Green Climate Fund Readiness and Support Programme

Niue Strategic Framework and GCF Country Programme 2024

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Acronyms

ADB	Asian Development Bank
AE	Accredited Entity
AF	Adaptation Fund
AREAN	Accelerating Renewable Energy and Energy Efficiency Applications in Niue
CN	Concept Note
CP	Country Program
CSO	Civil Society Organisation
DAE	Direct Access Entities
DFAT	Department of Foreign Affairs and Trade
DP	Delivery Partner
EAFM	Ecosystems Approach to Fisheries Management
EEZ	Exclusive Economic Zone
FAO	Food and Agriculture Organization
FP	Funding Proposal
GCCA	Global Climate Change Alliance
GCF	Green Climate Fund
GDP	Gross Domestic Product
GEF	Global Environment Facility
GHG	Greenhouse Gas
IAE	International Access Entity
IWRM	Integrated Water Resource Management
JNAP	Niue's Joint National Action Plan – Disaster Risk Management and Climate Change
LDC	Least Developed Country
LTS	Long-term (Climate) Strategy
M&E	Monitoring and Evaluation
MoFP	Ministry of Finance and Planning
MSW	Municipal Solid Waste
NAP	National Adaptation Plan
NCCP	Niue Climate Change Policy
NCDs	Non-Communicable Diseases
NCOC	Niue Chamber of Commerce
NDA	National Designated Authority
NDC	Nationally Determined Contribution
NGO	Non-governmental Organization
NiSERM	Niue Strategic Energy Roadmap
NIWSP	Niue Integrated Water Strategic Plan
NNSP	Niue National Strategic Plan
NZD	New Zealand Dollar
OCC	Ocean Conservation Commitment
PACC	Pacific Adaptation to Climate Change
PMCU	Project Management Coordination Unit
POST	Project Oversight Steering Team
POT	Project Overview Team
PPF	Project Preparation Facility
RP	Readiness Proposal
RPSP	Readiness and Preparatory Support Programme
SFCP	Niue's Green Climate Fund Strategic Framework & Country Programme
SIDS	Small Island Developing State
SPREP	Secretariat of the Pacific Regional Environment Programme
TC	Tropical Cyclone
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
USP-2	Updated Strategic Plan-2
WHO	World Health Organization

1 Overview

This document presents investment options with the Green Climate Fund. It has been designed not to be a stand-alone document but to consolidate and use existing Niue climate change related policies and sector plans to develop a framework to enable Niue to engage effectively with the Green Climate Fund (GCF). The document provides an overview of Niue's current status, focusing on its developmental and climate profiles.

Further chapters delve into the development goals, and the policy response adopted by Niue to address climate change. Additionally, the document outlines the country's climate finance and readiness needs, setting the stage for a comprehensive exploration of project and program priorities for the Green Climate Fund (GCF). Sectors prioritized for GCF intervention, including food security, water security, tourism, health, energy, transport, solid waste, and climate-resilient infrastructure, are summarized. The programme also details the GCF project pipeline. Moreover, the multi-stakeholder engagement process involving various entities is outlined. Lastly, the document addresses the critical aspect of monitoring and evaluating the country program to ensure the effective implementation of climate initiatives in Niue.

2 Country Context Niue

Niue´s development and climate profile is presented below.

2.1 Development Profile

Geography and Environment [1]

Situated in the Southwest Pacific Ocean, Niue, an island spanning approximately 259 km², boasts an Exclusive Economic Zone (EEZ) covering 300,000 km², making it renowned as one of the world's largest elevated coral atolls. The island's average elevation above sea level is 23 meters, with its highest point standing at less than 70 meters. Owing to its geographical location and size, Niue's biodiversity, within the confines of the world's largest elevated coral atolls, faces limitations. The island features seven vegetation types, broadly classified into Cropland and Fern land (grouped as Managed Land Vegetation) and Littoral Shrub land, Littoral Forest, Coastal Forest, Mature Forest, and Secondary Forest (grouped as Natural Vegetation). As outlined in Niue's 2013 Forest Management Plan, the native forest area spans around 19,000 hectares, constituting approximately 70% of the island's total area.

Factors such as population settlement, agricultural demands, the utilization of advanced land-clearing technology, and a lack of awareness have contributed significantly to the marked decline in forest area from the 1950s to the late 2000s. Cyclones and the development of coastal tourism pose additional threats to forests, leading to vegetation and species loss. Nonetheless, over the past decade, a noticeable improvement in forest cover has been observed, attributed to a decline in population, reduced agricultural activities, and a diminished demand for timber. Consequently, there has been a substantial conversion of cropland into secondary rainforest. Presently, Mature Dense Forests and Regenerating Medium Dense Forests account for the largest share, encompassing total areas of 5,566 hectares and 13,191 hectares, respectively.

Niue grapples with the impact of invasive species present within the country. The Niue National Invasive Species Strategy and Action Plan (2013–2020) underscore the threats posed by invasive species to native biodiversity, agricultural production, and human well-being, outlining actions for the control or eradication of these invasive species.

Demography [2]

Niue, recognized as the world's least populated country with a mere 1,681 inhabitants in 2022, grapples with a demographic landscape marked by distinctive gender proportions. Men constitute 48.4% of the population, while women make up the remaining 51.7%. Since 1979, Niue has faced the ongoing challenge of outmigration, resulting in a consistent decline in its population.

[1] See Forest Management Plan for Niue (2013), Available at https://niue-data.sprep.org/index.php/system/files/Forest%20Management%20Plan%20for%20Niue%202013.pdf, and Niue's National Invasive Species Strategy And Action Plan 2013–2020 (2013), Available at https://faolex.fao.org/docs/pdf/niu176159.pdf

Several critical factors hinder social and economic growth in the country, including its small population size, limited labor force, migration patterns, high transport connectivity costs, infrastructural limitations, poor land quality, and an escalating vulnerability to natural disasters.

Within the Niuean context, two demographic segments emerge as particularly vulnerable:

- Youth Groups: The lack of economic opportunities stands out as a primary driver for widespread migration, especially among the youth. The younger population's limited sector-specific skills further constrain the expansion of livelihood options. The declining population poses a significant concern for Niue's sustainability.
- Women: Niue exhibits pronounced gender gaps in economic participation, health, and overall well-being. Challenges include a scarcity of reliable data and gender-focused research, hindering a comprehensive understanding of the extent of gender inequality. Moreover, gender-based violence prevails, emphasizing the need for strengthened legislation to promote women's rights and gender equality.

Economy[3]

The economy of Niue relies on three climate-sensitive sectors: agriculture, fisheries, and tourism. Primarily agrarian, Niue has witnessed tourism's economic ascent over the last few decades, contributing to a high per capita GDP of USD 13,825 in 2021, primarily supported by assistance from New Zealand. Key features of Niue's economic sectors include:

- Agriculture: Predominantly subsistence-based, Niue faces challenges such as small local markets, lack of scale, geographic isolation, and a brain drain. Crops like talo, bananas, cassava, breadfruit, sweet potatoes, yams, vegetables, and tropical fruit trees are cultivated, relying on rainfall due to the absence of surface water.
- Fishery: Vital for food security and economic sustenance, Niue's fisheries encompass both inshore and offshore sectors. Inshore fisheries within 12 nautical miles from the coastline meet local nutritional needs, while offshore fisheries, extending into the Exclusive Economic Zone (EEZ), contribute to commercial fishing and employment.
- Tourism: An emerging sector with the potential for significant income and employment growth. While currently, most tourists come from New Zealand, investing in tourism infrastructure is crucial for establishing Niue as an international destination.

Despite its economic strengths, Niue grapples with a significant trade deficit, largely due to heavy dependence on imports from New Zealand. Fuel constitutes the largest share of imported goods, with approximately 96% for power generation and 100% for land, sea, and air transportation.

Niue, characterized by robust human development, stands devoid of absolute poverty. The country ensures universal access to clean water and improved sanitation. In the period from 2006 to 2011, approximately 80–90% of households had both indoor and outdoor taps, witnessing a decline in rainwater-fed water tanks from 53% in 1997 to 14% in 2011. However, by 2015, the number of households with rainwater-fed tanks rebounded to 65%. Access to alternative water sources like wells remained steady at two to three percent.

Primary and secondary health care services are freely accessible to all residents on the island, while tertiary medical treatment is facilitated through transfers to New Zealand and visiting specialists. The average life expectancy in 2017 was reported at 76 years. Despite the prevalence of electricity and telephone connections in most households, infrastructure vulnerabilities persist due to exposure to natural disasters, affecting economic and social development. Road connectivity, crucial for both sectors, is frequently disrupted by cyclones and storms.

Niue's education system provides free primary and secondary education to all children. However, there's a growing need to fortify higher education by introducing skill-based technical courses, particularly in sectors like tourism and energy, while also updating skills in traditional fields such as agriculture and fisheries.

