



GOVERNMENT OF TUVALU

TE KAKEEGA III

**National Strategy
for Sustainable Development
2016 to 2020**



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National Strategy for Sustainable Development 2016 to 2020

March 2016



GOVERNMENT OF TUVALU

Private Mail Bag, Funafuti, Tuvalu

Tel: (688) 20 231 email: pbd@gov.tv

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• Amalinda Satupa • Riiti Conway

Mati Afelee • Semese Alefaio • James Conway • Letasi Iulai • Semi Malaki • Niuatui Niuatui

Map: Asian Development Bank

Theme of the 2015 National Summit on Sustainable Development

PROTECT AND SAVE TUVALU

Improve the quality of life and prosperity for all

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Foreword



It is my honor and privilege to present Te Kakeega III (TKIII), prepared for the people of Tuvalu and Tuvalu’s development partners, who continue to provide Tuvalu with generous support for its development. To them I offer my deepest gratitude on behalf of the Government and people of Tuvalu.

TKIII succeeds Te Kakeega II (2005-15) and is Tuvalu’s eighth national development plan. Like TKII the original Te Kakeega (1995-98), TKIII was conceived by the people of Tuvalu, in the preparatory stages, in the consultative phase, and during the final approval process. Staff from the Department of Planning and Budget, representatives from TANGO and from EKT met with the eight island communities on Funafuti, and their seven counterparts in the outer islands. Discussions focused on the performance of TKII, plans for TKIII, and what should be emphasized in TKIII. In all more than 300 people were consulted, including more than 100 island leaders who were invited to the TKIII National Summit. Summit delegates, who

represented a broad spectrum of Tuvalu society, adopted the Malefatuga II Declaration, which presents the Summit’s outcome. Marking the end of the long consultative process, TKIII was subsequently subjected to a broad government policy and project review. This was followed by several Cabinet reviews and final Cabinet approval, prior to submission to Parliament.

Where TKII ended TKIII begins. It continues work on unfinished business, takes on new initiatives and development objectives, and adds four new strategic areas, in addition to the eight identified in TKII. These new areas focus on: Climate Change; Environment; Migration and Urbanization; and Oceans and Seas. Climate change presents grave challenges, which are in need of urgent attention and that cut across the scope of TKIII. Focus on the environment, previously captured under the broad natural resource umbrella, is now separately emphasized. This highlights the major importance the government assigns to protecting the environment, and by extension the importance the rest of the world places on environmental protection. Migration and urbanization are phenomena that reside at the forefront of numerous challenges facing the domestic economy and society at large. These challenges demand more attention than they have received in the recent past. The protection and management of Tuvalu’s ocean areas is, of course, of special interest. Within this strategic area are important goals for sustainable development, and many of these need immediate action.

Many attendees to the National Summit played key roles in developing the TKIII agenda. They included Tuvalu expatriates currently working for Pacific regional organizations; members of Tuvalu’s diplomatic corps based in Suva, Wellington, Taipei, New York and Brussels; and local representatives from the public and private sector, as well as public and private representatives from other countries. The latter two groups met their own expenses and I take this opportunity to record my special thanks to them and their employers who allowed them to attend Summit. Their collective experience and expertise brought a wealth of knowledge to bear on the thinking behind specific elements of TKIII. I also acknowledge the special assistance of Hon. Kausea Natano, with whom I shared the honor of co-chairing the National Summit, and whose help and insights proved invaluable in steering the Summit to a successful conclusion.

Lastly, many thanks to my staff in the Ministry of Finance, in particular the Secretary of Finance, officers in the Department of Planning and Budget, and the local consultants who helped draft, guide and shape the production of TKIII.

Let us all now embark on the hard work of implementing TKIII. We have a long road in front of us. But with collective determination I believe our goals of protecting Tuvalu and its people, improving our quality of life, and creating greater national prosperity are within our reach.

Hon. Maatia Toafa
Deputy Prime Minister & Minister of Finance and Economic Development



Acronyms

AF	Adaptation Fund	EEZ	Exclusive Economic Zone
ADB	Asian Development Bank	EIB	European Investment Bank
ADMA	Agriculture Domestic Marketing Authority	ECCE	Early Childhood Care & Education
AGO	Attorney General's Office	EIB	European Investment Bank
ALO	Agriculture Livestock Officer	EKT	Ekalesi Kelisiano Tuvalu
ATM	Automated Teller Machine	ESD	Environment and sustainable development
CBA	Cost benefit analysis	EU	European Union
CC	Climate change	FAO	Food and Agriculture Organization
CCU	Climate Change Unit	FCA	Funafuti Conservation Area
CDCC	Cultural Development Coordinating Committee	FDI	Foreign direct investment
CFC	Community Fishing Centre	FFA	Forum Fisheries Agency
CIF	Consolidated Investment Fund	FNU	Fiji National University
CJ	Chief Justice	FTF	Falekaupule Trust Fund
CLAG	Combined Law Agency Group	GAO	General Administrative Orders
CLGF	Commonwealth Local Government Forum	GCF	Green Climate Fund
C&P	Conservation and protection	GDP	Gross Domestic Product
CPF	Curriculum Policy Framework	GEF	Global Environment Facility
CRPD	Convention on the Rights of People with Disability	GID	Gender Information Database
CSD	Central Statistics Division	GIS	Geographic Information System
CSO	Community Service Obligation	GNI	Gross National Income
CTC	Community Training Centre	GNSS	Global Navigation Satellite System
DBI	Department of Business and Industry	GOT	Government of Tuvalu
DBT	Development Bank of Tuvalu	HH	Household(s)
DCA	Department of Community Affairs	HRD	Human resource development
DCC	Development Coordinating Committee	ICPD	International Conference on Population and Development
DGA	Department of Gender Affairs	IDC	Island Disaster Committee
DMO	Disaster Management Office	IFAD	International Fund for Agricultural Development
DOC	Department of Culture	IMF	International Monetary Fund
DOE	Department of Education	INDC	Intended Nationally Determined Contributions
DOF	Department of Fisheries	IPCC	Intergovernmental Panel on Climate Change
DOW	Department of Women	IPP	Independent Power Producer
DPB	Department of Planning & Budget	IUU	Illegal, unreported and unregulated
DPT	Department of Personnel & Training	JV	Joint venture
DWFN	Distant Water Fishing Nation	LDCF	Least Developed Country Fund
ECCE	Early Childhood Care and Education	LRP	Land Reclamation Plan
EDF	European Development Fund	LUM	Land-Use Management plan
EE	Energy efficiency	MCT	Ministry of Communication & Transport
		MDG	Millennium Development Goals
		M&E	Monitoring and evaluation

MEYS	Ministry of Education, Youth & Sports	NSP	National Sports Policy
MFATTEL	Ministry of Foreign Affairs, Trade, Tourism, Environment & Labour	NWP	National Waste Policy
MFEP	Ministry of Finance & Economic Planning	NYP	National Youth Policy
MHARD	Ministry of Home Affairs & Rural Development	OAG	Office of the Auditor General
MLRS	Multimedia Learning Resource Studio	ODS	Ozone Depleting Substance(s)
MNR	Ministry of Natural Resources	OI	Outer island(s)
MOFA	Ministry of Foreign Affairs	OPM	Office of the Prime Minister
MOH	Ministry of Health	PA	Paris Agreement
MOP	Ministry Operational Plan	PAC	Public Accounts Committee – or – Pacific Access Category (NZ)
MOU	Memorandum of Understanding	PACLII	Pacific Islands Legal Information Institute
MPUI	Ministry of Public Utilities & Industries	PBA	Public Broadcasting Act
MSME	Micro, small & medium-size enterprises	PBAAC	Public Budget Accounts and Audit Committee
MTEF	Medium-Term Fiscal Framework	PERMU	Public Enterprise Reform Monitoring Unit
MTEF	Medium-Term Expenditure Framework	PIC	Pacific island Country
MTR	Mid-term review	PNA	Parties to the Nauru Agreement
NACCC	National Advisory Council on Climate Change	PPA	Power Purchase Agreement
NAFICOT	National Fishing Corporation of Tuvalu	PR	Permanent residency
NAPA	National Adaptation Programmes of Action	PRAPSWM	Pacific Regional Action Plan on Sustainable Water Management
NAPCLDD	National Action Plan to Combat Land Degradation and Drought	PRM	Policy Reform Matrix
NBSAP	National Biodiversity Strategic Action Plan	PROP	Pacific Regional Oceanscape Project
NBT	National Bank of Tuvalu	PSC	Public Service Commission
NCC	National Coordination Centre	PSRC	Public Sector Reform Committee
NCD	Non-communicable disease	PV	Photovoltaic
NCP	National Culture Policy	PWD	Public Works Department
NCSCS	National Committee on Social & Community Services	QMR	Quarterly Monitoring Report
NCSM	National Control Survey Mark	RE	Renewable energy
NDC	National Disaster Committee	ROC	Republic of China (Taiwan)
NDP	National Disability Policy	RSE	Recognized Seasonal Employer scheme (NZ)
NDRC	Natural Disaster Relief Coordination Unit	SAR	Search and Rescue
NEP	National Energy Policy	SBM	School-based management
NGO	Non-Government Organisations	SCCF	Special Climate Change Fund
NGP	National Gender Policy	SDE	Special Development Expenditure
NLMP	National Labour Migration Policy	SDG	Sustainable Development Goals
NSCM	National Survey Control Mapping/Marks	SIMS	School of Information Management Systems
		SIWSP	Sustainable and Integrated Water and Sanitation Policy 2012-2021
		SMC	Senior Magistrates Court

SOPAC	South Pacific Applied Geo-Science Commission	TYNC	Tuvalu National Youth Council
SPC	Secretariat of the Pacific Community	UN	United Nations
SPFSC	South Pacific Form Seven Certificate	UNCLOS	UN Convention on the Law of the Sea
SOE	State-owned enterprise	UNDOALOS	UN Division for Ocean Affairs and the Law of the Sea
SWAT	Solid Waste Agency of Tuvalu	UNFCCC	United Nations Framework Convention on Climate Change
SWP	Seasonal Workers Programme	UNDP	United Nations Development Programme
TANGO	Tuvalu Association of Non-Governmental Organisations	UNFCCC	United Nations Framework Convention on Climate Change
TBD	To be determined	WB	World Bank
TECS	Tuvalu extended continental shelf	WCPFC	Western and Central Pacific Fishing Commission
TEMIS	Tuvalu Education Management Information System	WHO	World Health Organization
TISIP	Tuvalu Infrastructure Strategy and Investment Plan	WOSA	Waste Operations and Services Act
TKII	Te Kakeega II		
TKIII	Te Kakeega III		
TNDCC	Tuvalu National Disability Coordinating Committee		
TNPF	Tuvalu National Provident Fund		
TNPSO	Tuvalu National Private Sector Organization		
TPF	Trade Policy Framework		
TPS	Tuvalu Police Service		
TRC	Tuvalu Red Cross		
TTC	Tuvalu Telecommunications Corporation		
TTF	Tuvalu Trust Fund		
TSSC	Tuvalu Senior Secondary Certificate		
TuEHCI	Tuvalu Early Human Capability Index		
TuFHA	Tuvalu Family Health Association		
TUSTA	Tuvalu Standardized Test of Achievement		
TUVLIS	Tuvalu Land Information System		
TVET	Technical and Vocational Education and Training		
TVSD	Technical and Vocational Skills Development		

Introduction

TKIII: Vision, Mission, Guiding Principles, Formulation



Te Kakeega III aligns with the goals of the UN Sustainable Development Agenda (**Box 1**), the SIDS Accelerated Modalities of Action (Samoa) Pathway (**Box 2**), the achievements of TKI and TKII, and the objectives of recent government Roadmaps. TKIII is the outcome of wide consultations that culminated in a National Summit on Sustainable Development (NSSD) held in Funafuti, Tuvalu, in November 2015. The NSSD produced the *Malefatuga* Declaration II, which covers the period 2016 to 2020. Although TKIII covers the next five years, it is led by the longer-term outlook of the UN Sustainable Development Agenda, which runs through 2030. TKIII is based on the vision, mission, and guiding principles set out below.

Box 1 – UN Sustainable Development Goals

Throughout the text, readers will find references to the UN's Sustainable Development Goals 1-17. These are the successor goals to the MDGs, which elapsed in 2015. The SDGs include over 160 development targets through 2030, similar to MDG targets only developed in much more detail, and expanded beyond the broad universal umbrella of poverty reduction, which anchored much, but not all of the MDGs.

The exercise to develop TKIII – wide ranging public consultations culminating in the National Summit on Sustainable Development, which produced the outcomes of the NSSD – was framed by the SDGs. Throughout the period of TKIII, development progress will be measured against the SDGs, as well as local factors that lie outside the SDG framework.

Box 2 – The SIDS “Somoa Pathway”

The Malefatuga Declaration II (Annex 13) underscores the spirit of the Samoa Pathway* for future development in Small Island Developing States, which includes implementation of the Barbados Programme of Action (BPA) and the Mauritius Strategy. The Samoa Pathway presents a basis for action in 15 priority areas; most have specific relevance for Tuvalu:

- Sustained and sustainable, inclusive and equitable economic growth with decent work for all;
- Climate change;
- Sustainable energy;
- Disaster risk reduction;
- Oceans and seas;
- Food security and nutrition;
- Water and sanitation;
- Sustainable transportation;
- Sustainable production and consumption;
- Management of chemicals and waste, including hazardous waste;
- Health and non-communicable diseases;
- Gender equality and women’s empowerment;
- Social development [incl. education];
- Biodiversity; and
- Invasive alien species.

* Resolution adopted by the UNGA on 14/11/14 (A/RES/69/15).

Spanning the years 2016 to 2020, TKIII’s medium-term focus sets the broad direction for future development. Projecting specific development plans over even a five-year period is problematic. Focus can easily shift away from specific policies and projects, or other tangible development initiatives. Aid donor and government policy emphasis can also change, which affects future budget and aid allocations (funding availability), which makes long term planning difficult if the focus is on specific near-term initiatives. While TKIII embodies a long term outlook consistent with SDG targets through 2030, TKIII’s initial emphasis is much shorter term, through 2020.

During the period of TKIII results will be monitored closely. A full review of TKIII will occur in 2019-20 to reemphasize and refocus development efforts over the longer term. Bear in mind that much more specific activity detail on policies, needs, near-term initiatives and projects can be found in documents developed by each government ministry and department, for example, education, health, fisheries, lands, infrastructure, public finance, air and marine transport, and by public utilities, other public enterprises, and so on. These include corporate plans, action plans, sector plans, frameworks, strategies, programmes, and other formats.

Vision

The TKIII vision foresees a more protected, secure and prosperous Tuvalu; healthier people who are more engaged in national, regional and international forums; and a government fully committed to honoring Tuvalu’s international commitments and respecting its partnerships.

Through 2020 and beyond, Tuvalu’s unique vulnerabilities will be significantly reduced by building resilience to better respond to global economic and environmental crises. Twenty percent more of the workforce will be employed in the formal economy and real household income will be 20% higher than it is now.

Tuvalu’s small and vulnerable land area will be better protected against loss and erosion, and the extraction of its marine resources more effectively controlled by the government. More Tuvaluans will be comfortably living abroad, and the number of people educated and trained in skills appropriate to higher earning potential and career advancement will have increased by 40%.

Mission

The TKIII mission is to achieve a greater level of security and prosperity for all Tuvaluans; achieve higher standards of quality health and education; and to develop and maintain good relations with our friends and allies on the international stage.

Guiding principles

TKIII will be implemented respecting the widely-held principles of good governance; the widely-held principles of sustainable development; using the concept of strategic planning; and guided by the national motto, *Tuvalu mo te Atua* (“Tuvalu is for God”).

Governance is the use of government authority to provide economic and social services to the people. The ballot box measures people’s approval of their elected government, its accountability to the people, the quality of economic and social services delivered, and the degree of honesty and transparency in how government is run. Each of these form important elements of good governance.

Sustainable development holds that development – the balance between economic growth, social equity and environment protection – can be managed so that there is an increase in the sum of the three capital stocks (hard sustainability) or if there is a decrease in one (e.g., the environment) this can be offset by an increase in one or both of the two other stocks (soft sustainability).

The Rio Declaration and Agenda 21 defined sustainable development as: (a) the integration of economic, social and environment priorities, and (b) wide participation of stakeholders in the development process. Integration means that where policy changes are made the positive and negative effects in capital stocks are properly considered, to identify trade-offs and arrange appropriate mitigation measures for minimizing any negative impacts. For example, in Tuvalu this can mean taking into consideration the negative impacts of particular investments on the poor and designing ways to minimize or off-set such impacts. Also, the negative impacts development projects may place on the natural environment should be identified, through such tools as environmental impact assessments (EIA), and that the means to mitigate such impacts be agreed to before project implementation starts. A method of doing this is to involve stakeholders at key stages as a project (or initiative) unfolds. This safeguards local concerns,

encourages input from the community to improve project development, so development efforts are sustained and adopted by the community.

In TKIII, three ideas form the basis for strategic planning. The first is that TKIII methods and targets are based on:

- 1) Tuvalu’s own development perceptions and needs, which are linked with the **UN SDGs**, the SIDS **Samoa Pathway**, and the UNFCCC’s **Paris Agreement** (the successor to the Kyoto Protocol), to be adopted in April 2016;
- 2) a commitment by knowledgeable public officials under the terms and conditions of their appointments to give advice to the best of their professional ability; and
- 3) political leaders who have constitutional decision-making authority to act in the country’s best interest.

The second idea is that specific policies are well thought out, coordinated with related policies, and based on reliable information and sound analyses of the likely outcomes of a chosen action (a process that in the past has too often been neglected by Tuvalu decision-makers). This will show how government initiatives are expected to achieve specific results.

TKIII does not represent a separate or new planning process, but an adaptation and extension of past and current development planning efforts, to comply with sustainable development principles, and to formulate TKIII by combining the views expressed through public consultation with government’s own policies, and the review of past plan performance. To be effective in the context of Tuvalu, strategic planning should also allocate resources and responsibilities to the most appropriate national or local island agencies.

The third idea is targeting resources and monitoring their use, the latter to measure results. Activities that pursue TKIII targets will be well funded – if domestic and aid funding is available – before projects and programmes begin. Monitoring will be conducted on a regular basis, and projects evaluated at least once a year.

TKIII formulation

The formulation process for TKIII began in 2015. It adopted the basic process used to formulate the two previous strategic plans – *Te Kakeega*, and its follow-up, TKII, which was built on the MDGs. Following the mid-term review (MTR) of TKII in 2011, which replicated the findings of the MDG-MTR (Box 3), but in more TKII-specific detail, periodic TKII reviews also took place from mid-late 2013 during the government’s “prayer breakfast” exercises, which reviewed the government’s Aug/Sep 2013 roadmap and its delivery during its first 100 days in office – and thereafter. The findings of these monitoring and review exercises were reported to the public by Cabinet, led by the Minister of Finance in late 2013. This type of public reporting became a regular feature of the government.

Box 3 – MDG Progress Report 2010/2011

TKIII builds on Tuvalu’s efforts to meet the eight MDGs, now superseded by the SDGs. After a two-year assessment (funded by UNDP and Australia) Tuvalu’s 2011 MDG progress scorecard reported that Tuvalu was on a near-term track to achieve four of eight MDGs (2,4,5,8), potentially on track to achieve three (3,6,7), but was unlikely to achieve MDG 1 any time soon: eradicate extreme poverty and hunger. Renewed efforts to do that have been ongoing since 2011, and it remains a priority under TKIII. See Sustainable Development Goals 1 and 2 (Annex 14), which underpin TKIII.

TKIII has three main inputs: government policies, which include and build on the TKII mid-term review; and the outcome of public consultations with each of the eight island communities. Together with those participating in the TKIII Summit in November 2015, the number of people that directly participated in TKIII formulation exceeded 300 people – about 3% of the national population. The draft TKIII that emerged – a mix of public wants and needs, government policy and plans – was used to develop each ministry’s Operational Plans (MOP), together with their capital and recurrent budgets. MOPs are integrated into the national budget so

that TKIII development aims will be funded in 2016 and later years. Public corporations and NGOs take their cue from the MOPs (ministerial portfolios) under which they fall, to develop and focus their own future development plans.

The Department of Planning and Budget (DPB) coordinated the TKIII formulation process, incorporating the principles of good governance, sustainable development and strategic planning. A proposed Monitoring and Evaluation Unit (MEU) will be the main coordinating agency and secretariat for TKIII, which will report to the Development Coordination Committee (DCC). A TKIII Task Force within DPB will continue to act like a technical subcommittee of the DCC, to advise the Secretary of Finance during TKIII implementation.

Every effort was made in the TKIII design and post-design stages to identify overlaps (and potential conflicts) between strategic area goals and objectives so trade-offs could be identified and less than desirable impacts minimized or eliminated. In the strategic areas of Climate Change (1), Natural Resources (8), Environment (10), and Ocean and Seas (13), for example, there is some overlap in certain areas, some of it significant. Where these overlaps – and where potential conflicts arise – the ministries concerned and other parties likely to be affected will consult with each other to find common ground, compromise and workable solutions.

Without appearing to create an overly complicated apparatus separate from the DCC, the DCC will continue to maintain its central decision-making role reporting to Cabinet, but as it has historically the DCC will rely on technical advice from whatever the source, such as the TKIII Task Force, which is an intra-Finance Ministry advisory committee that reports to the Secretary of Finance, who reports to DCC, which reports to Cabinet.

1. Climate Change

GOAL: Protect Tuvalu from the impacts of climate change: resilience, mitigation, adaptation



1.1 Threats, consequences and resilience

The reason *Te Kakeega III*’s first strategic area is climate change: it poses the most serious threat to the security and survival of Tuvalu. The danger of climate change and the prospect of warming temperatures, sea level rise, and severe weather events overhang the entire discussion of future development. And the dangers – some long-term, some more immediate – cut across Tuvalu’s development landscape.

The challenges of climate action and future climate financing now and in the future are enormous. Urgent actions in response to climate change impacts are needed both at the local and global level. The United Nations Framework Convention on Climate Change (UNFCCC) and the Intergovernmental Panel on Climate Change (IPCC) estimate that before 2100 sea levels will rise by 1.2 to 1.7 meters. With an average height above sea level of less than 3 meters, Tuvalu is among the most vulnerable countries in the world to sea level rise. Seawater flooding of low-lying areas occurs regularly and is expected to become more frequent and extensive over time.

Box 1.1 – Global nature of climate change

The UN has underscored that the global nature of climate change and calls for the widest possible cooperation by all countries and their participation in an effective and appropriate international response. The UNFCCC provides that parties should protect the climate system for the benefit of present and future generations of humankind on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities. [The biggest concern is] the significant gap between the aggregate effect of mitigation pledges by parties in terms of global annual emissions of greenhouse gases by 2020 and aggregate emission pathways consistent with having a likely chance of holding the increase in global average temperature below 2°C, or 1.5°C [see outcome of COP21 and the “Paris Agreement”] above pre-industrial levels. The ultimate objective [of] the UNFCCC is to stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.

Source: UN. 2014. “Sustainable Development Goals”. Open Working Group of the General Assembly on SDGs, p. 4 (document A/68/970).

The IPCC also predicts that unless urgent actions are taken to curb a global temperature increase of not more than 1.5°C above pre-industrial levels, vulnerable small island states like Tuvalu will face more catastrophic impacts, including an increase in cyclone intensity and the existential threat of disappearance due to rising sea levels. An average surface increase in the Earth's temperature has been observed at 0.85°C since the mid-19th century. This rise in global temperature has shifted rainfall patterns that are changing freshwater supplies, thus affecting the quality and quantity of water availability in Tuvalu, with adverse effects on agriculture and other sectors of the economy and society.

The World Bank has estimated that building resilience against climate change will require Tuvalu to invest annually around 2% of GDP, to build the country's adaptive capacity by climate-proofing critical infrastructure, adopting better early-warning systems for all hazards, and enforcing policies and plans to inform decision-making. The increase in sea surface temperature is exacerbating ocean acidification, which is damaging coral reefs and reef ecosystems. Among other things, this increases the likelihood of severe coastal erosion, loss of land, and other unwanted geographical, physical, economic and social side-effects.

Box 1.2 – Samoa Pathway: Climate change

SIDS remain a special case for sustainable development based on their unique and particular vulnerabilities, and climate change and sea-level rise continue to pose a significant risk to small island developing states and their efforts to achieve sustainable development and, for some, represent the gravest threat to their viability and survival. The Samoa Pathway calls for international support for efforts of SIDS to:

- a) Build resilience to the impacts of climate change and to improve their adaptive capacity through the design and implementation of climate change adaptation measures appropriate to their respective vulnerabilities and economic, environmental and social situations;
- b) Improve the baseline monitoring of island systems and the downscaling of climate model projections to enable better projections of the future impacts on small islands;
- c) Raise awareness and communicate climate change risks, including through public dialogue with local communities, to increase human and environmental resilience to the longer-term impacts of climate change; and
- d) Address remaining gaps in capacity for gaining access to and managing climate finance.

1.2 Response costs

In Tuvalu, the cost of physical adaptation and mitigation to climate change will be enormous. Such adaptation measures will involve infrastructure works that generally require large up-front capital and long-term maintenance costs. The financial cost is perhaps best illustrated in the unit cost for coastal zone protection per capita in small islands, which is far higher than the unit cost for similar protective and adaptive infrastructure in non-island countries with much larger populations. This is the socio-economic reality that confronts many small island states like Tuvalu, notwithstanding the benefits that could accrue to island communities – at tremendous cost – through adaptation.

Similarly, the cost of disaster impacts will be huge, well beyond Tuvalu's financial means. Even minor emergencies can have a crippling effect on the national economy as evidenced by Tropical Cyclone Pam, which struck the northern islands of Tuvalu in March 2015. The post-cyclone rapid assessment reported that loss and damages equated to more than 25% of GDP (the assessment included agriculture, fisheries and infrastructure sectors only). The total cost required for the delivery of response and recovery, and future vulnerability reduction assistance is estimated at A\$99.2m. Investment in disaster risk reduction and to "Build Back Better" in recovery, rehabilitation and reconstruction are critical to build up social, health, economic and environmental resilience over the long term. This is no easy task for a small island state like Tuvalu to undertake alone, requiring substantial assistance and cooperation from the international community.

1.3 Climate-related initiatives

The recently established National Advisory Council on Climate Change (NACCC) has advised Government on high-level policy responses to climate change through the newly established Climate Change and Disaster Policy Unit (CDP), within the Office of the Prime Minister.

The integration of climate change resilience into national (and sector-specific) policies is the responsibility of the CDP. Together with the Environment Department, the CDP coordinates projects that address physical responses to the impacts of climate on the environment. *Te Kaniva*, the Tuvalu Climate Change Policy and the accompanying National Strategic Action Plan on Climate Change and Disaster Risk Management, together with the National Communications and the National Adaptation Programmes of Action (NAPA) thoroughly spell out Tuvalu's vulnerability and have guided and instigated the implementation of climate change actions across the country. The NAPA specifically outlines urgent and immediate adaptation needs country-wide.

Te Kaniva is scheduled for review, as is development of its medium- to long-term National Adaptation Plan under TKIII to further strengthen Tuvalu's resilience to the impacts of climate change. The review of *Te Kaniva* will assess its first five years for results and practicality, to identify challenges in implementation, and options for the best way forward to adjust and refine the policy's strategies, objectives and priorities.

The government will explore options, and establish and implement risk transfer mechanisms (e.g., disaster insurance) to spread the financial burden of reducing and recovering from the impacts of climate change and natural disasters. These impacts are growing more expensive to deal with, more frequent, and prolonged. Actions undertaken by Tuvalu here will also inform relevant regional frameworks on financing climate change and disaster risks.

Accessing climate finance under various multilateral funding mechanisms is a challenge, and frequently beyond the scope of Tuvalu's limited administrative resources and expertise. Multilateral funds for climate change investments and environmental protection are available under the Green Climate Fund (GCF), Adaptation Fund (AF), the Least Developed Country Fund (LDCF), the Special Climate Change Fund (SCCF) and the Global Environment Facility (GEF). Accreditation to these funds is critical to secure direct access. Established institutional arrangements under the Office of the Prime Minister (OPM) and the Ministry of Foreign Affairs, Trade, Tourism, Environment and Labour (MFATTEL) can facilitate accessibility to these funds. The Ministry of Finance will secure accreditation to the AF (pending) and will further seek accreditation to the GCF to allow direct access to these funding sources.

