



TUVALU

National Climate Change Policy

2012 - 2021

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Coordinated by the
Ministry of Foreign Affairs, Trade, Tourism, Environment and Labour
in collaboration with
Tuvalu Pacific Adaptation to Climate Change (PACC)
Tuvalu Integrated Water Resource Management (IWRM)
Tuvalu National Adaption Programme of Action (NAPA)
Tuvalu Second National Communication (SNC)
Tuvalu National Disaster Risk Management Programme (TDRMP)
GOVERNMENT OF TUVALU

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FOREWORD

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INTRODUCTION

This National Climate Change Policy prescribes the Government and the people of Tuvalu's strategic policies for adapting responding to climate change impacts and related disaster risks over the next 15 years (2012 – 2021). The policy defines 7 thematic goals, strategies and desired outcomes that the Government and the people of Tuvalu have prioritised for implementation to ensure that safety and resilience are achieved.

The Policy is directly linked to its National Strategic Action Plan for Climate Change and Disaster Risk Management (NSAP). In both the policy and its NSAP, climate change refers to both adaptation and mitigation unless specifically differentiated. The Policy covers climate change impacts and related climate and hydrological hazards where as the NSAP covers geological and anthropological hazards and related disasters.

This Policy is 'cross cutting' meaning that climate change impacts affect every development sector and Tuvaluans way of life. Thus its implementation (refer NSAP) should be integrated into all the sectors and thematic areas of the Te Kakeega II and all community and islands' development.

POLICY CONSIDERATIONS

Tuvalu is the fourth smallest nation in the world with the landmass of 26km² with 9561 people¹ scattered across eight inhabited islands. Fongafale, where the national capital of Funafuti is located, is home to about half of Tuvalu's total population of the population. The challenges Tuvalu faces in the context of climate change are similar to other small island countries but Tuvalu is a small atoll country and their vulnerability to climate change impacts and associated disasters are much more profound due to limited ecological, socio-economic and technological capacities.

All islands in Tuvalu are extremely low-lying (3 m or less geographical elevation above mean sea level). Sea level rise is a direct threat to lives, assets, livelihoods and ecosystems capacity exacerbated by the fact many areas were dug up during WWII, sea water seeps from underground as well as inundation from the sea. Rising atmospheric and surface

¹ 2002 Census.

ocean temperatures reduce productivity of agriculture and marine resources, increase evaporation from soils, and pose a direct health threat. There is clear evidence of mean sea level increase regionally (2-3mm/year) and temperature increase in the last six decades (0.2°C/decade), and they are likely to continue in the future.

Key climate change impacts and consequences that Tuvalu need to urgently adapt and reduce the risks of disaster include the following:

- Sea level rise
- Intensity and frequency of tropical cyclone
- Storm surges
- Coastal erosion and loss of land
- Salt water intrusion into water resources, soil and cultivation areas
- Drought
- Increasing temperature (heat stress)
- Coral bleaching
- Biodiversity loss

Given the considerable overlap between disaster risk reduction and climate change adaptation, the policy is aiming to integrate both in terms of policy, institutional arrangements and capacity building, and in the technical tools and risk-reduction disaster management methods utilised as sets out in the National Strategic Action Plan for Climate Change and Disaster Risk Management (NSAP).

GUIDING PRINCIPLES OF THE POLICY

The Tuvalu Climate Change Policy has been developed with a set of principles to guide implementation activities based upon and consistent with those within the Te Kakeega II (2005-2015)² National Disaster Risk Management Plan (1997), The National Energy Policy (2009), and the National Water Policy (being developed).

- Ownership, planning and implementation of this strategy will ultimately lie with the Government and the people of Tuvalu and respective Kaupule of each atoll and supported by regional agencies, Tuvalu development partners, international agencies (bi-lateral and multi-laterals, private sectors, NGOs etc).

² Mid-term review of Te Kakeega II is planned for October 2011.

- A complementary approach that builds on and responds to the Te Kakeega II and Islands Strategic Plans (ISP) and relevant programmes (e.g. PACC, IWRM, NAPA, SNC, PIGGAREP, NBSAP, SLM, EDF 10, CCCPIR and new initiatives) and existing technical studies and information.
- Climate change adaptation programmes are to be guided by this policy and its National Strategic Action Plan on Climate Change and Disaster Risk Management (NSAP) 2011 and to be complimenting the National Disaster Act (2007) and the National Disaster Risk Management Arrangements
- Equitable development between population groups through recognition of the unique nature of each of the eight Atolls, diversity of needs and access to opportunities, services, goods and privileges.
- Respect for, and preservation of the values, culture and traditions of Tuvalu.
- Respect for human rights, the rule of law, gender equality and sensitivity.
- Supports sustainable development (economic, social, political development and ecological integrity).
- A multidisciplinary and no-regrets approach to guiding adaptation decision-making, based on consultation, traditional knowledge, a scientific evidence base, policy monitoring and evaluation and regular reviews.
- The most effective and efficient ways to increase resilience to climate change require scientific and technological advancement, including increased uptake of adaptation technologies and emission reduction technologies. Methodological technologies and tools, such as ecosystem- and community-based approaches and decision support tools, are equally important to avoid mal-adaptation.

POLICY STATEMENT AND PURPOSE

The Vision of the Te Kakeega II is *“By 2015, guided by strong spiritual values enshrined in its motto -‘Tuvalu mo te Atua’1 -we will have achieved a healthy, educated, peaceful and prosperous Tuvalu.”* The climate change policy is absolutely crucial to achieving the vision of Te Kakeega II and future sustainable development strategies.

The purpose of this National Climate Change Policy Framework (NCCP) is to set out the strategic priorities for scaling up the Government of the Tuvalu’s commitments to respond to climate change, both in terms of current and future vulnerabilities. This policy promotes a coordinated approach to strengthen the capacity of Tuvalu in reducing current and projected climate change impacts and risks such as the risk of loss of life, economic

disruption and damage to the environment and property, and to alleviate poverty in vulnerable groups, thus ensuring a healthy, educated and peaceful and prosperous Tuvalu. Complimentary to the Te Kakeega II, the climate change policy is to be incorporated into every sector development and implementation plans. The policy's aim is underscored in its vision.

VISION

To Protect Tuvalu's Identify and to Build it's Capacity to Ensure a Safe, Resilience and Prosperous Future.

The Linkages of the Climate Change Policy to the Te Kakeega II and its NSAP

Te Kakeega II (2005-20015)

National Strategy for Sustainable Development

- Medium to long-term visions
- Goals
- Key Strategic Development Sectors
- Strategic Priority 7 Environment (Climate Change and Disaster Risk Management)



Tuvalu Climate Change Policy (2011)

A Cross Cutting Policy for ten years

- Visions
- Thematic Goals
- Policy Strategic Areas
- Outcomes



National Strategic Action Plan for Climate Change and Disaster Risk Management 2012-2016

- Strategies
- Actions
- Responsible Agencies
- Implementation Arrangements
- Indicative Costing of Implementation
- Monitoring and Evaluation

POLICY THEMATIC GOALS, STRATEGIC AND OUTCOMES

Based on a comprehensive process of consultation including situation analysis, desk reviews, government, civil society, private sector and outer islands consultations and workshops and a National Climate Change Summit where island chiefs and Kaupule attended together with government, civil society, churches and school children; the following priority thematic goals underpin sustainable development in Tuvalu and the need to urgently adapt and integrate climate change into sector and or thematic policies, plans and budgetary processes to reduce disaster or emergency risks.

Goal 1: Strengthening Adaptation Actions to Address Current and Future Vulnerabilities

Adaptation to climate change hazards and its impacts are absolutely necessary in order for Tuvaluans to survive in Tuvalu. On-the-ground adaptation now means that Tuvalu's resiliency and capacity are being strengthened as the people of Tuvalu wishes to continue living in their country and experience their unique cultures way of life.

Risk Issues:

- Health and socio-economic cost and implications of climate change
- Narrow resource base/narrow opportunities for livelihood diversity
- Lack of awareness
- Food crops affected by storms and salt water intrusion
- Coastal system vulnerability to population growth and demand and vulnerable to erosion from storms and cyclones
- Water management issues
- Droughts
- Lack of coordinated and integrated planning and implementation among responsible agencies taking into considerations the whole islands or applying ecosystems base approaches
- Lack of enabling policies, legislation and regulations
- Lack of opportunity to diversify livelihoods or income generation
- Lack of support from big GHG emitters to the cost of rebuilding due climate change impacts

Strategies

Expected Outcomes

<p>1.1 Health and socio-economic implications (inclusive of gender) of climate change and disaster risks informing appropriate health and socio-economic adaptation programmes for each island.</p>	<p>Resilience and livelihoods strengthened.</p> <p>Increased awareness of the costs and implications of climate change and disaster risks.</p> <p>Gender disaggregated data and information are available for development planning.</p>
<p>1.2 Assessments and analysis of salt and/or heat tolerant food crops (e.g. pulaka) and tree species for coastal protection.</p>	<p>Food security.</p> <p>Coastal protection through re-planting programmes and other appropriate schemes.</p>
<p>1.3 Integrated and coordinated water resources (including desalination) planning and management including preparedness and response plans for each island³</p>	<p>Water security (adequate water quality and quantity).</p> <p>Preparedness for droughts and other extreme events.</p>
<p>1.4 Coordinated planning and management of marine, coastal and land resources and systems (Whole Island Systems Management/ecosystem base management).</p>	<p>Recognition and adaptability of the inter-linkages of systems (ecosystems) in adaptations and disaster risk reduction activities to strengthened resilience.</p> <p>Marine (offshore) and coastal resources are sustainably managed in the context of climate change to the benefit of the people of Tuvalu.</p>
<p>1.5 Capitalising on recent studies on predicted migratory species movement due to climate change.</p>	<p>Economic security, food and species diversity (biodiversity and ecosystems) for Tuvalu.</p> <p>Appropriate technology transfer and capacity building to support economic diversity initiatives.</p>
<p>1.6 Awareness and empowerment programmes for each island on climate change impacts and disaster risks in each sector.</p>	<p>Climate change adaptation integrated into planning and development decision making including household daily activities.</p>
<p>1.7 Legislations and policies to govern</p>	<p>Improved coordination driven by relevant</p>

³ This implementation of this strategy should be coordinated with the implementation of the National Water Policy (under development)

sustainable resource management, (marine, coastal and land) in the context of climate change impacts.	policies. Threats and impacts of climate change and disaster risks on biodiversity minimised and avoided (refer NBSAP, NAPA, NAP etc).
1.8 Appropriate insurance arrangement schemes to address loss and damage from the impacts of climate change.	Cost of re-building from the impacts of climate change are primarily borne by major GHG producing countries.

Goal 2: Improving Understanding and Application of Climate Change Data, Information and Site Specific Impacts Assessment to Inform Adaptation and Disaster Risk Reduction Programmes.

Developing scientific and assessment capacity in Tuvalu will be an important element of this Policy (TCCP) and it's Action Plan (NSAP). The need to understand climate change and its impacts in the context of Tuvalu and to communicate this to policy and decision makers cannot be undermined. There is a need to link this to the work of Tuvalu Meteorological Services

Key Issues:

- Lack of capacity (climate services) and enabling policy and legislation within the Tuvalu NMS
- Old equipments
- Lack of capacity and resources to translate weather and climate information for end users
- Lack of public and school awareness of weather and climate information
- Poor inter-islands communications
- Poor adaptation and mitigation initiatives
- Lack of national capacity for negotiations

Strategies	Outcomes
2.1 Upgrading the capacity of the National Meteorology Services including stations on the outer islands.	A strong NMS with legislation, relevant policy and protocols for data sharing and usage are available and implemented to guide the use and sharing of weather and climate services data including historical data Capacity for climate change monitoring is available in

	<p>the meteorological services</p> <p>Old equipment is replaced and maintained</p> <p>Capacity to service the needs of end users (e.g. agriculture, fisheries, tourists operators, aviation sector, women and men)</p> <p>Improved public awareness of weather and climate information</p>
2.2 Reliable telecommunications with outer islands for weather and climate information	Inter island communications is improved to receive warning and send observations
2.3 Climate change and disaster risk management information are incorporated into school curriculum.	High level of awareness in school age children (pre-schools, primary, secondary, vocational and tertiary levels.
2.4 Site specific studies and assessments informing adaptation and mitigation options.	Informed adaptation and mitigation programmes.
2.5 National capacities in international negotiations are strengthened.	Tuvalu continue to be visible and have an impact in international negotiations

Goal 3: Enhancing Tuvalu's Governance Arrangements and Capacity to Access and Manage Climate Change and Disaster Risk Management Finances

Tuvalu must strengthen national institutional arrangements and position itself to obtain maximum benefits from relevant international and regional instruments relating to climate change finances. This entails strengthening the capacity of agencies responsible for climate change coordination, development planning, disaster risk reduction and regulation by supporting enabling policies, regulations and human resources. Finance and procurement policies are required as well as a dedicated NIE.

Key Issues:

- Lack of capacity in each ministry/department to mainstream climate change
- Lack of capacity in the Island (Kaupule) Governance
- ISP short of climate change and disaster risk management considerations
- Lack of enforcement and practice of good financial management

- Weak drivers in coordination committees
- Lack of enforcement and coordination
- Lack of a known process to inform public about climate change finances
- Lack of sustainable and predictable funding for medium and long term planning
- Weak institutional arrangements for climate change, environment, meteorology and disaster (dis-jointed and lack opportunity to collaborate and coordinate)

Strategies	Outcomes
<p>3.1 Climate change and disaster risk management aspects are incorporated into the Te Kakeega II (and future national sustainable development plans), budgetary planning and into sector policies and plans.</p>	<p>There is capacity in each ministry and department to integrate climate change and disaster risks into project development and project monitoring and evaluation</p> <p>Climate change and disaster risks are incorporated in each sector/agency policies, plans and budgetary processes and in all new and ongoing development programmes</p>
<p>3.2 Island governance and leadership (Kaupule) strengthened.</p>	<p>Effective and responsive island governance where climate change and disaster risks and impacts are integrated into Island Strategic Plans</p> <p>Diversifying gender specific climate resilient livelihoods and enhanced hazard response capacity of the Kaupule.</p>
<p>3.3 Robust financial management procedures and procurement policy for donor funded (or partnerships supported) climate change and disaster risk management programmes.</p>	<p>Donor confidence in national procedures and governance arrangements.</p> <p>High level of professionalism in financial management in central and line agencies including Island Kaupule to access and report on financial and technical support.</p>
<p>3.4 Enabling policies and tools to strengthen the coordination role of the Aid Coordination Unit, the National Climate Change Advisory Council (NCCAC) and the National Disaster Committee (NDC).</p>	<p>National policies and by-laws are enforced to provide the policy driven support for coordinated climate change and disaster risk management targets and outcomes.</p> <p>Strong coordination of planning, implementation, monitoring and evaluation evident in government</p>

	<p>agencies implementing climate change and disaster risk management programmes.</p> <p>High level of awareness amongst agencies and communities on climate change finance.</p>
3.5 A National Trust Fund to support adaptation, and mitigation actions in to respond to climate change impacts and disaster risks	Sustainable and predictable funding available for immediate, medium and long term climate change and disaster risk management planning and implementation of adaptation, mitigation and disaster risk reduction priorities.
3.6 Strengthen institutional arrangements for climate change, disaster risk management and meteorology to enhance coordination.	<p>Improved coordination, sharing of expertise, data and information.</p> <p>Good lessons learned and best practices are gathered, replicated and shared.</p> <p>A ministry to encompass climate change, disaster risk management and Meteorology thus raising their visibility and role in national sustainable development planning.</p>

Goal 4: Developing and Maintaining Tuvalu’s Infrastructures to Withstand Climate Change Impacts, Climate Variability, Disaster Risks and Climate Change Projection

Strengthening infrastructures are important as it is the life line that the people of Tuvalu use for transportation and communications such as communicating with the outer islands, to move commodities and for transportation to schools, hospitals and government offices. Strengthened infrastructures are also use as shelters in emergency or disaster events.

Key issues:

- Infrastructures are not build to the code provided and specifically do not consider future projection
- Lack of land use planning
- Building code is difficult to enforce
- ISP need to include land use planning
- Lack of awareness
- Coastal protection and road building increases coastal erosion and inundation

Strategies	Outcomes
4.1 Climate proof and secure key infrastructure considering climate change impacts, climate variability, disaster risks and projected climate change.	Key infrastructures (e.g. power station, telecom, meteorological services, airport, wharfs, roads, hospital, schools, churches and Falekaupule in Funafuti and outer islands etc) are secure and functional at all times.
4.2 Physical planning and development control for Funafuti and the Outer Islands.	<p>Improved and coherent physical planning Physical planning integrated into the Island Strategic Plan (ISP).</p> <p>Building code is enforced for key infrastructure and construction of houses (wooden and concrete) in the context of climate change adaptation.</p> <p>Increased public and community awareness on climate change and disaster risks issues impacting on their properties.</p> <p>Coastal protections and causeways constructions followed best practices appropriate for Tuvalu’s situation and reduce vulnerability to the impacts of climate change, climate variability and geological hazards.</p>

Goal 5. Ensuring Energy Security and a Low Carbon Future for Tuvalu.

Tuvalu’s green house gas emissions are nil in a global context, Tuvalu nonetheless remains committed to a mitigation agenda to transition to a low-carbon future. The 2009 Tuvalu developed its National Energy Policy and Action Plan. Tuvalu’s National Energy Policy and Action Plan seek to improve energy efficiency and reduce GHG emissions through affordable renewable energy.

Key issues:

- Heavy reliance on fossil fuels
- Continuous awareness on energy efficiency
- Lack of appropriate legislation
- RE technology expensive

<ul style="list-style-type: none"> Emissions from the land fill and pig farms 	
Strategies ⁴	Outcomes
5.1 Reduce reliance on fossil fuels by providing opportunities for renewable energy (RE).	Realise the target of 100% of electricity generation through renewable energy technologies (TNEP 2009) Enhanced access to safe, secure, clean, efficient, and affordable energy supplies
5.2 Promote energy efficiency and conservation programmes.	
5.3 Energy legislations and regulations promoting and supporting EE and RE.	
5.4 Mitigation plans for the agriculture and waste management sectors to reduce green house gas emissions.	Maximising the GHG reduction from local energy sources

Goal 6: Planning for Effective Disaster Preparedness, Response and Recovery

Disaster management is important to save lives and properties. Response and recovery however need to be carried out based on lessons learned from the disaster to ensure that overall vulnerability is reduced.

The Tuvalu National Risk Management Plan (2010) and DRM Arrangements cover priorities for action in both disaster risk reduction and disaster management in connection with climate-related and other natural and human-induced hazards. The timely implementation of the DRM NAP will ensure increased safety and strengthen resilience at all levels.

Key issues:

- **Highly vulnerable to extreme events and climate change impacts**
- **Lack of drills and exercises**
- **Lack of advance preparedness**
- **Lack of capacity and awareness**
- **Lack of targeted (to most vulnerable groups) preparedness, response and recovery**

Strategies	Outcomes
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⁴ The Energy Strategies are to be implemented in close consultation and collaboration with the agencies responsible for the National Energy Policy (2009).

6.1 Strengthen the coordination, operational arrangements for Disaster Management (at national, sectoral, island and community levels.	Well coordinated disaster management institutional arrangements at all levels.
6.2 Enhance preparedness to disaster risks.	Advanced preparedness at all levels (national, island and community) to cope with the impacts of climate change and disaster risks.
6.2 Effective disaster response system capability.	Timely and coordinated response arrangements to alleviate suffering to victims.
6.3 Strengthen disaster recovery systems.	The needs of the most vulnerable groups and those with special needs are given priority in emergency preparedness and response planning and implementation.

Goal 7: Guaranteeing the Security of the People of Tuvalu from the Impacts of Climate Change and the Maintenance of National Sovereignty

Despite climate change impacts, the people of Tuvalu would like to protect their identity and in case of where it is impossible to remain in Tuvalu because of climate change impacts the people of Tuvalu want to be prepared and know what their future holds.

Key issues:

- **Uncertainty on global commitments to reduce GHG emissions**
- **Signs of climate change impacts already experiencing in Tuvalu – droughts**
- **Need to protect EEZ**
- **Lack of international policy for forced migration due to climate change**
- **Cost of any relocation due to climate change**
- **Fear of losing Tuvalu’s identify and culture**

Strategies	Outcomes
7.1 Secure the EEZ of Tuvalu (approved coordinates) as belonging to the Government and People of Tuvalu regardless of any loss of	Tuvalu’s constitution and legislations are amended to address Tuvalu’s sovereignty taking into consideration climate change impacts and projections on Tuvalu’s EEZ.

coastal areas or islands due to impacts of climate change such as sea level rise.	
7.2 Ensure that Tuvalu continued to have the capacity to remain as a nation.	A resilient Tuvalu
7.3 Special Pacific Access Category (PAC) for Tuvaluans considering climate change vulnerability and forced climate migrants.	Tuvalu's preparedness for any migration or displacement due to climate change impacts
7.4 Climate change migration/resettlement plan for each island in view of climate change impacts worst case scenario.	Tuvaluans have a secured place to live.

POLICY IMPLEMENTATION

Tuvalu's National Climate Change Policy is formulated with the understanding that Tuvalu's development partners and the international community will help support its' financing and implementation as presented on the Tuvalu Blue Print – on – Adaptation (2008).

National implementation and monitoring and evaluation arrangements are presented in detail in the National Strategic Action Plan for Climate Change and Disaster Risk Management (2012-2016), (NSAP). A mid-term review of the policy should be carried out in 2016.