[2] See https://niuestatistics.nu/population/niue-census-of-population-and-housing-2022/ and UN Women https://asiapacific.unwomen.org/en/countries/fiji/co/niue

[3] See Niue's Sixth National Report to CBD (2020), Niue Country Classification (ADB 2021), Niue Statistics, Available at: https://niue.prism.spc.int/category/social/education/ and Niue National Accounts Estimates 2021, Available at https://niuestatistics.nu/category/economic/national-accounts/

Oceans, marine and coastal ecosystem[4]

Distinguishing itself as a trailblazer, Niue stands among the first countries to pledge the sustainable management of 100% of its exclusive economic zone (EEZ). At the forefront of this commitment is the establishment of the expansive Niue Moana Mahu, a no-take Marine Protected Area encompassing a substantial 40% of Niue's EEZ, equivalent to 127,000 km². In a recent stride, Niue has unveiled the ground-breaking 'Ocean Conservation Commitment' (OCC), a visionary initiative aimed at securing sustainable sponsorship. This funding will fortify the construction of a climate-resilient, sustainable blue economy, thereby reinforcing long-term ocean conservation efforts. The OCCs represent an innovative environmental instrument, seeking to monetize aspects of the costs and benefits emerging within Niue's oceanic domain. This novel approach aims to channel resources towards broader objectives, including adaptation, resilience, and the establishment of a sustainable blue economy. Throughout this endeavor, Niue maintains its status as a global exemplar in ocean conservation and the responsible utilization of its extensive marine expanse.

2.2 Climate Profile

GHG emissions and sink[5]

As one of the world's least populated nations, Niue contributes insignificantly to global emissions. Accounting for less than 0.0001% of global greenhouse gas (GHG) emissions, Niue emerges as a net carbon sink, with its forests surpassing emissions many times over. The breakdown of Niue's GHG emissions, as per the Second National Communication, reveals that the energy sector dominates, particularly in 2009 data. Within this sector, transport claims the majority, constituting 57% of emissions, followed by electricity generation at 42%. Notably, emissions from the waste sector were negligible, registering as less than 1 in the 2009 inventory.

Despite its commendable efforts, Niue faces challenges in its mitigation actions. The absence of comprehensive environmental base data hampers evidence-based decision-making, while limited monitoring and evaluation (M&E) capacity impedes the assessment of cost and emission reduction effectiveness, especially in energy supply initiatives. Notably, the country has successfully offset 144 gigagrams of CO2 by converting former managed lands (presumed to be cropland) into secondary forest, showcasing its commitment to carbon neutrality.

Climate Impacts and risks[6]

In Niue, climate change stands as a primary driver of environmental degradation, with significant and far-reaching impacts. Rising temperatures, fluctuations in rainfall, and the intensification of storms and tropical cyclones constitute some of the most prevalent consequences. These environmental shifts translate into sectoral risks, posing threats to vital aspects of people's lives, including income, food availability, water access, and energy security, among others. Additionally, the intrinsic connection between the natural environment and Niuean identity, shaping the island's culture and traditions for centuries, is now under serious threat, putting the small island nation at risk of losing its cultural essence.

Despite Niue's minimal contribution to global greenhouse gas emissions, the tangible impacts of climate change within the country are considerable. Key changes in Niue's climate include:

- Temperature Increase: Both land and sea surface temperatures have risen since 1950, with maximum temperatures increasing at a rate of 0.15°C per decade. Sea Surface Temperature has also experienced an upward trend, rising approximately 0.08°C per decade from the 1970s to the 2010s.
- Rainfall Variation: Niue has witnessed substantial variations in rainfall patterns since 1950, although no clear trend can be deduced from the available data.
- Sea Level Rise: Since 1993, sea levels near Niue have steadily increased by approximately 5 mm per year, surpassing the global average during the same period.
- Ocean Acidification: Niue has observed a gradual increase in ocean acidity, with the aragonite saturation state declining from about 4.5 in the late 18th century to approximately 4.0 ± 0.1 by 2000.

[4]Government of Niue (2022), Media Release, Available at https://www.gov.nu/wp-content/uploads/2022/07/12-july-media-release-gon-niue-occ.pdf

Of greater concern are future climate projections indicating further changes in Niue's climate:

- Temperature Projections: Annual average air temperature and sea surface temperature are expected to increase by 0.3–1.1°C by 2030 under the highest emission scenarios. El Niño and La Niña events will persist.
- Rainfall Patterns: Variations in annual rainfall patterns are predicted, with a decrease in dry season rainfall and an increase in wet season rainfall over the 21st century.
- Extreme Weather Events: The frequency of intense rainfall days is likely to increase, and the proportion of high-intensity storms is anticipated to rise despite a potential decline in the overall frequency of tropical cyclones.
- Sea Level Rise: Projected sea level rise ranges from 4-17 cm by 2030 under high emission scenarios.
- Ocean Acidification: Ocean acidity levels are projected to continue increasing in Niue's waters under all emission scenarios throughout the century.

Climate vulnerability[7]

Situated at the fringes of the southern tropical cyclone belt and influenced by southeast trade winds, Niue experiences a tropical marine climate marked by distinct wet and dry seasons. The wet season, spanning November to April, is characterized by tropical cyclones, high temperatures, and humidity, while the dry season, from April to October, brings warm sunny days and cool nights. The annual average temperature hovers around 25°C, displaying minimal variation across seasons. Niue encounters significant annual climate changes, a typical pattern in the tropical Pacific Ocean, where El Niño events tend to usher in drier conditions, while La Niña events bring increased rainfall.

Niue's susceptibility to tropical cyclones and droughts poses considerable challenges to its socio-economic development. From 1969 to 2010, the country faced 63 tropical cyclones, with higher frequencies during El Niño years. Additionally, severe droughts, notably in 1983, 1991, and 1998, have left their mark. The devastating impact of Tropical Cyclone Heta in 2004 exemplifies the sudden onset events that have profoundly affected Niue. This catastrophic event resulted in the loss of two lives and the destruction of homes and government infrastructure, totalling 90 million NZD. The destruction of ninety percent of Niue's artifacts, archives, and records housed in the national museum underscores the enduring non-economic losses and damages inflicted by climate change, impacting generations to come.

Niue's vulnerability extends beyond climate-related risks, encompassing geological threats such as earthquakes and tsunamis, as well as human-induced risks, including disease outbreaks and the potential contamination of its sole freshwater supply. As Niue grapples with these multifaceted challenges, strategic resilience and adaptation measures become paramount in safeguarding the island nation's future.

[6]See Australian Bureau of Meteorology and CSIRO, 2011. Current and future climate of Niue, Available at: https://www.preventionweb.net/files/28164_12pccspniue8pp.pdf, Australian Bureau of Meteorology and CSIRO (2011), Climate Change in the Pacific: Scientific Assessment and New Research. Volume 1: Regional Overview. Volume 2: Country Reports, Available at: https://www.pacificclimatechangescience.org/wp-content/uploads/2013/09/Volume-2-country-reports.pdf, as well as Church, J.A., P.U. Clark, A. Cazenave, J.M. Gregory, S. Jevrejeva, A. Levermann, M.A. Merrifield, G.A. Milne, R.S. Nerem, P.D. Nunn, A.J. Payne, W.T. Pfeffer, D. Stammer and A.S. Unnikrishnan, 2013: Sea Level Change. In: Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. Available at: https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_Chapter13_FINAL.pdf

Disaster and risks

The risk profile of Niue is intricately tied to its isolation and limited capacity to manage and respond to both disasters and the impacts of climate change. Traditional coping strategies have yielded ground to an increasing dependence on external support, with New Zealand playing a pivotal role in fulfilling its obligations to assist Niue in times of crisis. Niue's unique environmental circumstances further underscore its vulnerability.

Lacking surface water, Niue relies on groundwater resources and rain catchments for its water supply. Groundwater, vital for the island's needs, undergoes recharge through rainfall infiltration, a process currently surpassing the rate of extraction. However, the porous nature of Niue's soil exposes its underground freshwater to potential contamination, originating from both human-related factors, such as agricultural chemicals, and natural sources, like seawater intrusion.

Agriculture on the island primarily focuses on subsistence production, particularly root crops. The combination of relatively poor soils and a heavy reliance on rainfall renders agricultural production highly sensitive to fluctuations in rainfall frequency and amount. This underscores the precarious nature of Niue's food security, emphasizing the need for sustainable practices and adaptive measures in the face of evolving climate patterns. As Niue navigates these challenges, its reliance on external support remains crucial for building resilience and ensuring the well-being of its populace.

[7]Government of Niue (2014) Second National Communications to United Nations Framework Convention on Climate Change, as well as Government of Australia (2022), Pacific Climate Change Science Program, Niue Department of Meteorology and Climate Change, Available at: https://www.preventionweb.net/files/28164_12pccspniue8pp.pdf

3 Climate Strategy and Needs

Niue´s development goals, the climate policy response to climate change, as well as climate finance and climate finance readiness needs are summarized below.