Box 1.3 – Tuvalu Survival Fund

The Tuvalu Survival Fund (TSF), governed by the Tuvalu Survival Fund Act 2015, was established by GOT to finance recovery and rehabilitation from climate change impacts and disasters, and climate change investments in mitigation and adaptation projects. Greater investment is needed to grow and sustain the TSF to effectively adapt to and deflect the impacts of climate change and respond to disaster events.

The 2009 National Energy Policy set a national target of 100% renewable energy for power generation by 2020. This goal was reaffirmed under Tuvalu's Intended Nationally Determined Contribution (INDC), submitted prior to COP21, with the target date extended to 2025. To grow the use of renewable energy for not only electricity production but a larger share of the energy market in the next five years, the government will continue to explore options for developing limited volumes of biofuel and introduce it as an alternative fuel for land and sea transport. It will explore the use of wind power to supplement solar PV, and the eventual phase out of diesel-based power generation beyond base-load capacity, which may still be required for back-up power. The government will also provide incentives to adopt energy conservation and demand management measures as a way of improving energy efficiency.

In addition, under the INDC, Tuvalu has committed to reduce greenhouse gas (GHG) emissions from diesel electricity generation by 100%, i.e., almost zero emissions by 2025; reduce total GHG emissions from energy consumption to 60% below 2010 levels by 2025; and a further GHG emissions reduction from other sectors, such as agriculture and waste (liquid and solid), conditional upon access to the necessary technology and finance (**Box 1.4**).

Box 1.4 – Notes on Tuvalu's INDC targets

- These GHG targets exceed those enunciated in Tuvalu's NEP and the 2013 Majuro Declaration on Climate Leadership.
- Tuvalu's GHG emissions are less than 0.000005% of global emissions – statistically zero emissions in a global context.
- Though Tuvalu believes the focus of INDCs should mainly be on mitigation, this does not discount Tuvalu's vulnerability and its planned adaptation actions as stated Tuvalu's NAPA, National Communications, National Strategic Action Plan for Climate Change and Disaster Risk Management, and National Climate Change Policy.
- This view will be further reinforced in GOT's climate change 2016 National Action Plan.

1.4 Disaster-related initiatives

The National Disaster Relief Coordination Unit (NDRC) of the CDP is responsible for incorporating disaster risk reduction into sector policies and programmes. (In May 2015, the Cabinet approved a decision to establish the NDRC and to appoint a Special Envoy for Disaster Response Policy.)

The National Disaster Committee (NDC), legislated by the 2008 National Disaster Act, functions as an advisory and coordination body for disaster mitigation, preparedness, response and recovery. It also advises on requirements for humanitarian aid. Its membership consists of key representatives of government and non-governmental agencies. For each island, there is an Island Disaster Committee (IDC) responsible for coordinating disaster-related measures and acting as a conduit between the NDC and the local community. Disaster management training and other capacity building initiatives are needed to support IDC so it can effectively fulfill its assigned role.

The government will review the 2008 National Disaster Act, the 2012 National Disaster Risk Management Arrangements, and national disaster and contingency plans to strengthen institutional processes in managing disaster risks. The NDRC through the CDP will work closely with line

ministries, Falekaupule, IDCs, Tuvalu Red Cross (TRC), development partners, international humanitarian agencies, and civil society organisations to improve disaster preparedness and response. This includes the development, testing and implementation of contingency plans, early warning systems, and communication protocols.

1.4 International climate change and disaster risk reduction agreements

The 195 Parties to the UNFCCC adopted a universal, global climate deal – the Paris Agreement – at COP21 in December 2015. The agreement is binding in some elements (e.g., reporting requirements), but other aspects of the deal, such as setting national emission targets, are non-binding. The deal requires any country that ratifies it to act to stem its greenhouse gas emissions in the coming century, with the goal of peaking greenhouse gas emissions “as soon as possible” and continuing the reductions as the century progresses. Under the all-important Art. 2.1(a), the Paris Agreement aims to hold

“...the increase in the global average temperature to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change.”

The aim is to balance anthropogenic GHG emissions by sources and removals by GHG sinks in the second half of this century. Tuvalu is committed to achieve the global temperature goal through its INDC targets.

Parties to the PA must submit their nationally determined contribution articulating mitigation contributions. Tuvalu communicated its INDC to the UNFCCC in November 2015. Because Tuvalu's GHG emissions are insignificant – less than 0.000005% of global emissions – its mitigation targets are symbolic but consistent with its ambition to keep global warming to less than 1.5°C. After GOT signs and ratifies the PA in April 2016, the INDC will be transformed into the nationally determined contribution (NDC), and obligations under the

PA will be translated into domestic law. **Box 1.4** and **1.5** highlight important elements of the Paris Agreement that address averting and minimizing –

“...loss and damage associated with the adverse effects of climate change, including extreme weather events and slow onset events, and the role of sustainable development in reducing the risk of loss and damage.”

Box 1.5 – Warsaw Mechanism and Sendai Framework

Another major outcome of the PA is the recognition of ‘loss and damage’ associated with climate change. Parties agreed to task the Executive Committee of the Warsaw International Mechanism on Loss and Damage to establish a clearinghouse for risk transfer and establish a task force to define appropriate measures to address climate-induced displacement.

Tuvalu will ratify the Sendai Framework for Disaster Risk Reduction 2015-2030. The four priorities for action include:

- 1) Understanding disaster risk;
- 2) Strengthening disaster risk governance to manage disaster risk;
- 3) Investing in disaster risk reduction for resilience;
- 4) Enhancing disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation and reconstruction.

Box 1.6 – Art. 8: Loss and Damage

Areas of cooperation and facilitation to enhance understanding, action and support may include:

- (a) Early warning systems;
- (b) Emergency preparedness;
- (c) Slow onset events;
- (d) Events that may involve irreversible and permanent loss and damage;
- (e) Comprehensive risk assessment and management;
- (f) Risk insurance facilities, climate risk pooling and other insurance solutions;
- (g) Non-economic losses; and
- (h) Resilience of communities, livelihoods and ecosystems.

2. Good Governance

GOAL: Strengthen institutional capacity to serve the public interest with competence and justice



Of the 20 good governance objectives listed in TKII, twelve were met. Eight have carried over to TKIII, either because they are recurring targets or they remain unfinished but work has begun.

2.1 Public reporting

Some progress has been made on public sector reform. TKII emphasized that public corporations and the ministries responsible for them work to one plan. This has been largely accomplished. Ministries now prepare regular progress reports, which they submit to the DCC. In TKIII this reporting exercise will be extended to NGOs – possibly private businesses if they receive direct government support or subsidies. *Falekaupule* and *Kaupule* will continue to strengthen their reporting responsibilities on operations and island development through the Ministry of Home Affairs & Rural Development (MHARD).

2.2 Public sector expenditure

TKII emphasized that government operate within its annual budget, as appropriated by parliament. Successive governments under TKII largely failed to balance their appropriated budgets. Public

corporations have an equally poor record. The number of supplementary appropriation bills each year attest to this, including for large unplanned expenditures on off-budget items. Public corporations are inherently unprofitable, and historically they have required annual government subsidies to operate, though some additional costs have been imposed by government in recent years, such as Community Service Obligations (CSO), which mandate government subsidy.

2.3 Public sector efficiency

The Public Sector Reform Committee (PSRC) is working with technical assistance to improve public sector efficiency. This includes such improvements as providing more timely, reliable and quality public services at appropriate – and affordable – cost. TA has thus far reviewed the broad area of personnel administration; more specifically Public Service Commission (PSC) functions and the process of PSC appointments; workforce planning; General Administrative Orders (GAO); recruitment, selection and hiring practices; staff management and performance appraisals; performance standards; and other public HRD issues.

Potential efficiency gains can be found throughout the public service. Recently reviewed job descriptions can be linked with job performance and accountability through a better performance management and appraisal process, appropriate job classifications, and the integration of new officers through the public service induction program. Methods used to appoint PSC members will be reviewed, focusing on the need for professional HRD qualifications prior to appointment. The PSRC will also focus on more effective methods of measuring job performance, to make sure that the public service – to the extent possible – delivers efficient and effective services to the public.

2.4 Public sector reform

As far back as 1994 the government has been involved in periodic efforts aimed at reforming the public sector. After the 1994/95 success at downsizing the public service, as a cost-cutting measure and to improve efficiency, reform results have been mixed at best, and the size of the public service has trended upwards almost uninterrupted since then. With a slow growing private sector during this period, there were few employment opportunities – especially career-oriented opportunities – outside the government. Government fills this gap in the labour market and will continue to. This raises inevitable questions about how efficient or inefficient this type of income distribution is, though most answers focus on the latter.

The government is aware that the limited public sector capacity of the national government amplifies the difficulties of providing basic services – health, education, sanitation, social welfare, shipping, power, etc. In the outer islands, with small, isolated, widely dispersed populations, the difficulties of improving public sector performance become greater still. The creation of new institutions (departments, agencies, etc.) can be problematic, unless external TA is available. The government is already large, managerial and technical human resources are limited, and those that exist are severely stretched. New institutions siphon valuable human assets from existing

departments, which can scarcely afford to lose the few skilled employees they have.

Although some have been tried in recent years, again with mixed results, future efforts at public sector reform – driven by government, aid donors, or both – should focus on small, less ambitious micro reforms that are:

- well within GOT's capacity to implement, and
- have clear administrative efficiency and (or) investment gains.

2.5 Ombudsman

The Office of the Ombudsman needs to be strengthened. The 2013 appointment of an Ombudsman fulfills a TKII objective, but the office remains understaffed. It is in need of two more highly qualified and experienced lawyers to assist the Ombudsman in the discharge his duties, which prominently include strict adherence to, and administration and enforcement of, the Leadership Code Act, and public service training in good governance. To effectively enforce the Leadership Code, the Ombudsman needs the full support of government and community leaders. The Ombudsman needs to be neutral, and immune from institutional or political interference. The Ombudsman and his office needs to be granted constitutional authority to act in the public's best interest, in the same way as the Secretary to Government, Auditor General and Commissioner of Police (all three are constitutional offices).

2.6 Parliament: institutional strengthening

An induction workshop was held in Funafuti in August 2015 for all MPs elected in the 2015 general election. MPs were given a basic understanding of their roles and responsibilities, and training on parliamentary procedures and practices. These workshops will be held annually. The Leadership Code clearly defines leadership roles and responsibilities throughout Tuvalu society, and government leaders in particular. Parliament will develop a website, and digitize all public information on legislation, the lawmaking process, the Hansard and other parliamentary documents for easy public consumption.

Ongoing institutional strengthening will focus on reviewing parliamentary rules and procedures, privileges, and parliamentary committees, especially increasing the expertise and oversight power of the Public Accounts Committee (PAC).

Design and construction of a permanent parliament house is in the early planning stages. The building will be sited on landfill in the Funafuti lagoon, just off the southern end of the airfield. The building, reached by a short connecting bridge or causeway, will house the parliament administrative offices on the ground floor, the parliament chamber on the first floor, and offices for MPs on the second floor. The parliament building, which is being designed by PWD, has received partial funding from the Republic of China. Project cost is estimated at A\$5-7m. At present there is no project start date, but a tentative completion date of 2018 or 2019.

2.7 Parliament's Outreach Programme

Parliament's lawmaking role will be re-emphasized through community and school outreach programmes, informing them of parliament's constitutional duties, the legislative process, the process to make laws, and the public's constitutional rights. Not enough outreach activity has taken place in the past to fully educate the general public on the principles of good governance and ethical leadership, as well as educate Cabinet ministers on their constitutional authority, the constitutional roles of the public service in general, and public servants in particular.

2.8 Laws of Tuvalu

A comprehensive review of the Laws of Tuvalu is long overdue. Any number of laws and regulations need to be updated to reflect current (and more modern) Tuvalu society, local and national circumstances, and to comply with Tuvalu's international obligations. The Constitution also needs review, in particular to revisit the issue of how people wish to be governed. Any suggested changes to the Constitution arising out of public discussions would require a national referendum before any proposed amendments could be made through the legislative process.

New stand-alone legislation needs to be developed that strengthens Tuvalu's response to climate change and its impacts. Legislative options need to be explored that protects the public, island communities, land resources, marine ecosystems, biodiversity, and not least, laws that protect the country's sovereignty rights to any future climate threats.

2.9 Judiciary

The management and administration of the judiciary has been subjected to some neglect in recent years. Not least are the infrequent sittings of the High Court, the long-standing difficulty in flying in the Chief Justice (CJ), and the mounting backlog of cases, some of which have been waiting adjudication for years. Similar delays (and other issues) are even more pronounced in the lower courts.

A review of the judiciary's professional and administrative staffing will be carried out to determine the right size and mix of staff needed to efficiently discharge the work of the judiciary. Dedicated court clerks need to be trained and appointed to each outer island, with annual training workshops built into these appointments.

The efficiency of the courts, and the legal system in general, can be determined by the time it takes to dispose of a case. In 2010, the averaged elapsed time it took the Senior Magistrates Court (SMC) to dispose of a case – the time a complaint is first lodged, to court hearing and final judgement – was 260 days. In the last five years this delay has grown. The SMC – provided sufficient resources are made available – will set a target of no more than 90-days to settle future court cases.

Poor management of case files and records is a growing problem throughout the court system, including Lands Courts, as caseloads grew in recent years. Poor file management has also opened the door to corrupted, unreliable files, and possible case tampering. This has been remedied to some extent within the SMC, with the adoption of an Excel-based case management system. The system will be adopted by all courts and judiciary staff, including those in the outer islands. New computer

networks, other technologies, and training to operate the new systems will be supplied to all Tuvalu courts, and their support staff.

Transparency and accountability is another issue that will be addressed. There is currently no annual report nor any statistics published on the work of the judiciary. Only the decisions of the High Court and Court of Appeal are published online in PACLII. A judiciary website is now available and all information relating to the judiciary's work will be published on it, including all court decisions, information about court practice and procedures, and judiciary annual reports.

Under TKIII the judiciary's organizational structure will be reviewed, looking at ways to improve judicial administration and management. The Lands Courts budget, currently administered by the Department of Lands and Survey, will be brought under the judiciary. The judiciary will submit its own budgets through the Office of the Prime Minister, and appoint its own staff. To effect this, certain existing statutory laws may need to be amended.

Construction of a permanent courthouse is scheduled to begin in 2016. The building, which has funding appropriated in the 2016 budget, will include a courtroom, offices for the Senior Magistrate, People's Lawyer, Lands Court, and support staff. The new court facilities have been sited in Vaiaku, between the Vaialofa Church and the TPF building, adjacent the lagoon foreshore.

2.10 Role of the media

A constitutional check on the use of power in liberal democracies is provided by the media, as protected by the constitution, and it must remain impartial and fair in its reporting of events. It can report leaders' abuses of public office for private gain. Broad or specific media opinion, however, is not generally protected by the freedom of the press in Tuvalu, as enshrined in the Constitution. The Tuvalu Media is run by GOT, making its media staff generally compliant with passive government broadcast restrictions. As a result, its news coverage rarely exposes the government, its officials and politicians, to constructive criticism or potentially uncomfortable reportage.

Box 2.1 – Public Broadcasting Act

The PBA was amended in December 2014 and became effective in January 2015. Although it guarantees protection and broadcast independence from political, commercial or other interference, accountability for news reporting lies with the general public if it thinks the news is biased or under-reported. The Act further secures the provision of high quality broadcast transmission facilities and government financial support for media operations in Tuvalu's small and unprofitable media market.

Ways to overcome weaknesses and under-reporting in news coverage – some of it culturally-based – will be discussed and efforts made to open up media coverage to more broad-based and in-depth reporting, and news presentation.

2.11 Office of the Auditor General

A long-standing issue facing the OAG is the inability of those being audited to produce quality financial accounts that contain complete and reliable information to audit. Another key issue is a lack of legislative freedom by the OAG to independently perform its role, and the limited accountability of GOT for audit findings reported to Parliament. This is chiefly due to inadequate expertise on, powerful oversight by, and independence of the Public Accounts Committee's (PAC). The PAC currently has no power to scrutinize (and analyse) GOT budgets.

The OAG will continue to apply pressure on public corporations and Kaupule to provide quality financial statements, and provide them on time. OAG may also use public media, specifically the internet and radio, to publicize its audit findings and those firms whose accounts are incomplete and cannot be audited.

To ensure the OAG is independent from GOT, amend the Audit Act to allow the OAG to prepare and manage its own budget, based on a minimum percentage of GOT's annual budget, with oversight from Public Budget Accounts and Audit Committee (PBAAC) and parliament. OAG should be allowed to appoint and set remunerations for its own staff,

exempting the OAG from statutes that appoint public servants and set staff salary levels.

Legislation is required to strengthen OAG and the current inadequacy of PAC, and its ability and power to scrutinize GOT budgets. The Public Budget Accounts and Audit Committee (PBAAC) Bill should overcome these deficiencies. The bill has yet to be enacted by parliament but it should be as soon as possible, if the state of national budget scrutiny is to improve and be more effective.

OAG with support from MHARD and PERMU will mount training workshops for auditees, especially Kaupule treasurers and corporation accountants, to enable them produce quality accounts to the standard required for ease of auditing.

2.12 Community consultations

GOT remains committed to public discussions, as described in TKII, and extended to TKIII, on policy, development plans, and other government affairs. The Ministry of Finance consulted widely with Tuvalu's eight island communities, including Funafuti. The consultative process convened on the outer islands in September 2015. Communities were apprised of TKII performance, with discussions focusing on ideas and contributions from each island on future TKIII development plans. The TKIII Summit in November 2015 provided a final opportunity for island communities and non-government representatives to express their views on the future of development in Tuvalu, now embodied in TKIII. These types of consultations with the wider Tuvalu community will continue throughout the duration of TKIII, and will continue to be an effective way for the public to express its collective viewpoints, concerns and needs.

2.13 International relations and foreign policy

International relations have made sizeable strides in recent years, having grown more comprehensive and diversified. Under successive governments over the last decade, Tuvalu has extended diplomatic relations beyond its traditional partners, and engages in partnerships and development cooperation with these countries in a number of different areas.

Tuvalu's offers its support in the United Nations on a selective basis, but extends a hand of friendship to all members of the UN family, based on the principles of trust, respect and reciprocity. As of 2011, Tuvalu has established diplomatic relations with 100 out of a potential 190 countries that are members of the UN. The ROC's engagement in Pacific regional and international affairs will continue to be strongly supported by Tuvalu, further cementing Tuvalu's long-term relationship with Taipei, which was first established in 1979, dating back almost 40 years.

Under TKIII, Tuvalu will expand its involvement with the UN, continue to cultivate existing diplomatic ties and forge new ones, and generally build on the more robust foreign relations base that has been established in recent years.

Tuvalu's foreign policies are currently under review. This review is expected to be finalized in 2016, including, among other things, the outcome of public discussions held during the TKIII National Summit. Among a number of new proposals related to overseas diplomatic operations is engagement of former senior officials and public servants (now retired) to be assigned as diplomats, and step up training for foreign affairs officers to cultivate a more professional foreign service.

Given its significant dependence on foreign sources of income and aid, Tuvalu will continue to manage its foreign relations with care. The Ministry of Foreign Affairs in particular and GOT in general maintains close relations with all of Tuvalu's development partners, regional and international agencies, and multilateral banks. Developing closer relationships with countries that historically have not been aid partners but which Tuvalu has established diplomatic relations will be a foreign policy priority.

The Ministry of Finance, in cooperation with the Ministry of Foreign Affairs, will attempt to once again establish a working database for aid management. Among a range of vital administrative duties currently lacking, this will permit – and give a high priority to – the timely preparation of accurate aid acquittals, and improve foreign aid coordination.

The Ministry of Finance, with support from Ministry of Foreign Affairs, welcomes greater donor participation in the Tuvalu-donor Policy Reform Matrix (PRM), a framework that targets donor assistance in a number of selected areas (i.e., finance, education and health). The PRM is meant to stimulate better public financial management (PFM), and prospects for budget support and the budget support implementation agenda, but only on the terms and procedures set by GOT and the original donors involved in the PRM/PFM exercise (e.g., Australia, New Zealand, ADB, IMF, World Bank and UNDP). Such terms, conditions and procedures were set to specifically govern all future short-to medium-term aid-funded budget support initiatives.

2.14 Law enforcement

The Tuvalu Police Service (TPS), which includes the Sea Police Force, aims to reduce crime rates, and focus on reducing its response time to national disasters and other emergencies. It will continue efforts to increase its maritime surveillance presence, including satellite surveillance, enforcement of maritime laws, and its ability to prosecute maritime lawbreakers. Search and rescue (SAR) capabilities, also under the Sea Police, need to be upgraded. GOT is looking at options to develop a SAR Centre, in conjunction with existing facilities that are part of the National Coordination Centre (NCC). GOT will also enact SAR legislation, and develop specific plans to direct SAR activities.

The TPS has taken the lead role in reviving the Combined Law Agency Group (CLAG) consisting of 8-10 overseas law enforcement agencies. CLAG's purpose is to share information and collaborate in the enforcement of national laws. TPS is strengthening its manpower by training the force based on training plans produced with assistance from the Australian Federal Police (AFP).

A number of improvements to law enforcement infrastructure, hardware and equipment are needed to keep the TPS in a state of action-readiness. TPS has identified ten potential donors to approach for assistance during TKIII's 4-5 year development period. GOT will augment external aid with expanded funding for law enforcement initiatives, if domestic budget resources permit.

2.15 Climate change and governance

Governance, in relation to climate change and its impacts – sea level rise, new and uncertain weather patterns – will continue to evolve, mainly in response to real and immediate threats, and planning for (and adapting to) perceived threats that are likely to emerge in the future – some of which are already well known. The government's response to climate change and the threats it poses are urgent, not just because quick fixes are needed, but because some government responses require long lead times to deal with the problem.

Under TKIII, the government will make sure that good governance underpins all present and future responses to climate change, including:

- access to – and usage of – multilateral climate funding (**Section 1**);
- access to domestic funding (**Box 1.3**);
- the defense of Tuvalu's climate change interests and concerns abroad; and
- the widespread advocacy of Tuvalu's climate change policies specifically, in cooperation with our Pacific island neighbors, and other small island states more broadly, who share the same interests and concerns.

3. The Economy: Growth and Stability

GOAL: Sound macroeconomic management and policy



See links with UN Sustainable Development Goal 8 on economic growth and employment, and, related to this Section, the discussion on the private sector, and employment policies and prospects, in **Section 6**.

3.1 Dependence and the monetary economy

Tuvalu's dependence on foreign earnings and official aid is considerable. In the 3-4 years to 2015, official aid received from development partners was roughly A\$81 million, roughly A\$35m of that was cash grants from the Republic of China. The balance was development grants from the ADB, Australia, EU, Japan, New Zealand (NZ), World Bank, UN agencies, Pacific regional development agencies, and others. Foreign earnings included income and interest earnings from the Tuvalu Trust Fund (TTF) and *Falekaupule* Trust Fund (FTF), fish licenses, .tv, remittances from migrant labour, and Tuvaluans residing abroad. In years prior to 2012 aid also included large cash grants from Australia, Japan, NZ, ROC, and smaller one-time grants from Canada, the EU, India, PNG, and Korea.

Because of foreign dominance in the Tuvalu economy, gross national income (GNI), not gross domestic product (GDP), is a more useful measure of economic activity in Tuvalu, which has large

capital inflows from external income sources – the TTF, fish licences, remittances, etc. The dominance of the foreign sector can be seen in the ratio of GNI to GDP. In the eight years to 2012, GNI was 1.64 times higher than GDP, on average. GNI per capita averaged A\$4,970/yr. With historically high revenues from fish licenses in the 3 years to 2015, the GNI/GDP ratio and GNI per capita is likely to be substantially higher. All fish licensing agreements are denominated in US dollars, which converts relatively favorably to Australian dollars (in most years). Interpretation of the raw data suggests Tuvalu is ready for LDC graduation, based on per capita income, which is not unfavourable. However, such a conclusion would be misleading and has been for some years. GOT will resist graduation from LDC membership, based on the country's economic and environmental fragility, highly variable external income, wide income fluctuations, and income uncertainty due to external sources of income outside the control of government.

Environmental threats compound Tuvalu's vulnerability. For example, the permanent threats posed by climate change, the periodic and usually adverse effects of such phenomena as El Nino weather patterns, more regular violent storms, and vulnerable coastlines – Tuvalu's entire land area is one continuous coastline – are real but difficult

to predict with certainty, but whose impacts adversely affect economic growth and stability, leaving Tuvalu potentially as dependent as ever on external aid grants and other outside support.

The current boom in fisheries income is almost entirely dependent of EEZ tuna stocks. A highly migratory species, fisheries income is as likely to fall as far as it has risen in recent years. Amplifying the link between the environment and the economy, the recent boom in fisheries income is affected – if not determined – by the Southern Ocean oscillations, El Nino and La Nina. The El Nino phenomenon, which has begun, is predicted to be the most powerful in years. The effect on fisheries income can only be guessed at, although past El Nino events suggest that the current boom may yet last for several more years. But this prediction can change, and not for the better.

(For more detailed discussion and analysis of Tuvalu's economy, its strengths and weaknesses, recent trends, and prospects for growth and stability, see the latest IMF Article IV mission reports, ADB economic reports, and a wide array of other literature on the subject.)

3.2 Macroeconomic management

GOT struggled to manage Tuvalu's economy during the first 7-8 years of TKII. Domestic budgets were in chronic deficit as successive governments were unable to contain public expenditure. Deficits were financed by aid cash grants, aid subsidies, extra drawdowns from the Consolidated Investment Fund (CIF), multilateral bank loans, and NBT overdrafts (**Box 3.1**). By 2010 the national debt was equal to 44% of GDP, part of which was eventually cleared by aid grants from Australia, New Zealand, ADB and EIB; the latter initially loans but converted to grants in 2009.

Box 3.1 – Other debt-related items

In 2011, Tuvalu signed a JV agreement with commercial fishing companies in Taiwan. Tuvalu financed its JV investment with a loan equivalent in contingent liability to 28% of GDP. In early 2012 GOT received a A\$2m one-time cash grant from the EU – under the discontinued V-FLEX mechanism. This temporarily offset GOT debt by financing short-term recurrent expenditure.

The government budget returned to surplus in 2013, largely as result of windfall fisheries revenues and renewed TTF distributions. But expenditure risks remain. Rising over-expenditures and unbudgeted new expenditures, both need supplementary appropriations, entitlements for overseas medical treatment, more expenditure to again attempt to salvage what's left of TCS, increasing numbers of scholarships awarded, and a likely across-the-board public service salary increase (currently under review), are a few of the larger examples. Clear budget lessons from the 2005 to 2012/13 period do not appear to have been learned.

Box 3.2 – Monetary and fiscal policy

Tuvalu – for the most part – has no ability to set or shape monetary policy. That leaves only fiscal tools to stimulate the economy. The predominant fiscal tool is the national budget, if there is a chance to achieve a greater degree of economic stability and growth. Because of the dominant role public expenditures play in shaping fiscal policy, GOT's ability to control certain variables and influence some economic activity can be advantageous. Because of GOT's dominance in the Tuvalu economy – about 85% of GDP – fiscal policy must be used much more effectively under TKIII. Since the efficacy of fiscal policy in Tuvalu depends in large part on the government's sizeable role in the economy, if the government gets fiscal policies right this should generate a net positive impact on the economy. But if government gets fiscal policy wrong it can have the opposite effect. It cuts both ways.

Solid government revenue prospects seem assured for now. The national debt is currently well serviced. This is owed to recent, large budgetary surpluses from windfall revenue, not expenditure control. In 2014, Tuvalu's debt was equivalent to 35% of GDP, 5% more than the debt ceiling set in TKII. For the next five years under TKIII, GOT plans to keep the national debt below 30% of GDP. A debt servicing unit will be set up in MFED to centralize debt management, monitor debt, and service it as it becomes due.

