REPUBLIC OF NAURU

Intended Nationally Determined Contribution (iNDC) Under the United Nations Convention on Climate Change

Introduction

The Republic of Nauruis one of the smallest independent, democratic states in the worldand is fully committed to supporting a successful outcome from the COP 21 on a new, ambitious, universaland legally binding agreement under the UNFCCC.

In this regard, the Republic of Nauru wishes to submit its initial Intended Nationally Determined Contributions (INDC) to the UNFCCC in accordance with the relevant paragraphs of Decision1/CP.19 and 1/CP.20. Being a Small Island Developing State (SIDS), as per the Lima decision 1/CP.20 in paragraph 11, Nauru is mainly communicating information on strategies, plans and actions for climate resilience and low greenhouse gas emission development.

Nauru reserves the right to revise this initial INDC prior to finalization and/or ratification under a new global climate agreement.

Executive Summary

Nauru's Intended Nationally Determined Contribution (INDC) hinges on its National Sustainable Development Strategy (NSDS) 2005 – 2025 (revised in 2009), The Nauru Energy Road Map 2014-2020, The Second National Communication (SNC) to the UNFCCC (submitted in 2015), and The Republic of Nauru Climate Change Adaptation and Disaster Risk Management Framework (RONAdapt). In addition, relevant data and information have been used from the Nauru Bureau of Statistics and other,various government departments, private and civil society organizations. Extensive consultations with all relevant stakeholders were held during the preparation of Nauru's INDC. Like other small island nations Nauru has been profoundly disturbed with the implications of climate change since the problem appeared on the world scene. Being one of the smaller low lying island nations it is particularly vulnerable to the impacts of climate change including sea level rise.

With only around 10,000 persons, Nauru has very limited capacity to respond to a global threat of this magnitude. As such its response has to be streamlined to sit within its capabilities. In this respect its main concern is adaptation. This concern is predicated on projected temperature increases due to existing and inevitable near term future levels of greenhouse gases in the atmosphere which will be sufficient to cause global warming well beyond the 1.5 degrees Celsius that is considered safe for SIDS. This temperature increase will put in place an inevitable sea level rise that will be an existential threat to the Nauruan population.

In terms of adaptation Nauru is keen to improve its resilience which has been severely compromised by nearly a century of intensive phosphate mining. One such improvement will be transition to untapped clean energy sources, such as renewable resources rather than relying on the traditional imported dirty liquid fuels. The other pressing adaptation strategy is to improve the indigenous food supply and potable water availability and storage. In addition there is a concurrent need to rehabilitate the environment and improve the health of the population. The issue of loss and damage is important to Nauru, particularly when considering the current low level of mitigation ambition internationally and the science is telling us that there will be limits to adaptation. For our very survival it is fundamental that loss and damage must be considered as a separate and distinct element from adaptation in the 2015 COP21 agreement.

The main mitigation contribution is to achieve the outcomes and targets under the National Energy Road Map (NERM), NSDS and recommendations under the SNC and is conditional on receiving adequate funding and resources.

The key mitigation intervention is to replace a substantial part of the existing diesel generation with a large scale grid connected solar photovoltaic (PV) system which would assist in reducing the emissions from fossil fuels. Concurrent to the above there needs to be put in place extensive demand side energy management improvements which will complement the PV installation. The demand management improvements are expectedto reduceemissions by bringing down diesel consumption further.

The cost of these mitigation measures is likely to be around US$50 million (US$ 42 million for Solar PV and US$ 8 million for demand side energy efficiency measures) with some uncertainty depending on the storage of energy either as electrical (battery) or thermal (chilled water) to account for the high night time electrical load on the island.

Due to somewhat higher phosphate extraction in past years Nauru's emissions in 1990 were higher than at present and estimated to be around 80kt. If economic activity proceeds at the current pace the BAU estimate for 2030 emissions of CO_2 only will also be around 80 kt.

The mitigation contribution will be contingent on obtaining funding and technical assistance to put in place the energy transition and energy savings measures.