3.1 Development Goals

Niue's strategic development goals, as outlined in the Niue National Strategic Plan (2016-2026), revolve around achieving prosperity for the nation through a comprehensive approach. The overarching vision, Niue ke Monuina, is supported by seven national development pillars, each emphasizing specific aspects of societal progress. These pillars are briefly summarized below:

Pillar	Goal
Infrastructure	Sustainable use and management of key infrastructure that is climate-proof and resilient. Strategies include the development of modern, climate-resilient infrastructure to support overall national growth.
Social Services	Fostering a harmonious and healthy lifestyle in a thriving, educated, and safe community with access to a wide range of quality social services. Strategies focus on providing essential social services, ensuring education, and maintaining a safe community environment.
Environment and Climate Change	Sustainable use and management of Niue's natural resources and environment for present and future generations. Strategies aim at preserving and utilizing natural resources responsibly, with a focus on climate change adaptation.
Tāoga Niue (Cultural Heritage)	Promote, strengthen, and integrate Tāoga Niue cultural heritage, language, values, and identity. Strategies revolve around preserving and promoting Niue's cultural heritage, language, and identity for future generations.
Private Sector	A prosperous and skilled island nation, underpinned by a thriving and entrepreneurial private sector. Strategies involve fostering entrepreneurship, skills development, and overall economic prosperity through a vibrant private sector.
Finance and Economic Development	Secure sufficient financial resources and ensure responsible fiscal management that supports development strategies. Strategies focus on securing financial resources, maintaining prudent fiscal management, and supporting sustainable economic development.
Maximize Benefits from Niue's Resources	Support private sector development, targeting tourism, agriculture, and fisheries, backed by safe, reliable, and affordable modern infrastructure. Strategies include maximizing benefits from key sectors like tourism, agriculture, and fisheries, supported by modern and resilient infrastructure.

The Niue National Strategic Plan emphasizes careful resource allocation, with government agencies aligning their corporate plans to these pillars and strategies. The ultimate measurement of progress lies in annual reports, the national budget process, and ongoing adaptation to challenges. The plan reflects Niue's commitment to achieving prosperity while preserving its cultural heritage and natural environment.

3.2 Climate Change Policy Response

Niue's commitment to the Paris Agreement through its National Determined Contributions (NDC) centres around mitigating electricity generation by reducing reliance on fossil fuels, particularly in the realms of renewable energy and transportation. Additionally, the nation is focused on adapting to climate change impacts in areas such as food security, the built environment, infrastructure, and the well-being of its people and communities. Niue's NDC is currently undergoing updating (2024). The Updated NDC includes unconditional, conditional, and aspirational contributions to meet Paris Agreement goals. Efforts to reduce GHG emissions in Niue adds value and compliments Niue's focus on its vision to 'build a sustainable future that meets our economic and social needs while preserving environmental integrity, social stability, and the Niue culture'. The Updated NDC put focus on the energy sector which will allow Niue to work towards achieving not only the NDC but also support towards the achievement of the Niue Strategic Energy Roadmap (NiSERM) 2016 – 2026 which highlights Niue's issues, challenges, and aspirations in the energy sector. The NiSERM outlines Niue's aspirations to meet the 80% target of its electricity needs from renewable energy by 2025 which would in turn reduce the country's high reliance on imported fossil fuel.

> ***Niue National Determined Contributions***
>
> *While Niue's contribution to global greenhouse gas emissions is negligible (less than 0.0001%), and Niue is a net sink given the growth of our forests, nevertheless we are taking steps to reduce our emissions, in particular in the energy sector. The Niue Strategic Energy Road Map (NiSERM) 2015-2025 outlines Niue's aspiration to meet 80% of its electricity needs from renewable energy sources by 2025, which would in turn reduce the country's high reliance on imported fossil fuel. Part of this goal can be achieved through national resources and identified assistance, but achieving such high levels of electricity from renewables (from around 2% today) is very ambitious and will need considerable contributions of financial and capacity support from our partners.*

In response to the imperative of addressing climate change comprehensively, the Government of Niue has formulated a climate change policy. This policy aligns with the Niue National Strategic Plan (2016-2026) and aims to enhance understanding and develop appropriate responses to the causes and effects of climate change, in support of national sustainable development objectives.
To guide climate-related projects, Niue looks to the Joint National Action Plan (JNAP) on Climate Change Adaptation (2012). Currently undergoing review, the JNAP is slated for an update to incorporate new strategies and plans, including those outlined in the Niue Infrastructure Energy Road Map and the Niue National Transport Strategy.

The Private Sector in Niue is actively contributing to the low-emission, high-resilience development agenda by developing a Private Sector Climate Finance Strategy. This document explores how the private sector can align with and support Niue's goals.
Engagement with the Green Climate Fund is facilitated by aligning concepts and projects with the priorities identified in national strategies and plans. This approach ensures that Niue can access climate finance to further its commitment to sustainable development in the face of climate change challenges. Besides the above, further key strategies and policies in this respect are:

- **Niue's National Strategic Plan (2016-2026):** The five-year strategic framework for the country's sustainable development provides broad goals and strategies aimed at achieving the seven National development pillars – finance and economic development, governance, infrastructure, and climate change, Taoga Niue, and private sector. The plan addresses environmental concerns including the need to address the effects of climate change while emphasizing on economic growth.

[8]Government of Niue (2015), The Niue Strategic Energy Road Map 2015–2025 (NiSERM), Available at https://www.pcreee.org/publication/niue-strategic-energy-road-map-2015-2025

- **National Adaptation Plan:** Niue has submitted a Readiness Proposal on Developing Niue's National Adaptation Plan for Medium to Long-Term Adaptation in 2023 (RP-NAP, 2023).
- **Niue Infrastructure Investment Plan (NIIP) (2023 – 2033):** The NIIP sets out the priorities for infrastructure investment, based upon a strategic review of priorities, aimed at supporting economic and social development objectives for the period to 2030.
- **Forest Policy (2004):** It provides direction to develop Niue's forest resources. Although climate change is not directly mentioned, the guiding principles of sustainable resource use, conservation and protection, individual and collective responsibility for control, and management of forests and provision of economic opportunities, contribute towards addressal of climate impacts.
- **Niue National Energy Policy (2005):** The policy aims to achieve energy security by encouraging fuel conservation and efficiency. Key principles underlying the policy include economic efficiency, energy efficiency and environmental protection.
- **Ecosystems Approach to Fisheries Management (EAFM) (2010):** The EAFM plan adopted in 2010 aims to sustainably manage fisheries to utilize the resource for economic benefits while taking measures to minimize the risk of general environmental conditions (like cyclone, extreme weather) on fish resource and the quality of water.
- **Food and Nutrition Security Policy (2015- 2019):** This Niue Food and Nutrition Security Policy 2015-2019 is a first for Niue. Food is not only essential for life and health, but also vital to people's livelihoods and it plays a very important role in Niuean society, culture, customs, and traditions. This document presents the rationale and direction for a food and nutrition security policy for Niue.
- **National Agriculture Sector plan (2015-19):** Niue faces many challenges in sustaining agricultural growth stemming from several factors. Niue's import bill is ten times higher than its exports resulting in a significant trade deficit. For achieving sustainable growth, there is a need to strengthen effective partnerships and support private sector development with increased foreign investment to balance the deficit. Hence, Agriculture Sector Plan was formulated to guide a coordinated approach in addressing the challenges to the sector and thus strengthen the contribution of the sector to economic growth.
- **Water Act (2012):** This Act makes provision for the management, conservation and use of water resources in Niue. It also provides for the control of water pollution and concerns protection of ecosystems that depend on water and to make provision for the investigation, extraction, use, control, protection, and management of water and for related matters.

3.3 Climate Finance Needs

Niue relies on international support from multilateral and bilateral sources to enhance its capacity, receive technical assistance, secure climate finance, and facilitate technology transfer. These resources are essential for reinforcing ongoing efforts, strengthening existing programs, policies, and regulations, initiating new initiatives, and comprehensively assessing and addressing the impacts of climate change in alignment with Niue's climate priorities.

Despite diligence in formulating plans and prioritizing needs, access to funds has proven challenging. A crucial requirement is the assurance and accessibility of funds to enable Niue building resilience and safeguard against the escalating challenges posed by the changing global climate.
Several initiatives contribute to Niue´s resilience - the GEF supports projects in renewable energy (AREAN project), biodiversity conservation, and ecosystem enhancement (Ridge to Reef), as well as programs for invasive species control and eradication. Additionally, New Zealand focuses on renewable energy, while Australia funds a waste management recycling centre. The European Union has extended support to Pacific countries through the PACC program to address adaptation needs.

Engaging with the GCF provides opportunities for synergies with existing projects to scale up and replicate successful approaches. Niue has effectively utilized GCF Readiness Funds to enhance the capabilities of the National Designated Authority (NDA) and facilitating the development of the country programme. This includes supporting the direct access accreditation of the Ministry of Finance & Planning and the Niue Development Bank to the GCF, mobilizing the private sector, and encouraging their involvement in the country's consultative process for supporting Niue's low emission, high resilience development agenda.

To further these efforts, Niue has submitted a second Readiness proposal to the GCF. This proposal aims to continue supporting the ongoing accreditation process and the preparation of concept notes and project development in alignment with this country programme. Further Readiness support needs through the GCF were assessed and translated into a long-term action plan, to inform a fourth Readiness Proposal (see below).

3.4 Climate Finance Readiness Needs

A Readiness Needs Assessment was elaborated for Niue, and findings are translated into a long-term Action Plan. The Readiness Needs Assessment identifies several challenges and needs in Niue. This includes insufficient institutional coordination as well as coordination and sharing of important data, limited private sector engagement in climate finance and resilience-building of businesses, low capacities for enforcing policies, and low capacities for developing concept notes and full-funding proposals to access climate finance. A strong limitation to addressing these barriers is the limited absorptive and capacity due to the small population size.
Identified needs and suggested approaches for enhancing Niue's Readiness using GCF Readiness grants are summarized below for the four Readiness areas.
In the category of *institutions and governance*, this includes the following:

Institutions and Governance (IG)	
Identified Need	Proposed Measure for the use of GCF Readiness Funding
IG1 Improve coordination mechanisms on climate change planning and implementation, both between government agencies and between the public and the private sector.	Coordination mechanisms can be improved by enhancing the recognition and acknowledgement of the PMCU and its mandate to steer national climate change matters among public and private sector stakeholders. This could include enhancing the PMCU's visibility to public and private sector stakeholders, for example by organizing roundtables with important sector focal points or by issuing a regular newsletter on recent developments. Alternatively, the envisioned Climate Change Unit could be established and vested with the mandate of climate change coordination, based on an assessment of strengths and weaknesses of current coordination mechanisms.
IG2 Enhance the capacity of PMCU (both functioning as NDA and executing entity) to close remaining gaps for handling GCF processes and ensuring continued coordinative capacity.	To further enhance the capacity of the PMCU, outstanding capacity needs of the NDA for handling GCF processes should be identified after the full implementation of institutional strengthening and NDA capacity building measures under RP-002. Capacity needs can then be addressed through targeted trainings, developing manuals, and using GCF funding to hire NDA staff to address human capacity constraints.
IG3 Address remaining gaps to advance the DAE accreditation process of the Treasury's Department of Finance and Planning.	To to complete DAE accreditation of the Treasury's Department of Finance and Planning, gaps identified in the gap analysis performed in 2022 should be addressed, which are in the areas of basic fiduciary standards, specialized fiduciary standards and gender. The gap assessment should further be complemented by another gap assessment targeting the aspects of the background information on the entity, which was not assessed yet. To further advance the Niue Development Bank's capacity to engage with the GCF, the next measures of the 'no regrets approach' as outlined in the Institutional Capacity Assessment can be implemented. In the first phase, these steps relate to formalising the motivation and approach for how the Niue Development Bank would like to engage with GCF and develop first project concepts.

Institutions and Governance (IG)	
Identified Need	Proposed Measure for the use of GCF Readiness Funding
IG4 Enhance capacity of private sector to engage in adaptation activities and accessing climate finance.	To enhance knowledge on climate change adaptation strategies in the private sector and enable climate action, targeted expert advice and trainings can be provided in cooperation with the Met services on how individual industries can climate proof their businesses. Additionally, the regulatory and governance framework can be improved to create an enabling regulatory environment for the private sector to engage in climate finance activities once the assessment of regulatory environment issues its recommendations. The environment for private sector engagement can also be improved by establishing coordination mechanisms between the public and the private sector and developing a formalized framework for Public-Private-Partnerships that draws on the Private Sector Climate Finance Strategy that is to be finalized.
IG5 Enhance participation of communities in planning and implementation of climate change projects.	To increase the participation of communities, it is recommended to engage in knowledge and awareness raising to enhance communities' understanding of climate change and its impacts. Increasing the engagement of communities during consultation and planning processes also helps to build community ownership and stake in climate projects, for example by including respective village councils in planning processes.

For the category *policy environment*, the Readiness Needs Assessment identifies the following needs and approaches for enhancing Niue's Readiness:

Policy Environment (PE)	
Identified Need	Proposed Measure for the use of GCF Readiness Funding
PE1 Improve the translation of policies and strategies into implementation and enforcement.	To ensure implementation and enforcement of policies, the coordination mechanism among governmental agencies needs to be strengthened. This can include strengthening existing monitoring and evaluation systems, for example through establishing a clear mandate, standard mechanisms, timeframes, and templates for reporting, as well as integrate oversight for monitoring and evaluation in the coordination mandate. Additionally, it is recommended engage in pipeline development through translating not implemented policy priorities into bankable projects for donor funding. Besides that, GCF Readiness funding could be requested for increasing staff capacity for overseeing and managing policy implementation.
PE2 Review and update important strategies, including the NCCP, to align with the climate priorities outlined in the NNSP.	Reviewing and updating climate strategies supports alignment and mainstreaming of Niue's change objectives and priorities across development pillars. Developing national guidelines to incorporate climate risks and opportunities, based on the objectives laid out in the NNSP, can also support alignment of future sectoral policies. Niue's Climate Change Mainstreaming Strategy (2022) lays out actions for mainstreaming, which include updating the NCCP, specifically with regards to develop an integrated approach to data management (see also IDK1), enhancing capacities in policy and planning units on climate change and disaster risk reduction mainstreaming and climate finance proposal writing skills, and establishing timelines for reviewing and updating sectoral policies.

Policy Environment (PE)	
Identified Need	Proposed Measure for the use of GCF Readiness Funding
PE3 Implement adaptation strategies to increase Niue's resilience to climate change	Support and complement the adaptation activities outlined in the NAP Readiness Proposal, which include reviewing the existing national policy framework and addressing gaps in capacity for adaptation planning, strengthening policy coordination and building capacity of existing institutions and stakeholders across key sectors and industry. For example, additionally needed scoping studies to reduce vulnerability and improve resilience are needed in the following areas: a) sustainable waste management / organic concepts, e.g. composting, b) resilience against invasive species that pose risks in the agricultural and tourism sector and c) increase of non-communicable diseases due to climate change and appropriate resilience measures.

Identified needs and approaches for enhancing Niue's Readiness in the category of *pipeline development* are presented below:

Pipeline Development (PD)	
Identified Need	Proposed Measure for the use of GCF Readiness Funding
PD1 Investment prioritization methods	To improve the understanding of Niue's domestic climate finance spending and demonstrate co-financing ability when approaching donors for accessing additional climate finance, a climate finance mapping needs to be conducted. In the long-term, establishing a system to tag climate expenses in the public budget can be useful to generate these insights continuously and with in-country capacity over time.
PD2 Establish de-risking tools and methods and enable easy access to climate finance.	To facilitate the implementation of local climate change resilience projects, an enabling environment for climate finance needs to be created. Before de-risking tools can be set up, other capacities need first to be strengthened, but the government and the Niue Development Bank could benefit from training that provides a general overview and explains the basics of de-risking tools could be useful. Besides this, the two options laid out in the Private Sector Options Paper, referring to a Climate-smart tourism risk sharing facility and a Climate-smart agriculture risk sharing facility, could be further explored through studies.

Regarding the Readiness category of information, data and knowledge, the Readiness Needs Assessment identifies the following needs and approaches:

Information, Data and Knowledge (IDK)	
Identified Need	Proposed Measure for the use of GCF Readiness Funding
IDK1 Improved coordination mechanisms for sharing and accessing data.	To improve coordination mechanisms for sharing and accessing data, the existing national data management system should be upgraded by establishing a data framework for collecting, managing, and sharing relevant climate change-related data continuously across ministries and government agencies. This data framework should be informed by a mapping of the climate data landscape in Niue to assess what data is generated, used, and needed. The implementation can be supported by designing standardized protocols for data collection, formats and management and appointing and training staff in ministries to be responsible for contributing to the data management system.

Information, Data and Knowledge (IDK)	
Identified Need	Proposed Measure for the use of GCF Readiness Funding
IDK2 Development of targeted knowledge tools for private and public sector.	The envisioned climate information products and trainings targeted at the private sector (see IG4) should be extended to the public sectors to enhance knowledge and enable sector specific climate action.
IDK3 Improve information base for adaptation through collecting vulnerability data.	To improve data availability for adaptation and resilience building, mechanisms for continuous data collection, specifically on climate change vulnerabilities and risks, need to be established. This activity should be aligned and integrated with data collection processes foreseen for the NAP development. Next to establishing best practices for data collection and training responsible staff, this can also include developing a vulnerability index. This would support monitoring of vulnerabilities over time through establishing regular timeframes for collecting and reporting data, in line with the suggested mechanisms for coordination on data **(IDK1)**.
IDK4 Conduct climate finance tracking for enhancing transparency of public climate finance flows.	To enhance transparency and insights about public climate expenditures in the absence of a dedicated climate budget in Niue, climate finance tracking can be useful to fulfill MRV purposes (PD1). In the short-term, this can be realized through a mapping of public climate finance flows to enhance transparency and make public climate expenditures visible. In the long-term, establishing a budget tagging system could be useful to continuously engage in climate finance tracking and ensure sustainability of transparency measures.
IDK5 Establish monitoring processes of the implementation of important climate strategies, including the NAP, NDC, NCCP.	Establishing regular monitoring of the implementation of the NAP, the NDC and the NCCP supports identifying the need for climate finance from private and international public sources. This can be done by establishing standardized M&E procedures, synchronizing the timeframes for M&E of climate strategies to evaluate Niue's overall progress in achieving its climate objectives, and assigning and training responsible staff.

4 Project and Programme Priorities for the GCF

The sections below present the climate financing priorities for a period up to 2030 - associated with the NDC and further key national long-term strategies as well as sector strategies. The sector assessment is also aligned with the Readiness Needs Assessment Report and Action Plan for Niue, which was elaborated and released in 2024. Based on those priority sectors, the most relevant projects and programmes for funding are presented as GCF project pipeline.

4.1 Priority Sectors

Below, 8 priority sectors are outlined, including their gaps and needs as well as respective proposed actions for alignment with a sustainable, climate-resilient, and low-emissions development pathway. The assessment of each priority sector has benefitted from comprehensive stakeholder inputs, obtained during consultations and in bilateral discussions, received as comments on the country programme, and provided during a country programme validation workshop.

4.1.1 Food Security

GCF Results Areas

- Health, food, and water security
- Livelihoods and people and communities
- Forests and land use

Niue faces many challenges in sustaining agricultural growth stemming from a number of factors including climate change. Niue's imported bill is ten times higher than it exports resulting in significant trade deficit. The economy depends largely on foreign aids to support many of the government operations. Increasing reliance on imported foods is increasingly recognised as a major cause of the NCD problems in Niue.
Agriculture and food security are integral to the economy of Niue has been identified in the Niue National Integrated Strategic Plan as one of the priority areas for economic growth. In addition, Agriculture and Food Security were identified as priority areas to address under the Niue Joint National Adaptation Plan (2012). Furthermore, the Niue Agriculture Sector plan identified the need to develop a sector strategy to guide collaborative efforts in the food production sector.

Across the island the soil is mostly shallow as a result of depth to base rock, surface boulders and rock outcrops. Generally, the soils are calcium and magnesium high resulting in a high pH and low in the essential nutrient's nitrogen, potassium, sodium, and zinc thereby reducing soil fertility and reducing plant growth. Soil structure and fertility has been affected over time by continuous land clearance and cultivation practices. There is a high reliance on inorganic fertilizers and herbicides for cultivation and maintaining productivity, impacting on soil structure, and threatening purity of ground water.

Most agricultural productivity is undertaken at subsistence level but overall contributes to 23% of Niue's Gross Domestic Product (GDP). The main crop that is affected by drought is taro, and Niue's worst recorded drought in 1984 led to the collapse of taro exports from 86 tonnes to zero between 1982-1984, and not recovering until 1986. Day to day 73% of households in Niue eat fish caught in Niuean waters. Fishing is also an income source for some households who either catch or both catch and sell fish. Niue's National Coastal Fisheries Management and Development Plan 2017-2022 indicates that almost all of Niue's coastal fisheries are fully exploited or over fished. Climate change may result in an extension of the present range of deep-water tuna fisheries, to higher latitudes (away from Niuean waters), as well as impacting Niue's coral reefs through coral bleaching, ocean acidification and cyclone damage, affecting artisan fisheries which feed a high percentage of Niue's population daily.

Throughout the last decade Niue has used the definition of food security based on four important dimensions introduced by FAO, namely food availability, food accessibility, food utilization/ consumption and food variability. Niue's food security priorities are outlined in the Niue Food and Nutrition Security Policy 2015-2019, which remains relevant as strategic documents, but needs updating.

Updating the policy on food security would:
- improve food availability through increased domestic food production and facilitation of safe food imports.
- improve access to employment in food production sector, increase income generation and improve social safety nets.
- improve utilization of food by improving food preservation and preparation technologies ensuring stability of food supplies and
- strengthen climate change adaptivity.

Table 1: Proposed actions for the food security context

Proposed Actions
• Climate-smart agriculture risk-sharing facility [1] aimed at increasing agriculture business access to climate finance through targeted financial products, including concessional loans. • Regulatory arrangements for accessing and using groundwater resources [1] • Coral reef adaptation (as expansion of the Niue Coral Reef Restoration project) [1] • Increasing the resilience of the agricultural sector through resilient agricultural systems, training farmers and capacity for vulnerability assessments for food security [2] • Adapting Tuna-dependent Pacific Island Countries and Economies to Climate Change (Project Preparation Facility approved by GCF) • Enhancing food security for the private sector: Explore Concept Note development under Readiness and Preparatory Support Programme(2023 – 2025) Sources: [1] Private Sector Options Paper (developed in cooperation with the Niue Chamber of Commerce (NCOC) under GCF Readiness program); [2] Niue Agriculture Sector Plan 2015–2019.

4.1.2 Water Security

GCF Results Areas

- Health, food and water security
- Ecosystems and ecosystems services

Water Supply:

Niue faces potential threats to its water sources from changes in sea level or rainfall patterns. The island, characterized by highly porous Karst geology, predominantly relies on groundwater extraction from an underground freshwater lens spanning approximately 200 km2 at the island's centre and extending within 1 km of the coast. Positioned between 34 and 55 meters below ground level, this lens experiences rapid recharge from December to May due to the unique karst rock structure. The National Integrated Water Resource Management Diagnostic Report 2007 estimates a recharge potential of 132 million m3 per year.

The primary risk to Niue's water stems from contamination, primarily driven by surface activities like agriculture. Additionally, the island faces threats of prolonged drought and excessive groundwater extraction, potentially leading to saltwater intrusion if the freshwater lens is overdrawn. Despite uncertainties surrounding future groundwater demand from additional production and irrigation boreholes, the current abstraction from PWD public water supply wells (typically 2000 m3/d) remains well below 2% of the freshwater lens yield, ensuring its sustainable capacity.

Niue, devoid of surface water runoff apart from underground sources, supplements its water through rainwater collection at the village and household levels. However, depending solely on the underground water lens poses a vulnerability exacerbated by climate change and the potential for salt intrusion. Increased cyclone intensity also poses a threat to water supply infrastructure, emphasizing the need for diversified water sources in Niue's water management strategy.

Wastewater:

Wastewater management takes centre stage in the Niue Integrated Water Strategic Plan (2014-2024) (NIWSP), a product of the Integrated Water Resource Management (IWRM) regional program (2009-2013).
Dealing with wastewater is currently a major issue for Niue. There is no reticulated wastewater collection system, so disposal is limited to private septic tanks which are then emptied by the Department of Environment/Department of Utilities and then untreated effluent is dumped on a portion of land at the end of the airport runway. The lack of a proper treatment and disposal facility has serious consequences for health care, environmental quality, and other factors, but most importantly, it could eventually impact the water lens and subsequent freshwater resources for the island. To avoid this, sewage treatment systems should be implemented that can avoid the degradation of water resources in Niue.

The wastewater treatment plant for the hospital is currently working at capacity and needs to be upgraded to keep up with increasing demand, likely caused by the increased facilities located at the hospital campus, but also as septic tanks keep getting blocked from strong winds on the island. Further study is required to confirm the appropriate level of demand that the new treatment plant should be designed for. This would help the hospital to continue to provide quality health services to the population, as required by the NNSP. Also ensures that waste management on the island continues to be done safely and sustainably, protecting the environment with minimum impact to public health.

Within the framework of the NIWSP, wastewater emerges as a key action area, emphasizing the allocation of resources for waste management to mitigate risks to water resources and waste facilities.
From 2017 to 2020, a wastewater reduction project gained approval, focusing on installing septic tanks in homes lacking a system and repairing leaking tanks in Alofi, Niue's capital. This initiative aligns with the Pacific Adaptation to Climate Change (PACC) Programme (2009-2014) and the Global Climate Change Alliance (GCCA).
An integral component of the wastewater reduction project involves scoping the feasibility of a waste treatment facility encompassing all waste types, including water. A scoping report by DFAT was completed in 2020, to pave the way for the government to seek donor support for implementation.

Table 2: Proposed actions for the water security context

Proposed Actions
• Climate proofing water utilities infrastructure against cyclones and extreme rainfall (Feasibility studies have been undertaken in 2024 under the Readiness programme) • Increase water security of households through expanding [3] and upgrading existing rainwater harvesting methods (e.g., connect rainwater tanks to residential roofs) [4] • Water security assessments for agriculture: Community projects with water tanks for irrigation of agricultural lands need more analysis by experts [9]. • Current process of disposing of wastewater at a land site near the Airport is also unsustainable as it risks filtering through and contaminating the freshwater lens. A proper sewage treatment system is required. *Sources: [3] Niue National Strategic Plan 2016 – 2026; [4] Niue State of Environment Report (2019); [9] Country Programme consultation workshop*

4.1.3 Tourism

GCF Results Areas

- Livelihoods of people and communities
- Infrastructure and built environment.
- Ecosystems and ecosystem services

Tourism stands as a pivotal and climate-sensitive sector for Niue, having directly encountered the repercussions of climatic shifts, exemplified by the impactful Cyclone Heta in 2004. Such weather-related events swiftly alter visitors' perceptions of the destination's appeal for a holiday. Islands like Niue, integral to the nature-based tourism market, are notably susceptible to climate-induced environmental changes. Climate change directly influences environmental resources, key attractions for tourism in Niue. Challenges such as widespread resource degradation from cyclone damage to sea tracks adversely affect the destination's allure. Dive and fishing tourism, in particular, grapple with issues like coral bleaching and diminishing fish populations, impacting this high-value market. Niue's captivating coral reefs, though a significant draw, face heightened vulnerability due to changes in ocean acidity and temperature.

In response, Niue has embarked on various resource restoration initiatives, encompassing artificial coral restoration and the establishment of marine parks and protected areas. Recognizing the inevitability of climate change impacts on tourism, Niue emphasizes the need for all businesses and destinations to adapt, minimizing risks and embracing new opportunities in an economically, socially, and environmentally sustainable manner.

Acknowledging the demand for updated policies, technologies, and behaviours to address climate variability predictions, Niue takes a pioneering stance with its "Dark Sky Nation" initiative. This initiative focuses on reducing carbon emissions by replacing streetlights with low-wattage, low-kelvin LED lighting, projecting an estimated 80% reduction in carbon emissions from lighting.

Niue Tourism actively collaborates with operators to integrate climate change as a decision-making tool, introducing climate change risk appraisals for tourism operators. This shift is deemed essential for behavioural change and the effective dissemination of information between the climate change science community and tourism operators, especially regarding the development of climate change scenarios and indicators tailored to local tourism decision-making. While this transformation will undoubtedly take time, it aligns with Niue's Responsible Tourism Policy, solidifying climate change adaptation and mitigation as critical priorities for sustainable tourism development.

Table 3: Proposed actions for the tourism sector

Proposed Actions
• Coaching and mentoring to assist businesses to (i) assess climate risks, (ii) formulate climate-resilient strategies, and (iii) prepare loan applications. Payment for Ecosystem Services (PES) scheme [1]: Establish a mechanism to provide ongoing financial incentives to landowners to effectively manage health and climate risks to their forests. • Coral reef adaptation [1] • Climate proofing of infrastructure (see also below) *Sources: [1] Private Sector Options Paper (developed in cooperation with the Niue Chamber of Commerce (NCOC) under GCF Readiness program)*

4.1.4 Health

GCF Results Areas

- Health, food, and water security

For Niue to be recognized as a clean and healthy nation it is paramount to implement the tourism strategy and economic development that waste is managed properly by residents and visitors to protect the environment and minimise the impact to public health. The implementation of an Integrated Waste Management Strategy has been a key pillar of government policies.

The Niue Health Sector Strategy 2011-2021 is currently undergoing updating in cooperation with the WHO. The Niue Health department also aligns national priorities with the regional approach through the Pacific Islands Action Plan on Climate Change. Niue Health Department delivering activities in partnership with the Department of Infrastructure, on Water and Sanitation (WASH), and WHO programmes to reduce and manage the non-communicable diseases from extreme weather events, threats to food and water security, outbreaks of waterborne and vector-borne diseases, and the increased pressure on scarce resources triggering climate-related migration and conflicts.

Nutrition remains a challenge as well for the Health Sector in Niue, and is linked to many NCDs, while the Niue Food and Nutrition Security Policy 2015-2019 has not been updated yet, it remains a relevant document outlining Niue's priorities in relation to nutrition and health. More emphasis on promoting the consumption of nutritious local foods should be given, promoting opportunities to market and promote local foods and strengthen education and awareness on cooking with local foods and ingredients, promote traditional knowledge on food and production and preservation techniques.

Another challenge is the ailing hospital infrastructure. The building has been moved after the cyclone Heta in 2004, but the structure is not built according to the latest cyclone-proof structures. The on-site waste management system is not functioning properly, with septic tank being blocked due to strong winds and waste incineration facility needing replacement.

Table 4: Proposed actions for the health sector

Proposed Actions
• Waste Management issues – there is pressure on the current waste management system at the hospital and this needs to be upgraded urgently so that waste disposal can continue safely and without impact to public health. • Implement initiatives as outlined in the Niue Food and Nutrition Security Policy 2015-2019 to address nutritional challenges, emphasizing the promotion of local and nutritious foods and develop and implement programs to support home gardening, seed distribution, and education on local food consumption. • Prioritize cyclone-proofing of the hospital to enhance climate resilience • Conduct a study on Non-Communicable Diseases (NCDs) ***Sources: NIIP and consultations with Health Sector representatives***

4.1.5 Energy

GCF Results Areas

- Energy generation and access
- Buildings, cities, industries, and appliance

Electricity generation plays a crucial role in Niue's Nationally Determined Contributions (NDC) for reducing greenhouse gas emissions, with the energy sector accounting for the majority of emissions, specifically 42%, as per the UNFCCC's Second National Communication report.

Niue boasts widespread access to electricity, primarily generated by diesel fuel-powered generators with an installed capacity of 2.084 MW, operating at approximately 50% capacity. Complementing these generators is solar PV-generated electricity, contributing 343 kWp, supported by a 150 kW battery capacity. Aligned with national, regional, and international energy sector concerns, the Niue Strategic Energy Road Map 2015–2025 (NiSERM) outlines the island's ambition to achieve 80% of its electricity needs from renewable sources by 2025. This target aims to reduce reliance on fossil fuel imports and enhance overall energy efficiency. However, the available financial and technical resources will not be enough to guarantee a timely and full achievement of said targets without additional support from relevant stakeholders.

Despite these strides, challenges persist in monitoring and controlling the PV array at 14 sites across the island and integrating the battery with the national grid. Issues arise from the monitoring platform's comprehensive control of the PV array, battery integration, and the interface with the government's network operations.

Crucial concerns encompass the provision of knowledge, expertise, and technical assistance to build capacity and capability in handling new technology challenges, particularly in establishing a monitoring system for solar integration with the national power grid.

Recognizing these challenges, a New Zealand-funded renewable energy project is set to provide technical assistance and training specifically focused on the seamless integration of solar energy into the national power grid. The GEF-6 project ,Accelerating Renewable Energy and Energy Efficiency Applications in Niue (AREAN)" aims to enable the achievement of low carbon energy access, sustainable energy and green growth targets of Niue as stated in the NiSERM. The design of the AREAN Project follows a holistic approach to the removal of barriers hindering the achievement of the green growth targets set in the NiSERM, by synergistically interconnecting all the barrier removal activities in the five (5) components of the project.

One of the expected outcomes of the project (under Component 3) is the increased availability of, and access to, financing for sustainable energy, energy access and low carbon development initiatives in the energy supply and demand sectors. Among the planned interventions to achieve the outcome is the design and implementation of financing instruments for the Niue Development Bank for financing Energy Efficient and Renewable Energy technology application initiatives. The financing scheme established under the AREAN aims to make the transition to energy-efficient appliances and renewable energy technology more accessible and affordable for all customers, regardless of their financial situation. The scheme is offering financial assistance and flexible payment options, that help customers save money on their energy bills in the long run and contribute to the reduction of greenhouse gas emissions. The financing mechanism is currently under development.

Table 5: Proposed actions for the energy sector

Proposed Actions
• Goal of meeting an 80% share of renewable energy of total generation by 2025 through various interventions, including improvements in grid & efficiency in electricity production, promoting private use of renewable energy, training, and capacity building [7] for local technical know-how of renewable energy technology and energy policy & planning • Continue activities of AREAN Project (GEF-6) on improvements in energy integrated development policy and planning, institutional capacity building on low carbon development, improvements in the financing of low carbon development initiatives, and climate resilient and low carbon technologies applications [8] • Operation system for the disposal of old appliances: Under AREAN, the Department of Environment will integrate an operation system for the disposal of old appliances into their current operations. The system will be established to ensure that the disposal of old appliances is carried out in an environmentally friendly manner. The terms and amounts of these costs will be specified in a separate document and will be discussed between the NDB/DoE and the Project Management and Coordination Unit. *Sources*: *Niue Strategic Energy Road Map (NiSERM) 2015 – 2025; [8] GEF-6 PROJECT INFORMATION FORM (PIF); AREAN Project Financing Mechanism, Financing Scheme Design Proposal, Energy Efficient Appliances and Renewable Energy Technologies, 2023*

4.1.6 Transport

GCF Results Areas

- Transport
- Infrastructure and built environment.

Transport holds a significant role in Niue's Nationally Determined Contributions (NDC) to mitigate greenhouse gas emissions. According to the UNFCCC's Second National Communication report, a substantial 57% of Niue's emissions stem from the transport sector within the broader energy sector. Given that the majority of fuel consumption occurs in land transport, Niue focuses its mitigation efforts on this sector, as international regulations limit interventions in the airline industry.

Niue's primary public roads, covering a distance of 67 km, have been tar-sealed over the past two decades without adequate maintenance support. Through Chinese Aid funding ($US 14 million), a Chinese Roading company, is currently reconstructing the road network of the island.
In the absence of a public transport system, private vehicles dominate the transportation landscape. Although there are no restrictions on the types of vehicles allowed into the country, customs regulations amended in 2011 do not allow the import of vehicles older than 15 years and encourage the import of fuel-efficient vehicles, with targets set under Niue's Sustainable Energy and Roadmap (NiSERM) for increased deployment of such vehicles.

Challenges in the transport sector persist due to limited technological solutions, though the emergence of electric vehicles offers promise. The government welcomes international assistance to explore opportunities for significant emissions reductions in the transport sector.
The Transport Strategy Roadmap, along with various action and delivery plans developed by line Ministries, the private sector, and other communities, are integral to Niue's climate change priorities. Sir Roberts Wharf, crucial for maritime activities, faces limitations due to its open harbour without natural shelter. Efforts to climate-proof the wharf are underway following a pre-feasibility study by the Asian Development Bank (ADB). Niue Hanan Airport, catering to flights from New Zealand, underwent improvements in 1995-1997. Despite the pandemic's impact, funding has been approved for the airport tarmac resealing, expected to conclude in 2025.

Table 6: Proposed actions for the transport sector

Proposed Actions
• Development of targets for deploying more fuel-efficient vehicles [7] • Improving efficiency of land transport through various measures, including restricting the import of inefficient and large vehicles while reducing import duty on more efficient vehicles, motorcycles, electric bicycles/vehicles • As the renewable energy generation in Niue increases, fully electric vehicles charged with solar electricity might become an option. In this respect, capacity building and further training for mechanics on electric vehicles will be relevant [7] *Sources: [7] Niue Strategic Energy Road Map (NiSERM) 2015 – 2025*

4.1.7 Solid Waste

GCF Results Areas

- Health, food, and water security
- Ecosystems and ecosystems services
- Forests and land use
- Building, cities, industries, and appliances

The 2020 draft GCF strategic framework and country programme for Niue indicates that Niue's waste generation rate averages 0.31 kg/person/day, though detailed records on individual solid waste producers are unavailable. Anecdotal evidence suggests the tourism sector, with the Scenic Matavai Resort as the largest single producer, is a significant contributor to solid waste on the island.
Waste management falls under the purview of the Department of Environment in Niue. The department provides services directly or through contractors, but current facilities struggle to meet the needs of residential and business sectors.

Solid waste disposal has been a challenge with a majority of solid waste ending up in landfills, including official sites at Makato and Mutalau, with the latter posing a pollution risk to the water lens. An unofficial site at Vaiea further compounded the issue. To address these issues a recycling facility was commission and constructed with the help of DFAT. It became operational in 2022, aiming to sort and prepare waste for storage, potentially exploring off-island removal or recycling, such as using plastics for asphalt road surfaces or closed-loop wastewater systems. While a step in the right direction, the facility still lacks machinery to enhance recycling activities, and there is a lack of working incinerators across Niue (most notably at the hospital). Consequently, illegal burning of waste is causing issues at three landfill sites.

Future The government is further exploring initiatives that include reducing plastics through eco-friendly products, plans to ban plastic bags, promoting reusable bags, waste composting, and encouraging recyclable and eco-disposable products. Taxing waste is also being considered.
The government's immediate priority is implementing the waste management strategy, focusing on Niue's landfills, hazardous waste disposal, and liquid waste. With donor assistance, the government aims to invest in new technologies and capital plants to minimize waste, enhance recycling, and improve collection systems for a cleaner, pollution-free environment.

Table 7: Proposed actions for solid waste treatment

Proposed Actions
• Exploring of optimized waste management approaches for Niue, including cars and appliances. • Lack of machinery to enhance recycling activities, and there is a lack of working incinerators across Niue (most notably at the Hospital). Consequently, illegal burning of waste is causing issues at 3 landfill sites. • Conduct awareness and capacity building programmes for behavioural changes of waste generators as well as waste management personnel • Develop Waste to Energy strategy for Solid Waste (MSW) • Strengthen composting for organic waste to produce soil enhancer. • Implement Collect, Sort and Export of Recyclable Materials (first phase) for Niue • Implement Collect, Sort and Export of Recyclable Materials as identified by E-Waste & Recyclables Project • Niue plans to develop and deliver Training of Trainers (TOT) programme on waste management and pollution control. • Niue commits to develop and implement a waste minimization plan (Including 3Rs, composting, characterisation, source separation) by 2030. • Develop a legal and policy framework for the sustainable management of solid waste in Niue. Sources: [9] Country Programme consultation workshop, NIIP, Updated NDC draft

4.1.8 Climate resilient infrastructure

GCF Results Areas

- Infrastructure and built environment.
- Livelihoods and people and communities
- Building, cities, industries, and appliances

Niue is facing a future of increasingly severe impacts as a result of our changing climate, even though they have contributed negligibly to the cause of the problem. Niue shares the vulnerabilities of many Small Island Developing States including remoteness, a susceptibility to natural disasters, a fragile natural environment, and a high dependence on imports, particularly food and fuel.
Niue can effectively reach the majority of their population regarding climate change awareness etc., however designing and implementing adaptation programs is a challenge with the limited human resource capacity of the island. Climate resilient infrastructure comes as a cross-cutting topic, addressing various sectors such as energy, transport with the wharf and airport, cargo centre, water security, and the built environment.

Table 8: Proposed actions for climate resilient infrastructure

Proposed Actions
• Climate & natural hazard resilient construction of buildings and public infrastructure (energy/ power, water, communications, roads, air, and seaports, etc.) • Climate proofing of infrastructure against storm surges and cyclones [6] • Sustainable use and management of key infrastructure that is climate proof and resilient [5] *Sources: [5] Niue National Strategic Plan 2016 – 2026. [6] Niue Sustainable Coastal Development Policy (2008); Sources: [9] Country Programme consultation workshop*

4.2 GCF Project Pipeline

The following table holds a summary of the priority projects and activities in Niue that seek GCF funding.

Table 9: Envisaged funding proposals and concept notes for GCF submission

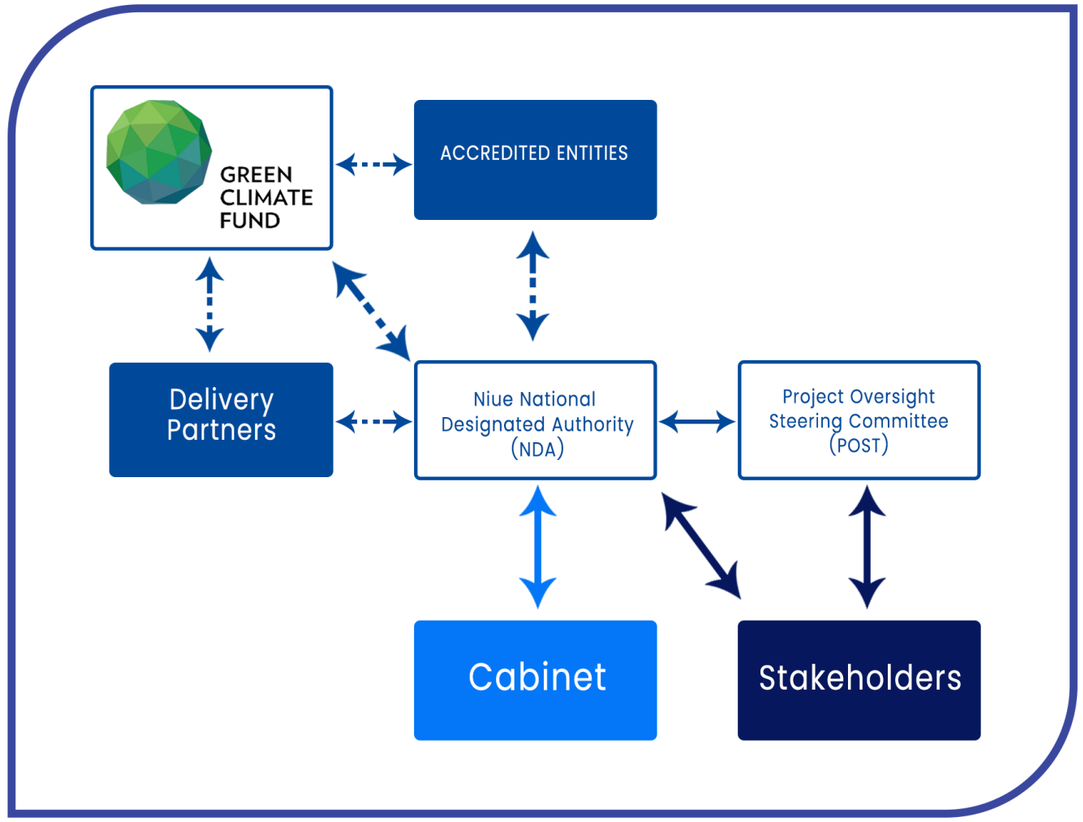
Project Name	Type of GCF Proposal	Project Preparation Facility (PPF) Required	Baseline	Estimated GCF Financing (USD)	Estimated Co-Financing (USD)	Accredited Entity	Fiduciary Instruments	ESS	Estimated Submission			
									2024	2025	2026	2027
Adapting Tuna-dependant Pacific Island Countries and Economies to Climate Change (Regional)		X (PPF approved in 2022)	PPF proposal approved in early 2022			Conservation International						
Enhancing hydrometeorological services for climate resilient water security in the Pacific SIDS	Multi-country	X	The design is to strengthen the hydrometeorological services in the Pacific Island countries with the aim to enhance water security in the context of climate change.	tbd	tbd	SPREP (Implementing partners in Niue comprise NDA/PMCU, MET Services and Utilities/ Water)	Grants			x		
Water Security (Climate proof water utilities infrastructure)			Concept Note submission planned for end of 2024			SPC						

5 Multi Stakeholder Engagement Process

The country coordination mechanism provides a framework for systematic country coordination and multi-stakeholder engagement. It establishes a consultative process through which national climate change priorities and strategies can be defined and climate activities are monitored through inclusive engagement with all relevant actors within the government, the private sector, academia, civil society and other relevant stakeholder groups or sectors. Additionally, Niue's coordination mechanism enables several related procedures, e.g. the GCF no-objection procedure. The NDA plays a pivotal role within the country coordination mechanism by providing Niue's interface with the Fund, coordinating the requisite consultations among multi-stakeholders and working with AE's to communicate the country's priorities for financing low-emission and climate-resilient development. The NDA also provides strategic oversight of the GCF's activities within the country.

Figure 1 below illustrates the national coordination mechanism for GCF related processes in Niue. Here, the NDA and serves as focal point for the GCF, AEs and DPs, and interacts with domestic stakeholders through the POST.

Figure 1: Niue Country Coordination Mechanism



Roles of key stakeholders and entities in the coordination mechanism of Niue are described in the following:

5.1 Niue National Designated Authority (NDA)

Niue NDA to the GCF is located within the Premier's Office and Ministry of Finance and Planning, under the PMCU. The NDA plays a crucial role in coordinating and enhancing Niue's engagement with the GCF, overseeing overall coordination, and facilitating capacity building. Acting as the government's representative, the NDA serves as the interface between Niue and the GCF

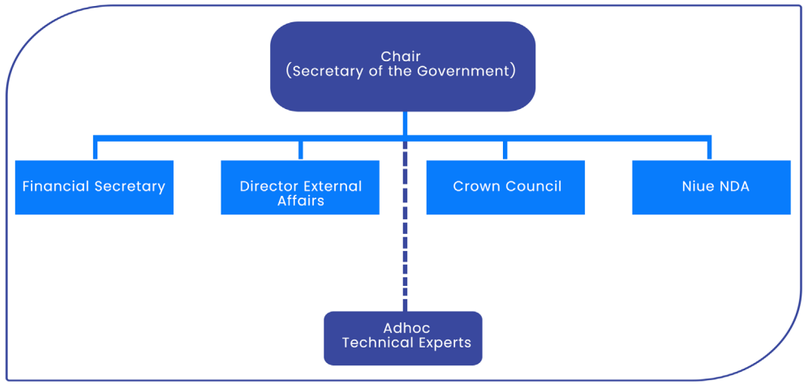
5.2 Project Oversight Steering Committee (POST)

The Niue Government has established a high-level group of officials, that operate under the name of Project Overview Steering Team (POST) who collectively have oversight of projects and programmes including providing high level support to government decision-making at the cabinet level. POST includes the assessment of project proposals, including GCF projects/programmes to inform the grounds of a No-Objection Letter being issued as well as updates on the Country Programme project pipeline. POST meets as required from time to time.
POST is chaired by the Secretary to the Government, and comprises of the Financial Secretary, representative of Niue NDA, Crown Council, Director of External Affairs, and other experts who are invited on a needs basis if required.

The POST communicates with relevant agencies and is mandated to inter alia:

- **Consultation and Expert Evaluation:** POST receives project documents from the NDA with a completed POST project profile form that outlines project scope and climate rationale for project justification and offers consultation, insights, and expertise to inform Cabinet's consideration. It acts as an advisory body, evaluating project proposals.
- **Alignment with Priorities and Coordination:** Ensures projects align with national and regional climate priorities and fit within broader strategies/goals. Coordinates and reduces duplication with existing projects, maximizing their impact on addressing climate change.
- **Evidence-Based Assessment:** Evaluates project proposals for evidence-based support and effectiveness in addressing climate change concerns.

Figure 2: Project Oversight Steering Committee



5.3 Niue Cabinet

Niue Cabinet considers the project documents recommended by POST and presented by the NDA for endorsement. Their endorsement or reasons for objection are crucial, including for the GCF No-Objection Procedure Approval, and obtaining Cabinet approval is necessary for the project to proceed. If approved the Minister (NDA official signatory) will sign the No-Objection Letter at the same time for submission to the GCF, facilitated through the NDA office.

5.4 International Access Entity (IAEs)

IAEs are institutions or organizations that are accredited by GCF through the international access modality track and operate across multiple regions and countries. They develop and submit funding proposals for appraisal and approval by the GCF and oversee and monitor the management and implementation of projects and programmes approved and financed by the GCF.
The respective IAE that is involved in a project development in Niue is tasked with the development of concept notes (CNs) / funding proposals (FPs) and support all steps of the GCF review process. The IAE must interact with the NDA to ensure country priorities are well integrated into the project. Moreover, the NDA should continuously be informed about any progress and achievements by the IAE.

5.5 Direct Access Entity (DAEs)

As mentioned above, GCF accredited institutions are mandated to submit funding proposals to the GCF as well as to oversee and monitor the management and implementation of projects and programmes approved and financed by the GCF. DAEs are accredited under the direct access modality and have obtained a nomination from NDAs/focal points. DAEs are generally responsible for the development and implementation of smaller projects under the GCF categories and are well equipped to support country-driven processes.
A DAE based in Niue is to maintain close collaboration with the NDA during the development process of projects. Also, the DAE communicates to the GCF on the development of CNs/FPs.

5.6 Delivery Partner (DPs)

Delivery Partners assist the NDA in the readiness process and implementation of activities approved under the Readiness Preparatory Support Programme. Responsibilities include the development of readiness request proposals, implementation and supervision, fiduciary management, progress reporting, and project completion and evaluation. In the context of Niue's coordination mechanism, DPs should engage and report to the NDA. Furthermore, DPs take care of the fiduciary management of GCF Readiness resources and report to the GCF. Delivery partners may be AEs or other institutions assessed to meet the financial management capacities requirements of the Fund. Delivery partners who are not AEs must undertake a Financial Management Capacity Assessment to be approved to implement readiness support.

5.7 Stakeholders

In addition to AEs, DPs and members of the POST, other stakeholders include public institutions and government departments that are not members of the POST, as well as private sector representatives, NGOs and civil society. Stakeholder engagement is important to hear the collective voice to ensure that everyone's needs are met in the most effective way.
Stakeholders can be consulted as needed through the NDA or the POST (via specific Working Groups) on feedback and further relevant thematic local inputs.

5.8 Green Climate Fund (GCF)

Developing countries can obtain GCF support through the Readiness Programme, Project Preparation Facility (PPF) and the funding of transformative projects and programmes that meet all GCF investment criteria and policy standards. The GCF has several approval procedures established to ensure an effective, well-targeted and reasonable provision of resources. In this context, the GCF Secretariat is in constant exchange with AEs (IAE / DAEs/DPs) regarding the revision of Full Proposals and maintains contact with the NDA to align country priorities. Moreover, the GCF provides its project funding resources to AEs and DPs, in the case of project / programme appraisal.

6 Monitoring & Evaluation of Country Programme

Relevance of M&E for Strategic Planning

The integration of a robust M&E framework within the GCF Country Programme for Niue is essential for informed strategic planning. M&E serves as a compass, guiding the program's alignment with national priorities, climate objectives, and sustainable development goals. By systematically assessing project outcomes, identifying challenges, and capturing lessons learned, M&E enhances adaptive management, ensuring the Country Programme remains responsive to the dynamic needs of Niue. It establishes a feedback loop, promoting accountability, transparency, and continuous improvement in achieving climate-related outcomes.

Key Indicators to be monitored

- Up-to-Date Country and Climate Profile: Regular updates of Niue's country and climate profile to inform the contextual relevance of projects.
- Sectoral Needs Assessment: Ongoing monitoring of sectoral needs to ensure the GCF interventions address evolving priorities.
- Status of Project Pipeline: Continuous tracking of the project pipeline to gauge implementation progress and anticipate future financing needs.
- Country Coordination Mechanism: Regular assessment of the effectiveness of the country coordination mechanism in streamlining GCF processes and ensuring stakeholder collaboration.
- Financial Needs Analysis: Periodic evaluation of financial needs to identify gaps and optimize resource allocation.

M&E Process

The M&E process will be integral to the Niue GCF Country Programme, and monitoring will be facilitated through the established country coordination mechanism, involving the National Designated Authority (NDA) and the Project Oversight Steering Committee (POST). The POST will play a pivotal role in overseeing the overall M&E process, ensuring alignment with national priorities and providing strategic guidance. The NDA will be responsible for monitoring activities, conducting periodic reviews every 5 years, and coordinating with implementing entities.

7 Bibliography

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