Financial policy will focus on building up reserve funds in the CIF, especially now with above-normal revenue coming in from fish licensing, TTF distributions, and other sources. Government will investigate formalizing investments in the CIF, as an annual budgetary expense, possibly equivalent to a minimum of 4% of GDP. CIF drawdown policies remain fixed, with no need at present to review them again. CIF drawdowns remain under the sole control of the Minister of Finance, as per the relevant sections of the Public Finance Act (**Box 3.3**). If international equity markets perform and the TTF fund managers perform, GOT is aiming for much higher TTF returns. Combined with GOT surplus re-investment, additional TTF investment should reach a maintained value well above A\$200m by 2020.

Box 3.3 – Consolidated Investment Fund

The CIF is part of GOT's Consolidated Fund. It is the repository of automatic distributions from the TTF, which are based on the annual calculation of TTF's real and maintained value. The Consolidated Investment Fund is so named because it is "investment" arm of the Consolidated Fund, where surplus money from the Consolidated Fund is invested so it earns a more commercial return, with minimal risk and high liquidity.

The CIF is established under Section 12.1 of the Public Finance Act (2008): "The Minister may authorise the investment of moneys forming part of the Consolidated Fund...", and Section 12.2, which states: "All investments made under this section [12] together with any interest received therefrom shall form part of the Consolidated Fund..."

3.3 Trade

Tuvalu is an acutely open economy. Its average trade/GDP ratio in the 7 years to 2011 is 54% according to government and World Bank data. This means that trade is equivalent to 54% of GDP (domestic production and services), with trade consisting almost entirely of imports. Tuvalu is highly dependent on imports, the bulk of which consists of food, fuel, and building materials, medicine and medical equipment, as well as all consumer products including motor vehicles, appliances, clothing, etc. No major consumer or

other products are manufactured in Tuvalu. Tuvalu is a non-trading nation, except as a net exporter of services, in the form of temporary migrant labor (including seafarers). This mostly non-trade landscape is unlikely to change over the term of TKIII, but efforts will continue to develop some type of material exports, a broad policy objective that has been in effect since independence in 1978.

Recently, GOT formulated its first Trade Policy Framework (TPF). This grew out of an extensive consultative process involving the private sector, civil society and other partners. The TPF, to launch in early 2016, recognizes the importance of developing some type of export trade (see **Section 6.8, 6.9 and 6.10**). The potential offered by trade and investment to reduce chronic trade imbalances, and the potential to drive increased national income and employment opportunities are both large. The TPF singles out four priority sectors to develop exports and/or domestic markets: agriculture, fisheries, tourism and labour mobility, where tourism and labour probably offer the greatest and most realistic potential, and agriculture the least. (**Box 3.4**).

Box 3.4 – Potential of service exports

Service exports are sometimes neglected. The traditional view is that only 'solid', value-added or commodity base industries like manufacturing or agriculture can generate export growth, or start up export markets in the case of Tuvalu, where none currently exist. But this does not always apply in small island developing states, which feature low economies of scale and high transport costs. For Tuvalu this overwhelmingly favours service exports. New sources of labour mobility are promising (see Section 6.5 and 6.6). Tourism probably has the highest growth potential of any industry in Tuvalu. In recent years many SIDS (e.g., Maldives, Vanuatu) have based their development strategies on service 'exports' like tourism. In an era of intense international competition, all countries are being forced to specialise, and Tuvalu's comparative advantages are in rental-related activities, human resources and tourism, not commodity or product exports (see Section 6.4).

Source: Excerpted from "Tuvalu: Diagnostic Trade Integration Study – 2010 Report" (GOT, 2010).

In each market – agriculture, fisheries, labour, tourism – the focus is on niche product exports or domestic markets, product diversification and value creation. Other sectors will receive attention too: 'blue economy' initiatives, such as possible exploration and development of natural resources found in Tuvalu waters, including potential long-term development of seabed minerals if found in economically recoverable quantities. (None found to-date. Deepsea mining has vast potential though prospects in Tuvalu's EEZ are poor.)

3.4 Public enterprise management

An increasingly bigger chunk of the economy now lies in public enterprises – also known as public corporations, or state-owned enterprises (SOE). Public corporations have not performed well in the last decade, continuing the historic trend. Seven of the eight public corporations – the exception is NBT – rely heavily on GOT, aid grants and subsidies to remain afloat, to finance capital expenditure, etc.

The challenges to improve SOEs are many, but the most significant is their historic unprofitability and relatively poor service. Small market effects, public corporations run not-for-profit, and a culture of communal sharing (of costs, responsibilities, accountability, etc.) compound the problems and resist corporate change. GOT ownership and direct control has placed major constraints (including political constraints) on SOE operations and management, which has produced poor corporate performance over many years.

Efforts to improve the management of SOEs has included staff and Board training, especially their roles as defined by the Public Enterprise Act. Financial subsidies have been provided, for among other things, so that SOEs can meet their not-for-profit Community Service Obligations (CSOs) under the Act. GOT pays for unprofitable services that SOEs must provide in their local markets. These obligations – so far limited to banking, electricity service in the outer islands, shipping services, and telecommunications – will continue under TKIII, possibly expanding CSOs where additional market failure exists.

The Public Enterprise Reform Management Unit, renamed Monitoring Unit (PERMU) in 2015, was set up seven years ago to assist government to reform SOEs. PERMU has not met its mandate, or that of the ADB, which set it up and has provided TA. In 2016, MFED will review the work of PERMU to gauge its usefulness and impact (see **Section 9** for more discussion).

3.5 Climate threats and the economy

Tuvalu's fragile economy is at risk from major and even comparatively minor climate change-induced disruption. Economic growth and stability will become of secondary importance if the government is regularly forced to respond to the effects of climate change, at considerable cost and at the expense of general national development.

Among other plans and initiatives to combat the effects of climate change, described elsewhere in TKIII, GOT has established the Tuvalu Survival Fund (TSF, **Box 1.3**) to finance climate change adaptation investments, and recovery from climate change impacts and natural disasters. The TSF will make available extra budgetary resources as needed, which will lessen claims on resources for normal government services in the event of immediate and unforeseen impacts from climate change or disaster recovery. The TSF also augments multilateral funding for additional climate change investments and environmental protection, such as the GCF, AF, LDCF, SCCF and GEF (**Section 1**). Each of these funding sources – mostly stand-alone, but complimentary tools to combat climate change – can collectively dampen the economic impacts and instability that will stem from climate change adversity.

4. Health and Social Development

GOAL: Provide high standards of health care, social opportunity, and social protection free of hardship and gender discrimination



HEALTH

Health sector responses under TKIII have been shaped by parts of the UN SDGs (1, 2, 3, 5), the SIDS-related Samoa Pathway (**Box 4.1**), the recently adopted *Health Reform Strategy 2016-2019* (with assistance from WHO, UNICEF and UNFPA), and local consultations, including the NSSD.

Social sector responses have also been shaped by the UN SDGs, the Samoa Pathway (**Box 4.1**), and local consultations, including the NSSD.

Box 4.1 – Samoa Pathway: Health and social development

In health, the Samoa Pathway supports efforts to:

- Develop strategies to prevent/manage disease; strengthen health systems; promote universal health care; distribute medical and drug supplies; and increase public awareness of healthy diets, good nutrition, sports and education.
 - Use the services provided by the United Nations Children's Fund (UNICEF), WHO, and United Nations Population Fund (UNFPA).
 - Establish 10-year targets to reverse the spread and severity of NCDs.
 - Strengthen primary health care; HIV prevention, spread, treatment and care; fight against TB, etc.
 - Reduce maternal, newborn and child mortality.
- In social development, including education, culture and sport, provide support to poverty eradication, and equal access to education, health, food, water and sanitation, and other public and social services.

For gender equality and women's empowerment: support efforts to:

- Eliminate all forms of violence and discrimination against women and girls.
- Strengthen women's economic empowerment; equal access to productive employment, and leadership – by temporary special measures if necessary; education and health care;
- Protect the human rights of all women and their sexual and reproductive health and reproductive rights*; and access to ownership and control over land and other property, credit, inheritance, natural resources, etc.

** In accordance with the Programme of Action of the ICPD, and the Beijing Platform for Action.*

4.1 Non-communicable diseases

The general health of Tuvaluans has been declining due to, among other causes, the rising incidence of Non-Communicable Disease (NCD), currently the country's top killer. More effort is needed to boost the capability of the Department of Health (DOH) to provide quality and effective health services. This is Goal 3 of the UN's Sustainable Development Goals (**Annex 14**), the successor to the UN MDGs 4, 5 and 6.

DOH's capacity to combat NCDs will be strengthened, as set out in an NCD Strategic Plan 2016-2020. Among the Plan's targets is a reduction by 5% of the overall prevalence of diabetes and NCDs in general by 50%. The NCD campaign will be regularly monitored, and a half dozen statutes will be reviewed to augment food safety, provide more focus on public health, and seek more effective prevention and curative efforts for alcohol, tobacco and substance abuse.

The government is considering using higher import tariffs ("sin taxes") to discourage unhealthy diets, characterized by alcohol and tobacco use, high sugar and salt intake, high salt content processed foods, soft drinks and other high-sugar beverages.

4.2 Health services

Professional, technical and administrative services in the Ministry of Health need to be improved. Several strategies are being proposed to make these improvements, which are at the heart of the Tuvalu Health Service. A health database will be established to include administrative and managerial information, and a second database will be established that includes technical information for medical diagnostic purposes and public health programs. The latter database will link online to a telemedicine network, and be available online both on Funafuti and in medical clinics (and new hospitals) in the outer islands.

4.3 Medical infrastructure

New medical infrastructure, upgrading and extension of existing facilities, and the procurement of new equipment, form a major part of strengthening and improving health services. Two

small hospitals will be built in the OIs, on Nanumea and the other on Vaitupu. If properly staffed and resourced, it is expected that these two hospitals will reduce the number of patients referred from the outer islands to Funafuti by half, and reduce referral costs by 40-50%.

A new extension to Princess Margret Hospital (PMH) will be constructed to accommodate paramedics and clinical services. The existing outpatient clinic at PMH is too small to cater for the daily influx of patients seeking medical help. The PMH pediatric ward also will be upgraded to meet much higher standards of pediatric care, to match those found elsewhere in the Pacific region.

The Ministry of Health's Building and Construction Programme covers the next decade. In addition to the above, a new PMH private ward will be built, as will a Rehabilitation Center, Isolation Facility for patients with infectious diseases, a Bulk Storage facility for safe-storage of drugs and supplies, a Public Health Mini-Laboratory, a Dialysis Center, an Oxygen Plant, and mortuary. All these proposed facilities will be incorporated into an expanded PMH. A new Youth Center is planned for TuFHA, the Tuvalu Family Health Association.

4.4 Facility/equipment maintenance

Lack of maintenance of medical facilities and equipment is a chronic problem. Major improvement is needed to prolong the life of medical assets, and government's long-term unwillingness to pay for maintenance must be reversed. A recurrent annual maintenance plan will be developed for all medical facilities and equipment. This will determine expenditure requirements for annual medical maintenance and upkeep.

4.5 Medical staffing

The OIs will be staffed by qualified medical doctors and nurses from 2017, when Tuvalu medical graduates from Cuba complete their internships. The development of these rigorous on-the-job internships, initially designed for the Cuban medical graduates from Kiribati and Tuvalu, will

significantly improve the quality of recent medical doctors entering the profession. The internship programme started with its first intake of doctors in October 2015. The public health module is based in Tuvalu, while the curative module is based in Kiribati. The full range of professional medical needs, as indicated in the Health Reform Strategy 2016-2019, is listed in **Box 4.2**.

Box 4.2 – Health human resource plans

The Tuvalu Health Service will continue to rely on expatriate medical specialists for a number of years. Other clinical staff needs, including professional training, are:

- Recruit specialists to PMH;
- Establish and post one GP to each island;
- Establish and recruit one biomedical technician;
- Establish and recruit one NCD officer;
- Establish and recruit one WASH officer;
- Assign specialized training for GPs;
- Train two nurses as qualified Nurse Anesthetists;
- Training for Nurse Practitioners to upgrade clinical skills;
- Training support for Midwives; and
- First-aid training for public servants.

PMH will continue to need specialist medical doctors from the region until such time as Tuvaluan doctors become highly qualified specialists, particularly in high risk diseases like diabetes and other NCDs. Tuvalu has a growing incidence of these diseases, which require expensive in-country treatment, with a large number of patients sent abroad for treatment. DOH expects a drop in the cost of the Tuvalu Medical Treatment Scheme (TMTS) – for certain types of treatment as much as 90% – when specialists are recruited to deliver treatment locally.

4.6 Professional pay and specialist retention

A long-overdue salary review of DOH medical staff is a milestone carried forward from TKII. This planned review is separate from standard salary reviews for public service administrators. These staff do not require professional qualifications

to carry out their jobs. Compared to the average public servant, medical service requires:

- highly developed professional skills; many years of professional training, often specialised;
- working abnormal hours;
- handling much greater job stress and responsibility; and
- putting a patient's well-being in one's hands on a daily basis, often having involving matters of life and death.

Independent technical assistance will be recruited to set new medical service salary levels for review and adoption.

Another long-overdue need is a Specialist Retention Policy. This is to retain local medical specialists in Tuvalu. The government and donors spend significant long-term resources to train medical professionals, often to see them lured away for higher paid medical jobs in other countries. The purpose of the policy is to set contract terms and conditions that are attractive enough to retain specialist staff in-country. The policy will be developed by MOH through the normal policy formulation process prior to Cabinet submission for approval.

4.7 Legislative and regulatory enforcement

Many health-related issues stem from weak enforcement of certain health statutes and health-related policies that are already in place. Inspection of food on sale, inspection of retail outlets where food is prepared and sold, the number of occupants dwelling in homes, maintenance of hygiene standards and water quality, disposal of liquid and solid waste, and many other areas that fall under public health are not routinely checked and/or inspected, fines are not imposed, adequate long-term budgetary funding is rarely provided, and things rarely improve. More effort will be made to enforce existing statutes and regulations pertaining to health – if funding and other resources permit. Where new legislation (or regulation) is warranted it will include budgetary provisions for enforcement.

Two priority targets under the Health Reform Strategy are the establishment of an Occupational Health and Safety (OHS) Unit and a Legal Unit to manage all health-related regulatory and legislative requirements. These Units will be established not later than 2019.

4.8 Climate change-related health issues

The government will provide material support for any and all issues that arise at the intersection of climate change and health over the 10-year plan period of TKIII, including but not limited to the health- and medical-related issues identified by the World Health Organisation.

SOCIAL

4.9 Social adaptation

Social change in Tuvalu has been accelerating in recent years. A small, economically fragile, highly open and dependent country that relies on the goodwill and generosity of aid donors in order to get by, must inevitably change, even if it does not want to. With ever greater monetisation of the economy even cherished customs and traditions are being weakened. Even the prized safety nets of communalism and egalitarianism are not immune from change, which may portend unintended and undesirable consequences. With its fast urbanizing population, more social pressures are created within both the urban center, Funafuti, and the mostly rural outer island communities. People need to learn how to adapt to the rapidly emerging and soon to be dominant mode of modern life in the Tuvalu of the 21st century.

The rapid pace of urbanization ushers in a whole new level of social and economic problems, which need urgent attention and for which solutions need to be found. Over the period of TKIII, the government will commit resources to creating a social climate in which people can learn the skills they need in the future, to thrive and prosper to an extent greater than they do now.

4.10 Population

The national population, according to the Population and Housing Census 2012, grew by 1.2%/yr between 2002-2012, a modest (and sustainable) rate of increase dampened by emigration. In absolute terms, the population has increased from 9,561 to 10,782. More people now live in Funafuti (57%) than live in the eight outer islands (43%). In 2002, it was the opposite – the outer island population outnumbered people living in Funafuti. Thirty-three percent the population are aged 15 and under; 58% are in the 15-59 age group; and 9% are older than 60. The dependency ratio has decreased from 82 in 2002 to 71.6 in 2012. This suggests that fewer people depend on the 15-59 year-old age group than they have in the past. This is in spite of a decrease in population for this age group, mainly due to emigration.

4.11 Emigration

The 2012 Census shows a significant dent in the 30-45 age group. This reflects higher emigration, including people emigrating through New Zealand and Australia labor schemes. The outflow reduces population pressure somewhat, especially on Funafuti. Inward migration to its small, finite land area has driven population density to 1,948 persons/km² (2012). For the foreseeable future, emigration will likely continue at present rates, prompted by lack of employment, the search for greater economic opportunity, and to a lesser extent the threat of climate change and sea level rise, and the loss of land. (For more on migration issues, see **Section 11** below).

4.12 Poverty

According to the 2010 Household Income and Expenditure Survey (HIES), poverty rates continue to rise. The national Basic Needs Poverty Line (BNPL) in 2004 set cash income per head at \$31.26/week. By 2010, the income line had increased to \$34.55, a rise of 10.5%. At this level, 26% of the population, or about 2,800 people were below the poverty line. The current BNPL for Funafuti is significantly higher at \$40.06 in 2010, due to a higher cost of living and low subsistence production, among other factors.

The outer island BNPL is less than the national average, due to lower costs of living, higher reliance on subsistence production, etc. The trend in the outer islands, however, shows the number of poor who rely on subsistence falling by half from 53% of the population in 2004/5 to only 26% in 2010. This is somewhat misleading. The basis underlying the trend is that not as many people rely on subsistence due to inward migration to Funafuti where they increase the number poor, or they have migrated abroad.

A carry over from TKII, GOT will formulate the National Hardship Assistance Policy (HAP), designed to deal with rising poverty rates, and have it implemented as early as possible.

4.13 Unemployment

The jobless and inactive population (students, people with disability, retired persons and those in full-time home duties) have trended upward from 19% in 2004/5 to 24% in 2010. One objective of TKII was for government to provide direct welfare to people in the jobless/inactive category who qualify for such assistance. No such welfare programme was established, now carried over to TKIII. With the national BNPL at \$35/week per person (in 2010), the average Tuvalu household of six could receive as much \$210/week to remain above the poverty line.

Despite the challenges, initiatives that could potentially reduce poverty and raise household income in the OIs, include:

- a return to producing large, subsidized volumes of copra (if export markets can be found);
- copra processing for value-added products, such as virgin coconut oil and oil production from other tree crops; and
- traditionally prepared foods and beverages (salted/dried fish, toddy, those from root crops), for both domestic and export markets, if a wide range phytosanitary conditions can be met.

Tourism and related services such as accommodation, attractions, restaurants, shops, tour and transport services could provide additional employment opportunities, but only if a wide range

of barriers to tourism development are overcome. (See **Section 6** on private sector development for discussion on TKIII tourism-related initiatives.)

4.14 Community Affairs

The Department of Community Affairs (DCA) is formulating a Social Work Act to provide a stronger legal framework to direct the work of DCA. The lack of data and specific information on the disadvantaged population in Tuvalu is a problem. This will be corrected to some extent by the Biannual Social Wellbeing Report, yet to be released, which is to become a regular report under TKIII. The Report will help inform decision-makers and community groups about the plight of the disadvantaged. The National Committee on Social and Community Services (NCSCS) will be established shortly.

A cost/benefit analysis will be carried out by DCA to determine the present status of the elderly and people with disabilities. Currently, there are two proposals that support activities in this area, the TSCSS (A\$300,000) and the DSS (A\$80,000). Still, there is little information or data available on the elderly and people with disability. A cost/benefit study will help clarify what has to be done for the elderly and disadvantaged.

Issues relating to family break ups, divorce and suicides are on the increase. In the past five years there have been five suicides and five attempted suicides. Social counseling services have been strengthened and several faith-based organizations are involved in counseling. DCA will target a reduction in the number of suicides in the next five years.

Help for people with disabilities is currently lacking. There is little coordination with, or adherence to, the UN Convention on the Rights of People with Disability (CRPD), to which Tuvalu acceded in 2013. There is a Tuvalu National Disability Coordinating Committee (TNDCC) working on a National Disability Policy, NDP (in draft). Under TKIII, the TNDCC will finalise the NDP and seek its formal approval, followed by combining help for people with disabilities, as prescribed in the NDP, with adequate levels of government and donor funding.

4.15 Culture

Like the NDP, a National Culture Policy has yet to be approved, and major work is needed to reinvigorate cultural health and preservation in the national discussion. The Department of Culture will establish a Cultural Development Coordinating Committee (CDCC) to develop a Strategic Action Plan for the department and to develop partnerships with potential donors who have an interest in, and funding for, cultural preservation and development.

According to the Department of Culture and others, traditional customs and values are being eroded or disappearing. A report and toolkit on how this can be reversed will be a priority under TKIII, building on the UN Cultural Mapping Project undertaken in 2010/11, which is little known and under which little has been accomplished. A cornerstone of DOCs work in the near-term will be regular cultural awareness-raising efforts. Although culture cannot be easily codified – culture is a living, dynamic thing – it can be broadly defined. Knowledge can be passed down year-to-year, from generation-to-generation, and be defined by the culturally knowledgeable, such as the elderly.

4.16 Gender

OPM is responsible for promoting gender equality, and including it in the national discussion. The National Gender Policy (NGP) 2013 is the latest in a series of efforts that started in 1999. The policy focuses on four key measures where public policies could make a difference, including institutional strengthening and capacity building; building economic empowerment of women; promoting female political voices and decision-making; and advancing the legal rights of women.

In 2012, fewer women were in wage employment than men, 51% to 68%, respectively (Census, 2012, based on labour force participation rates), though the gap has closed significantly since 1994. On Funafuti, the gap is narrower 60% (female) to 73% (male), but work remains to close the gap further. It is not clear when full equality can be reached

throughout the country, but possibly within the next decade. Nevertheless, Tuvalu ranks among the highest of the PICs for its gender development ratio.

The Department of Gender Affairs (formerly the Department of Women) will continue the implementation of NGP in the five years to 2020. Outputs foreseen include the training of gender trainers; setting up a Gender Information Database (GID); implementation and legal enforcement of the Family Protection and Domestic Violence Act; and increasing efforts to include more women in decision-making roles, both in national and local government institutions. The DGA will pursue amending the Falekaupule Act to emphasise woman's affairs in local government, and enshrine more political participation of women at the national level by having a special allocation of two extra seats in Parliament under Temporary Special Measures. Laws will also be amended to close legal gaps, particularly those relating to inheritance, marriage, and asset related-policies with gender dimensions.

Box 4.3 – Economic empowerment

Greater economic empowerment of women will raise household incomes and improve gender equality. One avenue open to this is the government's National Labour Migration Policy (NLMP, see Section 11), which seeks to create pathways for all Tuvaluans, including women, for overseas employment. Labour migration offers women temporary job opportunities in service sectors with labour shortages in countries such as Australia, New Zealand, the Cook Islands and elsewhere. Economic empowerment, especially the ability to acquire and control capital and material resources, helps reduce the potential for gender-based violence. Providing much needed new injections of capital for microfinance for women will continue to remain a vital step in women's pursuit of equal opportunity. The direct labour empowerment of women will feature prominently in efforts to implement related TKIII initiatives.

Gender equality will not by itself calm gender-related tensions in a society with fairly rigid gender divisions, though these are, to a certain extent, breaking down. It does, however, create a space to discuss and negotiate a fair playing field, whatever the issues that are being confronted. It is about providing choice and opportunity, regardless of gender, so people can pursue what they want and aspire to be. Continuing to strengthen initiatives aimed at gender equality within government (and society) will reinforce long-term social stability, and make sure that everyone counts in TKIII development efforts.

4.17 Climate change and society

Climate change impacts across Tuvalu will be profound, none of them good. Some impacts have already been felt, such as more frequent storm-related damages and damages caused by higher tidal inundation. These impacts, widely documented and discussed, are likely to grow over time. Society-at-large will bear the brunt of climate

change and rising sea levels. Curbing the social impacts of climate change can only be offset, for the most part, by prevention or remedial measures funded by the government, or by external aid.

Planning for the future, GOT established the Tuvalu Survival Fund (as discussed in **Section 1.3 and 10.3**), a funding source to mitigate the effects of climate generally, the impacts on society specifically, and to fund the costs of recovery and reconstruction after natural disasters. Also discussed in **Section 1**, the government is tapping external sources of climate change funding, both for investment purposes and environmental protection. These include: GCF, AF, LDCF, SCCF, and GEF. Projects and programmes committed to under these funding sources will begin in the early years of TKIII. In broadest terms, the main beneficiary of this funding will be society-at-large.

5. Falekaupule and Island Development

GOAL: Provide quality services and create more opportunities for development



whose members are appointed by governance customs on the eight islands. *Kaupule* officers, on the other hand, are elected by universal suffrage. The *Kaupule* set-up, comprised of democratically elected and generally independent officers, in contrast to the non-elected *Falekaupule* membership, has at times created island friction. Over the years, conflicts have emerged between the two institutions that have become socially divisive, and disruptive to the peace and harmony within Tuvalu's separate island communities.

Box 5.1 – The Falekaupule Act

The responsibility for running island affairs fell to local administration in 1998 with the passage of the Falekaupule Act. The Act, which removed national government responsibility from day-to-day administration, was hailed as an achievement of historic proportion, second only to the country's independence from Britain in 1978. Codifying the business of running island affairs was crafted along traditional social and cultural lines. Translation of the Act into the vernacular raised people's understanding of the business of running a government. In the years the Act has governed island affairs, it has produced mixed results. But such results cannot be attributed entirely to the Act itself, but larger economic and social forces at work that constrain island development.

5.1 Falekaupule government: performance

Most of this strategic area, which cuts across many of the UN SDGs and elements of the SIDS Samoa Pathway, falls under the Ministry of Home Affairs and Rural Development (MHARD). This includes the Departments of Rural Development, Culture, and Community Affairs; the Solid Waste Agency of Tuvalu (SWAT); and *Kaupule* administration (local island government). The Falekaupule Act (**Box 5.1**) created the island *Kaupule* – previously called island councils. *Kaupule* operate as the executive of the Falekaupule,

How the Falekaupule Act works and how its legal provisions should be interpreted needs to be regularly explained to the island Falekaupule and *Kaupule*, as should the *Kaupule* Staff Guidelines and Financial Instructions. Most of the issues at the root of past conflicts were resolvable had the relevant clauses of the Act and the Act's instructions been better understood. Part V, Section 4 of the Act itemizes the functions of the Falekaupule, which are further detailed in Schedule III of the Act. The Falekaupule is the dominant (more powerful) institution. The *Kaupule* serves as the executive arm, or secretariat to the Falekaupule. And within the official Falekaupule,

or Assembly, only the members of the Cultural *Falekaupule* can vote. *Falekaupule* proceedings are chaired by the *Ulufoenua* (Head Chief), who also acts as the chair of the Cultural *Falekaupule*.

5.2 Development issues and options

Many of the more difficult rural development issues derive from the highly scattered nature of the islands and atolls of Tuvalu, amplified by inadequate shipping, transport and communications infrastructure. Under TKIII, GOT intends to correct this situation by investing more heavily in these sectors to radically upgrade service provision by closing existing service gaps and eliminating barriers and bottlenecks to outer island development.

Building or upgrading OI boat harbors to expedite cargo handling and to improve the safety and security of vessel and passenger traffic will be a development priority. Options to put amphibious aircraft and helicopters into inter-island service will be evaluated, and if either or both options show economic promise (with minimal subsidies – if required) such transport services will be developed. This pursuit of these objectives, raised during public consultations, is a carry-over from TKII, which advocated that the quality, frequency and cost effectiveness of transport services to the outer islands be a priority (see TKII, **Section 12**).

Other outer island objectives are to upgrade civil infrastructure generally, including roads, water storage and catchment, and waste disposal more specifically, as well as improve schools and medical facilities, and establish commercial produce, poultry and pig farms. Though the latter initiatives have been tried in the past, without commercial success, the government intends to reinvigorate these proposals with greater resources under TKIII.

5.3 Sea transport and shipping services

Improving sea transport between the eight outer islands remains a difficult challenge. Servicing these communities by being able to ship greater volumes of bulk cargoes more frequently is a development priority. Two months – or more – between ships visits is no longer acceptable. The new MV *Nivea III*, funded by Japan, joined the aging MV *Nivea II* and MV *Manu Folau* in December 2015. (The *Nivea II*, funded by the UK and entered service in 1989, will be decommissioned in

2016.) Together with the ocean-going barge recently purchased in New Zealand by GOT, servicing the outer islands should improve dramatically. The Ministries of Home Affairs & Communications and Transport, will work together to produce OI shipping schedules that minimize disruptions – a common characteristic of past shipping schedules – and maximize shipping efficiency for cargo and passengers.

5.4 Outer island depopulation

Continuing urbanization on Funafuti, which depopulates the outer islands, robbing them of the local development manpower they need, is another difficult challenge to overcome. With most remaining adult residents in the outer islands being elderly, island development works are limited mainly to small construction projects that the *Kaupule* implement from time to time. Bigger national projects require outside support, and many of these that are commercial in nature, like the OI Community Fishing Centres (CFC) have been tried but proven to be unsuccessful and won't be without much larger infusions of capital, manpower, and other subsidized resources to sustain their viability.

5.5 Falekaupule staff development

An issue that needs urgent attention by GOT is the low skill capacity of MHARD staff – the responsible hub of national-based outer island management, especially in the area of financial management. In-house training conducted by an experienced administrator, or senior officers from the Department of Treasury and Office of the Auditor General should begin in 2016 and be a regular feature of MHARD staff development. Similar staffing issues afflict *Kaupule* staff, who require the same training.

5.6 Outer island communication

Ministry officers suffer, just like the rest of Tuvalu, from poor telecommunication service. Internet, mobile, and landline communications work sporadically, or not at all. This is a major constraint to conducting business efficiently with outer island governments. The Ministry intends to remedy these problems by securing independent bandwidth dedicated only for the *Kaupule*, and recruit an ICT Officer to improve communications with the outer islands.

(See **Section 9** for discussion of planned national telecommunication and internet initiatives.)

5.7 Solid waste management

Issues related to outer island solid waste management are relatively urgent, and should receive a high priority. As yet, there is yet no updated National Waste Policy (NWP), a shortcoming that should be addressed in 2016. The NWP will codify SWAT's objectives, to augment the Waste Operations and Services Act 2009 (WOSA) that sets the detailed legal framework for waste operations in Tuvalu, and regulates the entire waste sector.

The main issues confronting SWAT and the waste sector in general, some of which date back years, are contained in **Box 5.2**.

Box 5.2 – Solid waste management

The broad issues confronting the solid waste sector:

- A lack of proper Funafuti dumpsite management and oversight (though greatly improved in recent years, in particular following the infilling of the northern Funafuti borrow pit and rehabilitation of the Funafuti dumpsite by the NZ-funded project).
- Dedicated and managed land space for solid waste disposal in the outer islands.
- Lack of equipment for sorting and incinerating waste.
- Lack of public awareness about waste disposal and a litter-free environment.
- Lack of waste management expertise of SWAT staff.

SWAT – established by legislation (WOSA) funded by the EU under the 10th EDF Tuvalu Water, Waste and Sanitation project (TWWWS), and first set up as the project-based Waste Management Unit under an Australian-funded project in the late 1990s – has continued to better organize waste services, including collection, disposal, sorting, recycling, burning and burying, into a relatively efficient operation, much improved over the pre-SWAT era when funding levels and other dedicated resources were much lower.

A medium-term challenge on Funafuti, where the vast bulk of solid waste is generated nationwide, is limited land space on Funafuti for extending the Funafuti dumpsite. This problem could grow rather quickly depending upon ultimate government plans to develop the reclaimed land area at the northern end of Tengako, which could render the existing dumpsite unsuitable for waste disposal. Negotiations have

been ongoing with Funafuti landowners (*Kaupule*, *Falakaupule*, etc.) moderated by DLS and SWAT for 5-6 years to secure additional land at the present Funafuti dumpsite, but time may have run out. Previous borrow pit land uses were limited, but by infilling the borrow pit the area has now become much more valuable and has created attractive new land space that has the potential for lucrative economic and social redevelopment. Other waste disposal options will be explored but cost and land space are likely to be major issues. SWAT will renew and build on previous waste disposal plans for the outer islands, which will benefit from the recent experience of waste disposal on Funafuti.

SWAT will commission a new technical assistance study to investigate:

- alternative ways to improve waste disposal, including waste-to-energy systems;
- staff capacity building; identifying new equipment needs for waste collection, disposal and processing;
- expanding and improving organic, green waste operations;
- relocating the Funafuti dumpsite; and
- waste disposal on the outer islands, building on the lessons learned on Funafuti over the last 15-16 years.*

* The last point includes the lessons learned from the 4-year EU-funded waste project completed in 2013, including aspects of the overall EU waste project that went unfunded – or under-funded – such as the green waste component.

5.8 Climate change and island development

Throughout the TKIII plan period and beyond, climate change threats and impacts on the outer islands will be as pronounced as they will be on Funafuti – perhaps more so because they lack infrastructure and public services as well developed as Funafuti, making them more vulnerable with less ability to fend off threats or respond. Under TKIII, GOT will provide whatever outer island support is required – financial, technical, other – to respond and adapt to climate change threats and risks, and weather-related emergencies related to climate change and sea level rise.

6. Private Sector, Employment and Trade

GOAL: To be the engine of economic growth, employment and export trade



This section links with UN SDG 8 that relates specifically to private sector prospects for economic growth, and employment (see also **Section 3**).

6.1 Private sector overview

The under-developed private sector offers significant potential (as it has) to generate new employment and stimulate economic growth, but it has been held back by weak government policy, or inattention paid to existing policies. TKII had twelve private-sector policy objectives: of these, only three were met, seven remain in various incomplete stages, and two have yet to see any related movement. All else equal, the private sector is not the engine of growth it could be, despite optimistic predictions made as recent as five years ago.

Still, the private sector has made significant strides in recent years – as any casual observer will notice – roughly in tandem with overall economic growth. It has done this, among other reasons, by government taking a hands off approach, allowing market forces to act on their own, and by not protecting and subsidizing inefficient wholesale and retail operations – e.g. as it continues to

provide to TCS – unless the objective is making unspecified welfare (cash) transfers, not business development. But to grow faster private money must move into new businesses (i.e., create new retail and commercial markets), generate higher profits, improve efficiency, and grab more of the economy currently dominated by the government.

Government must and will provide more aggressive policies to support private sector growth, such as providing economic and financial incentives, including tax relief and more start-up capital for small businesses, and get out of markets where it chokes off private capital from being put to use.

6.2 The housing market

A good example of untapped opportunity, where government chokes off private sector development, is the housing and real estate market, especially on Funafuti.

On Funafuti, subsidized government housing controls well over 50% of the rental market, which is over 40% of total permanent housing (excluding traditional/local/temporary house construction). This creates an artificially inflated rental market, and distorts the real estate market in general.

6.3 Private sector growth

Growing the private sector – mainly micro, small and medium enterprises (MSME) – faces many constraints. The main constraints are Tuvalu's small isolated market, small economy, small scattered population, underdeveloped infrastructure, lack of low-cost bulk air cargo services, high costs, and dependence on a large, inefficient public sector that swallows up capital and crowds out more diversified capital investments. Notable challenges that small private sector operators and producers must face on a daily basis include poor credit access, commercial credit available only at high (non-market-based) interest rates, high utility costs (telecommunications, internet, power), and limited, costly and often unreliable cargo shipping (air and sea). Other equally important problems include a chronic shortage of managerial, technical and marketing skills, few home grown retail products, and no local product export industry.

Addressing this long list of constraints and challenges is a national priority, and only then can private market forces be given the chance to capture a larger share of the economy, create employment, more well paid jobs, generate higher tax revenues, and stimulate economic growth.

It bears repeating, a thriving private sector generates higher tax revenues and higher tax revenues make it easier to finance public services, build infrastructure, increase public welfare, and so on.

Some measures to promote private sector growth will include introduction of modern, accessible, and lower-cost financial services (on loans, exchange rates, etc.), better and lower cost cargo shipping, a realistic national export strategy, and more support for private sector initiatives such as the development of 'incubators' (**Box 6.2**), using aid-funded external and, importantly, sustained technical assistance (3-5 years) for business development, and on management and financial expertise (**Box 6.2**). The Ministry of Finance will be the responsible GOT agency, assisted by the Chamber of Commerce and TNPSO.

Government housing shrinks the real estate market, and suppresses options to accumulate private equity (presently TNPF is the only domestic option).

Such non-incentives hold back housing growth, and the development of a true real estate market, which has the potential to become the next big growth industry. But this can't happen unless the government gets out of the subsidized housing business, which, much like TCS, has probably out-lived its original purpose, which was to create housing for public servants where none existed before. In addition, annual government housing construction and maintenance uses up government resources (money, manpower, management) that could be put to more productive use elsewhere (**Box 6.1**).

Box 6.1 – A note on government housing

For over 30-years government housing construction has never met public service demand, which expands at a faster rate than government can build houses, and renovate existing stock. Waiting lists for government houses are a permanent fixture of the real estate market. Public servants not in government houses already receive housing allowances to rent private accommodation. Disposing of government housing on the private market, among other things, will:

- 1) stimulate economic growth;
- 2) accelerate development of a more robust private real estate market;
- 3) stimulate the private rental market – existing and new property (see the Funafuti housing initiative that continues to build new housing);
- 4) complete what began in the late 1990s when the government started to pay housing allowances to public servants; and
- 5) free up government capital for other purposes.

Box 6.2 – A note on business incubators

Such incubators will approximate business start-up incubators commonly found in developed countries (e.g., in hi-tech hubs like Silicon Valley in the U.S.), but lacking the vast array of technical expertise from a nearly unlimited stock of business knowledge at their immediate disposal. A Tuvalu-specific business incubator model would mimic classic start-up incubators, but focus only on original business proposals that show some practical application (and promise) of future returns on start-up investment. Start-up capital could be provided directly by the Ministry of Finance (but not through DBT), aid donors, or both. To receive start-up capital, proposed business ventures would have to meet strict requirements – much stricter than DBT loan criteria – and require only paying investment returns if the business start-up is successful over time. GOT would absorb the investment risk, as would aid donors, performing the same function as venture capitalists, with no guarantee of start-up success – only the promise of it based on the business being proposed.

Under TKIII, the government will also pursue greater export access for goods (if and when they are produced), services, and labour, through bilateral, regional and multilateral trade agreements. To achieve some measure of greater private sector development will need the support of overseas aid agencies and Aid for Trade initiatives over the long-term.

6.4 Private vs. public enterprise

The private sector – which excludes GOT-owned public enterprises – generates about 30% of GDP, which in 2010 was valued at A\$12m dollars. Its GDP share has not grown much beyond that in recent years because of concurrent growth in government spending and the continued government dominance of the domestic economy. Another cause is the lack of new and sustained GOT support to the private sector. But the biggest constraint to private sector growth is government investment in public corporations. It crowds out private investors from the market, both for credit and business. Subsidies to prop up public corporations, both necessary and unavoidable, weaken the government's financial position, especially if subsidies are not well managed or loosely estimated.

Although government investment in public corporations is substantial they continue to be unprofitable and – in broad terms – are poorly managed. Since the inception of most public corporations over 20 years ago, GOT has paid hefty subsidies to keep them running. Efforts to wean public corporations off subsidies, by subjecting them to stricter operating rules as overseen by the Public Enterprise Reform Management Unit (PERMU) set up in 2010 (renamed *Public Enterprise Review and Monitoring Unit* in 2015) under an Asian Development Bank (ADB) project. The original purpose of PERMU was so public corporations operate on more commercial principles in line with the Public Enterprise Act, an objective that remains largely unmet. (see **Section 9.9** for more discussion).

There are few services left that the government can transfer to the private sector that offer potential for private investment and management. Government construction and maintenance work is mostly tendered out to small contractors in the private sector. Bigger projects – roughly above \$250,000, both government and aid-funded – are open to international tendering and are usually won by overseas firms. The government will investigate formalising a so-called 'small project zone', capped by low fixed project costs (this includes sub-contracted projects), which is open only to local builders who have little operating capital, limited abilities to submit formal tenders, but who have or can assemble the requisite building skills. This is viewed as a practical route to developing a larger, broader-based domestic construction industry.

To further develop the local construction labour market, and develop local construction businesses, GOT will re-emphasize that all offshore construction firms with domestic contracts (government- or aid-funded) must employ local labour and small-scale local contractors (as sub-contractors) to build skills and experience. This would have two benefits:

- 1) it would continue to replenish the pool of qualified local contractors; and
- 2) qualified local builders could be contracted to carry out maintenance on completed projects.

6.5 Private sector development framework

The government is determined to expand the private sector during the period of TKIII, by increasing incentives, financial support and credit, and building the capacity of local entrepreneurs to run their businesses on commercial terms. The TKIII development framework will look at:

- supply and demand potential for new, tradable products;
- data collection for trade and investment evaluation;
- biosecurity and quarantine measures;
- current/potential capacity for food processing; and
- tourism development, in particular eco-tourism potential.

The framework will not include public corporations – their operations and management will be addressed separately. The framework will be developed in close cooperation with the local business community, those interested in investing in business, and business-related organisations (TNPSO, National Trade Steering Committee, DBT, Chamber of Commerce). The Ministry of Finance will lead this effort, supported by NBT and ADB technical assistance.

6.6 Tourism and eco-tourism

Tuvalu has a large, attractive and unspoiled natural environment. Tourism has long proven its economic potential in the Pacific region, and travel to non-traditional Pacific island destinations has grown in recent years. Tuvalu has a small and undeveloped tourism industry. This means that relatively minor changes to government policy, minor improvements in infrastructure, more investment (public and private), and shifts in established thinking could lead to significantly higher income, and generate new sources of economic growth.

Of the three TKII policy objectives for tourism two are currently being implemented and one remains unaddressed. Long-standing recommendations for the development of tourism have been re-stated in the latest National Tourism Development Strategy (NTDS) 2015-2019, which was recently approved. The Department of Tourism, once it has been staffed with fully qualified tourism professionals (and with

DBT and Business Centre support) will assist tourism-related business development, such as administrative support and to seek out funding for small tourism-related ventures, emphasizing eco-tourism.

GOT tourism policy will provide training on how to start up and run tourism businesses, possibly using a business incubator model, if such a business development method can be established for small businesses (**Section 6.3**).

The largest tourism-related initiative, the government will relinquish 100% control and management of the Vaiaku Lagi Hotel (VLH) to a private concessionaire. A long overdue initiative:

- the VLH concession will be awarded through an open and competitive tender;
- GOT will remove the asset from government control and repeal the VLH Corporation Act 2008;
- the lease-management concession agreement will be awarded in the first half of 2016; and
- the concession lease will be for 25 years.

6.7 Overseas employment

Three bilateral programs currently employ Tuvaluans abroad: New Zealand's system of Recognized Seasonal Employment (RSE) and the Pacific Access Category (PAC) system, and Australia's Seasonal Workers Program (SWP). At present, less than 100 Tuvalu seafarers are employed by European and Hong Kong-based merchant shipping companies, which is a 40-50% drop at the time of the 2008 and 75-80% drop from the historic peak in late 1990s, early 2000s.

Currently, there are some 600 Tuvaluans working overseas, including those employed in the RSE, PAC and SWP (see also **Section 11**). This has partly offset the loss of household income from declining seafarer employment. The Department of Labor plans to increase the number of Tuvaluans recruited under these labour initiatives by raising migrant worker reputations and promoting them as reliable and hardworking employees. Under TKIII government is looking at ways of overcoming the current bottlenecks in the seafarer industry (see also **Section 11**).

The labour export market for Tuvalu's merchant seamen has collapsed in recent years. The number of seamen on active overseas contracts is now well below

100, down from highs of 400-500 in the late 1990s. Seafarer remittance income at its peak was A\$2-4m per year. Tuvalu has always been a comparatively high cost, marginal supplier of seafaring labour. Expanding international labour competition, driving down costs, has been slowly eroding Tuvalu seafarers out of the market. The steady decline of Tuvalu's maritime training institute (TMTI) may also be a contributing factor, as well as competing increases in government wages and other sources of household income, such as non-seafarer remittances. Easy money from expanding the public sector (and increasing wages) may also have had a negative drag on the importance of remitted seafarer income, kick-starting the long decline in seafarer numbers as more money could be earned locally.

Box 6.3 – A note on domestic employment

Government is the biggest employer in the country, accounting for nearly 1,200 jobs, in the public service and public corporations. This represents almost 60% of working-age, economically active people currently employed (2012). This is another example of government crowding out the private sector, and by extension putting a drag on the economy. In general, government payroll is not a good way to increase living standards. Public service employment only increases national output (and therefore income) if employment produces something useful to other people, in this case Tuvaluans, or pay is used to buy useful things produced by domestic industry. Compared to private sector employment, government payroll jobs are a highly inefficient income distributor, soaking up money that could be spent nurturing private sector development that has much greater potential to increase GDP and the wide-spread benefits derived from faster, broad-based economic growth and prosperity.

The government will explore what options it has to revive demand for local merchant seamen, and revive the local industry in general. One calculation estimates that an investment of A\$1 million (or more) would be attractive if remittance returns approached

previous highs (A\$2-4m), generating favorable social and economic returns to the lives of ordinary Tuvaluans. One challenge is to reduce return airfares to Fiji, arranging their immediate transit thru Fiji and return to Funafuti, and desist from systematically offloading seafarers in preference for government officials travelling on routine business. This practice – among others, including higher wages – raised the ire of merchant shipping companies employing Tuvalu seamen, who over the years opted to recruit cheaper labour from other countries.

A possible avenue to pursue the revival of seafarer numbers on contract is better marketing. In the past TMTI (or the Tuvalu Maritime School as it was then known), faced many of the same challenges the local seafarer industry presently faces, most importantly developing an overseas market for local merchant seamen. GOT at that time established links with the German shipping industry, and recruited German and British Captain Superintendents associated with German shipping lines. This practice of recruiting European-affiliated captains, ship engineers and other staff ended in the early-mid 1990s in favour of local maritime officers.

There's been discussions over the last ten years to diversify TMTI training to include other trades thru MEYS and aid donor initiatives such as APTC, TVET, etc., but these have yet to materialize. Under TKIII these efforts will continue.

6.8 Employment in the fisheries industry

GOT intends to create more employment opportunities for Tuvaluans on fishing vessels operated by Distant Water Fishing Nations (DWFN) licensed to fish in Tuvalu's EEZ. Some 50 Tuvaluans currently work as observers on DWFN vessels operating within the EEZ's of Pacific Island Countries (PIC). GOT will negotiate with foreign fishing nations to employ higher numbers of Tuvaluans on their vessels, negotiated as a development assistance addendum to the terms of the access agreements, or to their fishing licenses permitting foreign vessels to operate in Tuvalu's EEZ (see also **Section 8.3 and 8.3**).

GOT will explore the needs of TMTI – and aid funding – to train cadets and retrain seamen to work on DWFN fishing vessels, and implement this concept at the earliest opportunity. Similar bilateral initiatives will be pursued to employ Tuvaluans on commercial fishing vessels in Australia and New Zealand. The Ministry of Natural Resources (MNR) target by 2020 is 250 Tuvaluans employed in the offshore commercial fishing industry, of which 100 are employed in the Observer Programme. MNR will also target a minimum number of Tuvaluans (to be determined) working on all foreign fishing vessels operating within Tuvalu's EEZ by 2017/18.

6.9 Domestic trade

In theory, domestic (interisland) trade should ensure that surplus, locally grown food moves from the outer islands to Funafuti. However in practice, Tuvalu's small market of producers, sellers and buyers, inadequate, infrequent and high cost freight services that prevent transporting perishable food, means cheaper much higher volume imports of frozen meats (chicken, lamb, beef, pork), processed foods (tinned tuna and beef, flour, rice, cereals, pasta, cooking oils, sugar), and some produce (long self-life fruits and vegetables, e.g., apples, oranges, onions, potatoes, taro, cassava, cabbage, carrots) displace local food production. The shortage of local food production, besides subsistence production, prompted retailers in 2014 to approach the government to conclude a bilateral trade agreement with Rotuma, Fiji, to import a variety of root crops, vegetables and fruits on a trial basis. Under TKIII, MFATTEL and other government agencies will continue to promote food imports from Rotuma, and lend whatever assistance is required to expedite such imports.

Areas that will stimulate more domestic trade and commerce in general is improved telecommunications and internet services (see **Section 9.4**), and more modern banking products, such as credit card services, automated teller machines (ATMs), electronic (online) banking, and so on.

6.10 International trade

To reverse the chronic merchandise trade deficit – merchandise exports are zero (**Box 6.4**) – any new GOT policy will address concrete options to create an export industry of some kind. Options will focus on value-added goods (merchandise), and options to boost value-added service exports (manpower).

Box 6.4 – Trade status: imports vs. exports

Tuvalu is a non-trading nation, except in a few services related to temporary offshore employment (merchant seamen, in fisheries, Australia and New Zealand-bound migrants, see Section 6.5). Merchandise exports are statistically insignificant, near zero (philatelic sales, handicrafts, small volume re-exports of imported petroleum products. (Copra exports ceased in the early-mid 2000s, even with subsidies, and any potential revival is problematic and not possible without even larger-scale government subsidies.) Trade is one-way and consists of imports only, which accounts for between 50-100% of GDP (A\$24-40m), depending upon the reporting source and method of estimation. Such trade deficits, partially offset by inflows of offshore income and official transfers, are normal and have been a permanent feature of Tuvalu's trade balance for decades.

Potential for expanded trade in existing services (unskilled labor, seafarers, etc.) is the option that has the highest likelihood for growth, with virtually no barriers to entry, and low entry costs relative to nearly all merchandise export options.

6.11 Trade Policy Framework

GOT recently formulated its first Trade Policy Framework (TPF), to be launched in 2016, following an extensive consultative process involving the private sector, civil society and other partners. The TPF's main objectives are:

- policy coherence;
- improving the business environment for private sector growth;
- increasing the competitiveness of domestic firms; and
- attracting foreign investment.

The TPF designates four areas of priority, as potential areas to add value:

- agriculture;
- fisheries (other marine resources);
- tourism; and
- labour mobility.

The focus is on niche markets and diversification. TPF implementation will rely mainly on external aid.

Another area with potential, but only long-term – perhaps 15-20 years out, well beyond the range of TKIII – is exploration and development of deep seabed minerals, below 2-4,000m (**Section 8.16**).

More promising short- to medium-term resource potential is the sustainable harvesting of high-value coral (e.g., black coral), and coral by-products for high-end jewelry. To-date, no such exports have been tried, the resource base is largely unknown, and export potential is probably low except for niche some markets.

Pearl and clam farming (all bivalves) also offer possibilities, but these products have very long development phases. Current trials are underway (year 4), commercial prospects are possible but none foreseen at present.

The TPF recognizes that Tuvalu is an open economy. It must import all essential goods, including food, fuel, pharmaceutical products, clothing, vehicle equipment, building materials, and almost all other products. Reducing imports poses large, domestic supply-side challenges (see also **Section 6.1**) that must be addressed first, before TPC policy objectives can eventually bear fruit.

6.12 Aid for Trade

The focus of Aid for Trade, a multi-billion-dollar initiative that includes bilateral and multilateral grants and soft loans, is to increase developing country trade; adopt appropriate trade policy regulations; improve economic infrastructure; build productive capacity; and so on. Each of these areas are addressed in the TPF, in TKIII and other government development plans, strategies and initiatives that are national in scope, which are also captured in TKIII.

6.13 Climate change, business and trade

The impact of climate change – now and in the future – cuts across the broad spectrum of national development, including development of the private sector. Though perhaps less obvious and tangible than elsewhere on the development landscape, climate impacts such as sea level rise pose real threats to economic growth and stability. A poorly performing economy, as a result of climate impacts, can effect business performance and business prospects over the short-term, and overall development of the private sector more generally over the long term.

Under TKIII, the government will assist the private sector, with whatever resources may be required, to overcome or steer clear of climate-related impacts that adversely affect the economy in general, business activity in particular, including the possibility of developing trade in export products.

TKIII strategies and objectives for education and training are linked to and consistent with UN SDG 4 and the education efforts defined in the Samoa Pathway (**Box 7.1**).

Box 7.1 – Samoa Pathway: Education

The Samoa Pathway emphasizes efforts to:

- Provide high-quality education and training for youth, including a special focus on the most vulnerable (e.g., people with disabilities), and the creative, cultural and environment-related fields;
- Provide education that builds peace and promotes social inclusion; and
- Increase investment in education, training and skills development, including vocational training;
- Improve access to formal and non-formal education, including for entrepreneurial skills, and distance learning and training.

7. Education and Human Resources

GOAL: Provide high quality education; equip people with knowledge and skills to develop more self-reliance; promote Tuvalu's cultural and spiritual values



7.1 Education and training

Most TKII goals in education continue in TKIII – in broad terms to continue to equip people with the knowledge and skills they need to achieve a higher degree of self-reliance in a changing world. TKII strategies targeted improvements in teaching quality/overall education standards through teacher training, better and well-maintained school facilities, more school equipment and supplies, and the introduction of a stronger, consistent and more appropriate curriculum. The expansion and improvement of technical and vocational training was another objective, as was serving the special needs of students with disabilities and preschoolers.

The TKII medium-term review in 2011 concluded that, of the 20 education objectives, seven were achieved (35%), eight were partially achieved (40%), and five were not achieved (25%). By early 2015, however, 16 objectives – those directly under the DOE – were achieved. Though most are ongoing in nature, and set to extend under TKIII, they will build on new challenges that have emerged.

Test scores on national and international exams have improved, but scores remain inconsistent from year-to-year (**Box 7.2**).

Box 7.2 – Test scores

For the 2013 South Pacific Form Seven Certificate (SPFSC) examination –

- over 80% passed the English test, with 44% earning merit;
- 60% passed calculus, 40% earned merit; and
- 90% passed physics, 8% of whom passed with excellence.

In 2014 over 80% of the student roll passed in all subjects with excellence scores achieved in English, statistics and calculus. For the Tuvalu Senior Secondary Certificate (TSSC) in the sciences, pass rates from 2008 to 2014 fluctuated from a high of 100% (2010) to a low of 30% (2009). In 2014, the pass rate in science examinations was about 50%, indicating a general decline in performance. The TSSC trend decline also occurred in English and mathematics.

7.2 Education administration, management, enrollments

The DOE has concluded that a more comprehensive Education Management Information System (TEMIS) is needed to support evidence-based reporting and intervention in areas of need. The TPR also needs to be disaggregated by subject so pupils get the teaching they need. A pool of high-quality relieving teachers is also needed for teachers on annual leave. Amendments need to be made to the Education Act in order to bring about the required changes in the education system. This includes incorporating more ICT in education.

Combined school enrolments – government and non-government – have averaged 3,376/yr from 2012 to 2014. Student:teacher ratio targets in primary (20:1) and secondary (12:1) have been met. The target ratio of 13:1 in Early Childhood Care and Education (ECCE) has not. Overall gender ratios in government schools is marginally in favor of girls, while in private schools the ratio favors boys. Training to qualify 22 ECCE teachers and 3 specialists to teach special needs students (including students with disabilities) will continue through 2016 and later, as is needed.

7.3 Non-government schools

Several pre-schools are run by parents in different districts of Funafuti. The teachers are paid by the Ministry of Education, who registers them and oversees their work. The registered but non-government Seventh-Day Adventist primary school and *Fetuvalu* High School, owned and operated by the *Ekalesia Kelisiano o Tuvalu* (EKT, the Tuvalu Christian Church) receive annual government cash grants to subsidise school operations. These grants will continue throughout the period of TKIII.

7.4 Technical and tertiary education

The Tuvalu Maritime Training Institute (TMTI) provides cadet training to future seafarers despite depressed market demand for Tuvalu seafarers. Somewhat less than 100 seafarers still work on overseas merchant ships, a number that has been in steady decline since the late 1990s. Prior to the global financial crisis that began in 2007/08, the government intended to work with local recruitment agencies to raise the number of

seafarers on contract at any time to over 300, but this proved undoable.

Training at TMTI is now 10-months, course work is more rigorous, covering more subjects, and class intake sizes are larger. GOT continues to investigate the potential to diversify TMTI to include seafarer training for work on fishing vessels operating in the tuna fleets around the Pacific islands.

Training in the technical trades will continue to be provided by the Fiji Institute of Technology (FIT), now a part of Fiji National University (FNU). The government makes other technical training available at institutes in Australia and NZ. These scholarship opportunities will continue.

Nurses, doctors and other medical professionals will continue to be trained at the College of Medicine, Nursing and Health Science at FNU, and at schools and medical facilities in Cuba, Taiwan, Kiribati and New Zealand.

Tertiary education continues to be provided at USP, FNU and institutions in Australia and New Zealand, the latter including courses and degree programmes that are not offered at institutions in Fiji. A few scholarship awards in diplomacy and international relations are provided for study in England. The number of overseas graduates currently outstrips the employment capacity of Tuvalu's domestic economy in general, and the government public service in particular. Returned graduates are taking jobs they once considered to be over-qualified for. One result has been an increase in graduates entering the private sector rather than government, historically considered the employer of first and last resort.

7.5 Investment in education and human resources

Investment in education and human resource development is a foundation issue, fundamental to the country's future development. In broad terms, manpower planning to get the right mix of skilled and semi-skilled labour will continue under TKIII (**Box 7.3**), with funding increased relative to past levels of government appropriations, and higher investment from aid sources, if it's made available. Government planning will target gaps in the domestic labor market, and employment in other parts of the Pacific

region that Tuvalu labour can fill, through NLMP and the TPF to expand labor migration and labor mobility. But, for these efforts to be successful, secondary, technical and tertiary education must adopt uniform national certification and standards that are equal to, and recognized by, other countries in the region. This is an education priority for TKIII.

Box 7.3 – Human resource planning

Strictly speaking, there is no government human resource (or manpower) plan* – but there is a process for allocating funding and support for human resource development, mainly for in-service scholarships for public servants.

Labour flows into and out of the market, especially in the private sector, are not tracked for planning purposes, nor could they be at present with any degree of reliability. This creates challenges not easily overcome to determine skill needs in domestic and foreign job markets beyond rudimentary estimates. At its most basic, this means Tuvalu's labor force cannot exploit employment opportunities until training is provided that has ready takers in regional job markets. This is another way of saying Tuvalu's labour cannot take advantage of employment opportunities abroad if the domestic labor market does not possess (or cannot produce) the skill sets and certifications to exploit such opportunities in meaningful numbers. For example, as referred to in Section 6.6 and Section 8, jobs on foreign fishing vessels cannot be readily filled until local seafarers have been trained with the requisite skills to work on fishing vessels. Much more needs to be done in vocational and technical training, and will be under TKIII, with government funding, aid funding and from other resources.

** This is not strictly true for some areas of pre-service training, where MEYS and donor governments who fund overseas scholarships attempt to match awards – mainly for professional degrees – with future labour market needs, mainly those in the public service. But small labour markets such as Tuvalu's are thin and not very dynamic. And too many variables can't be controlled. One or two professional staff departures – career changes, unforeseen changes in the job market, non-career-related job promotions, emigration – can leave a critical void not easily filled, especially and mainly because planning horizons for pre-service training are necessarily long-term. At best, the results of this type of manpower planning are mixed. Something the government and donors should remain acutely aware of throughout the period of TKIII.*

Not all training and capacity building needs addressed throughout TKIII are funded through, nor the responsibility of, MEYS. Examples include: some forms of short-term training (all ministries), some types of technical training some ministries and departments (e.g., Fisheries, Public Works), and in-service training for public servants (under the Department of Personnel and Training, Office of the Prime Minister). The majority of short-term training is provided under bilateral and multilateral aid, with government recommendations and approval in most cases. This type of training will continue unfettered throughout the duration of TKIII, with government upping domestic funding, encouraging increased aid funding (bilateral and multilateral), or seeking out new funding sources.

7.6 Annual budgets

MEYS commands the biggest share of government recurrent expenditure. MEYS is also the country's biggest employer. In 2016, it will employ 208 teachers and support staff with a recurrent budget of A\$9.63m (up from A\$8.4m in 2015), of which scholarships account for about 30%; plus, special development expenditures (SDE) of A\$3.1m, of which 85% is for education infrastructure.

The government provides other funding to support Tuvaluans who wish to further their education, enable more Tuvaluans to participate in Technical and Vocational Education and Training (TVET), and grants subsidies to non-government schools. These subsidies have increased from about A\$410,000 to almost A\$600,000, in part to fund the employment of more qualified teachers. Similar subsidies are paid to pre-schools to employ qualified teachers in early childhood education. These levels of expenditure in education will continue throughout the TKIII period, and will increase if budgetary (and aid) resources permit.

7.7 Policy Reform Matrix

Education initiatives under the Policy Reform Matrix (PFM) since 2012 have sought to rebalance the distribution of education resources toward more basic and vocational education, gender access to training, and school infrastructure. These and other PFM initiatives will retain the full support of GOT under TKIII.

7.8 Youth and sports

In Tuvalu a youth is a person in the broad age range of 15-35 years. It is estimated that there are approximately 4800 youths in Tuvalu (2015). Forty-nine percent of them are unemployed according to MEYS.

A National Youth Policy (NYP) is in place but funds needed to implement the policy are not yet available. The policy addresses how to resolve each key issue involving youth. Eighty percent of youth criminal offences are tobacco- and alcohol-related. Better enforcement of laws governing the purchase and consumption of alcohol by minors or young people is needed. To increase youth employment, MEYS encourages youth to start businesses or do volunteer work that builds experience to launch their own business, or pursue another career.

Youth are encouraged to attend awareness workshops on alcohol abuse and adult vocational employment training – either locally or abroad if they have access to public or private funding.

A National Sports Policy (NSP) provides the framework for the development of sports and related initiatives, but adequate funding to implement the Policy remains a bottleneck. Objectives and targets for TKIII include securing new (and higher) sources of funding for sports development; increasing sports participation rates; healthier living through sports; development of national sports associations; and development of more elite athletes (and teams) to participate at the international level.

7.9 Climate change and education

Education has a central and unavoidable role in the climate change discussion. It serves to inform the citizenry of climate change impacts, risks and responses. Perhaps more importantly is the subject of climate change and its impacts taught as part of a student's general education curriculum. This serves to educate the next generation of Tuvaluans, including its future leaders, who, coming of age, need to be exposed to the climate-related problems and prospects they will inherit from today's older generation.

Education has been the foundation of modern social and economic development in Tuvalu. This will be no more apparent than the importance of education in the fight against climate change impacts, threats and risks, and finding solutions to each of these as future circumstances change and the issues continue to evolve.

8. Natural Resources

GOAL: Maximize social and economic returns from the management and sustainable use of Tuvalu's natural resources



TKII listed numerous and wide ranging natural resource development objectives and strategies. By 2015, nine had been achieved. Eleven remained incomplete but were in various stages of implementation. Many had not yet begun. Of these, examples include: A strategic plan for a domestic fish export industry had yet to be developed*; and little or no support had been given to the private sector to develop eco-tourism, or the tourism industry in general.

NAFICOT entered into joint ventures (JV) with two Asian fishing companies. Although these joint ventures generate revenue, recent average revenue from both is equal to only 6% of average fish license revenue (≈A\$900,000), and less than 2% of total domestic revenue (2015).

Progress has also been made on the remaining fisheries-related objectives, and spin-off work in these areas continue:

- A review of CFC management and operations to reduce GOT subsidies, either through efficiency gains, transfer to the *Kaupule*, privatization, or closure;
- Operate NAFICOT under a joint-venture, with a new management/business plan that targets cost recovery;

- Increase revenue from fish licensing; and
- Formulate and implement a fisheries development programme.

*** As discussed elsewhere in TKIII, prospects for fish exports are limited: economic, logistical and other constraints make the development of export-based fisheries almost impossible.**

FISHERIES

8.1 Fisheries revenue

Fish licensing revenue has been progressively rising in recent years, from A\$8m in 2012 to over A\$31m in 2015, and remains Tuvalu's biggest source of revenue. 2015 revenue is largely due to a combination of factors:

- 1) Better international fisheries management through PNA, FFA and WCPFC, which has provided a stronger framework to negotiate fisheries' access agreements with foreign fishing nations;
- 2) El Nino conditions in 2013/14 and 2015/16, and more favourable US\$/A\$ exchange rates; and
- 3) Possibly one-time late and(or) incomplete earlier payments.

The Department of Fisheries (DOF) will continue to strengthen its specialist capacity to carry out economic, legal and financial analysis to support Tuvalu's position in international negotiations. DOF has set an average internal revenue target of \$25 million by 2017, but recommends a more conservative estimate of \$18-20 million per year for budget projections. DOF will continue to explore innovative ways of stabilizing and expanding its revenue base, such as from vessel-day pooling arrangements and selling access rights to overseas fish processors.

8.2 Fisheries: institutional strengthening, management, development

DOF has pursued institutional strengthening since 2012, with significant financial and technical support from New Zealand and the World Bank. As part of this effort, DOF adopted a new corporate plan and began departmental restructuring, starting in 2014. In the short-term, under TKIII, improvements to DOF will continue, including to its facilities (buildings, labs, equipment, food hygiene testing), organizational systems (ICT, planning, budgeting, procedures), staff performance, and financial controls.

Outer island fisheries development beyond subsistence is problematic, as it has been historically. Primary constraints have been small development budgets, access to remote and very small island markets, unreliable and irregular shipping, lack of equipment, poor equipment maintenance and breakdowns, long delays (commonly months) awaiting spare parts, and so on (**Box 8.1**).

Efforts attempting to overcome these problems and constraints will be funded by donors and aid agencies, including the supply of technical assistance. For the present, private finance is not foreseen. GOT will continue to cultivate these aid sources, and pursue new funding sources. The UNDP-funded NAPA II support vessel, *MV Talamoana*, will be used for basic fisheries work and fisheries extension services (some of it indirectly related to climate change), which includes outer island surveys of marine resource potential, administrative and fisheries development work, and fisheries management.

Under TKIII, DOF will re-establish OI fishery development/management plans, including island-specific guidelines on appropriate management systems and identifying realistic, viable development opportunities. DOF is committed to helping the outer islands maintain their fishery resources, for subsistence, food security, and, if possible, for cash income and economic growth.

Box 8.1 – Commercial and outer island fisheries*

Fisheries development suffers from some deep-rooted natural disadvantages and constraints, including, in the case of reef and lagoon resources, an extremely small resource base, and highly sensitive ecosystems now under stress from development. Significant fishery development in Tuvalu has to rely on more abundant tuna resources and other oceanic species. Other disadvantages and constraints include, but are not limited to, a lack of:

- Domestic capital to finance relatively large-scale commercial projects;
- Domestic investors willing to commit finance to risky commercial ventures;
- Effective means to transport fish;
- Supporting infrastructure, including comprehensive shore facilities and protected anchorages;
- Managerial expertise to successfully run a commercial venture;
- Skills and technology in a range of areas needed to underpin a commercial export-oriented fishery, including: fishing, processing, storage, and shore-based skills such as marketing, accountancy, repairs and maintenance;
- Difficulties in promoting commercial fisheries development among all island communities equally; and
- Potential over-exploitation of fisheries resources by the large Funafuti population.

* Partly adapted from *Kakeega O Tuvalu: 1995 to 1998 (GOT, 1995)*.

The government is concluding the long process to reform and relaunch NAFICOT, and, for the first time in over a decade, heeding the requirements of the Tuvalu Public Enterprises Act. The new NAFICOT will run all GOT fishery joint ventures, including the two existing JVs, and perhaps place crew on foreign fishing vessels (to be determined).

At present new JVs seem unlikely, partly due to the current low profitability of tuna fishing in the region. In the present fisheries economic environment, JVs are high-risk forcing DOF to be conservative in its approach to JV negotiations.

8.3 Crewing on foreign fishing vessels

DOF will continue to work with the Tuvalu Maritime Training Institute (TMTI) to establish training for seamen to work on purse-seine vessels. A purse-seine net and power block has been installed at TMTI, two tutors have undergone overseas training, and a consultant engaged to develop training materials and assist with running the first course. The purse-seine course was run twice in 2015, with 25 participants in each. There is funding to run eight courses in 2016 and after, resulting in about 250 Tuvaluan seamen qualified to work on purse-seiners.

DOF will amend its fish licencing conditions to make hiring of Tuvaluan crews mandatory on purse-seiners that operate in Tuvalu's EEZ. DOF is also working with local crew placement agencies to find purse-seine jobs for TMTI graduates. Purse-seine crews – up to 250 on multiple vessels – have the potential to add upwards of A\$2.5 million to the Tuvalu economy through remittances, although short-term projections are much lower.

8.4 Fishery observers

DOF will continue to promote development of the national fishery observer programme, with support from FFA and SPC for training and operational advice. The programme has grown from less than ten local observers contracted in 2012 to over 50 in mid-2015. (A new intake in early-mid 2016 will increase the number to 70.) Observers, at sea for lengthy periods, monitor catch, fishing operations, compliance with national laws, and WCPFC management measures. Observers are well paid, by local income standards,

and there is intense competition for observer training courses and observer assignments. Programme expansion is planned, with the goal of contracting at least 100 observers by 2018. To prepare for expansion, a review and audit of the programme's current management arrangements will be undertaken in 2016 to improve management procedures, and more effectively absorb future growth.

8.5 WCPFC compliance, vessel detection and prosecution

Tuvalu has not yet achieved full compliance with WCPFC fishery management requirements, which hinges on two relatively minor issues: 1) failure to achieve 5% observer coverage on Tuvalu-flagged long-liners, and 2) late submission of annual reports to the Commission. In 2015, DOF signed an MOU with the Fiji Department of Fisheries which will allow full compliance with the first, while improvements to DOF's reporting procedures will address the second. DOF plans to achieve full compliance in 2016, and maintain compliance despite the continuous introduction of new and increasingly rigorous compliance requirements. DOF also plans to use aid funding to increase its capability to detect and prosecute IUU fishing operations. In the 3-4 years to 2015, IUU cases have been recurring in Tuvalu's EEZ; two ended in prosecution and conviction for total fines of A\$788,000.

8.6 EU fishery compliance

In December 2014, EU authorities found Tuvalu did not have the control systems in place to manage and monitor its EEZ. This classified Tuvalu as a possible non-cooperating country for illegal, unregulated and unreported (IUU) fishing. The EU issued Tuvalu a 'yellow card' – three other PICs have been issued yellow cards – and failure to respond with remedial action will result in a 'red card'. This would prevent fish caught inside Tuvalu's EEZ, or by Tuvalu vessels fishing outside the EEZ, from entering the EU. (The volume of unprocessed or processed tuna entering the EU is unknown, but the volume is likely very small, absolute terms and relative to other sources of tuna supply.) A red card listing could badly undercut the value of access to Tuvalu's fishery

resources, and the interest of foreign companies who want to establish joint ventures. In 2015, DOF submitted an action plan to the EU, which includes enacting stronger fisheries legislation, updating the Tuna Management and Development Plan, and addressing nine other items (**Box 8.2**). Removal from the yellow card list is expected in 2016 or 2017. DOF will need to maintain and continually improve its fishery management systems after that time to prevent re-listing in the future, and to address the requirements of other markets (e.g., the U.S.) that are adopting measures similar to the EU.

Box 8.2 – Other EU compliance issues

- Upgraded fisheries legislation, new fisheries control systems, more active and aggressive fisheries enforcement to prevent IUU fishing are expensive, but necessary luxuries that come at a cost that at present Tuvalu cannot afford. This is a textbook diseconomy often encountered by small states in general and small island states in particular.
- Higher imposed (and fixed) costs of doing business cannot be passed onto the consumer, but instead eats into fluctuating fish licensing revenue, which – all else equal – is based on tuna catch sizes, not market demand.
- In the short- to medium-term these new expenses will be met under the World Bank's Pacific Regional Oceanscape Project (PROP, approx. A\$11m), and the New Zealand-Tuvalu Fisheries Support Programme (NZ\$1m) to meet operational costs (oceanic and coastal fishery management, including higher tempo EEZ patrols, radar satellite data); purse seine crew training (Section 8.3); and HRD capacity building/training. Added to these efforts is NZ\$4-5m for new shore-based fisheries infrastructure (offices, support facilities, etc).
- In the longer-term GOT will have to absorb most of these costs and bear more of the financial responsibilities for fisheries management, including the tougher, more costly regulations imposed by the EU and others, if EU fisheries aid and other aid sources are not available.

8.7 Fish product sanitary standards

Tuvalu lacks phytosanitary controls required for entry of Tuvalu fish products into the EU. (Fish landed in Tuvalu cannot not be exported to the EU, but fish caught in Tuvalu waters and landed where phytosanitary controls meet EU requirements, can be). The US is expected to adopt similar hygiene controls in the near future. Starting in 2016, legislation on fish product hygiene standards, together with inspections and controls, will be developed. For enforcement, an internationally certified hygiene authority will be established, though funding sources for establishment including training, compliance enforcement, agreements with competent authorities in other countries so Tuvalu meets EU and other market standards is unknown. By 2018, with aid funding and other support, GOT expects Tuvalu will have market compliant hygiene and sanitary standards in place for fish products landed or transshipped in Tuvalu, and for Tuvalu-flag vessels.

8.8 Protection of coastal fisheries

Tuvalu is highly dependent on coastal fishery resources to meet domestic needs and safeguard food security. Evidence suggests that coastal marine life is being impacted by pollution, over-fishing and coastal degradation, particularly around Funafuti. Septic tank leakage and uncontrolled liquid sanitation waste has created harmful and excessive nutrient loads in the Funafuti lagoon, and is likely the cause of Sargassum seaweed overgrowth and chronic problems with ciguatera that began some time before 2010. DOF, with aid support from NZ and the World Bank, will undertake a programme of water quality monitoring in 2016 and use this and other information to develop a plan to protect and rejuvenate coastal marine life, including fisheries. Any liquid pollution response must fix current sewage disposal methods by installing new sewerage infrastructure. Costs are currently unknown but will be high and well beyond the domestic resources currently available to GOT. DOF will also investigate other ecological issues affecting the health of coastal fisheries, including monitoring of ciguatera fish poisoning, habitat degradation caused by coastal development, loss of coral cover, and the role of managed areas to improve fishery health.

AGRICULTURE

8.9 Agricultural development

Work started on most TKII priorities for agriculture, however progress has been uneven. Only the supply of farm tools, adding Department of Agriculture (DOA) extension officers, and sending agriculture staff abroad for training have met with some success. DOA focused its efforts on subsistence farming through the provision of training, technology, project funding and other resources. A lack of farm credit and a host of other more intractable issues during the period of TKII, have been identified as barriers to commercial agriculture development (**Box 8.3**).

Labour shortages in agriculture production remain a problem, as is a lack of investment in the sector. With a national working-age unemployment rate of 40%, there is surplus labour available to put to work in agricultural production.

Box 8.3 – Agricultural constraints and challenges

In spite of TKIII's focus on food security, improved nutrition (Section 4), and agriculture in general (UN SDG 2), agriculture in Tuvalu faces a long list challenges that constrain prospects for agricultural development much beyond present levels. Long-standing supply-side constraints on food production include:

- harsh climate;
- very poor soils;
- narrow product base with few options to widen the base;
- land tenure systems that limit land availability;
- labour intensive production restricted to small plots;
- poor inter-island transport links;
- dependence on imported agricultural inputs; and
- lack of infrastructure to support non-subsidised agricultural development beyond subsistence.

8.10 Staffing and funding

GOT will address the non-functional performance of the DOA. Specific issues include: department

structure, Elisefou Ag Station performance, funding, and staff needs, including new posts. GOT will set a clear long-term policy for agricultural development; enact legislation – if needed; and strengthen the sector's regulatory powers. GOT will find ways to increase land availability for food production, and develop new land-use plans for agriculture. GOT will also work toward securing more predictable sources of funding – both domestic and external.

8.11 Agricultural trade

The Trade Policy Framework (TPF) designates agriculture for priority access to Aid for Trade resources to develop value-added food processing and compliance standards for product exports to regional markets. Examples of goods with domestic and export market potential include: virgin oils; coconut by-products, such as toddy; natural fibres; biofuel for motor vehicles; bio-waste for livestock and root crop production.

8.12 Organic Farming & Marketing Authority

A possible new initiative, but not until DOA has been re-structured and re-established as a fully functioning government department, is an Organic Farming & Marketing Authority to organize and increase farm production; train farmers in organic farming and conservation practices; set production targets for selected produce; and handle domestic marketing and sale of local produce.

LAND AND SEA

8.13 Maritime boundaries and land use

GOT has approved maritime boundary-lines with Kiribati, Fiji and France. Work was completed in 2014, and the Maritime Zones Act was amended. Tuvalu will deposit the new boundary coordinates with UNDOALOS, as required by UNCLOS in early 2016, one of the first PICs to meet this requirement.

A Land-Use Management plan (LUM) has been developed, but not implemented. Only rent assessment consultations have been conducted with the outer islands. Other LUM-related work, including on land use policies, will require government or external aid funding.

The Tuvalu Land Information System (TUVLIS) – a Geographic Information System (GIS) – was completed in 2013. Information on TUVLIS is available free to the public, and is a valuable tool for government and other decision-makers, including use by the judiciary. Plans are underway to make the database available to outer island users with Internet access after system operator training has been completed.

Lands Court training will remain ongoing throughout TKIII, in collaboration with the Senior Magistrate's Office, AG's Office, and Office of the People's Lawyer. The goal is to improve the work of the Lands Courts and Lands Appeal Panel.

Box 8.4 – Surveying and mapping

The National Cadastral Surveying and Mapping (NCSM), completed in the mid-1980s, surveyed, demarcated and mapped every land parcel in Tuvalu, based on field work, land registers, land lists, the general knowledge of landowners, and agreed boundary lines between neighbors. The survey followed international survey standards recognized by the UN. Once agreement was reached between adjoining landowners, a 'peg' was inserted by the Lands Committee and the position of these pegs was surveyed and recorded as coordinates in the local area land grid.

If boundary marks (pegs) have moved, damaged or intentionally removed by a landowner (a common practice), boundary marks can be easily re-established using the cadastral map of the area, re-defined by a surveyor, or by other means. The NCSM has been incorporated into TUVLIS. A medium-term DLS priority is installing new "Survey Control Marks" on each island, linked with existing control marks, using GNSS or GPS surveying, and other means. GOT funding has been allocated in 2016 (SDE) to initiate this project, which will likely run for several years.

8.14 Land and Survey staffing

Following a departmental review, DLS has adopted a new 5-year corporate plan, from 2016. The plan is geared toward redefining the roles and responsibilities DLS, and making those clear. DLS

struggled in recent years to shoulder various responsibilities that fell outside its mandate.

A Minerals Unit has been established to oversee, survey and analyze aggregates issues in Tuvalu, as well as investigate matters pertaining to seabed minerals (see Section 8.11). Foreshore aggregates will be closely monitored with island Kaupule, focusing on technical support for surveying foreshores and coastlines, including mapping areas of coastal erosion and accretion. The DLS corporate plan and Minerals Unit will become operational in 2016.

8.15 Landfill, reclamation and redevelopment

Two major land developments began in 2015. One is the long overdue infilling of the borrow pits on Funafuti (New Zealand-funded), arguably the most significant land development since independence. The other is the landfill project at the Vaiaku waterfront. Begun late in 2015, completion is expected in mid-2016 (government-funded).

Other land development projects are: 1) foreshore reclamation adjacent to the Taosoalima Falekaupule (Funafuti), with coral fill material obtained from two islets, Funamanu and Papealise, extending the shoreline outward 6-8m into the lagoon and extended about 200 in length; 2) the outer island's Harbours Project (donor-funded – possibly ADB, WB, NZ); and 3) foreshore stabilisation on Nukufetau and Nanumea (government-funded).

The borrow pit project has reclaimed over 8 hectares (ha) of land (0.08km²), now available for new housing, commercial development, left as green space, or mixed-use.

The largest and most important parcel is the new land at the northern end of Tengako islet, site of the Funafuti dump. This new land form – 2.8ha – extends from the end of the sealed roadway to nearly the end of the islet – about 150m short. Government will review the range of options to develop this land – for housing, tourism, parks and recreation, or mixed-use – and will work closely with the Kaupule and land owners before any firm plans are set on motion. This new land space offers significant development potential in any form, and conceivably represents a

once-ever set of opportunities for large-scale public and private land-use and redevelopment.

The new Vaiaku waterfront property represents similar opportunities, as well as coastal reinforcement against the effects of climate change and the impacts of rising sea levels. This land area, still being established and the land form stabilised, will also be subject to wide consultations and discussion before land-use plans are finalized.

8.16 Deep seabed minerals

The potential discovery of sizeable deepsea mineral deposits (manganese and cobalt) offer some long-term potential, if the resource base is economically and technically recoverable. This will be determined if mineral prices rise to a level that makes aggressive exploration and development attractive. At current prices, no such mineral deposits have been found. Survey work to-date have discovered some low abundance and poor quality deposits of manganese nodules and cobalt-rich crusts at depths of 5,200-6,000m and 1,900-2,800m, respectively, though neither are recoverable. The same has been found for the crust-bearing potential of surveyed seamounts to-date. (Mineral concentrations – low with poor continuity [manganese]; poor crust coverage, low crust-bearing potential [cobalt] – are very similar to that of other areas of the central Pacific Ocean.) Unknown areas of Tuvalu's EEZ will be the target of future surveys, using external assistance – if available – as will the Clarion Clipperton Fracture Zone (CCFZ), located in international waters and under the administrative jurisdiction of the International Seabed Authority (ISA).

The Tuvalu Seabed Minerals Act 2014 provides the legislative framework to pursue potential developments in this area. GOT is in discussions with a deepsea mining company for sponsorships (funding) and partnerships to explore the CCFZ. The new Minerals Unit within the DLS will oversee work in this area (see **Section 8.13**).

8.17 Extended continental shelf

Tuvalu has requested it be allowed to extend its continental shelf (Tuvalu Extended Continental Shelf (TECS)). This was jointly submitted to the UN in

2012, with France (Wallis & Futuna) and New Zealand (Tokelau). The extension claim, to extend the seabed continental shelf, refers to a pocket of international waters (high seas) outside the eastern boundary of Tuvalu's EEZ, between Tuvalu, Wallis & Futuna and Tokelau. After the initial submission in 2012, Tuvalu is awaiting its turn to defend the joint submission. Further discussions with France and New Zealand on matters pertaining to the seabed subdivision will be subject to the successful outcome of Tuvalu's joint submission.

8.18 Climate change and natural resources

Rising sea levels have affected, and will continue to affect, Tuvalu's coastlines – erosion, seawater intrusion and inundation, loss of land, other damaging factors. Tuvalu's natural geography is, of course, not an asset in the fight against climate change, but a severe liability to the country's most immediate destructive threat, sea-level rise. A long list of adaptation measures – useful applications in most other geographic circumstances – are simply not part of Tuvalu's climate change tool kit. Tuvalu is defined by coastline; it has no elevated geographic interior, and its small, often extremely narrow land areas are subjected to tidal swamping, seawater percolating through porous atoll and reef island geologic formations. This natural geohydrology makes immediate escape, as it were, and longer-term adaptation solutions problematic at best.

The International Fund for Agricultural Development (IFAD), in "Climate Change Impacts – Pacific Islands", has projected damages to water resources in the region of \$1 billion if average atmospheric temperatures increase by 2-4°C (even long-term average temperature increases less than a 2°C are still likely to cause unpredictable disruptions to weather patterns). As in other PICs, Tuvalu agriculture will be adversely affected, as will Tuvalu fisheries if, as expected, tuna migratory patterns shift or the health of Pacific tuna stocks decline as a result of rising average atmospheric and oceanic temperature increases.

9. Infrastructure and Support Services

GOAL: Provide efficient, high quality infrastructure and support services



9.1 Overview

TKII identified 22 priorities and strategies for infrastructure and support services. By 2015 nine had been met and thirteen had not. In 2012, the government published the “Tuvalu Infrastructure and Investment Plan”, funded by New Zealand.* The Plan, which covers the period ending in 2022-24, is comprehensive and much of it remains relevant. It was prepared after exhaustive consultations throughout GOT. The Plan lists needs and analyzes the entire scope of infrastructure requirements in Tuvalu, including investment needs and financing. Even in

areas where much has been accomplished – roads, civil aviation, waste management, power and energy (RE) – much still remains to be done. Current and future needs set out in TKIII mimic in large part the infrastructure needs set out in the Plan. The Plan lists the following broad areas of development priority (in addition to the four above):

- water and sanitation;
- telecom (including ICT);
- other public works (incl. roads);
- other air transport (navaids, civil aviation regulations, regulations, domestic air services); &
- maritime (domestic and international shipping, harbor, ports, equipment).

* The Infrastructure Plan is being updated, funded by the ADB.

9.2 Sustainable energy

In 2008, GOT announced its goal of using renewable energy to meet 100% of its power generation by 2020 – this excludes energy consumption in the transport sector. In 2009, Tuvalu launched its National Energy Policy (NEP), with a 15-year framework to 2024. The NEP has seven strategic areas: energy planning, coordination and management; petroleum; transport; electricity; renewable energy; conservation and efficiency; and environment. The NEP aims to reinforce energy security by aggressively adopting sustainable energy systems, such as expanding the use of renewable energy (RE), and diversifying the energy supply mix.

In 2012, GOT adopted the “Renewable Energy Master Plan (*Te Polani mo Enetise Tutumau*)”, now formally known as “*Enetise Tutumau 2012–2020: Master Plan for the Renewable Energy and Energy Efficiency in Tuvalu*”. The Master Plan is built on the NEP (2009), TKII, and now underpins TKIII. A main goal of TKIII is greater energy security, chiefly through the continued introduction of renewable energy (RE) systems – mostly, but not limited to, solar PV – for power generation, consistent with *Te Kaniva* (Climate Change Policy 2012).

The Master Plan directs GOT’s future development of renewable energy systems and the introduction of measures for greater energy efficiency (EE), to achieve the twin goals of:

- 100% power production using renewable energy by 2020 (extended to 2025, see **Section 1.5** on UNFCCC Nationally Determined Commitments – NDCs); and
- increase energy efficiency, etc. on Funafuti by 30% by 2020.

Solar PV currently provides 27% of total electricity generation (2016), and is expected to rise to 50% by 2018.

Tuvalu cannot meet the 100% renewable energy target for power production with solar PV only. A very broad projection is that solar will be able to meet 60-90% of electricity demand. To fill the potentially wide energy deficit, other potential and proven technologies to meet the 2025 target include: wind power (5-40%); biofuels (5-10%); and energy efficiency, conservation and demand-side management of 30% of annual Funafuti electricity demand.

Box 9.1 – Samoa Pathway: Sustainable energy

The Samoa Pathway, consistent with SDG Goal 7 for energy production and consumption, focuses on eight key SIDS-related areas that underpin TKIII (summarized here):

- Strategies/targets for EE, use of sustainable energy systems, in particular RE sources (solar, wind, hydro, biomass, biofuel, etc.).
- Financing mechanisms for and investment in RE and EE; energy conservation; HRD, public education and awareness.
- International collaboration on: energy access; integration with regional and international energy markets; use of local sources of energy; and joint energy infrastructure development.
- Support for ambitious RE and EE targets; diversification of energy systems; financing and technology access.
- Access environmentally sound technologies (e.g., clean fossil fuel and smart-grid technology; best practices; energy databases; technical studies, etc.

Other actions in the energy sector include:

- Translate NDC policies into energy-related initiatives from 2016 forward.
- Identify implementation baselines to achieve 100% renewable energy consumption by 2025.
- Review 100% RE policy by 2020.
- Reduce fuel consumption in the transport sector by increasing import tariffs on petrol/diesel-powered vehicles, plus duty-free and other incentives to import hybrid/electric vehicles.
- More aggressively explore use of RE sources e.g., grid-connected wind power.

9.3 Water and sanitation

Under the five years of TKIII, water and sanitation development will be driven by *Te Kumete*, Tuvalu’s “Sustainable and Integrated Water and Sanitation Policy 2012-2021” (SIWSP), adopted by national consensus in 2012. Policy development was coordinated by MPUI and the National Water and Sanitation Steering Committee (NWSSC), in collaboration with Tuvalu’s Integrated Water Resources Management (IWRM) and Tuvalu Pacific Adaptation to Climate Change (PACC) programmes.

Box 9.2 – Samoa Pathway: Water and sanitation

TKIII efforts in water and sanitation are consistent with SDG Goal 6 and the Samoa Pathway, which supports efforts to:

- Provide facilities and infrastructure for safe drinking water and sanitation systems;
- Use desalination technology if economically and environmentally workable;
- Expansion of wastewater treatment, recycling and reuse; and
- Promote water conservation.

Like many PICs, Tuvalu faces population pressure, limited water catchment/resources and storage capacity, temporary secondary water resources, and poor sanitation infrastructure. Limited institutional capacity, thinly spread human resources, and irregular funding sources further challenge Tuvalu’s ability to effectively respond to water and sanitation issues.

Boxes 9.2 and 9.3 describe the broad challenges.

Box 9.3 – Climate and water supply challenges

Compounding normal water-related challenges are the impacts of climate variability and climate change, which has been well documented. Tuvalu's vulnerability was dramatically illustrated in 1999 and 2011, when the country entered prolonged periods of drought, and states of emergency were declared. Drinking water ran dangerously low or ran out in some communities, requiring large-scale emergency assistance from Australia, New Zealand, and other donors.

High year-to-year variability in rainfall is mostly due to the impact of the El Nino Southern Oscillation (ENSO). This is a natural climate pattern that occurs across the tropical Pacific Ocean, and it occurs in two extreme phases: El Nino and La Nina, and a third neutral phase. El Nino events tend to bring wetter, warmer conditions than normal, while La Nina usually brings drier, cooler than normal conditions. Both result from ocean temperature variability.

Clearly, the challenges facing Tuvalu are significant. However, Tuvalu is making steady progress in the management of its water resources through applying Integrated Water Resources Management (IWRM) and traditional water management methods. The IWRM approach acknowledges that water is everybody's business, from individuals to the community to government, and it is on this basis that the WSP was developed (**Box 9.4**).

Box 9.4 – National Water and Sanitation Policy

SIWSP was a response to the 2011 drought, the worst water crisis in the country's history. The aim of the Policy is safe, reliable, affordable access to water and sanitation. The Policy, which remains current, drew on TKII policy, priorities and strategies (now superseded by TKIII); regional and international frameworks, such as the Pacific Plan, the Pacific Regional Action Plan on Sustainable Water Management (PRAPSWM); and the UN's Millennium Development Goals (MDG), now superseded by the UN's Sustainable Development Goals through 2030 (Annex 14).

The SIWSP also complements other national frameworks, including Te Kaniva (National Climate Change Policy); Strategic National Action Plans (SNAP); National Biodiversity Strategy and Action Plan (NBSAP); the National Action Plan to Combat Land Degradation and Drought (NAPCLDD); and the National Adaptation Program of Action (NAPA).

Policy development was a bottom-up process, developed through nation-wide consultations with all eight islands, as well as the eight island communities in Funafuti, culminating in a National Water Forum held in September 2011.

The SIWSP, which has five guiding principles covering water access, roles, responsibilities, services, risk, and water management, is built on the Vision and Mission below (excepted). See SIWSP for detailed goals, plans and strategies for implementation. These will guide TKIII through most of its implementation.

**Vision: *Atafai ki vai mo tou ola!*
(Save water to sustain life!)**

Mission: By 2021, Tuvalu will have a safe, reliable, affordable and sustainable water supply; and access to improved sanitation systems (incl. eco-sanitation).

More public and private water catchment and storage is needed on Funafuti, to meet rising water demand, to plan for future demand, and to be better able to cope with droughts or periods of low rainfall, which can last 3-6 months or longer in duration.

Routine, preventative maintenance of water desalination plants and public catchment and storage facilities is typically lacking, and will be upgraded under TKIII through annual budget appropriations and external aid.

9.4 Telecom and internet services

GOT recognizes that domestic and international telecommunications services need to be upgraded to keep pace with rapidly changing technology and common services now available to users around the world, in particular and especially the vast array of low-cost mobile communication and internet services, including ramping up affordability, access speeds, service stability and reliability.

The no. 1 priority of TKIII in this area is providing low-cost or free, stable, high-speed Wi-Fi internet access nationwide, through mobile devices (phones, tablets, etc.) and every connected computer (laptop, desktop, etc.). This can be done using commercial and consumer, off-the-shelf hardware and software technology, and erecting the necessary Wi-Fi infrastructure. There are only two issues that have prevented this from happening in the past: financing and government will.

Under TKIII, GOT will provide both, launching a major initiative immediately targeting low-cost or free nationwide Wi-Fi coverage by the end of 2017 – if not sooner. GOT recognizes that such an initiative is long overdue. The well-known benefits of such an initiative span across nearly every strategic area of TKIII: the economy, education, health, private sector (business development), government and governance, society, falekaupule and island development.

Box 9.5 – Improving internet and mobile services

Modern economies and societies are now built on Wi-Fi, mobile telecommunications and the internet. Tuvalu cannot be left behind any longer.

Tuvalu's history of telecommunications and internet services – however far it has advanced in recent years – is one of poor service and unprofitability. These two things are holding back development of the sector and denying the paying public the quality services they want and need. The former – poor service – can be easily fixed, while the latter – unprofitability – is unlikely to change in the foreseeable future, but can be overcome through immediate, direct and affordable government subsidy. Any additional technical assistance required can be provided by aid, and, as part of service contracts, with offshore telecom/IT service providers, targeting large multinational firms.

Such vision and initiative is at the forefront of TKIII.

To implement GOT's historic initiative to provide low-cost, or free nationwide Wi-Fi coverage and internet access will be financed by immediate government investment and permanent subsidy. The economic and social benefits of the initiative far outweigh the costs, as has been repeatedly shown around the world where governments face similar situations as Tuvalu, where infrastructure costs are high and capital returns are low. This has not stopped forward thinking governments from making the necessary investments, and financing whatever subsidies are required. (This is true throughout the developed world in virtually every major public utility sector, from telecommunications to rural electrification, where capital investment is required to extend services to unprofitable areas, a situation analogous to Tuvalu.)

Current telecom connectivity is satellite-based. Although this is relatively expensive, it is the only option for the foreseeable future. This is not a barrier to improving the spectrum of telecommunication services, it is only a matter of investing in the satellite bandwidth and required technical infrastructure. Such bandwidth and infrastructure has not been obtained with sufficient medium- to long-range planning horizons to meet rapid (possibly unexpected) demand growth.

Tuvalu can no longer wait for alternative telecommunications links to emerge, such as trans-Pacific submarine fibre-optic cables. This option will be pursued when it becomes a realistic option, but not at the expense of not radically upgrading existing satellite services to serve the present Tuvalu market.

GOT will also explore liberalizing elements of telecommunications, allowing overseas companies into the sector. A project by the World Bank and New Zealand is under discussion to fund an analytical study of the entire telecom sector, but this will not delay the government taking action now to fund major upgrades in mobile and internet services already being provided. If the Ministry of Communication and Transport (MCT) and TTC cannot secure and manage these upgrades without technical assistance, GOT will fund whatever expertise and manpower that is required as part of the overall service upgrade, and to maintain upgraded services.

9.5 Public works

PWD's core responsibilities are: (i) development of capital (public) infrastructure; (ii) delivery of capital works; (iii) delivery of water and sanitation services (see **Section 9.3**); and (iv) operation and maintenance of all public infrastructure.

A review was undertaken in 2015 to improve these core responsibilities. GOT has adopted the review's recommendations that address PWD restructuring, staff requirements in the technical, professional and management ranks, and to outsource certain skilled trades. Plans are underway to implement these recommendations.

GOT has struggled for several decades to adopt a uniform building code. Draft building codes have been on the books, but never enforced, and legislation has not been enacted to formalize a national building code and associated building regulations.

GOT is moving closer to enacting building code legislation, adopting strict building regulations, and enforcing those regulations, with the Public Works Department acting as the principal inspection and

enforcement agency. The resulting improvements to existing and new infrastructure will include climate proofing structures as committed under the Paris climate change agreement (PA). The importance of adopting and enforcing a building code as a key pillar of measures to mitigate and adapt to the effects of climate change and related natural disasters cannot be over-emphasised. As always, significant funding will be needed to train building inspectors and enforce building code regulations – to be funded by GOT, external aid, or both.

The building code will be integrated into the updated TISIP for long term infrastructure planning and development. The new building code will be adopted in stages – as implementation funds permit – beginning with public infrastructure and progressing to other sectors of building and facility infrastructure, including residential housing (both public and private).

9.6 Air services

A carry over from TKII, GOT will assess options to reinstate domestic air services, which ended in the early 1980s. The feasibility and need for a new, larger international airport will also be assessed, as will an "open skies" policy.

In theory, better domestic and international airport infrastructure and airport services could have multiplier effects on the economy, as a result of higher tourist arrivals – that is, if a tourism industry can be developed, the demand for expanded air services will follow in lock-step – and incremental demand growth for tourist accommodation, dining, transportation, tourism services (presently non-existent), cultural attractions, employment generally, higher wages, and other goods and services. Affordable, domestic air services will allow much greater movement of people, goods and services inter-island, creating its own economic and social multiplier effects. Both tourism-related and general domestic air travel, and the business it might generate could ultimately offer new incentives to possibly stem emigration of more skilled segments of the labour force.

Spillover effects from higher outer island tourist arrivals – assuming tourist arrivals could be created out of a thus far undeveloped Funafuti-based tourism industry – would stimulate the development of new (or upgraded) accommodation and the supply of goods and support services.

Box 9.6 – International air services and "open skies"

A larger international airport landing bigger aircraft, if demand could be created, would allow exports via airfreight of fish and other high-value products, improving Tuvalu's balance of trade if export product industries could be developed. A competitive aviation market might help stimulate such demand, but only after careful examination of the lessons learned after GOT introduced air service competition ("open-skies") in the mid-2000s that accelerated the bankruptcy of Air Fiji, and the loss of Tuvalu's majority Air Fiji shareholding and multi-million dollar investment.

Amphibious air services, like the one that operated in Tuvalu in the early 1980s (ending in 1983), proved its technical viability, and its social and welfare benefits, but was not commercially viable and required large aid subsidies to operate. But it was less expensive than any comparable land-based domestic air service at the time that would have required the construction of outer island airfields. That cost trade-off remains true today. Land-based aircraft would have higher upfront capital costs (airfield construction, support facilities, etc.), and require large land areas for airstrips on islands with very limited land space to start with.

Tuvalu's currently limited air services could be significantly improved. "Open skies" is one option (with the caveat pointed out in **Box 9.6**) to lower travel costs, and increase passenger traffic and cargo payload availability. MCT will commission a study to investigate the full range of options described here for improving domestic and international air services, including the viability of constructing a new international airfield (including the full range of supporting airport infrastructure), and new airfields in the outer islands.

9.7 Maritime services

The outer islands need boat harbors and related facilities. The islands most in need are: Niutao, Nanumaga, Nui and Nukulaelae.

Boat harbours and facilities are needed to:

- improve travel safety;
- faster and safer cargo handling (offloading and loading);
- handling a greater range of cargo;
- handling larger cargo loads; and
- improving shipping services overall.

The experience of Vaitupu attests to the above-listed gains, of course, and suggests that boat harbors pull in economic activities not otherwise present in the absence of a boat harbor and attendant port facilities.

At present inter-island shipping is well serviced by MV Manu Folau, MV Nivea II and the recent arrival of the MV Nivea III, with cargo shipping soon to be augmented by the arrival of a large second-hand landing craft, recently purchased by GOT.

Box 9.7 – Passenger travel

With the arrival of the landing craft for general cargo, all large cargoes not easily transported on either of the three multi-purpose interisland vessels (e.g., Nivea III), or cargoes that can only be shipped via landing craft such as bulk raw materials, items too large for conventional shipping, and materials for large-scale construction works, can now be handled.

The only remaining type of vessel currently in need is a fast passenger-only vessel, with no cargo capacity except personal effects (luggage, etc.), to move people between the islands.

Other inter-island sea transport is provided by the Police Patrol Boat, HMS Te Mataili, for urgent needs, such as medical emergencies, and the newly acquired vessel, MV Talamoana, for climate-related work, but will stand in for interisland passenger travel and light shipping on an as needed basis. With the Nivea III entering service in December 2015, it should help relieve some of the inter-island cargo and passenger traffic congestion.

9.8 Outer island infrastructure

Outer islands civil infrastructure needs to be upgraded, including paving roads (tar or concrete sealing); increasing public water catchment and storage; and general rehabilitation, upgrade, and(or) expansion of all public buildings and public works.

GOT will explore building a new high school on Nanumea to cater for an increasing number of projected students entering the education system at the high school level.

9.9 Corporatisation, public subsidies, and management

Under TKII, GOT planned to corporatize or privatize a number of government services. Some movement was achieved on the former, and none on the latter. As discussed in **Section 6** and in this section above, six of the eight public (statutory) corporations – excluding NBT and TNPF – have been poor financial performers, historically unprofitable and highly unlikely to become profitable because of Tuvalu's small, fragmented, high-cost markets serviced by public corporations. Public corporations (again, excluding NBT/TNPF) require government subsidies to remain in operation, to provide essential economic and social services (power, telecommunication, etc.). Part subsidy, GOT also funds Community Social Obligations (CSO), which are unprofitable services as required by government and provided by public corporations.

Throughout the period of TKIII, the government will continue to explore ways to:

- move public corporations to closer to profitability;
- eliminate/reduce government/aid subsidies; aim for at least cost-recovery plus CSO subsidies;
- improve the management of public corporations; and
- improve the oversight of public corporations by the responsible ministries, which is poor.

The government will more explicitly define CSO costs, and how they are calculated for more transparent and reliable annual budgetary appropriations.

The Public Enterprise Review and Monitoring Unit (PERMU), formerly the Public Enterprise Reform Management Unit pre-2015, was set up seven years ago to assist government to reform public corporations, including holding them to strict compliance with accounts, management and operations. PERMU has suffered from high staff turnover, has never been fully staffed, and never fulfilled its broad mandate, or that of the ADB, which set it up. In 2016, MFED will review the work of PERMU to gauge its need, usefulness and impact.

9.10 Climate change and infrastructure

New infrastructure and better service support will, by definition, play central roles in combating the effects of climate change. GOT commits to embarking on aggressive climate change adaptation measures, as permitted by available funding. Such measures include:

- enacting and enforcing strict building codes;
- upgrading existing civil infrastructure;
- new, climate-proofed civil infrastructure;
- coastal works that protect foreshores, for example, land reclamation, revetments to hold back sandbanks, offshore breakwaters; and
- other heavy works to, similarly, prevent erosion, permanent loss of shoreline, coastal damage from rising sea levels, prolonged seawater inundation, and more frequent wave wash-over that damages life and property.

10. Environment

GOAL: Protect, restore and promote sustainable use of terrestrial ecosystems; halt and reverse land degradation; protect and prevent biodiversity loss



GOT is aware that economic and social development can impose high costs on the environment. Development policies in general attempt to guard against incurring high environmental costs, initiate remedial measures that repair past environmental damage, and protect the existing natural environment. But policies by themselves only do so much and financial and other government resources are limited. Having said that, initiatives to address both current and future environmental concerns – ecosystem harm in general, land degradation, loss of biodiversity (**Box 10.1**) – and guard the general health of the nation's natural assets is a central platform of TKIII, which links with UN SDG 15.

Box 10.1 – Samoa Pathway: Biodiversity

The Samoa Pathway, as does TKIII, supports efforts to:

- Conserve biological diversity.
- Access financial and technical resources for the conservation and management of biodiversity.
- Ratify and implement the UN CBD's Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from Their Utilization to the CBD.
- Address land degradation and drought challenges, in respect of food security and nutrition, soil resources, adaptation to climate change, protection of biodiversity and resilience to natural disasters.
- Slow, halt and reverse deforestation and forest degradation.
- Pursue financing for forest management policies that improve the state of biological diversity, and conserve and safeguard forest ecosystems.

10.1 Background and awareness

By way of background, in recent years Tuvalu has made some progress in crafting and implementing policies which focus on environmental protection and management. The Review of Environmental Education was published in 1992, the State of the Environment Report was published in 1993, and the Environmental Legislation Review was published in 1994, all fed into the Tuvalu National Environmental Management Strategy (NEMS), which was published in 1997. Because it laid the foundation, NEMS initiated the evolution of GOT's environmental policy and action on the environment. Recent and important environment-related legislation – perhaps the most important – is: Environment Act 20007 and Waste Management and Services Act 2009, and their related regulations.

Systematic waste management efforts began in 1999, under an Australia-funded waste project and continued under the EU-funded 8th and 9th European Development Funds (EDF), culminating in the 10th EDF, which had a major waste and sanitation component to deal with solid waste reduction, municipal waste collection and management, liquid waste disposal, metal collection and recycling, hazardous medical waste, and green waste. Waste management in Funafuti (and on a lesser scale the outer islands) has vastly improved in the last fifteen years, but much more needs to be done.

The Funafuti Conservation Area (FCA), legislated by the Conservation Area Act of 1998, is a marine and terrestrial wildlife sanctuary on the western side of the Funafuti lagoon, and contains the richest coral reef ecosystem in the Funafuti lagoon (fish, coral, etc.). Despite their small size, the islets of the Conservation Area contain significant biodiversity richness. About 40% of the total area of threatened broadleaf forest of the atoll is found on the islets within the FCA, plus 24 species of sea, shore and land birds, coconut crabs, turtles, giant clams, etc. The FCA conserves marine and terrestrial biodiversity, and has led to a renewal of marine life, terrestrial animal and bird populations, not just in the Conservation Area but exported outside the FCA boundaries. This project has been

a major success, based on principles of sustainable stewardship. It will be replicated throughout Tuvalu under TKIII, pending availability of funding and other resources.

There is a growing environmental awareness in Tuvalu that TKIII will build on. This a direct result of national (and local) government intervention in recent years. Such awareness raising is essential to improving environmental management, including that of coastal zones, EIAs, enacting legislation, and local responses to climate change, the prospect of sea level rise, and other environment issues.

Box 10.2 – Responses to environmental protection

Atoll coastlines are inherently fragile, naturally dynamic, and sensitive to interference of any kind. But near-shore areas in Tuvalu are often the site of intense human activity, which can harm the natural coastline. To forestall man-made interference, elements of the coastal zone management in Tuvalu will include:

- renewing setback guidelines for buildings, including geo-technical investigations for large structures;
- planting vegetation close to shorelines (on-going);
- protecting existing shoreline vegetation (on-going);
- requiring EIAs for all large public and private works projects (on-going);
- limiting or forbidding extraction of raw building materials from shorelines (on-going, most sand and aggregate is now imported from Fiji by government decree);
- construction of seawalls (as needed); and
- land reclamation where it's feasible (on-going). Local defensive strategies to climate change and sea level rise include:
 - increasing fresh water storage (on-going);
 - seawall construction;
 - introducing more stringent building codes (difficult considering local building customs, the regulatory oversight involved, and enforcement cost – see Section 9.5);
 - increasing community awareness (on-going); and
 - monitoring sea levels (on-going, see above).

10.2 Threats to the environment

Climate change presents the biggest environmental challenge that Tuvalu must face. Development decisions are being influenced by threats posed by climate change – sea level rise being the number one threat – and have been for some time. Though direct and indirect impacts from climate change pose no greater threat than they do against the natural environment itself, environmental protection faces other important challenges as well.

(Tuvalu's response to climate change and its impacts are addressed in Section 1, and more broadly in each of TKIII's other strategic areas.)

10.3 Integrating sustainability into environmental policy

Integrating principles of sustainability into environmental policy is a first step toward reversing unsustainable environmental resource losses (MDG Goal 7, Target 7A). The successor to the MDGs, the UN SDGs broadens the environment discussion found in SDG 6 (water and sanitation: see **Section 5 and 9**), SDG 13 (climate change: **Section 1**), SDG 14 (ocean and seas: **Section 12**), and SDG 15 (terrestrial ecosystems: **this Section**).

The Department of Environment (DOE) manages the integration of environmental sustainability into national as well as sector policies. The National Adaptation Plan of Action (NAPA) and Te Kaniva direct GOT departments and agencies, and NGOs active in environmental work. A Tuvalu Survival Fund (TSF) was established to finance climate change investments in mitigation and adaptation, and recovery from natural disasters. Global funds available for environmental and green investments (see **Section 1** and elsewhere) are available from the Green Climate Fund (GCF), Adaptation Fund (AF) and the Global Environment Fund (GEF) accessible through the Ministry of Finance. There is GOT funding for climate-related programs for departments with responsibilities under the umbrella of climate change. (Annual GOT funding is appropriated as Special Development Expenditures (SDE), or from TSF.)

10.4 CO2 emissions

Tuvalu produced 10.3 Gg (Gigagrams) of CO₂ in 2004. Although current emissions have not been estimated, informal projections suggest emissions grew to 13 Gg by 2013, assuming some reductions from renewable energy (RE) use. At best RE would have slowed CO₂ emissions growth from power generation, but had no impact on emissions from transportation. Since 2013 the use of grid-connected renewable energy has increased (solar PV), both on Funafuti and three outer islands (Nukulaelae, Nukufetau, Nui). As of 2016 the use of renewable energy has reduced CO₂ emissions by perhaps 10-15%, from power generation only, slowing CO₂ emission growth but not yet reversing it, mainly as a result of increasing CO₂ emissions from a rapidly growing transport sector and continued growth in electricity demand.

10.5 Environment conventions and treaties

Tuvalu is a party to most conventions and treaties that deal with environmental issues, including, for example, the UN Convention on Biological Diversity (CBD), the Vienna Convention on ozone depletion, the subsequent Montreal Protocol (1987) and amendments; the UN Framework Convention on Climate Change UNFCCC; and so on (**Box 10.2**).

Some conventions and treaties have direct relevance to Tuvalu (CBD, FCCC), while others are less relevant, such as the Convention to Combat Desertification or the Vienna Convention. (For example, Tuvalu does not produce ozone depleting substances – ODS, but imports them. Under Art. 5 of the Montreal Protocol, Tuvalu can access the Protocol's Multilateral Fund to comply with its obligations, which includes freezing the import of bulk substances at the maximum level of 0.328 ODS tonnes from 1 July 1999. Import data indicate that Tuvalu has met its obligation under the Montreal Protocol.)

Box 10.3 – Environment conventions, treaties, other instruments

Tuvalu has ratified numerous environment-related international and regional commitments, and remains in general compliance with the spirit of such commitments.

- Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (the “London Convention”), 1972.
- United Nations Convention on the Law of the Sea (UNCLOS), 1982.
- All IMO conventions and protocols relating to the prevention of pollution from ships, 1973-present.
- Parties to the Nauru Agreement (‘Nauru Agreement Concerning Cooperation in the Management of Fisheries of Common Interest’), 1982.
- South Pacific Nuclear Free Zone Treaty (‘Rarotonga Treaty’), 1985.
- Vienna Convention for the Protection of the Ozone Layer, 1985.
- Convention for the Protection of Natural Resources and Environment of the South Pacific Region and Related Protocols (SPREP), 1986.
- United States Multilateral Fisheries Treaty, 1987 (as amended).
- Montreal Protocol for the Vienna Convention, 1987.
- Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, 1989.
- Convention on the Prohibition of Fishing with Long Drift Nets in the South Pacific, 1989
- London Amendment to the Vienna Convention, 1990.
- Rio Declaration on Environment and Development, 1992.
- United Nations Framework Convention on Climate Change (UNFCCC), 1992.
- United Nations Convention on Biological Diversity (CBD), 1992.
- Copenhagen Amendment to the Vienna Convention, 1992.
- Niue Treaty in Fisheries Surveillance and Law Enforcement, 1993.
- UN Chemical Weapons Convention, 1993
- United Nations Convention to Combat Desertification, 1994.
- Convention to Ban the Importation into Forum Island Countries of Hazardous and Radioactive Waste and to Control the Transboundary Movement and Management of Hazardous Waste within the South Pacific Region (Waigani Convention), 1995.
- Amendment to the Basel Convention, 1995.
- Kyoto Protocol to the UNFCCC, 1997.
- Basel Protocol on Liability and Compensation for Damage to the Basel Convention, 1999.
- Cartagena Protocol on Biosafety to the CBD, 2000.
- Stockholm Convention on Persistent Organic Pollutants (POPs), 2001.
- Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific (the ‘Tuna Convention’), 2004.
- Paris Agreement to the UNFCCC, Apr. 2016.

10.6 National Committee for the Compliance Action Plan

In existence since 1999, this Committee oversees the implementation of the National Compliance Action Plan (NCAP). Several targets set out in the plan, in particular phasing out the use of petroleum products by 2020, has surprised some countries. The goal is to

reduce the consumption of petroleum products by 2020 as far as investment in renewable energy (RE) and practicality will permit, and dependent upon the speed at which aid funding is made available. The reduction target also applies only to the power sector – not transport – switching electricity generation from diesel-based to renewable-based, mainly solar

PV with some prospects for wind power and biofuels. Tuvalu’s goal of increasing RE penetration in the power sector will continue well beyond 2020, with a current target date of 2025 for maximum RE penetration (see the NDC discussion in **Section 1.5** and elsewhere).

10.7 Ocean fish stocks

Distant water fishing nations (DWFN) operate in Tuvalu’s EEZ under annual licenses issued to them for a fee. Income from fishing licenses is the biggest recurrent revenue item in GOT’s annual budget, in recent years between A\$10m to just over A\$32m (2012-15).

To manage oceanic fish stocks, Tuvalu is a party to the Nauru Agreement, the FSM Agreement 1997, the US Multilateral Fisheries Treaty that aim to stop overfishing, restore depleted resources and ensure their sustainable use. Tuvalu is also a member of the Forum Fisheries Agency (FFA) and the Western and Central Pacific Fishing Commission (WCPFC).

10.8 Forest cover

The proportion of land area covered by forest in Tuvalu declined from 43% in 2000 to 33.3% in 2005 (according to SPC data). Although no recent estimates are available, there is some evidence to suggest that forest cover has rebounded since 2005. Primary causes of lost forest cover include land clearance for construction, erosion and saltwater infiltration (according to the TNBSAP 2010 report). FAO’s Global Forest Resource Assessment Report (2010) for Tuvalu noted that there was about 1,000 hectares under forest cover and some 10 hectares of this had been lost between 1990 and 2005. Several islets and large pieces of land were also lost as a result of Cyclone Pam in 2015.

By 2013 some forest area had started to recover due to several tree planting initiatives including the Community Tree Care Project, the TANGO Forest Management Plan 2007, and the Tuvalu Overview Project 2007 that planted seashore mangroves in Funafuti. Also women’s organizations in the outer islands have been active tree planters. In 2015, Funafuti’s wartime “borrow pits” were filled in by an NZ-funded project, which has up to 7.2 hectares of

useful land on Funafuti, primarily on *Fogafale* islet, but including the infilling of the largest borrow pit at the northern end of Tengako islet. Over time some tree cover will return to these areas, previously barren of trees and vegetation.

10.9 Sea level rise

The prospect of sea level rise is a profound existential threat, facing not only Tuvalu but other atoll nations (Kiribati, Maldives, Marshalls, Tokelau), and all low-lying areas around the world. The United Nations’ Intergovernmental Panel on Climate Change (IPCC), many other international agencies, and broad scientific consensus believe that man-induced climate change is real and sea-levels are rising. In Tuvalu sea-level rise is happening and its impacts are changing people’s way of life.

Tuvalu leaders have been unanimous in their campaign to fight against the prospects of climate change and sea-level rise, and the root cause. GOT will take the fight to the next level, recently declaring that Tuvaluans will not lie down and become environmental refugees; they will stay in Tuvalu and build whatever protection is required to combat rising sea levels, the central theme of the National Summit in November 2015, which underpins TKIII.

Sea levels are monitored with equipment installed by Geoscience Australia and SOPAC in Funafuti. Sea levels are trending upward, adjusted for inverted barometric pressure effects, by +4.77mm per year to-date. A foreshore erosion study conducted by Japan in 2010 led to the project, Eco-Technical Management of Tuvalu against Sea Level Rise. This project 1) assessed ecosystems and the effects coastal erosion, and the protection/rehabilitation of damaged areas; 2) developed plans for sustainable measures to prevent coastal erosion and implement coastal protection; and 3) looked at strengthening the capacity of institutions and island communities to better manage coastal areas. These initiatives will continue, and be further developed, under TKIII.

11. Migration and Urbanisation

GOAL: Mitigate the adverse impacts of internal migration and urbanisation; capitalise on opportunities offered by migration and urbanisation



TKIII links with SDG 11 and its relevant targets, in broad reference to human settlements, urbanization, and environmental impacts that relate to Tuvalu's unique circumstances.

11.1 The nature of internal (and external) migration

What is driving internal migration in Tuvalu is similar to forces operating in neighboring Pacific island countries, in particular the Cook Islands, Kiribati, Marshall Islands, Samoa and Tonga: people move from the outer islands (or countryside) to urban centers, and some move onward to other countries, in search of paid work, new opportunities and lifestyles. Decentralisation of services and the devolution of power and government administration to local island councils have been tried in each of these countries. Tuvalu – through the *Falekaupule* Act 1998 – is no exception: The investment returns, in terms of increasing sustainable employment and development in the outer islands, have been disappointing.

Economic and commercial investment in distant outer regions of other PICs is often seen as opportunities to earn money to pay for internal relocation and emigration. Developing Tuvalu's outer islands, to increase local economic opportunity and stem internal migration, poses the same set of challenges as those of 20 years ago.

Still, GOT remains committed to outer island development, believing that life and opportunity can be improved if the right incentives, and the physical and socioeconomic infrastructure, are in place. This objective is derived in part from a stated GOT policy on climate change (see **Section 1, 9, and 10**): Tuvaluans will stay in Tuvalu come what may.

Under TKIII, the government will put its weight behind building, improving and upgrading OI infrastructure, as recommended in the National Population Policy 2010-2015 (**Box 11.1**), and emphasised by each outer island community during public consultations for TKIII.

Box 11.1 – Tuvalu Population Policy Goal 2

Policy Goal No. 2: Retain population in outer islands and create a more balanced age structure.

Strategies to achieve policy goal no. 2:

- Improve all types of infrastructure in the OIs, including power, water, shipping, housing for teachers and nurses, etc.;
- Improve the delivery of basic social services;
- Facilitate the development of private businesses (including the provision of microcredit);
- Make OIs more attractive for youth by giving them a greater decision-making role and expand recreational/other facilities; and
- Explore the possibility of introducing a "managed migration scheme" on OIs [unrealistic; not explored].

11.2 Urban population growth

Urbanization presents a number of social, economic and environmental challenges. Each are the responsibility of the national government, the Funafuti *Falekaupule* (local government), and the Funafuti community itself.

Funafuti Atoll has become increasingly urbanised over the last 25 years and is under severe population pressure. The 2012 census found that 57% of the country's population now live on Funafuti, compared to 47% in 2002. The population density, just over 1,600 in 2002, is over 2,220 people/km² in 2012 – and increasing. Fogafale islet, the 1.43 km² seat of government where over 98% of Funafuti residents live (the other inhabited islets are *Tegako*, *Amatuku*, *Mulitefala* and *Funafala*), population density rises to 4,225/km².

Many social, economic and environmental problems that result from such a high population density, coupled with the difficulties they present for government, create a less than ideal urban landscape. Shortages of water catchment and storage, causing periodic water shortages, poor liquid and solid waste disposal, unplanned and inadequate housing, degradation of Funafuti's fragile ecosystem (marine and terrestrial), and congested, unsanitary living conditions are challenges that need to be tackled quickly to avoid compounding these problems in the future (**Box 11.2**).

Box 11.2 – Tuvalu Population Policy Goal 3

Develop an urban environment.

- Strategies to achieve policy goal no. 3: Develop an urban management plan for Funafuti, including a system of land zoning;
- Review, finalise and implement/enforce a national building code [see Section 9.5];
- Design and implement a recycling scheme for reusable waste (plastics, metal, paper, etc.); and
- Strengthen environmental health programmes (water quality, sanitation, food safety, vector control) [see Sections 5.7, 8, 9.3 and 10].

Land reclamation from the Funafuti lagoon is one solution to the twin problem of limited land and population density, building up is another. Other population-related problems on Funafuti are solvable, but will require substantially higher funding investment than is available at present.

The flip side of urbanization is the depopulation of the outer islands, especially of working-age adults, which deprives them of critical manpower for day-to-day employment and island development. Depending upon the circumstances of each outer island and its functional needs for administration, management, service provision, and economic expansion and development, there is a population threshold below which catering for these needs become increasingly difficult the smaller the population.

11.3 International migration

More people emigrate from Tuvalu each year than arrive to reside permanently. Only in 2006, during the repatriation of Tuvaluans from Nauru, including dependents and sponsored immigrants, when some 600 people exceeded the outflow of emigrants. Aggregate migration between 2002 and 2015, excluding 2006, has seen a net outflow. The loss of skilled labour has been particularly acute (from the medical profession, other professional ranks, experienced senior public servants), leaving gaps in the labour force that are becoming increasingly difficult to fill from within the remaining labour force. For doctors, teachers, and other professionals, labour shortages are

mostly filled by specialist recruits from other PICs, Australia, New Zealand, and the ROC.

At present, the international migration pattern is split between migration-for-work – often short-term (temporary), requiring workers to return home – and permanent emigration, but predominated by the former. About 400 people have participated in New Zealand's 'Recognized Seasonal Employer' (RSE) programme that started in 2008 (for NZ's PAC programme – **Box 11.3**). Australia launched a similar temporary work programme in 2013 that recruited 24 Tuvaluans. Seafarers continue to work on 1-2 year contracts on overseas merchant ships but their number has fallen from highs of 400-500 in the late 1990s to less than 100 in 2015. Tuvalu seafarers are no longer price competitive, and seafarer equipment and technology training is outdated. It was once estimated that from 2010 approximately 600-700 Tuvaluans would be employed on overseas ships, a projected 40% increase from 2002. Due to structural shifts in the industry, seafarer employment is unlikely to again reach even historic heights of 400-500 (see **Section 6.5** for more discussion).

Box 11.3 – Seasonal employment recruits and planned migration

Recruits for migrant employment were once selected by the island falekaupule, on the basis of demonstrated support for community work. This method of selection produced poor results, which came close to terminating labour recruitment by Australia/NZ authorities. Subsequent worker selection by GOT committee has produced much better results and saved the schemes from being shut down.

New Zealand's 'Pacific Access Category' (PAC) has an annual quota of 75 Tuvaluans a year to enter NZ, provided they have a job offer from a perspective NZ employer. According to GOT's Labor Department (DOL), by 2015 some 331 Tuvaluans had migrated to NZ under the PAC and 26 have received permanent residency status under the terms and conditions of the PAC scheme. The 2006 New Zealand census enumerated 2,600 people of Tuvalu descent residing in the country. The number has grown significantly since then.

DOL plans to continue its efforts to improve the reputation of Tuvalu workers to increase demand in Australia and NZ. The Australia and NZ market for labourers in the horticulture and viticulture industries is relatively large, offering an opportunity to expand these migrant schemes, as well as fill vacancies in other industries if the reputation of Tuvalu migrant workers attracts more offers of employment.

11.4 Outward migration policy

The objective of the National Labor Migration Policy (NLMP) is to assist Tuvaluans to access temporary and permanent employment in overseas markets, as mentioned above, by matching skills to labour demand while equipping workers with the skills and experience they need. Regional initiatives such as the Pacific Labour Migration Framework, which is designed to facilitate the movement of workers in the Pacific region, and trade and investment pacts such as the Pacific Agreement on Closer Economic Relations (PACER) Plus, and other initiatives, will make it easier for job seekers to better access employment opportunities in the region. Under

TKIII, GOT will expand overseas employment for suitably qualified individuals through private, bilateral and multi-lateral means.

11.5 Remittances

Remittances from Tuvaluans working on short-term contracts abroad and from those living permanently outside Tuvalu make a large contribution to the Tuvalu economy, in recent years as high as 30% of GNI. This share could grow higher with greater labour movement within the region. Remittances are a direct welfare transfer to individual households, which is highly efficient, in most cases the most efficient. In 2002 remittances from abroad was a main income source for 18% of all Tuvalu households, and 26% in the outer islands. (In Nanumaga remittances accounted for 78%.)

By 2015 remittance income accounted for 40% of household income in Tuvalu, second only to wages and salaries. Half of all households (51%) received remittance transfers from overseas, with 77% of Funafuti households receiving remittance income, and 31% of households in the outer islands.

Increasing remittance transfers – directly or indirectly – through temporary overseas employment schemes, emigrant-residency schemes, and general outward migration will remain a priority

of GOT under TKIII, specifically where government policy and initiative can influence temporary or permanent migration opportunities.

11.6 Climate change and migration

Climate change is already contributing to the displacement of millions of people worldwide as extreme weather events become increasingly frequent and intense. It will drastically impact pressures to migrate, particularly in small island states like Tuvalu. But, the potential for Pacific households to use international migration to manage the risks of climate stressors is limited by lack of access to international migration opportunities like RSE and PAC. Also, there is no international and regional migration scheme for climate-induced displacement.

Under the Paris Agreement, parties agreed to request the Executive Committee of the Warsaw International Mechanism on Loss and Damage to establish a taskforce to define appropriate measures to address climate-induced displacement.

The identity of the people of Tuvalu is defined by their deep connection to ancestral lands and the surrounding sea. Climate-induced migration remains a last resort. This is especially true for older generations who wish to remain in Tuvalu. Younger generations, on the other hand, may see migration as the only choice to safeguard their future.

Tuvalu will further explore the issue of climate-induced migration through such initiatives as the development of the Tuvalu Survival Plan and other relevant legislation associated with climate change and migration.

12. Oceans and Seas

GOAL: Conserve the oceans, seas and marine resources for sustainable development



GOT will support efforts to conserve, protect, manage and sustainably use its ocean areas, and implement strategies on coastal zone management and ecosystem-based management, including for fisheries, management, and enhancing national legal and institutional frameworks for the exploration and sustainable use of living and non-living resources. These strategies key off UN SDG 14.

To protect its resource rights, GOT will use the United Nations Convention on the Law of the Sea (UNCLOS), which provides the legal framework for the conservation and sustainable use of oceans and their resources.

12.1 Exclusive Economic Zone

Tuvalu's 900,000 km² exclusive economic zone (EEZ) lies between Kiribati to the north and northeast, French Wallis and Futuna and Fiji to the south, and the Solomon Islands to the west, as well as two areas of high seas to the east and west. The distribution tuna in the southwest Pacific shifts eastward into Tuvalu's EEZ during El Nino years, and westward in La Nina years. Fishing fleets of Distant Water Fishing Nations (DWFN) follow the tuna

distribution each year and off-load or transship their catches in ports in Asia and Pacific island countries including American Samoa, Solomon Islands and Papua New Guinea. Transshipment in Funafuti increases dramatically during El Nino years. Catches in Tuvalu waters are typically 50-60,000 tonnes per year, about 3-4% of the total WCPO (Western Central Pacific Ocean) catch.

12.2 Tuna stocks, fisheries institutions and agreements

The estimated size of the annual tuna stock that passes through the southwest and central Pacific is well known. Most is caught by DWFN and sold abroad with little or no local value-added to any but a few regional economies. Stocks of skipjack tuna – the most important for Tuvalu – are still robust, although fishery expansion in Indonesia, the Philippines and Vietnam is cause for concern. Yellowfin and albacore tuna fisheries are thought to be at the limit of their expansion potential, and the economics of albacore have worsened in recent years due to depletion of larger fish. The fourth main species, bigeye tuna, is overfished and still subject to overfishing, with stocks estimated

to be only 16% of their unfished state. Tuvalu is aware of these issues and works within regional fisheries institutions, such as FFA and WCPFC, to guard against them, while also attempting to avoid a disproportionate burden of the fishery management measures that impose high costs on SIDS but whose benefits accrue to developed nations. Tuvalu also honours regional and international agreements that conserve, protect and restore threatened species and the marine ecosystem. Protection of the pelagic fishery is a Pacific regional responsibility, and cannot be achieved by any one country acting alone. As a member state of FFA and a party to the Nauru Agreement, Tuvalu works with other PICs to set clear fisheries policies and vigorously enforce them.

12.3 Artisanal fisheries

Coastal fish stocks are vital supply sources for subsistence and artisanal fishing. Funafuti's coastal fish stocks appear to have been depleted to some extent in recent years due to overfishing – though this is not certain – and has been compensated for by broadening catches farther from shore. A rich biodiversity in marine life still exists, but less so that what is found in the outer islands with lower populations and less demand placed on artisanal fish stocks. According to studies by the Department of Fisheries, eutrophication (depletion of oxygen and the collapse of complex food webs into simpler algae-dominated systems) in the Funafuti lagoon has been a growing problem for several decades, caused by organic run-off and nutrients leaching from poor or non-existent sewage septic systems – mostly household – and other sources. The fundamental problem with these systems – basic or not – is their inability to export excess nutrients away from the lagoon. (No amount of sewage treatment gets rid of the fertiliser created from even treated sewage, which, however, can be valuable for agricultural production to offset food imports. It's a trade-off. The problem is the excess waste that has to be removed using ocean disposal.) Near-shore lagoon ecosystems, e.g. reefs, have already been damaged, some severely, with most of organic pollution emanating from the densely populated urban areas of Funafuti (Fogafale islet).

Under TKIII, the Department of Fisheries will monitor, and explore methods to prevent and manage, polluted coastal areas. DOF will conduct surveys of coastal marine life throughout Tuvalu, establish biodiversity baselines and fish stock levels, and produce plans to control marine pollution and rejuvenate marine life in coastal areas. The programme will develop its own information database and work with island Kaupule to develop coastal protection plans, including plans for better sewage disposal (**Box 12.1**).

Box 12.1 – The sewage disposal problem

Alternative methods of sewage disposal on Funafuti must be explored, including reticulated sewerage and direct discharge of untreated sewage into the deep ocean, which has the capacity to easily absorb and attenuate the nutrient loads from populations much larger than that on Funafuti. This should include estimates of infrastructure and funding requirements – besides capital, O&M costs including long-term engineering and other technical expertise to operate the system, from collection to pumping, treatment and disposal. Some donors beginning to show interest in supporting such an initiative.

It should be emphasized that coastal fisheries are of equal importance to oceanic fisheries, but for different reasons. In addition, while there is continuity in coastal fisheries work from TKII to TKIII, there are new areas of coastal fisheries that reflect how work in the sector is evolving.

12.4 Other measures and initiatives

While practicing prudent environmental conservation and management of Tuvalu marine areas, to protect fish stocks and biodiversity, and otherwise maintain healthy marine ecosystems, the government will explore the development potential of other oceanic resources. This includes marine areas for new, sustainable fisheries, marine-based energy resources, marine bioprospecting, and marine and coastal tourism.

**Box 12.2 – Samoa Pathway:
Oceans and seas***

The Samoa Pathway, integrated with TKIII and summarized here, supports efforts to:

- Assess, conserve, protect, manage and sustainably use the ocean resources.
- Research and implement coastal zone and ecosystem-based management, including fisheries, and implement legal/institutional frameworks for the exploration and sustainable use of living and non-living resources.
- Address marine pollution by developing partnerships, including through UNEP's Global Programme of Action to protect the marine environment from land-based activities, such as marine debris, and nutrient, wastewater and other marine pollution.
- Protect coral reefs and other vulnerable marine ecosystems, including from ocean acidification and invasive species - drawing on measures such as those identified in the Framework for Action 2013 of the International Coral Reef Initiative.
- Monitor/control fishing vessels to prevent, deter and stop illegal/ unreported/unregulated fishing.
- Develop small-scale fisheries and initiatives that add value to small-scale fisheries production.
- Build capacity to better use fisheries resources and develop fisheries-related industries;
- Conserve by 2020 at least 10% of coastal/ marine areas, especially ecologically important ones to protect biodiversity and ecosystem health.

* The Samoa Pathway contains 16 separate areas for oceans and seas. Not all are cited here.

Also to be investigated will be the natural resource potential of Tuvalu's deep seabeds, beyond what is already known – presently, very limited potential based on current costs, technology, known resource base, etc. – with funding assistance from aid donors, possibly private partnerships, and sustained technical assistance from regional organisations to undertake further deep seabed survey work.

12.5 Climate change and ocean impacts

The link between GHG emissions and ocean impacts is well understood science. What it tells us is not reassuring, especially for nearshore ecosystems like those found in Tuvalu, and the broader and more threatening macro impacts such as ocean acidification, fisheries disruption, and of course, rising sea levels. These are the ocean-related issues Tuvalu must deal with, many of which are well beyond Tuvalu's control. What Tuvalu can control, adapt to or manage, will be the practical focus of TKIII. Including a wide range of other non-climate related marine issues, the Samoa Pathway for oceans and seas lists doable actions to respond to the threats and challenges that now confront Tuvalu.

13. Implementation, Monitoring and Review**13.1 Accountability**

The government will be held accountable for reporting on TKIII. Reports to parliament and the public will include the overall performance of TKIII implementation and resource use, including:

- budget allocations and expenditures;
- the use of aid funding;
- the present state of progress on improving social and economic services; and
- administrative equity and justice.

To meet the government's accountability obligation, a system will be set up to monitor and review progress on TKIII implementation. Government attaches the highest priority to the accountability process, the same high priority it will attach to pursuing the implementation of TKIII goals and objectives, the pursuit of practical and doable actions, and the delivery of results to the people of Tuvalu.

13.2 Implementation

The twelve strategic areas set out in TKIII, defined at the NSSD, summarise the direction of Tuvalu's future development. Specific development strategies outlined in TKIII will be implemented by government ministries, departments, public enterprises, local island governments, NGOs, and the private sector over the five years to 2020 – and the longer TKIII

vision beyond. Ministries and departments will follow TKIII objectives and strategies, their own internal corporate plans and annual operational plans, which have informed TKIII. Operational plans should be developed concurrently during the annual government-wide budget process, in the second half of each year, and finalized in the December-January period following passage of the Appropriations Act at the December session of Parliament. This means a ministry's operational plans, by definition, are linked to ministerial budget appropriations.

TKIII outputs, contained in each ministry's operational plans, which are defined by its budget appropriations, will be reported each quarter to the Ministry of Finance in the format below. This Quarterly Monitoring Report (QMR) will contain information about ministry programs and activities underway in relation to TKIII strategies, how they are being implemented, and how progress and results are being measured. Operational plans should cover the current year and two forward years.

Operational plans will be updated, concurrently with annual budget submissions, subject to progress made on TKIII implementation, previous year funding allocations, and the annually updated (6-year) Medium-Term Fiscal Framework (MTFF), developed by the Ministry of Finance and approved by Cabinet.

Two-year projections for operational plans and budgets will be based on existing budgetary trends, and assumptions underlying future domestic revenue estimates and indicative aid funding estimates.

13.3 Monitoring and review

TKIII progress will be reviewed regularly. An annual government progress report will be tabled in Parliament at the December session. Annual reviews will highlight:

- the preceding year and next multi-year budget framework; and
- links with the national and sectoral strategies that have been implemented.

The reviews will also summarize quarterly monitoring reports, which feed into the annual budget process (and operational plans), plus they will address any recommended changes, adjustments to existing policies and/or TKIII plans and strategies. As with TKII, and normal budget operations, sector budget priorities and funding allocations will be agreed between the Ministry of Finance, who sets macroeconomic policy, and ministries and departments who set their own funding priorities. Public corporations, NGOs and other civil society organizations – those who receive government operational support or budget subsidies – will also submit operational plans to the government ministry to which there are responsible in support of their funding requests for the following financial year. All operational plans will be subject to periodic government monitoring and evaluation (M&E), as illustrated below.

Example of Quarterly Monitoring Report Format Strategic Area 4: Health and Social Development

Outputs	Who	Inputs	Results	Budget Exp. to-date Planned exp
Reduce poverty & hardship.	MHARD, CSD	<ul style="list-style-type: none"> • Updated social data/pop. surveys. • Data analysis of old and disadvantaged pop. • Biannual Social Well-Being Report on the disadvantaged. 	<ul style="list-style-type: none"> • Hardship Assist. Policy (HAP). • Consultations on HAP. • Cabinet review, comment and approval of HAP. 	<ol style="list-style-type: none"> 1. A\$10,000 2. A\$2,50 3. A\$7,50

A TKIII Monitoring and Evaluation (M&E) Unit will be set up. This Unit will act as the hub for the broad TKIII planning activities throughout the country. The M&E Unit in particular will act as the secretariat for the Development Coordinating Committee (DCC) in matters relating to TKIII implementation, coordination and review.

Ministries and departments will have their own M&E units, as may be required, using a subset of existing staff, to advise their Ministers on the progress of TKIII implementation, as well as changes to ministry policies that may be required. Each ministry will provide their quarterly reports to the M&E Unit.

The Ministry of Finance will use its powers provided under the Public Finance (Control and Audit) Act to enforce TKIII reporting requirements. For example, penalties could be imposed on ministries, public enterprises and NGOs by withholding appropriated funds allocated to them if they fail to submit operational plans, quarterly reports, and, in the case of public enterprises, annual businessplan

ANNEXES 1-12

Strategic Areas



ANNEX 1: Strategic Area 1: Climate Change Matrix

Goal: Protect Tuvalu from the impacts of climate change: resilience, mitigation, adaptation

Key Performance Indicators	Milestones				2019/2020	Implementation
	2016	2017	2018	2018		
<ol style="list-style-type: none"> Area of coastline reclaimed from erosion, cyclones and storm surge. Sea defenses built in all islands of Tuvalu. Annual incremental growth of the Tuvalu Survival Fund (TSF). Climate change and disaster resilience integrated into national policies and plans. National climate change legislation adopted. National and island Disaster management plans implemented. Paris Agreement and Sendai Framework on Disaster Risk Reduction signed/ratified. 	<ol style="list-style-type: none"> Area of coastline reclaimed from erosion, cyclones and storm surge. Sea defenses built in all islands of Tuvalu. Annual incremental growth of the Tuvalu Survival Fund (TSF). Climate change and disaster resilience integrated into national policies and plans. National climate change legislation adopted. National and island Disaster management plans implemented. Paris Agreement and Sendai Framework on Disaster Risk Reduction signed/ratified. 	<ol style="list-style-type: none"> Area of coastline reclaimed from erosion, cyclones and storm surge. Sea defenses built in all islands of Tuvalu. Annual incremental growth of the Tuvalu Survival Fund (TSF). Climate change and disaster resilience integrated into national policies and plans. National climate change legislation adopted. National and island Disaster management plans implemented. Paris Agreement and Sendai Framework on Disaster Risk Reduction signed/ratified. 	<ol style="list-style-type: none"> Area of coastline reclaimed from erosion, cyclones and storm surge. Sea defenses built in all islands of Tuvalu. Annual incremental growth of the Tuvalu Survival Fund (TSF). Climate change and disaster resilience integrated into national policies and plans. National climate change legislation adopted. National and island Disaster management plans implemented. Paris Agreement and Sendai Framework on Disaster Risk Reduction signed/ratified. 	<ol style="list-style-type: none"> Area of coastline reclaimed from erosion, cyclones and storm surge. Sea defenses built in all islands of Tuvalu. Annual incremental growth of the Tuvalu Survival Fund (TSF). Climate change and disaster resilience integrated into national policies and plans. National climate change legislation adopted. National and island Disaster management plans implemented. Paris Agreement and Sendai Framework on Disaster Risk Reduction signed/ratified. 	<ol style="list-style-type: none"> MFED accredited as a National Implementing Entity. 100% renewable energy of power generation by 2025. Percentage in reducing GHG emissions from energy sector below 2010 level. Percentage in increasing energy efficiency on Funafuti. Number of lives lost/saved from disasters. Number of people and property affected by disaster. Percentage reduction in direct disaster loss and damage (relative to national GDP). 	OPM
<p>Governance and Mainstreaming</p>	<ul style="list-style-type: none"> Sign and ratify the Paris Agreement and the Sendai Framework on Disaster Risk Reduction. Formally accredit the Climate Change Unit as the climate change focal point within GOT. Domesticate UNFCCC and other international agreements on climate change and disaster risk reduction into national laws, policies, plans. Disseminate information on the Paris Agreement and raise public awareness on climate change and disaster resilience. Review the Climate Change Policy and the National Strategic Action Plan on Climate Change and Disaster Risk Management. 	<ul style="list-style-type: none"> Review and monitor PA actions. Prepare for the Third National Communication to UNFCCC. Develop a standalone climate change legislation. 	<ul style="list-style-type: none"> Review and monitor PA actions. Mainstream climate change and disaster risk reduction to all sectors. 	<ul style="list-style-type: none"> Specific initiatives will follow on from the 2018 mid-term review. 	<ul style="list-style-type: none"> Specific initiatives will follow on from the 2018 mid-term review. 	<ul style="list-style-type: none"> Specific initiatives will follow on from the 2018 mid-term review.
<p>Financing Climate Change</p>	<ul style="list-style-type: none"> Establish and operationalise Tuvalu Survival Fund. Establish property registration system for all the islands. Secure funds from GOT Budget & foreign public/private organizations. Apply for National Implementing Entity accreditation. Obtain approval of Tuvalu's proposal to the Green Climate Fund. 	<ul style="list-style-type: none"> Develop TSF investment policy, operational framework and payout policy. Update the property registration system. Obtain accreditation of MFED as the National Implementing Entity to the Adaptation Fund and Global Environmental Facility. 	<ul style="list-style-type: none"> Commence annual reporting to MFED on the TSF. Update the property registration system. Obtain accreditation of MFED as the National Implementing Entity to the Green Climate Fund. 	<ul style="list-style-type: none"> Specific initiatives will follow on from the 2018 mid-term review. 	<ul style="list-style-type: none"> Specific initiatives will follow on from the 2018 mid-term review. 	<ul style="list-style-type: none"> Specific initiatives will follow on from the 2018 mid-term review.
<p>Adaptation</p>	<ul style="list-style-type: none"> Develop and integrate coastal zone management plan for inclusion in the National Adaptation Plan. 	<ul style="list-style-type: none"> Develop long term National Adaptation Plan of sea defenses and land reclamation for all islands. Implement GCF coastal adaptation project. 				<ul style="list-style-type: none"> OPM, MFATTEL, MHARD, MPUI

Mitigation	<ul style="list-style-type: none"> Translate INDC into nationally determined contribution. Develop action plans on NDC based on the findings of the National Energy Policy review 	<ul style="list-style-type: none"> Prepare a project proposal for wind power technology. 	<ul style="list-style-type: none"> Specific initiatives will follow on from the 2018 mid-term review. 	OPM, PUI	
Information and Knowledge Management, and Capacity Building	<ul style="list-style-type: none"> Establish professional Project Documentation, Storage and Retrieval System adopted by DoE. Develop, maintain and update database systems for NACC and CDP. Strengthen institutional capacity to develop climate change and disaster resilience proposals. Design and deliver capacity building and awareness raising workshops on climate change and disaster resilience. 	<ul style="list-style-type: none"> Deliver awareness raising workshops to Kaupule on climate change and Environmental Impact Assessment (EIA) and ensure coordination on these with GOT departments. Develop a database of current policies, plan, technical assessments & knowledge products. Strengthen national and community capacity for climate change and disaster resilience. Continue to deliver capacity building and awareness raising workshops. 	<ul style="list-style-type: none"> Develop database including gender disaggregated data & information. Conduct assessment on state of marine & level of resources / ecosystem and share it with relevant sectors. Strengthen national and community capacity for climate change and disaster resilience. Continue to deliver capacity building and awareness raising workshops. 	<ul style="list-style-type: none"> Specific initiatives will follow on from the 2018 mid-term review. 	OPM, MFATTEL, NAPA2 Project, R2R Project
Loss and Damage	<ul style="list-style-type: none"> Identify options for risk transfer and insurance mechanism. 	<ul style="list-style-type: none"> Establish a Survival Plan for Tuvalu (also refer to 'climate-induced displacement' under the urbanization and migration section). Legalise Loss and Damage by amending relevant legislation (also refer to 'climate-induced displacement' under the urbanization and migration section). 	<ul style="list-style-type: none"> Implement Survival Plan for Tuvalu. 	<ul style="list-style-type: none"> Specific initiatives will follow on from the 2018 mid-term review. 	OPM, AG
Disaster Risk Reduction	<ul style="list-style-type: none"> Review and strengthen domestic laws, policies and plans. Secure funds for the implementation of Tuvalu Recovery and Vulnerability Reduction Plan. Develop contingency plans at national and island levels. Strengthen the capacity of disaster committees. 	<ul style="list-style-type: none"> Amend relevant legislation and policies as per recommendations from the review. Implement Tuvalu Recovery and Vulnerability Reduction Plan. Ensure gender and disability perspectives are incorporated into disaster risk management. Implement multi-hazard early warning systems. 	<ul style="list-style-type: none"> Integrate disaster risk management into all sectoral policies and programmes. Implement Tuvalu Recovery and Vulnerability Reduction Plan. Investigate and assess options for financial and social protection against natural disasters. 	<ul style="list-style-type: none"> Strengthen financial and social protection measures against disasters. Prepare for mid-term review of the Sendai Framework for DRR. Review Tuvalu Recovery and Vulnerability Reduction Plan. 	OPM in collaboration with other ministries, IDC's, TRC and other key organisations

ANNEX 2: Strategic Area 2: Good Governance Matrix

Goal: Strengthen institutional capacity to serve the public interest with competence and justice

Key Performance Indicators	<ol style="list-style-type: none"> Number of ministries, departments, SOEs, private sector and NGOs achieving at least 80% of their annual outputs to the approval of their client. Number of GOT organizations, NGOs and private sectors operating to their Corporate and Operational Plans during the year. Number of breaches of the Leadership Code in the year. Incidence of Abuse of Office prosecuted and convicted in a Court of Law. Number of community consultations that lead to change in government policy. Number of training in ethical leadership and management. Number of cases decided by the Ombudsman. Number of court cases decided against GOT in any Court of Law. 			
Strategies	Milestones			
Law Reform & Constitutional Review	2016	2017	2018	2019/2020
	<ul style="list-style-type: none"> Review Tuvalu laws to align them ratified international conventions Country Report to the UN on Human Rights. 	<ul style="list-style-type: none"> Hold referendum on Constitutional Review. Review/amend Environment Act & submit to Parliament for passing into Environment Act 2017. 	<ul style="list-style-type: none"> New constitution reviewed and passed by Parliament. Enforce the Public Broadcasting Act 2014. 	<ul style="list-style-type: none"> Awareness workshop on Leadership Code.
Strengthen Public Sector Management	<ul style="list-style-type: none"> Staff assessment annual reports based on their JOB description. Develop & finalize in-service Training Policy for Civil Service, SOE and private agencies. Annual Reports from all ministries, depts. & SOE. Appoint more staff to office of Ombudsman. Contract Out Permanent Secretary positions. 	<ul style="list-style-type: none"> Workshop on Good Governance for public servants. Review and streamline govt processes to improve efficiency. Annual reports from all ministries, depts. & SOE. Performance management guidelines are integrated into day to day business operations. 	<ul style="list-style-type: none"> Study on automation of govt. administration. Annual reports by ministries, depts. and SOE. DPT holds 1-day workshop for each ministry. 	<ul style="list-style-type: none"> Annual Reports.
Public Sector Reform	<ul style="list-style-type: none"> Review Public Service. Human Resource Development Plan implemented in the Public Service. Performance based management. Review GAO rules governing public servants owning businesses. 	<ul style="list-style-type: none"> Continue review public service. Create independent Public Service Commission. 	<ul style="list-style-type: none"> Review GOT depts. for corporatization. SOE corporate & operational plans. 	<ul style="list-style-type: none"> Implementation

Strengthen Border Security Management	<ul style="list-style-type: none"> Train Mataili crew in border management with Aust. Border Management Dept. Review passport & citizenship legislation. 	<ul style="list-style-type: none"> Build Search and Rescue (SAR) Center. Develop an SAR Plan of Action. Design more robust passports & travel documents. 	<ul style="list-style-type: none"> Establish a Border Security Dept. Equip border security system with satellite surveillance capability. 	<ul style="list-style-type: none"> Draft SAR Bill specifying the functions and responsibilities of SAR. Enact SAR legislation. Arrange for arrival visas for Tuvalu passport holders in other countries, esp. Pacific countries. 	OPM, TPS, AG
Strengthen the Office of the Auditor General	<ul style="list-style-type: none"> Amend Audit Act to enable Audit Office to have own budget & appoint its own staff. Change appropriate laws to give PAC more power to scrutinize & direct GOT Budgets. 	<ul style="list-style-type: none"> W/shops and in-house training of Kaupule accounts staff and SOE accountants on how to produce auditable accounts. 	<ul style="list-style-type: none"> Training of Kaupule and SOE accountants to produce auditable accounts. 	<ul style="list-style-type: none"> Biennial training programs Lands Court. Reduce the case disposal rate in all courts in Tuvalu to below 90 from 260 days per case. Biannual training prog. For Island Courts staff. 	OAG, OPM, MHARD, AG, PERMU, MFED
Strengthen Management of the Judiciary & accord it more independence	<ul style="list-style-type: none"> Review staff structure of judiciary. Judiciary appoints its own staff; sets its own budget thru OPM. Annual budget no more than 1.5% of GDP in past 2 past years. 	<ul style="list-style-type: none"> Adopt Excel-based Case Management System to improve information, storage and retrieval. Build new court house. Biannual training for Lands Courts Magistrates and court clerks. 	<ul style="list-style-type: none"> Improve security and integrity of court/public records, esp. land, births, deaths and marriage. Biannual training for Island Court Magistrates and clerks. 	<ul style="list-style-type: none"> Biennial training programs Lands Court. Reduce the case disposal rate in all courts in Tuvalu to below 90 from 260 days per case. Biannual training prog. For Island Courts staff. 	SMC, OPM, AG, MFED
Strengthen the role of Parliament	<ul style="list-style-type: none"> Design/build new Parliament bldg. - 50 yr. lifetime. Make Parliament functions more visible. Increase women participation in parliament. 	<ul style="list-style-type: none"> Parliament Office (PO) to prepare its own Budget and Clerk to Parliament to be the Accounts Officer for budget expenditures. Research development of a Parliament Act. 	<ul style="list-style-type: none"> Training Programs for MP and Kaupule on parliamentary business. Review PAC's functions to make it more efficient and effective. 	<ul style="list-style-type: none"> Appointment ICT Officer, Parliament Counsel, & Sergeant-at-Arms. Set up an Information Management Strategy that centralizes all parliament-related information. Review twinning arrangements for cost-free knowledge sharing. 	PO, OPM, MFED, Falekaupule & Kaupule.
Law and Order	<ul style="list-style-type: none"> Tuvalu Police to set up Combined Law Agency Group (CLAG). Administer law and order. Prosecute criminal offenders. 	<ul style="list-style-type: none"> Capacity building in the Police Service according to specific training programs designed to strengthen the Tuvalu Police. 	<ul style="list-style-type: none"> Capacity building in the Police Service according to specific training programs designed to strengthen the Tuvalu Police. 	<ul style="list-style-type: none"> Capacity building in the Police Service according to specific training programs designed to strengthen the Tuvalu Police. 	TPS, AG, MFED
Foreign Relations	<ul style="list-style-type: none"> Review foreign policy. Evaluate overseas missions. 	<ul style="list-style-type: none"> Maintain good relations with friends/allies in UN. 	<ul style="list-style-type: none"> Maintain good relations with friends/allies in UN. 	<ul style="list-style-type: none"> Maintain good relations with friends/allies in UN. 	

ANNEX 3: Strategic Area 3: The Economy – Growth and Stability Matrix

GOAL: Sound macroeconomic management and policy

Key Performance Indicators.	<ol style="list-style-type: none"> Real GDP growth averages 2.5% per annum. Budget deficit equivalent to no more than 11% of GDP. Increase the real value of TTF to AUD \$200 million by 2020. CIF target minimum balance 16% of TTF's maintained value. Increase in Government tax revenue. External debt equivalent no more than 30% of GDP. 			<ol style="list-style-type: none"> Growth in number of tourists coming into the country annually. Growth in contribution to the economy as a % growth of GDP from tourism. Growth in contribution to the economy as a % growth of GDP from copra production. Increase percentage in ODA. Improve Public Expenditure/Financial Accountability (PEFA) assessments. 		
	Milestones			2019/2020	Implementation	
Strategies	2016	2017	2018	2019/2020	Implementation	
	<ul style="list-style-type: none"> Budget deficits less than 25% of CIF minimum balance. Establish M&E Unit in Planning & Budgeting. 	<ul style="list-style-type: none"> Control public service wage bill within a ratio to be agreed upon based on recurrent revenues. 	<ul style="list-style-type: none"> Conduct more audits of tax payers in the private sector 	<ul style="list-style-type: none"> TTF maintained value target of A\$200 million. 	MFED	
Strengthen and develop sound macroeconomic management.	<ul style="list-style-type: none"> Define CSO clearly and pay SOE exactly the CSO amt. 	<ul style="list-style-type: none"> Institute annual cycle of gradual excise rate. 	<ul style="list-style-type: none"> Continuously service debt in a timely manner 	<ul style="list-style-type: none"> Strengthen tax admin. Strengthen litigation for non-compliance. 	MFED, SOE	
	<ul style="list-style-type: none"> Establish a regulatory framework for and conduct an analysis of the banking system. Excise tax and TCT rate review. 	<ul style="list-style-type: none"> Improve quality of debt data recording and reporting. 	<ul style="list-style-type: none"> PFM grading system improved and aligned to w/international fiduciary standards. 	<ul style="list-style-type: none"> Annually invest savings of at least 2% and 1% of GDP in CIF & TSF. 	MFED, AG	
	<ul style="list-style-type: none"> Establish Debt Management Unit to monitor and service national debt. Maintain debt level (external and domestic) below 30% GDP 	<ul style="list-style-type: none"> Fully implement PEFA recommendations. 	<ul style="list-style-type: none"> Save annually at least 2% and 1% of GDP into CIF and TSF respectively. 	<ul style="list-style-type: none"> Annually invest savings of at least 2% and 1% of GDP in CIF & TSF. 	MFED	
	<ul style="list-style-type: none"> Improve grading of PFM & implement PEFA recommendations. 	<ul style="list-style-type: none"> Save annually at least 2% and 1% of GDP into CIF and TSF respectively. 	<ul style="list-style-type: none"> Save annually at least 2% and 1% of GDP into CIF and TSF respectively. 	<ul style="list-style-type: none"> Save annually at least 2% and 1% of GDP in CIF & TSF. 	MFED	

Ensure proactive economic development policies.	<ul style="list-style-type: none"> Review/reform policy & regulatory frameworks for business, labor, FDI, trade, etc. to reflect international best practices and standards. Review GOT's role in the economy, identify privatization most suitable for Tuvalu. 	<ul style="list-style-type: none"> Use investment incentives such as concessions, tax holidays, subsidies in developing trade in services (tourism, elderly caregiving, etc.). Develop strategies to broaden domestic revenue base. 	<ul style="list-style-type: none"> Review operation of PERMU against its objectives. Develop a national lottery legislation. 	MFED, various Boards. e.g., foreign investment, TNPSO, AG
Improve and strengthen partnership and cooperation with development partners.	<ul style="list-style-type: none"> Strengthen development cooperation with aid partners. 	<ul style="list-style-type: none"> Identify and consolidate SOE fiscal risks. Increase number of donors involved in the Policy Reform Matrix. 	<ul style="list-style-type: none"> Identify and consolidate SOE fiscal risks. Increase number of donors involved in the Policy Reform Matrix. 	MFED
Effective and stable financial system that enhances economic growth.	<ul style="list-style-type: none"> Establish database for aid; ensure timely acquittals by DPB. Reform banking system to improve financial services (e-banking) and reduce non-performing loans. Litigate and recover outstanding DBT loans. Implement recommendations of the diagnostic study on the banking System. 	<ul style="list-style-type: none"> Encourage direct budget support thru PRM & PFM. Improve outreach with innovative financial services to the OIs. Strengthen the regulatory framework for financial institutions. 	<ul style="list-style-type: none"> Increase private sector contribution of GDP to 50%. 	MFED, NBT
Explore and exploit trade opportunities.	<ul style="list-style-type: none"> Revitalize trade in services incl. seafarer industry, tourism, labor mobility & fishing. Analytic study of TMT and seafarer industry to determine how best to market local seafarers. 	<ul style="list-style-type: none"> Implement recommendations for trade policy. Implement analytic study recommendations. 	<ul style="list-style-type: none"> MFATEL, DOL, DOT, MNR 	MFATEL, DOL, DOT, MNR
Revive the copra industry and explore opportunities for producing alternative coconut products.	<ul style="list-style-type: none"> Develop a strategic study to reviving the copra industry, and export of other value added products from coconut. Revive TCTC operations. 	<ul style="list-style-type: none"> Stimulate copra exports and other value added products; implement recommendations of a feasibility study. 	<ul style="list-style-type: none"> Implement recommendations of the feasibility study. Increase copra and tonnage for export. 	MFED
Strengthen development and marketing of Tuvalu eco-tourism industry.	<ul style="list-style-type: none"> Improve business development and marketing. MCT to negotiate for lower roundtrip airfares Funafuti-Suva-return. Implement recommendations in the Tourism Sector Plan Develop human resources. Negotiate cruise ship visits. 	<ul style="list-style-type: none"> Update marketing and information practices. Upgrade telecom connectivity across Tuvalu. Continue to implement Tourism Sector Plan. 	<ul style="list-style-type: none"> Market and promote Tuvalu as a tourist destination. Resource owners benefit from greater participation in the eco-tourism industry. Fully implement recommendations of Tourism Sector Plan. 	MFATEL, MCT

ANNEX 4: Strategic Area 4: Health and Social Development Matrix

Goal: Provide high standards of health care, social opportunity, and social protection free of hardship and gender discrimination

Key Performance Indicators	Milestones			Implementation
	2016	2017	2018	
<ul style="list-style-type: none"> 1. Infant Mortality Rate. 2. Under 5 Mortality Rate. 3. Reduce incidence of NCD by 50% by 2018. 4. Reduce incidence of communicable disease by 30% by 2020. 5. Proportion of 1 year olds immunized against polio, measles. 6. Reduced maternal mortality rate. 7. HIV prevalence against population 15-24 years. 8. Proportion of population 15-24 yrs old knowledgeable about HIV/AIDS. 9. Proportion of population with advanced infection with access to antiretroviral infection. 10. Contraceptive prevalence rate. 11. Adolescent birth rate. 	<ul style="list-style-type: none"> 12. Antenatal care coverage. 13. Tuberculosis incidence prevalence & death rates. 14. Percentage of TB detected/cured under observed treatment short course. 15. Welfare assistance provide to those in the hardship category. 16. Proportion of people live below basic national poverty line. 17. Social & Cultural Strategic Action Plan developed/implemented by 2017. 18. Social Work Act developed and implemented by 2017. 19. Percentage of person with disability and older people receiving benefit. 20. Annual incidences of domestic violence, divorce, and suicides reported to the Police and domestic violence center. 21. Proportion of seats held by women in local government and parliament. 22. Number of women visits for uterus check-up. 	<ul style="list-style-type: none"> Diabetes prevalence reduced by 5%. NCD prevalence reduced by 50%. 	<ul style="list-style-type: none"> MOH, MEYS, MFED, MFATEL MOH, MPUI, MHARD MOH MOH, MCT 	
<p>Strategies</p> <p>HEALTH:</p> <ul style="list-style-type: none"> NCD campaign against diabetes and hypertension prevalence. Upgrade health infrastructure. Health staffing; essential medical supplies and equipment. Information computer technology. 	<ul style="list-style-type: none"> Review and enforce all laws relating to food security, hygiene and substance abuse. Build base hospitals in Vaitupu and Nanumea. Annual maintenance plan for all equipment/bldgs. Local Internship Program (LIP) in Kiribati for Tuvalu medical grads. Health & medical database linked to an online telemedicine network. Improve ICT information access/decision-making. 	<ul style="list-style-type: none"> Fiscal incentives on sale of local food products. MOH construction program starts – buildings/ extensions, outpatient wards, storage, etc. All hospitals fully equipped with essential supplies and equip. Post MDs to all OIs. Ol hospitals and clinics linked online to PMH and telemedicine network. 	<ul style="list-style-type: none"> MOH, MEYS, MFED, MFATEL MOH, MPUI, MHARD MOH MOH, MCT 	

Social: Advancing gender equality.	<ul style="list-style-type: none"> Continue to implement 2013 Nat'l Gender Policy (NGP). Set up a gender database. 	<ul style="list-style-type: none"> Build capacity of institutions to mainstream gender into GOT policies. Special temp measures for 2 parliament seats for women. Econ. empowerment of women thru greater participation in business. Implementation of Family Protection Act. 	<ul style="list-style-type: none"> More women in decision-making roles incl. falekaupule, kaupule and parliament End violence against women thru community training, legislation & law enforcement. Improved counselling services. 	OPM, AG, Police
Capacity building and training.	<ul style="list-style-type: none"> Awareness programs on social/community issues. 	<ul style="list-style-type: none"> Cultural awareness raising promotion. 		OPM, MHARD
Legislation	<ul style="list-style-type: none"> Draft Social Work Bill. 	<ul style="list-style-type: none"> National consultations on Social Work Bill. 		AG, MHARD
Departmental restructure and institutional strengthening.	<ul style="list-style-type: none"> Restructuring plan for Social and Community Affairs endorsed by Cabinet. Recruit TA for restructure. 	<ul style="list-style-type: none"> Est. NCSCS to guide & monitor social work. 	<ul style="list-style-type: none"> Establish Cultural DCC. 	MFED, MHARD
Research and feasibility studies.	<ul style="list-style-type: none"> Biannual National Social Well-Being Report on disadvantaged population. 	<ul style="list-style-type: none"> Update social data. Survey for Hardship Assistance Policy (HAP) 	<ul style="list-style-type: none"> Analysis of the status of the old and disadvantaged. 	MHARD
Operational and Strategic Plans and Implementation.	<ul style="list-style-type: none"> Strategic plan on cultural preservation and development. 	<ul style="list-style-type: none"> Integrate disability work into other sectors. Disability policies submitted for Cabinet approval. 	<ul style="list-style-type: none"> Implement findings of HAP policy. 	MHARD

ANNEX 5: Strategic Area 5: Falekaupule and Island Development Matrix

GOAL: Provide quality services and create more opportunities for development

Key Performance Indicators	Milestones			Implementation
	2016	2017	2019/2020	
<p>Strategies</p> <p>Capacity Building for Rural Development.</p> <p>Restructuring Dept. of Rural Development.</p> <p>Improve transport and communication to outer islands.</p> <p>Research & feasibility studies.</p> <p>Provision of waste management services.</p> <p>Operational and Strategic Plans.</p> <p>Improving Telecom services.</p>	<p>1. Number of attendees to formal Budget and Bye Law sessions of Falekaupule.</p> <p>2. Falekaupule Act in force balancing traditional and modern governance.</p> <p>3. Number of new services decentralized to the outer islands.</p>	<p>4. Telecommunication service working well in all islands.</p> <p>5. Improve shipping services to the outer islands.</p>		
	<ul style="list-style-type: none"> Train elected local leaders for competency. Awareness program on Falekaupule Act. 	<ul style="list-style-type: none"> Conduct training on Financial and Project mgmt. for Kaupule staff. Formulate Project Guidelines Special training on how to make report for Kaupule staff. 	<ul style="list-style-type: none"> Adopt and ratify UN Waste Convention and implement its provisions, esp. training. 	MHARD, CLGF, AGO
	<ul style="list-style-type: none"> Formulate the reorganization by technical assistant (TA) Seek cabinet approval and funding. 	<ul style="list-style-type: none"> Implement the reorganization. Review FTF deed. 		MHARD, CLGF
	<ul style="list-style-type: none"> Feasibility study on domestic transportation (sea and air). Design boat schedule to meet MHARD needs for consultations/M&E/trainings and delivery of projects materials. 	<ul style="list-style-type: none"> Ministry to provide Kaupule with a dedicated bandwidth. Ministry/Kaupule to recruit ICT officers. 		MCT
	<ul style="list-style-type: none"> Study to improve sea and air transport to outer islands. MHARD to involve in design of Tuvalu Quarterly Ship Schedule Develop Tuvalu Integrated Solid Waste Plan (TISWP). 	<ul style="list-style-type: none"> Survey to determine hazardous and medical waste. Waste Survey to obtain data for planning. Study how to improve Funafuti dumpsite. 	<ul style="list-style-type: none"> Do feasibility study on a transfer and recycling station for Funafuti. External transfer and recycling station in Ols. 	MHARD, MCT, CSD
	<ul style="list-style-type: none"> Implement Funafuti dumpsite study. Implement the TISWP. 	<ul style="list-style-type: none"> Identify/acquire equip. & machinery for waste disposal. 		MHARD
	<ul style="list-style-type: none"> Write a National Waste Policy (NWP) and seek Cabinet approval to guide waste disposal in the Country. 	<ul style="list-style-type: none"> TA set up User Pay Program for Waste Management with charges collected by the Kaupule. 		MHARD
	<ul style="list-style-type: none"> Kaupule equipped with dedicated bandwidth. 	<ul style="list-style-type: none"> ICT Officer recruited for Kaupule. 		MCT, TTC

ANNEX 6: Strategic Area 6: Private Sector, Employment and Trade Matrix

GOAL: To be the engine of economic growth, employment and export trade

Key Performance Indicators	Milestones				Implementation
	2016	2017	2018	2019/2020	
<ol style="list-style-type: none"> Annual number applicants to start business to the Foreign Investment Act. Ratio of new business to total businesses in the year. Ratio of new business loans to existing business loans of financial institutions. Ratio of new jobs to existing jobs per year. Number of active employee accounts with NPE. Number of consultations between GOT and TNPSO about business development. Consumer Protection Council established and operating. 	<ol style="list-style-type: none"> 8. Type of information provided to businesses by the Department of Trade. 9. Number of Tuvaluans employed in overseas labour markets per year. 10. Per capita GDP growth rate. 11. Value of trade on Goods and Services increased. 12. SMEs registered for imports and exports trade. 13. Increase remittances. 				
Strategies	Milestones				Implementation
PRIVATE SECTOR					
Enhancing the development of the private sector	<ul style="list-style-type: none"> Develop a plan to support private sector development. Conduct a demand and supply assessment of tradable products. Develop eco-tourism products. 	<ul style="list-style-type: none"> Increase financial support/access to credit for business, provided annual financial reports are submitted to MFED. Seek finance to start a business incubator model for entrepreneurs. 	<ul style="list-style-type: none"> Improve data collection on trade. Improve biosecurity and quarantine measures. Applications for FDI are up. 	<ul style="list-style-type: none"> Improved local food production. 	MFED, NBT, ADB, TNPSO
Price Control according to regulation	<ul style="list-style-type: none"> Appoint 2 more Price Controllers. 	<ul style="list-style-type: none"> Mount training for Price Controllers. 			MFED
Increase business skills and awareness	<ul style="list-style-type: none"> Entrepreneur training program started, to include youth and women. 	<ul style="list-style-type: none"> Entrepreneur training program continues, incl. in the OIs. 			MFED, TNPSO
Monitoring progress of businesses	<ul style="list-style-type: none"> Businesses submit their annual business plans to DBI (optional). 	<ul style="list-style-type: none"> Business Annual Report to MFED. 	<ul style="list-style-type: none"> Business annual report 	<ul style="list-style-type: none"> Business annual report 	MFED
EMPLOYMENT					
Increase the number of Tuvaluans employed overseas	<ul style="list-style-type: none"> Liaise often with employer-farmers who employ Tuvaluans to check on their progress. Encourage RSE/SWP workers to be model employees. 	<ul style="list-style-type: none"> Diversify employment into other sectors e.g. fishing, mining. Etc. in Australia and NZ 	<ul style="list-style-type: none"> Reduce airfares Fun-Suv-Fun for seafarers and those on work schemes. 		MFATTEL
					MFATTEL

ANNEX 7: Strategic Area 7: Education and Human Resources Matrix

Goal: Provide high quality education; equip people with knowledge and skills to develop more self-reliance; promote Tuvalu's cultural and spiritual values

Key Performance Indicators	Milestones				Implementation
	2016	2017	2018	2019/2020	
<ol style="list-style-type: none"> Maths, Science Graduate Teachers: Pupils ratio in Primary, Secondary in all schools. Teacher: Pupil ratio in Primary and Secondary in all schools. