound macroeconomic management.<sup>5</sup> Since 2009, economic growth has been sluggish due to a downturn in tourism, delayed infrastructure projects, and Cyclone Pam (a category 5 cyclone that caused significant damage to Vanuatu in 2016). The economy is expected to rebound with 3.8% growth in 2017.<sup>6</sup>

The economy remains dualistic with a relatively affluent urban economy—dominated by the public sector, service sector and construction sector—and a largely informal rural economy that is driven by subsistence agriculture and fisheries. As of 2014, the service sector accounted for 65% of gross domestic product (GDP), of which tourism activities represented a significant contribution.<sup>7</sup> While agriculture, fishing and forestry output contributed less than the service sector at 22% of GDP in 2014, the agricultural sector is the cornerstone of rural development and is the most important source of livelihood for those living in rural areas.<sup>8</sup> Agricultural production in Vanuatu is predominantly in the informal sector, with 80% of the population depending entirely on subsistence agriculture for their daily sustenance and well-being.<sup>9</sup>

Vanuatu is one of 48 countries designated by the United Nations as a Least Developed Country (LDC). The country was to be removed from LDC status<sup>10</sup> in December 2017 due to improved performance on per capita income and human assets, but this has recently been postponed until December 2020.<sup>11</sup>

### 2.2 Environmental Sustainability

**Available environmental indicators for Vanuatu are generally positive although the GoV is concerned that loss of biodiversity is affecting livelihoods.**

5 Ron Duncan, "Sources of Growth Spurts in Pacific Island Economies," *Asia and the Pacific Policy Studies* 3, no. 2 (May 2016): 351–365.

6 Asian Development Bank, *Asian Development Outlook* (2016).

7 Reserve Bank of Vanuatu, *December Quarterly Economic Review* (2015).

8 Vanuatu National Statistics Office, *National Accounts of Vanuatu: 2014 Annual Report* (2014).

9 GoV, *Vanuatu Agriculture Sector Policy 2015-2025* (2015).

10 United Nations Conference on Trade and Development, *Least Developed Countries Report* (2015).

11 United Nations Conference on Trade and Development, *UNCTAD Supports Efforts to Achieve Structural Progress Towards Graduation from Least Developed Country Status* (2016).



But data on impacts are scarce, as there has been no overall national environmental assessment for Vanuatu since 2005. Based on available data, however, the country compares well to the broader East Asia and Pacific region: forest cover is high (36% in 2015);<sup>12</sup> mean annual air pollution from particulate matter is low (9 micrograms per cubic meter of PM 2.5 in 2015);<sup>13</sup> and per capita CO<sub>2</sub> emissions are low (0.42 metric tons per capita in 2013).<sup>14</sup>

Vanuatu's absolute levels of CO<sub>2</sub>e emissions account for less than 0.0016% of global levels of emissions.<sup>15</sup> Vanuatu's national greenhouse gas (GHG) emissions in 2000 were 585.39Gg of CO<sub>2</sub>e. In 2010, agriculture contributed 86%, energy 12% and waste 2% of total emissions. Taking into account CO<sub>2</sub> sequestration by forestry and land use, total net emissions were estimated to be negative 7,327.77Gg of CO<sub>2</sub>e, which means that Vanuatu is a net GHG sink.<sup>16</sup>

**Yet, Vanuatu faces extreme climate vulnerability.** Like other Small Island Developing States (SIDS), Vanuatu has been recognized by the United Nations Framework Convention on Climate Change as one of the countries most vulnerable to the impacts of climate change. Vanuatu is already experiencing the negative impacts, especially through changing weather patterns, including droughts and flooding events, and increasingly damaging natural disasters (such as Cyclone Pam).

Vanuatu has been identified as the country with highest disaster risk in the ranking of the World Risk Index since the rankings began in 2011. The most recent World Risk Report ranks Vanuatu as the world's most exposed country, and the most vulnerable to damage from natural hazards, including earthquakes and droughts<sup>17</sup>. Cyclones have had a major impact—Cyclone Pam, in March 2015, left up to 70% of Vanuatu's people displaced. This cyclone also led to a decline in GDP of about 0.8% in 2015, relative to pre-cyclone projections of 3.5%.<sup>18</sup>

**Climate change is expected to negatively impact all key sectors, and is a major risk to future economic growth.** Future negative impacts will affect all areas of life for ni-Vanuatu and are expected to include reduced agricultural and fisheries productivity, declining health outcomes, reduced tourism revenues, and higher social and infrastructure costs.

## 2.3 Poverty Reduction and Social Inclusion

**Vanuatu has made considerable progress on reducing absolute poverty and on improving other human development indicators since 1980. Official rates of poverty, however, have not changed in recent years.** Vanuatu has commitments in line with the SDG target of eradicating extreme poverty by 2030, which is currently measured as people living on less than USD 1.25 a day. In 2010, the incidence of basic poverty was 12.7%, reduced slightly from 13% in 2006, with large geographic disparities nationally.<sup>19</sup> Vanuatu's relatively strong growth in recent years has therefore not translated into poverty reduction, and a large proportion of the population continues to remain close to the poverty line or is vulnerable to becoming poor from economic shocks such as natural disasters and fuel price rises.

The national income distribution in Vanuatu improved over the period from 2006 to 2010, with the Gini coefficient decreasing from 0.41 to 0.31 at the national level. As of the last census in 2009, the unemployment rates were 12% and 2% in urban and rural areas, respectively. The low rural unemployment rate in Vanuatu can be explained by the high proportion of people engaged in subsistence farming and the informal economy. Vanuatu remains a predominately rural country, with an estimated 76% of households living outside of urban areas in 2009, but the urban population continues to grow at a rate of 3.5% per annum.<sup>20</sup>

**Vanuatu's rural population has low access to energy, water infrastructure, health and education services.** Rural electrification rates are very low—under 10% of households. In Vanuatu, only one third of households have access to electricity, most of which are connected to the GoV regulated grids in the two main urban areas (Port Vila and Luganville). Yet, 76% of Vanuatu's households are located in rural areas, where only one in ten homes, under half of the schools (42%), and one in four health facilities have some self-generated electricity (mainly petroleum fuel based).<sup>21</sup> Rural households are also less likely to have access to modern cooking fuels, with about 95% of the rural population still cooking with biomass.<sup>22</sup> Water is abundant in most islands across Vanuatu, but access to reliable safe water supplies in rural areas is low. The *Vanuatu Millennium Development Goals Report* indicated 92% "improved" water access for urban centers in 2006, compared to 63% in rural areas, with rural access declining since 1999 and nearly unchanged from 1989.<sup>23</sup>

12 World Bank Data, 2015, <http://data.worldbank.org>.

13 Ibid.

14 World Bank Data, 2013, <http://data.worldbank.org>.

15 GoV, *Intended Nationally Determined Contribution* (2015).

16 GoV, *Second National Communication to the United Nations Framework Convention on Climate Change* (2014).

17 United Nations University, *World Risk Report* (2016).

18 International Monetary Fund, 2016 *Article IV Consultation with Vanuatu* (2016).

19 GoV and the UNDP Pacific Center, *Vanuatu Hardship & Poverty Report* (2010).

20 United Nations Population Fund, *Population and Development Profiles: Pacific Island Countries* (2014).

21 GoV, *Updated Vanuatu National Energy Roadmap* (2016).

22 Asian Development Bank, *Urban Household Appliance & Energy Use Survey for Port Vila & Luganville, Vanuatu 2013* (2014).

23 GoV, *Millennium Development Goals 2010 Report for Vanuatu* (Office of the Prime Minister with UNDP, 2010).

Therefore, differences in energy and water access match the differing levels of development in urban and rural areas.

**Gender equality in Vanuatu has improved over the last 20 years but there is still a significant need for action in this area.** The gender gap in literacy and education has narrowed, and in some provinces, girls have outperformed boys in school attendance.<sup>24</sup> Vanuatu's first *National Gender Equality Policy* was developed in 2015, which recognizes that "gender equality and women's empowerment are [...] critical to the achievement of the national development vision", and that Vanuatu "cannot prosper when half of its population faces considerable inequalities in social, economic and political settings". Government of Vanuatu, *National Gender Equality Policy 2015-2019*, 2015. There are numerous challenges that will need to be dealt with. From independence in 1980 until 2013, only five women were elected to Parliament and there are no women in the current Parliament.<sup>25</sup> In 2009, women represented 38% of the labor force of the public sector and 40% of the private sector.<sup>26</sup> The opportunity for women to set up businesses is limited as they lack access to capital, financial services and markets, with the situation being worse for rural women.<sup>27</sup> More women than men (49% and 41% respectively) are involved in the subsistence economy, which makes them more susceptible to poverty, impacts of climate change, disasters and other livelihood stresses.<sup>28</sup> On many islands in Vanuatu, women do not have formal rights in the traditional land ownership system. It is thus crucial to take land access into account when designing and implementing projects to ensure both women and men benefit from development assistance.<sup>29</sup>

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24 Vanuatu National Statistics Office, *National Population and Housing Census Gender Monograph: Women and Men in Vanuatu* (2009).

25 World Bank Data, 2015, <http://data.worldbank.org>.

26 Vanuatu National Statistics Office, *National Population and Housing Census Gender Monograph: Women and Men in Vanuatu* (2009).

27 International Finance Corporation, "Helping Women in Vanuatu Get a Head Start in Business," 2011, [http://www.ifc.org/wps/wcm/connect/news\\_ext\\_content/ifc\\_external\\_corporate\\_site/news+and+events/news/helping+women+in+vanuatu+get+a+head+start+in+business](http://www.ifc.org/wps/wcm/connect/news_ext_content/ifc_external_corporate_site/news+and+events/news/helping+women+in+vanuatu+get+a+head+start+in+business).

28 GoV, *National Gender Equality Policy 2015-2019* (2015).

29 Anna Napua, "Making the Invisible Seen: Putting Women's Rights on Vanuatu's Land Reform Agenda," in *Kastom, property and ideology: Land transformations in Melanesia*, ed. Siobhan McDonnell, Matthew Allen and Colin Filer (Canberra, Australia: ANU Press, e Australian National University, 2017), 305-326.



Table 1. Vanuatu at a glance	
Population, 2016	271,000
Ratio of land area to ocean area	12,189 km <sup>2</sup> : 680, 000 km <sup>2</sup>
Number of islands	83
GDP in current USD, 2015	USD 742,432,131
GNI per capita, PPP, in current USD, 2015	USD 3,050
World Bank classification, 2017	Least Developed Country
World Risk Index, 2016	1 out of 171 countries
Percentage of people living on less than USD 1.90 a day, 2010	15.4%
Incidence of basic needs poverty in population, 2010	12.7%
Human Development Index, 2014	0.726 (93 out of 188 countries)
CO <sub>2</sub> e emissions in metric tons per capita, 2013	0.42
Absolute CO <sub>2</sub> e emissions, 2010	720.66 Gg
Forest area % of land, 2015	36%
Agricultural land % of land area, 2014	15.3%
Arable land % of land area, 2014	15.3%
Permanent cropland % of land area, 2014	10.3%
Agriculture, fishing and forestry output % of GDP, 2014	22.0%
Industrial output % of GDP, 2014	7.5%
Service sector output % of GDP, 2014	64.7%
Percentage of energy generated from renewable sources, 2016	29%
Percentage of energy generated from renewable sources projected for 2020, 2016	40%
Urban electrification rate, 2015	62%
Rural electrification rate, 2015	9%
Availability of fresh water, 2014	38,627 m <sup>3</sup> per year per capita
Ease of Doing Business, 2017	83 out of 190 countries
Income Gini coefficient, 2010	37.2
Annual urban growth rate, 2014	3.5%
Rural population % of population total, 2009	76%
Total population density, 2014	22 persons per sq. km

Sources: Food and Agriculture Organization, "Fishery and Aquaculture Country Profiles: The Republic of Vanuatu," accessed June 9, 2017, <http://www.fao.org/fishery/facp/VUT/en>; GoV, Updated Vanuatu National Energy Roadmap (2016); GoV, Second National Communication to the United Nations Framework Convention on Climate Change (2014); GoV and the UNDP Pacific Center, Vanuatu Hardship & Poverty Report (2010); United Nations Data 2014 and 2016, <http://data.un.org>; United Nations Population Fund, Population and Development Profiles: Pacific Island Countries (2014); United Nations University, WorldRiskReport (2017); United Nations University, WorldRiskReport (2016); Vanuatu National Statistics Office, National Accounts of Vanuatu: 2014 Annual Report (2014); and World Bank Data 2010, 2014, 2015 and 2017, <http://data.worldbank.org>.







# 3. National Priorities

The NSDP, NERP and NDC have numerous objectives and targets related to the principles of green growth (Table 2).

Table 2. Green growth objectives and targets in national plans and strategies	
National Plans	Key Objectives and Targets related to Green Growth
National Sustainable Development Plan	Increase access to safe, reliable and affordable modern energy services for all that are increasingly generated from renewable sources and reduce reliance on imported fossil fuels.
	Ensure all people have reliable access to safe drinking water and sanitation infrastructure.
	Promote broad-based growth by strengthening linkages between tourism, infrastructure, agriculture and industry in rural areas and diversify the rural economy.
National Energy Roadmap	60% rural electrification by 2020, and 100% by 2030.
	100% of electricity generated from renewable resources by 2030.
	Reduction of at least 10% in total energy demand (in tonnes of oil equivalent) between 2015 and 2030, compared to the business-as-usual scenario.
International Commitments	65% of rural tourism bungalows using renewable energy by 2030.
	Key Objectives and Targets related to Green Growth
	Nationally Determined Contribution
	Reduce energy sector GHG emissions by 72Gg by 2030, compared to a baseline of 130Gg in 2010.

## 3.1 National Sustainable Development Plan 2016-2030

The NSDP has a strong green growth and sustainable development focus. The goals and objectives of the NSDP are built around three development pillars:

1. Preservation of Vanuatu's Melanesian society and culture;
2. Maintaining a pristine natural environment that ensures enhanced resilience and adaptive capacity to climate change and natural disasters;
3. Economic development that is stable, and creates income earning opportunities for all people in both rural and urban areas.

Under the environment pillar, a key goal is "an economy which fosters sustainable growth and development through low impact industries and modern technologies to ensure the well-being of future generations".

The NSDP policy objectives clearly indicate the commitment of the GoV to an inclusive, pro-poor, environmentally sound green growth pathway including:

- Inclusive economic development through promotion of a traditional economy that is valued and safeguarded;
- Mainstreaming of gender policies and ensuring a gender responsive planning and budgeting process;
- Deepening the integration of the tourism sector into the rural economy to spread opportunities to rural communities;
- Exploring and promoting new and sustainable sources of energy and ensuring efficient consumption;
- Promoting sustainable water and natural resource management.

## 3.2 National Energy Roadmap

The NERM 2013-2020 sets out a framework for providing electricity to a much higher percentage of ni-Vanuatu, expanding renewable energy, and improving petroleum supply arrangements. An updated NERM 2016-2030 was prepared with GGGI assistance in 2015 and was launched in 2016.

**The updated NERM adds coverage of green growth and energy, as well as improved demand-side energy efficiency.** It also includes new objectives, targets and timescales for reaching the targets (see Table 2 for an overview of the NERM targets).

**In addition, the updated NERM introduces the establishment of the National Green Energy Fund (NGEF)** as a new implementation tool for the NERM to mobilize domestic and international finance to meet the NERM targets for electricity access, renewable energy and energy efficiency.

## 3.3 Nationally Determined Contribution

The mitigation part of the NDC has an energy sector focus with a 2030 target of generating 100% of its electricity with renewable resources by 2030. The NDC is consistent with the goals outlined in the NERM, and achieving the NDC target is contingent upon appropriate financial and technical support being made available. This contribution would reduce emissions in the energy sector by 72Gg by 2030, with emissions in this sector around 130Gg in 2010 but expected to rise to 240Gg by 2030 at a rate of 3% per annum. Concurrently, the NDC states that Vanuatu will pursue emissions reductions in the agricultural, forestry and waste sectors.<sup>30</sup>

<sup>30</sup> There are no quantitative targets in the NDC for emissions reductions in the agricultural, forestry and waste sectors.

Given Vanuatu's extreme climate vulnerability, the NDC has a strong adaptation component. The impacts of climate change are considerable in Vanuatu, including a sea-level rise since 1993 measured by satellite altimeters of about 6 mm per year, nearly double the global average of  $3.2 \pm 0.4$  mm per year. For some low-lying areas, encroaching sea water has resulted in salinization of water, forcing communities to look for other sources of potable water.<sup>31</sup> The NDC therefore reiterates the adaption priorities Vanuatu identified in key national documents such as the *National Adaptation Programme of Action* and the *National Climate Change and Disaster Risk Reduction Policy*.

### 3.4 Nationally Appropriate Mitigation Action

Vanuatu's 2015 *Nationally Appropriate Mitigation Action* design document on rural electrification proposes a series of five solar photovoltaic micro- or mini-grids plus grid extensions with estimated GHG reductions of 13,440 tonnes of CO<sub>2</sub> during a 15-year project lifetime, with about 5,000 people provided with electrification services.

### 3.5 Sustainable Development Goals

Vanuatu is committed, through ratifying the SDGs, to collaborate with the international community on a wide range of initiatives including climate change mitigation and adaptation, sustainable development, and improved water management. The NSDP 2016-2030 includes policy objectives that are in line with the 15 SDGs. They cover the social, environmental and economic pillars of sustainable development (the key green growth policy objectives are stated in Table 2). These policy objectives, which will contribute toward achieving the SDGs, will be delivered via coordinated GoV planning and service delivery at the national, provincial and municipal levels.

### 3.6 National Environment Policy and Implementation Plan 2016-2030

The *Vanuatu National Environment Policy and Implementation Plan 2016-2030* strongly advocates for green growth to be defined as an approach to foster "economic growth and development, while ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies". By doing so, the GoV aims to "reconfigure businesses and infrastructure to deliver better returns on natural, human and economic capital investment, while at the same time reducing GHG emissions, extracting and using less natural resources, creating less waste and reducing social disparities". The policy includes the following green growth objectives:<sup>32</sup>

- Ensure that vulnerable watersheds, catchments and fresh water resources are well managed and all community water sources are protected;
- Enhance the sustainability of farm, forest and fisheries production;
- Mainstream climate and disaster risk into policies, strategies, budgets and planning at all levels.

### 3.7 Climate Change and Disaster Risk Reduction Policy 2016-2030

The *Vanuatu Climate Change and Disaster Risk Reduction Policy 2016-2030*, has a vision of Vanuatu as "a nation whose communities, environment and economy are resilient to the impacts of climate change and disaster risks".<sup>33</sup> Rural communities, in particular, need to transition toward climate-smart agricultural practices. The goal of climate resilient infrastructure is to ensure that "the design and construction of public and other major infrastructure and development projects consider current and projected risks in order to minimize loss and damage, especially by developing and adhering to climate-proofed building codes, environmental impact assessments, regulations and development guidelines".

31 Pacific Climate Change Science Program Partners, "Current and Future Climate of Vanuatu," 2011, [http://www.pacificclimatechangescience.org/wp-content/uploads/2013/06/15\\_PCCSP\\_Vanuatu\\_8pp.pdf](http://www.pacificclimatechangescience.org/wp-content/uploads/2013/06/15_PCCSP_Vanuatu_8pp.pdf).

32 GoV, *Vanuatu National Environment Policy and Implementation Plan 2016 - 2030* (2017).

33 GoV and the Pacific Community, *Vanuatu Climate Change and Disaster Risk Reduction Strategy 2016-2030* (2015).







## 4. GGGI's Engagement in Vanuatu

### 4.1 GGGI's Achievements to Date

Vanuatu became a member of GGGI in 2014 and the GoV signed a Host Country Agreement and Memorandum of Understanding with GGGI in 2015. The GGGI Office in Port Vila, Vanuatu, was established in the Department of Energy, Ministry of Climate Change, in February 2015.

**GGGI's support to Vanuatu has thus far focused on the energy sector, and has included the integration of green growth and energy efficiency into an updated NERM, and the development of the NGEF, a green energy financing mechanism.** Both the NERM and NGEF have been endorsed by the Council of Ministers, the Cabinet of Vanuatu.

More specifically, GGGI assisted the GoV to update the NERM 2013-2020 in 2016 by integrating green growth and energy efficiency strategies and targets into the revised NERM 2016-2030.<sup>34</sup> GGGI also carried out an initial scoping and business plan development for the NGEF in 2016. The purpose of the NGEF is to implement the renewable energy and energy efficiency targets under the NERM.<sup>35</sup> This will result in an increased capacity to mobilize green energy financing, improved energy planning, and increased investment in rural renewable energy and energy efficiency projects. These results will in turn contribute to the reduction of GHG emissions and decreasing imports of fossil fuels.

**GGGI's support is directed at developing renewable energy-based electrification for rural households and public institutions, and also at improving water security and developing rural productive sectors.** The initial activity in 2015 involved the development of a policy paper on green energy and the water, tourism, agriculture and fisheries sectors. In 2016, this was followed by the development of five potential projects in the biomass, biogas, water, rural electrification and tourism sectors in consultation with the Department of Agriculture, the Department of Forestry, the Department of Water and the Department of Tourism.

These projects are in line with Vanuatu's NDC to achieve 100% renewable electricity, and the NERM target for 100% rural electrification, both by 2030. The projects' outcomes also contribute to achieving SDG 7 (affordable and clean energy), as well as Vanuatu's own NSDP objectives to improve the livelihoods of all people and ensure energy access for all, while promoting renewable energy and energy efficiency.

Further market research into the utilization of renewable energy for the electrification of rural tourism bungalows was carried out in late 2016, in partnership with the Department of Tourism and the Department of Energy. The research aimed to increase investment in energy projects, and contribute to job creation and economic growth in rural communities.

### 4.2 GGGI's Comparative Advantage in Vanuatu

**GGGI has found a strong niche in the energy sector in Vanuatu.** While there is ongoing support from several development partners on energy, there remains a strong need for support on: (1) building an enabling environment for energy financing; (2) mainstreaming energy considerations into sectoral plans; and (3) shifting energy sector support to green growth by creating linkages to the water and productive sectors.

**GGGI works from an embedded position within the GoV, providing flexible and relevant support.** By building on its energy sector experience in Vanuatu, GGGI can assist with developing sustainable energy systems to increase rural energy access and clean rural water supply, and foster development of Vanuatu's key productive sectors. GGGI's work brings together many of the environmental and social objectives of other international organizations, and the economic growth and poverty reduction objectives of development banks and investors. This innovative approach allows GGGI to provide more holistic, results-oriented technical assistance to governments, and distinguishes GGGI from traditional development partners.

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<sup>34</sup> GoV, *Updated Vanuatu National Energy Roadmap* (2016).

<sup>35</sup> GoV and GGGI, *Designing a National Green Energy Fund for Vanuatu* (2016).



**There is also scope for collaboration with development partners, whereby GGGI can play the role of a facilitator, as well as provide technical inputs on specific energy issues.** GGGI collaborated with the World Bank in 2015-2016 to revise the original NERM 2013-2030, and will continue to collaborate with the World Bank and other partners on implementing the updated NERM 2016-2030. GGGI is partnering with the United Nations Development Programme (UNDP) to develop a comprehensive Green Climate Fund Program for solar home systems and solar mini-grids for rural electrification throughout Vanuatu's off-grid rural areas. The scoping work was completed in 2016, and GGGI continues providing support through its 2017-2018 work program. This Green Climate Fund Program will build on the rural electrification work funded by New Zealand and the World Bank.

There is scope for GGGI to partner with other agencies active in the energy and productive sectors, including the Asian Development Bank, the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), the New Zealand Ministry of Foreign Affairs and Trade, and the Australian Department of Foreign Affairs and Trade. Partnerships have the potential to be formed around the areas of linking renewable energy and tourism, agriculture and rural water supply, and mobilizing and making finance more accessible across these sectors.

In Vanuatu, GGGI has a comparative advantage vis-à-vis other development partners in the following areas:

**Trusted advisor for strategic planning on green growth policy and embedded unit within the GoV.** GGGI leverages an in-depth understanding of Vanuatu's public sector processes and access to international green growth experiences to support the GoV in the policy development process. GGGI provides objective and neutral assistance in strategic planning for the conceptualization of the problems, challenges and priorities of agenda setting and policy design. The GoV's trust is evident in the selection of GGGI as the key partner for the development of the NERM and the NGEF.

**Experience on the development of bankable projects and a finance vehicle serves as blueprint for unlocking large-scale finance and delivering high impact.** GGGI has been involved in formulating rural energy projects and was commissioned by the GoV to develop the NGEF. GGGI is, therefore, uniquely placed to assist Vanuatu with designing and implementing projects, and identifying and mobilizing funding for delivering green growth. A key feature of GGGI's approach is its emphasis on sustainable long-term results. For this reason, GGGI aims to strengthen the institutional capacity of GoV to implement its energy and green growth projects in an inclusive, effective and efficient manner.

**Capacity to create unique spaces for coordination and knowledge exchange between different government levels and various sectors, and create integrated approach to project development.** GGGI has experience bridging the gap between different sectors of the GoV in energy policy and project development. GGGI leverages this experience and extensive public sector knowledge to foster links between key agencies and strengthen conditions for integrated projects and high impact. To this work, GGGI also brings a knowledge-sharing component to enrich dialogue and maximize impact through South-South cooperation in the Pacific region, and with countries facing similar challenges in other parts of the world.

**Working in partnerships with other cooperation agencies and catalyzing their previous work on sectors related to green growth.** GGGI has played an active coordination role catalyzing its own interventions and those of other actors in order to generate a greater combined impact on public policy. During the CPF period, GGGI will seek to strengthen this role in order to form synergies with other international cooperation entities, private sector players and civil society.

**Connecting local and national objectives with the global development agenda.** Finally, GGGI takes seriously its mandate to connect local and national objectives with the global climate change and sustainable development agendas. Our strategic advice aims to mainstream global objectives into national policy wherever possible. In Vanuatu, the work being carried out will contribute to the implementation of the NDC and the SDGs.





# 5. Theory of Change

GGGI's central goal in Vanuatu is to support the country's transition to a green economy through sustainable energy provision. GGGI will assist the GoV to: (1) continue improving its energy sector policy and strategic planning; (2) develop the environment for private sector investment in renewable energy; (3) further develop energy efficiency actions; and (4) create linkages and synergies between sustainable energy and Vanuatu's productive sectors, through integrated policy and planning and project design.

The rural energy components are prerequisites to more inclusive green growth, which provides productive opportunities to the rural economy. There are two specific outcomes that are interlinked, and are aligned with the GGGI energy thematic strategy:

- Strategic Outcome 1 – Expanded access to affordable and sustainable energy services for rural households, businesses and public institutions through renewable energy.
- Strategic Outcome 2 – Sustainable energy services power rural livelihood creation and economic growth in the agriculture, fisheries and tourism sectors.

## 5.1 Strategic Outcome 1: Expanded Access to Affordable and Sustainable Energy Services for Rural Households, Businesses and Public Institutions through Renewable Energy

GGGI's interventions will support the following goals of the GoV:

- 60% rural electrification by 2020, and 100% by 2030;
- 80% of public institutions have access to electricity by 2020;
- 100% of electricity generated from renewable resources by 2030;
- Reduce energy sector GHG emissions to 72Gg by 2030 (compared to a baseline of 130Gg in 2010).

### 5.1.1 National Objectives

The GoV aims to achieve 60% rural electrification by 2020, and 100% by 2030, from a level of 10% in 2016, while at the same time approaching 100% renewable electricity generation as part of its NDC commitment. The GoV has been able to mobilize resources from several development partners in support of these targets, with significant commitments made toward rural electrification, although additional assistance is needed.

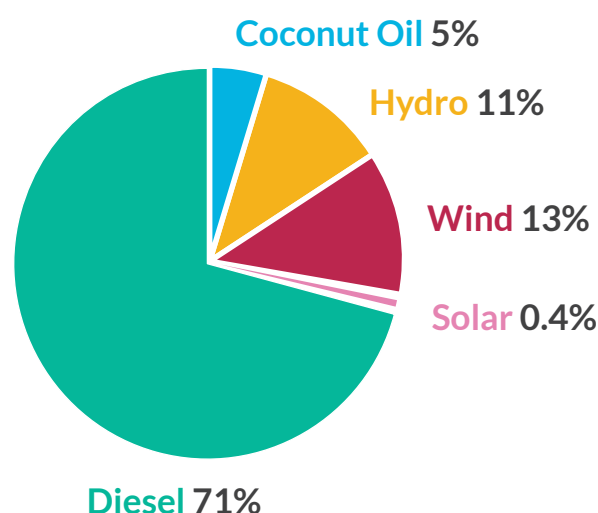
The energy sector in Vanuatu is characterized by the following:

- Very high dependency<sup>36</sup> on petroleum fuel imports, leading to high energy costs and exposure to fuel price and exchange rate risks;
- Geographical remoteness from overseas oil refineries, which, with many dispersed islands, results in high transport costs to and within the country;
- Small volume of fuel demand, which makes it difficult to negotiate better prices and benefit from economies of scale;
- High energy prices, for both petroleum fuel and electricity;
- Considerable but poorly assessed and developed indigenous renewable energy resources;
- Relatively low access to electricity, and unreliable and unaffordable energy services, particularly in rural communities.

Vanuatu has no known petroleum resources, therefore it imports all fuel for electricity and transport use, and is among the ten most vulnerable countries in the Asia-Pacific region to oil price volatility.<sup>37</sup>

Diesel fuel accounts for the largest share of fuel imports (63%), with a volume of 33 million liters during 2012.<sup>38</sup> About half of the fuel demand comes from the transport sector, but diesel is also the main fuel for electricity generation in Vanuatu. In 2015, approximately 71% of all electricity generated was from diesel fuel, with 29% provided by renewable energy as shown in Figure 1.

Figure 1. Vanuatu electricity generation by energy source



Source: GoV, Updated Vanuatu National Energy Roadmap (2016).

36 In 2010, Vanuatu, like all Pacific Island countries (except Fiji and Papua New Guinea), depended on petroleum imports for about 99% of commercial energy use, compared to 80% for the Caribbean islands, 45% for the Asia-Pacific region and 34% globally.

37 United Nations Economic and Social Commission for Asia and the Pacific, *Pacific Perspectives on the Challenges to Energy Security and the Sustainable Use of Energy* (2012).

38 GoV and UNDP, *Nationally Appropriate Mitigation Action Design Document: Rural Electrification in Vanuatu* (2015).

Widespread, reliable and affordable access to modern forms of energy underpins sustainable development. Energy is a critical driver for economic growth and for the development of modern public services, including the provision of clean water and sanitation, effective delivery of health care, as well as educational and knowledge services. Widespread and affordable energy access can provide reliable, efficient, and clean lighting, heating, cooking, mechanical power, and transport and telecommunication services. These are all vital services for economic growth. Relative to other countries (including in the Pacific region), electricity access levels in Vanuatu are extremely low.

With its population distributed across islands, spread over more than 12,000 km<sup>2</sup>, the delivery of energy services is both logistically challenging and costly. This contributes to very low electrification rates and high electricity prices.

Differences in energy access match the differing levels of development in urban and rural areas. The population without electricity access in rural areas by province ranges from 83-85% in Tafea and Shefa provinces, 89% in Sanma, 92% in Malampa, and 97% in Torba. Improving access to electricity is a central objective of the updated NERM 2016-2030, with a stated target of 100% rural electrification by 2030. The NERM also aims to electrify all public buildings such as schools and health centers by the same date, and provide 65% of the rural tourism bungalows with solar energy.<sup>39</sup>

The GoV plans to reach its 60% rural electrification target by 2020 through implementing the NERM. The NERM intends to provide households and businesses with higher quality electricity service, above the basic minimum of lighting, charging mobile phones and powering radio. This will be attained through a variety of approaches, depending on the geographic location, and will include grid extension, micro-grid solutions and individual solutions. Affordability of the energy supply is also key in the NERM.<sup>40</sup>

In April 2016, the Council of Ministers approved the establishment of the NGEF, a green energy financing facility, to develop bankable project proposals and channel climate finance into projects identified in the NERM.

Addressing Vanuatu's energy challenges and increasing rural energy access is critical to achieving the Vanuatu 2030 development model. The GoV has committed to this vision and developed a robust and ambitious set of strategies and targets as laid out in the NSDP, the NERM and the NDC, as follows:

- **NSDP** – Includes a goal to increase access to safe, reliable and affordable modern energy services for all that are increasingly generated from renewable

sources and reduce reliance on imported fossil fuels. It aims to prioritize renewable sources of energy and promote efficient energy use;

- **NERM** – The GoV has committed to 60% rural electrification by 2020, and 100% by 2030. The NERM also includes a commitment to 100% renewable electricity by 2030;
- **NDC** – The NDC is aligned to the NERM targets, aiming to reduce energy sector GHG emissions by 72Gg by 2030, compared to a baseline of 130Gg in 2010.

### 5.1.2 Barriers

Vanuatu has a high potential for renewable energy development, and increasing energy access is a key priority for the GoV. There are a few major challenges, however, to achieving 60% rural electrification by 2020 and maintaining this and expanding to 100% rural electrification by 2030 through 100% renewable energy sources.

**There is inadequate public and private financing to meet the goals of increasing energy access and renewable energy deployment.** There may not be adequate finance for meeting the GoV's rural electrification goals. Also, development partners may be reluctant to provide finance to national financing mechanisms as they prefer to use their own mechanisms. There has been limited and inadequate governance of past national financing vehicles for energy, and therefore, a new mechanism is needed with strong governance that can establish confidence and attract external assistance. The 2013 Public Expenditure and Financial Accountability Report notes that some donors have been poor at channeling finance through the GoV systems, but in general, the GoV financial systems are assessed as good. There is limited scope for property and land to be accepted as collateral for loans, which limits access to finance, and most local credit institutions are unfamiliar with renewable energy investments.

**The market conditions for rural energy systems are poor and the engagement of the private sector in rural areas is still developing.** There is a lack of information and evidence to demonstrate that rural populations have the willingness and ability to pay for electricity. This is a key barrier as Vanuatu has a poor record of sustainably financing energy systems—including rural government facilities such as schools—which has resulted in failures after only a few years. Involvement of the private sector is still limited in rural areas due to poor market conditions, but it is growing. Developing stronger partnerships between businesses and government, and businesses and communities, could assist in developing implementable solutions to achieve financial sustainability.

**Institutions are underdeveloped and there is a lack of technical capacity.** Developing sustainable and affordable rural renewable energy systems requires strong institutions and effective regulations. For instance, rural energy systems should use standardized designs that

39 GoV, *Updated Vanuatu National Energy Roadmap* (2016).

40 Ibid.



are endorsed by senior officials and enforced in practice to ensure affordability. But some GoV agencies require support to strengthen their capacity to promote and regulate these systems. Capacity enhancement is needed in the areas related to the improvement of regulation and legislation in the energy sector, clarification of responsibilities and authority within the GoV, coordination among GoV agencies, policy and project implementation, and monitoring and evaluation of progress.

**There is a lack of bankable rural energy projects for investors to finance.** Vanuatu has never had a program to provide a large percentage of its rural population with electrification. The development of a rural electrification master plan with a pipeline of bankable projects could increase donor confidence and foster private sector involvement in the deployment and maintenance of rural energy systems. Vanuatu's indigenous renewable energy resources and energy efficiency potential are considerable, but apart from solar energy, these resources and opportunities (including hydro, wind, biomass and geothermal) have not been adequately assessed and developed into projects.

### 5.1.3 GGGI's Response

**To address the abovementioned challenges, GGGI proposes to provide the following services in the areas of sectoral policy and planning, energy financing and project development, implementation support, and capacity enhancement, as follows:**

- Strengthening energy sector policymaking, planning, economic assessments and regulatory capacity within the GoV to develop an enabling environment conducive to sustainable energy project development and private sector investment;
- Providing technical assistance to mobilize finance for sustainable energy projects, including – (1) designing and establishing the NGEF; (2) developing an appropriate legislative, policy and regulatory framework for operationalization and integration of the NGEF into the GoV's financial systems; and (3) providing recommendations to the GoV on establishing mechanisms for achieving and financing long-term operational sustainability;
- Developing a pipeline of green energy projects to support the GoV's attainment of objectives related to renewables-based energy access to households and improved end-use energy efficiency. This pipeline of projects will be prioritized and developed into bankable projects, and financing will be assessed and identified.

The program will have a strong pro-poor focus and will apply GGGI's safeguard policy to address environmental and social risks, as follows:

- GGGI will explore policies and practices that are particularly beneficial to the poor and previously

under-served communities, including through promoting community involvement in the project design and financing of energy projects;

- As this program will involve land use, risks related to the construction of energy systems will be assessed and property rights will be taken into account;
- Potential unsustainable solar pumping of water from non-renewable sources, such as aquifers, will be included in the environmental safeguard assessment.

### 5.1.4 Results

**In the short term, these activities will support Vanuatu in making important institutional improvements in the renewable energy investment environment, and prepare the GoV for a longer-term scale of investment in the energy sector beyond 2021.** Immediate outcomes of the CPF will include the following:

- NGEF designed and operationalized, with financing disbursed to green energy projects;
- Legislative and regulatory framework strengthened for managing and disbursing rural energy financing;
- GoV's regulatory capacity strengthened to create an enabling environment that is conducive to private sector activity in the rural energy sector;
- Economic impact assessments completed, which includes scenarios for scaling up renewable energy, and identifies appropriate energy systems for rural users and options for improving energy efficiency;
- A pipeline of bankable projects developed with financing identified and secured.

Through the design and implementation of the NGEF and rural energy projects, GGGI will contribute to the achievement of the GoV's objective to increase rural energy access by utilizing its substantial renewable resources.

**GGGI's support will directly contribute to Vanuatu's national commitments for increasing energy access and supply in the NERM and NSDP, and its international commitments to reduce GHG emissions and provide energy for all under the NDC and SDGs.**

This CPF will contribute to achieving the national targets in the NERM of 60% rural electricity access by 2020 and 100% by 2030, and the NSDP objectives of "increasing access to safe, reliable and affordable modern energy services for all that are increasingly generated from renewable sources and reduce reliance on imported fossil fuels". GGGI's support on expanding access to reliable, affordable and sustainable energy services is expected to result in improved human development in rural communities. This could include improving health outcomes from reducing the reliance of households on biomass for cooking, and educational outcomes through increasing household lighting and thus the amount of time rural students can spend studying.

This CPF will also contribute to achieving SDG 7, which explicitly targets sustainable and affordable access to reliable and modern energy for all by substantially increasing the share of renewable energy in the energy mix, and associated targets on energy efficiency and the expansion of infrastructure for SIDS. In addition, GGGI's assistance on deploying low-carbon renewable energy technologies will support the GoV with meeting the mitigation contribution of the NDC, as well as the sector specific target of generating 100% of its electricity with renewable resources by 2030.

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## 5.2 Strategic Outcome 2: Sustainable Energy Services Power Rural Livelihood Creation and Economic Growth in the Agriculture, Fisheries and Tourism Sectors

GGGI's interventions will support the following GoV goals:

- 25% of rural tourism bungalows use renewable electricity by 2020, and 65% by 2030;
- 100% of households have year-round access to drinking water as per agreed standards by 2030;
- At least 8 mini-grid systems are operational with the potential to develop farm, forest and fisheries businesses by 2020;
- Promote the use of renewable energy and application of energy efficiency in rural bungalows and tourism resorts, and promote the use of renewable energy to enhance income generation and raise productivity in the agriculture and fisheries sectors.

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### 5.2.1 National Objectives

**The NSDP outlines a clear agenda for rural development.** The plan states that “attention particularly needs to be given to our rural areas, which have for too long suffered from an infrastructure and services deficit”. In addition, the plan articulates several targets for developing productive rural sectors, improving access to markets, and improving the provision of government services. The NSDP is also the national framework for implementing the SDGs and is closely aligned to a number of SDGs, including SDG 1 (end poverty and build resilience of the poor), SDG 6 (clean water and sanitation), SDG 7 (affordable and clean energy), and SDG 8 (economic growth and the development of micro and small enterprises).

**The three sectors that are key to rural economic development in Vanuatu are agriculture, fisheries and tourism.** The NSDP 2016-2030 mentions these in a number of instances, including through increasing agricultural and fisheries food production, and promoting

broad-based growth by strengthening linkages between tourism, infrastructure, agriculture and industry in rural areas, and thereby diversifying the rural economy. The formal economy of Vanuatu is dominated by the tourism industry, with the service sector (of which tourism is the mainstay) contributing to 65% of GDP in 2014. Tourism led growth, however, has not been inclusive and benefits have not sufficiently flowed to rural areas or smaller businesses. The informal economy, which mostly consists of rural households, is dominated by activity in subsistence agriculture and fisheries. Agriculture is the largest employer in Vanuatu and sustains the livelihoods of 85% of the population living outside the main urban centers.<sup>41</sup> Access to reliable, secure and sustainable energy will stimulate the productive sectors. Energy access helps to improve livelihoods and welfare, and diversify incomes.

**The goal is to improve energy services and ensure their sustainability for the agriculture, fisheries and rural tourism sectors, through the deployment of renewables.** This is in line with Vanuatu's NERM and NDC target to generate 100% of its electricity with renewable resources by 2030.

**In addition to improving energy services and access, the development of the rural economy requires better rural water infrastructure.** Water is abundant in most islands across Vanuatu, but access to reliable and safe water supplies in rural areas is low, which limits productivity improvements in the tourism, agricultural and fisheries sectors. There is insufficient water for tourism-related activities in rural areas, particularly for drinking, showering and washing. Inadequate energy and water infrastructure means that farmers in Vanuatu are unable to irrigate their land, resulting in reduced output and shorter crop growth seasons. Lack of access to energy and water resources also affects the fisheries sector as electricity and water are important inputs for processing and storing fish.

**The importance of linking water supply with rural electrification has been identified by the GoV as a priority in the NERM due to the interdependence of energy and water systems.** For example, the use of renewable energy for water supply systems (e.g., solar water pumps or solar desalination) can increase the quality and volume of potable water for rural tourism and agricultural usage. Also, renewable energy mini-grids can be used to supply water to households, rural businesses, schools and health centers.

As energy and water services supply provincial centers, stimulating growth in businesses in rural areas, there will be a need to manage waste effectively and carry out integrated planning for green infrastructure. Energy, water and waste services will have to be considered in a more integrated manner than in the past.

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41 GoV, *Vanuatu Agriculture Sector Policy 2015-2025* (2015).



Moreover, these energy, water and waste systems require ongoing maintenance (including preventive maintenance), but a key constraint to developing sustainable systems in the Pacific is achieving and financing long-term operational sustainability.

The GoV envisions a strong rural economy that creates jobs and income earning opportunities for everyone, and thus increasingly contributes to national prosperity. The GoV has committed to this vision and developed a robust and ambitious set of strategies and targets to bring it to reality, including the following policy objectives in the NSDP and NERM:

## NSDP

- Ensuring all people have reliable access to safe drinking water and sanitation infrastructure;
- Promoting broad-based growth by strengthening linkages between tourism, infrastructure, agriculture and industry in rural areas and diversify the rural economy;
- Deepening the integration of the tourism sector into the rural economy to spread opportunities to rural communities;
- Improving access to markets through quality infrastructure, utilities, storage and processing facilities in rural areas;
- Establishing effective partnerships that facilitate the development of the private sector and rural communities as service suppliers in the provision of transport and the infrastructure sector.

## NERM

- Promote green energy as a catalyst for sustainable development;
- Promote the use of renewable energy in Vanuatu's main economic sectors, including agriculture, fisheries and tourism;
- Increase renewable electricity use by rural tourism bungalows;
- Promote the appropriate use of renewable energy and energy efficiency technologies in the water sector.

### 5.2.2 Barriers

Boosting rural productivity in the agriculture, fisheries and tourism sectors can potentially contribute to rural economic growth. There are, however, a few major challenges, as follows:

- **Insufficient planning** – There is a lack of detailed plans integrating energy access targets with key productive sectors critical to livelihood creation (agriculture, fisheries and tourism) and water access (also a critical input to productive sectors).
- **Institutional coordination** – The GoV currently has weak institutional coordination mechanisms to link

national government officials to sub-national and sector and sub-sector planners. Government ministries and departments often neglect coordination in analyses, policy development and implementation in areas of overlapping responsibilities (such as energy and water supply, energy and building standards, energy and rural development). Overcoming this will require strong leadership and long-term commitment.

- **Low capacity and technical knowledge** – Currently, there is insufficient technical capacity and resources to build and maintain strong institutions for integrated planning. Other key challenges are a lack of data and analysis demonstrating a strong economic case for integrated planning, and a lack of access to international experiences and best practices for developing productive sectors through improved rural infrastructure services.
- **Lack of project proposals aimed at developing the rural economy** – Rural projects are currently focused on single sectors, such as stand-alone projects for increasing rural energy and water access and supply. These projects do not achieve cross-sectoral synergies, such as linking energy to water provision and growth in the rural tourism sector. Inclusive green growth for low-income rural households in Vanuatu requires projects that are focused on improving rural infrastructure to foster growth in the agriculture, fisheries and tourism sectors.

### 5.2.3 GGGI's Response

Alongside efforts to promote rural electrification, GGGI will support livelihood creation and economic growth in rural areas through the provision of improved infrastructure services, particularly in the areas of energy and water. To address the aforementioned challenges, GGGI proposes to provide the following services:

- Carry out policy development, planning and economic assessments to identify areas where improved energy and water services and integrated planning can improve outcomes for the productive sectors (agriculture, fisheries and tourism);
- Mainstream energy sector objectives and targets into sectoral policy and planning, build capacity, integrate rural development and sustainable energy investment planning, and develop integrated investment plans, including a pipeline of energy and water projects focused on boosting the productive sectors;
- Emphasize the creation of income opportunities for low-income households, female-headed households and women's businesses and cooperatives, and assist vulnerable groups in catalyzing inclusive green growth in Vanuatu's rural communities.

## 5.2.4 Results

**In the short term, these activities will improve infrastructure services for rural businesses, promote cross-sectoral coordination and support rural economic development planning.** Immediate outcomes of the CPF will include the following:

- Market data used to identify pathways for improved rural access to markets in the agriculture, fisheries and tourism sectors;
- GoV's regulatory capacity strengthened to create an enabling environment that is conducive to private sector activity in the rural energy sector;
- Linkages between sectors through integrated energy and water planning strengthened.
- Cross-sectoral planning and coordination mechanisms, and capacity building initiatives, designed with the GoV and implemented.
- Collaboration and communication between ministries and government officials enhanced to develop synergies in the agriculture, fisheries and rural tourism sectors;
- Rural economic development and renewable energy investment targets integrated into sectoral action plans for implementation by the NGEF and other financing mechanisms;
- Renewable energy and water supply initiatives incorporated into rural economic development plans and implemented;
- An integrated rural energy and water investment plan developed, which includes bankable project proposals on boosting productivity and market access in productive sectors.

With the assistance from GGGI, Vanuatu can realize increased economic growth in the agriculture, fisheries and rural tourism sectors. Rural livelihoods will be improved and income earning opportunities enhanced, as projects aimed at boosting productivity and market access in key rural sectors are implemented. This is expected to alleviate poverty in rural communities as the projects will be targeted at job creation and improving water security for low-income households. Over the longer term, the positive impacts are expected to include increased green job opportunities in the rural economy and improved social development outcomes from increased rural economic growth.

These outcomes are in line with the NSDP, and they also contribute to meeting Vanuatu's international commitments outlined in the NDC—specifically growing the productive sector, especially the agriculture and tourism sectors. The SDGs promote the energy sector as a driver of employment creation and economic growth, and GGGI's support to Vanuatu will contribute to achieving the SDG targets.







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