In conclusion, although a very small nation, Nauru wishes to play its part in the enormous challenge presented to the world by threat of global warming. In Nauru's case the threat is to its very existence.

National Circumstances

The Republic of Nauru is one of the smallest independent, democratic states in the world housing a little over 10,000 persons. Nauru is a small, isolated, coral capped island which is 21 km^2 in area, 20 km in circumference. It islocated in the central Pacific Ocean 42 km south of the equator and 1287 km west of the International Date Line.

Nauru is clearly one of the most severely impacted nations on earth from environmental degradation. It has been the subject of intense mining for the critical element phosphate for a good part of the 20th century. The mining has removed a large proportion of original forest, and arable land. Scarcity of arable land and fresh water resources, geographic isolation, dependence on imports for meeting basic food and energy needs, environmental degradation and the emergence of chronic health problems all make achieving sustainable development a difficult task, and at the same time also create vulnerability to other stresses, such as those brought on by climate change.

The phosphate, however, is now running out and it has only been recently that the Government has commenced secondary mining of the spent spoils of earlier extraction. The island is very low lying with the coastal areas only a few meters above sea level and not much higher in the central area. Along with the above characterisation the country has a number of challenges that make it quite unique in terms of facing the vagaries of climate change.

Nauru faces a full range of geologic and climatic hazards and is also subjected to climatic variability and extremes. The main climate change vulnerabilities in Nauru include drought, sea level rise and the effect that an increase in temperature will have on marine resources and already stressed water and vegetative resources. Due to environmental degradation, the island is already experiencing coastal erosion and declines in the productivity of its coral reef systems. Rising ocean temperatures, ocean acidification, sea level rise, and an increase in the number of intense storms and droughtwill cause further damage to these ecosystems. Climate-related disasters have already had huge impacts on the economic growth and national development.

A number of development strategies and policy instruments as a response to climate change have been introduced by the Government since 2005 through the economic reform programme which includes: NSDS 2005-2025 (rev 2009); Nauru's Utility Sector-A Strategy for Reform; National Energy Policy Framework; National Energy Roadmap 2014-2020; Nauru Utilities Cooperation Act and RONAdapt. However, Nauru's accomplishment remains on paper and it would require the necessary means of implementation through finance, capacity building and technology development and transfer to achieve tangible outcomes.

In common with many other small island nations the Government of Nauru realises the difficulties in terms of mitigation and has adaptation to climate change as its top priority. In this respect a transition from relying on imported fossil fuels by putting in place an indigenous solar energy supply is also an adaptation strategy to become more resilient and has as a co-benefit, mitigation.

Adaptation

The Government of the Republic of Nauru considers the focus of its INDC to be primarily adaptation, with a strong emphasis on building resilience which also encompasses mitigation in an integrated manner. Through this approach the INDC serves to highlight our national sustainable development priorities, which encompass adaptation priorities. These include identifying current gaps and needs for support in terms of addressing adaptation on the ground.ThisINDC does not constitute additional commitments from Nauru. Rather, Nauru views its planned adaptation actions, and broader focus on building resilience, as part of the international commitment to Nauru under the UNFCCC.

Climate change adds to the already significant challenges of achieving the NSDS goals and it undermines food and water security, erode coastlines, damage marine ecosystems and will impede on progress already made. The impacts of climate change will also add extra burden to the national budget diverting resources away from other important sectors and activities such as education, health and economic development. Therefore, addressing climate change in the context of sustainable development means that there will be co-benefits for not only achieving the NSDS but also in building the resilience of Nauru to climate change.

Vulnerability in the case of Nauru is a combination of different factors including climate change. The NSDS outlines Nauru's main social, economic and environmental challenges, and key development priorities. These developmental and environmental challenges illustrate Nauru's vulnerability to external stresses and risks, including those posed by climate change. At the national and community scale in Nauru, some of the factors that create vulnerability are: scarce water resources; limited land and soil resources; environmental degradation; high concentration of income activities; dependence on imports; geographical isolation; low human capacity; chronic health problems; aid dependency; and risk of climate change and disaster. Further priorities are expected to emerge over time as Nauru increases its capacity to respond to vulnerability and risk or its lack of capacity to respond.

Nauru has taken successful steps to establish our RONAdapt as part of our national efforts to prepare for adaptation.The RONAdapt represents the Government of Nauru's response to the risks to climate change and disaster risk reduction and is therefore aligned with the development priorities embedded in the NSDS. It is intended to support achievement of our NSDS goals, by highlighting a series of actions that will also reduce Nauru's vulnerability to climate change and disasters. In doing so, it will improve the country's social, economic and environmental resilience.

Priority actions are given to those that will work towards the goals in the NSDS, as well as those in sectoral plans and strategies where these already give consideration to climate change and disaster risks. The priorities outlined targets the following goals:

- Water security;
- Energy security;
- Food security;
- A healthy environment;
- A healthy people

- Productive, secure land resources.

High priorities are given to actions that can contribute towards multiple development and resilience objectives simultaneously, often cross cutting across sectors. The priority actions are arranged under sectors targeting the following areas: water; health; agriculture; energy; land management and rehabilitation; infrastructure and coastal protection; biodiversity and environment; community development and social inclusion; and education and human capacity development. However, as highlighted earlier, the actions generally contribute to the goals of multiple sectors and at the same time to the overall NSDS goals.

Nauru faces a multitude of challenges, barriers and gaps. These include information gaps, limited capacity both institutional and human, and the unavailability of appropriate adaptation technology and lack of funds at the national level. Lack of funding at the national level has prevented many larger infrastructure projects from getting underway, such as a new hospital, electricity transmission system, improvements to port and airport, and land rehabilitation. At the national level, there are no nationally focussed adaptation projects due largely to the very limited funds available at the national level. At the regional level, Nauru is also involved in a relatively low but increasing number of adaptation projects and programmes and through the regional projects and programmes, some actions are being implemented on the ground that addresses the needs in relation to coastal zone management, water, capacity building, gender, policy and planning.

Addressing the challenges, barriers and gaps are therefore important for building the resilience of Nauru. These can be addressed through building and strengthening the information gap that are vital for planning and management in many sectors as sectors are currently constrained by poor information about current conditions and/or likely future changes. Strengthening institutions are also important actions and undertakings for adaptation in Nauru and this includes the finalisation of policies and plans that have only been progressed to draft form. Strengthening institutions for Nauru will also entail the need to build the human capacity of sectors. Human capacity is a critical part of capacity building in Nauru and is currently a major weakness in almost every sector. This could be addressed through activities funded and/or implemented with support of external partners, aiming to maximise opportunities for skills transfer to local staff and/or communities and to require future externally funded development projects, including those focused on climate change adaptation and disaster risk management to emphasise skills transfer components. In addition, the up-skilling of local staff should be a core priority of all project activities, since it will help position Nauru better to be able to respond to an array of future challenges, including planning for and responding to climate change and disasters.

The need for development of new technologies and transfer of existing appropriate technologies for adaptation in Nauru cannot be overstated. Technology Needs Assessment (TNA) will help countries like Nauru track their needs for new equipment, techniques, services, capacities and skills necessary to build resilience to climate change. However, TNA has not been initiated in Nauru due to various constraints including lack of institutional, human and financial capacity. The preparation of a detailed technology needs for adaptation is an important next step.

Implementation of many of the adaptation priorities will be heavily dependent on resources being made available by external development partners, to supplement limited domestic

funds. While dedicated climate funds are available at the international level, these can be challenging to access for a small country like Nauru. Therefore, Nauru intends to place considerable emphasis on working with its bilateral partners, regional agencies, for the financial and technical resources needed to implement its adaptation priorities, including the improvement of access and facilitation to international climate finance.

Responsibility for implementing climate change adaptation and disaster risk reduction related activities is shared across different parts of government and the community. However, at the operational level, the Department of Environment under the Ministry of Commerce, Industry and Environment (CIE) has the primary responsibility for coordination, monitoring progress and reporting on the RONAdapt implementation of Nauru's climate change activities at all government department/sector levels.

Monitoring and evaluation (M&E) are critical tasks for tracking progress on the implementation of climate change adaptation and disaster risk reduction priorities and goals. The M&E framework for adaptation reflects the desire for tracking and for learning, but also recognises the limited institutional, human and financial resources available in Nauru to dedicate to M&E.

The priority activities highlighted in the RONAdapt require, in most cases, further development through some additional steps before they are ready to be implemented. The financial costs for the activities are not provided, since there is insufficient detail on individual activities to be able to accurately indicate costs. The preparation of detailed cost estimates is an important next step in implementing each activity and it is expected to be undertaken in conjunction with the process of detailed design of the activities.

Loss and Damage from climate change

Loss and damage is a significant issue for Nauru. The inclusion of loss and damage in the INDC is twofold. First, its purpose is to highlight the significance of the issue for Nauru and second, to present our views on loss and damage in the 2015 climate agreement.

The reality of the impacts of climate change that Nauru and Small Island Developing States (SIDS) are already experiencing means adaptation is absolutely critical. However, the science is telling us that we are quickly moving towards a reality where adapting will not be sufficient. The prospect for loss and damage associated with climate change for Nauru and SIDS are real. The IPCC findings in both the Fourth and Fifth Assessment Report from Working Group II show that there are substantial limits and barriers to adaptation. In Warsaw, Parties also acknowledged that loss and damage associated with the adverse effects of climate change involves more than that which can be reduced by adaptation.

The climate change projection for Nauru is expected to increase sea surface temperatures, rise in sea levels, ocean acidification and changes in ocean currents. These will in turn, impact on the whole of Nauru. The ability of corals and invertebrates to form will be affected by ocean acidification; coral bleaching will increase as a result of higher sea-surface temperatures; and the abundance of key oceanic fish species will be affected by changes to ocean currents, such as the Southern Equatorial Current, and to the area and location of the PEQD and the Warm Pool and their convergence. Sea level rise threatens to increase saltwater intrusion into precious groundwater reserves as well as to exacerbate coastal erosion and flooding during storm events, and changes in rainfall patterns will likely affect

water scarcity, while important fish resources may be affected by changes in ocean temperature and acidification.

Nauru calls for loss and damage to be included as a separate element of the 2015 agreement, one that is separate and distinct from adaptation. Loss and damage must be addressed in a robust, consistent and sustained manner. This can only be accomplished through a loss and damage mechanism that is anchored in the 2015 agreement. Anchoring the mechanism in the 2015 agreement will ensure that it is permanent.

Defining the relationship between mitigation, adaptation and loss and damage needs to be considered and reflected in the 2015 agreement, including a clearly defined relationship between mitigation ambition, adaptation costs as well as loss and damage, particularly when mitigation ambitions are currently grossly inadequate and adaptation measures are not sufficient to address climate impacts.

There is also an urgent need for technical work to be undertaken and should include an assessment of impacts and risks at different levels of CO2 concentration and warming, including 1.5 ℃, especially the risks of ocean acidification, global and regional sea level rise and irreversible changes in the physical, ecological and human systems, including for specific regions and key sectors and systems. Observations and projections relevant to local and regional circumstances should cover exposure and vulnerability to climate change, the resulting impacts, adaptation options and loss and damage.

Nauru acknowledges that there is on-going work under the Warsaw International Mechanism on Loss and Damage, including a 2016 Review, and expects that the results of this on-going work be integrated into the mechanism that is anchored in the 2015 agreement.

Immediate and adequate financial, technical and capacity building support for loss and damage is needed and to be provided on a timely basis for Nauru and other SIDS to address loss and damage. It is beyond our current national means to address loss and damage from climate change and financial flows from developed countries for addressing loss and damage in Nauru and other vulnerable developing countries should be new and additional to financing for those for mitigation and adaptation.

Mitigation

Mitigation Contribution	
Time Frame	2020 - 2030
Type of Contribution	Conditional Reduction based on identified mitigation actions To replace a substantial part of electricity generation with the existing diesel operated plants with a large scale grid connected solar photovoltaic (PV) system with an estimated cost of 42 million US$ which would assist in reducing the emissions from fossil fuels. Concurrent to the above there needs to be put in place extensive demand side energy management improvements with an estimated cost of 8 million US$ which will complement the PV installation. The demand management improvements are expectedto reduceemissions by bringing down diesel consumption further.

	The conditional mitigation contribution discussed above would require a total investment estimated at 50 million US$ including substantial technical, capacity building and logistical assistance due to the limited capacity on the island. Unconditional Reduction The unconditional contribution includes a secured funding of US$5 million for implementation of a 0.6 MW solar PV system which is expected to assist in unconditional reduction of CO_2 emissions marginally. This initiative will be used as a model project for the larger Solar PV plant and in addition assist in terms of technology transfer and institutional learning.
Type of Reduction	Being a Small Island Development State and a developing country with lowest total emissions in the world, Nauru's mitigation contributions are non-GHG targets through implementation of conditional and unconditional policies, measures and actions. Nauru also recognizes that mitigation contributions from developed countries may be absolute economy-wide emissions reduction targets relative to a base year while the developing countries can communicate policies, measures and actions departing from business as usual emissions.
Sectors	Sectoral (energy sector) commitment focussed on a transition to renewable energy in the electricity generation sector and energy efficiency through demand side management.
Gases	CarbonDioxide(CO_2)
BAU Emissions	The expected trajectory in emissions is highly uncertain due to paucity of reliable data and uncertainties in economic activities on the island. Contributing factors include both the small size of the economy and the uncertainty of phosphate extraction opportunities and the other recently commenced activities including offshore banking and housing Australian bound refugees. An extrapolation of trends in the last three years suggests economic growth of around 2.2% p.a. Of concern are high levels of expansion in the electricity sector with growth over the same period being around 13% p.a. Estimates, however, are that CO_2 emissions will increase from 57 kt p.a. in 2014 to close to 80 kt p.a. in 2030. The mitigation options are envisaged toassist in reducing CO_2 emission levels by 2030.It is important to note that the BAU emission estimates are not accurate due to substantial gaps in data for the sectors.
Methodology	The baseline, BAU and mitigation scenario assessments was done using best available historical data entered into the GACMO model which uses IPCC 2006 guidelines and conversion factors. Where data was not available default factors in the software were used.
Planning Process	Nauru's iNDC originates from a series of strategies, policies and assessments concerned with sustainability, environmental protection and energy supply developed or commissioned by the Government

	over the past decade. These include: National Sustainable Development Strategy (NSDS) 2005 – 2025 (revised in 2009), The Nauru Energy Road Map 2014-2020 and The Second National Communication (SNC) to the UNFCCC (submitted in 2015). Further, Extensive consultations with all relevant stakeholders were held during the preparation of Nauru's iNDC.
Fairness, Equity and Ambition	
Fairness, Equity and Ambition	Although a very small nationwith absolute levels of CO_2 eq emissions under 0.0002 % of world emissions(2014), Nauru wishes to play its part in the enormous challenge presented to the world by threat of global warming. In Nauru's case the threat is to its very existence. Nauru is also faced with serious economic challenges. Its once thriving phosphate industry has ceased operation thus depriving Nauru of its major lifeline revenue source. The local infrastructure, including power generation, drinking water and health services, has been adversely affected in recent years by the decline in income from phosphate mining. With fewer prospects in the phosphate industry, Nauru has to look at other alternative revenue sources to support its economic development. Unfortunately, for a country of the size of Nauru (21 km^2) with its limited natural resources, the options are not many. The global goal underlying the assessment of mitigation contribution is to reduce fossil fuel imports by using indigenous renewable energy and implementing energy efficiency measures. In light of the above, for such a remote island already severely damaged by phosphate mining, Nauru's mitigation contribution is quite ambitious. With regards to equity Nauru cannot be expected to mitigate out of its own resources and would need extensive international assistance.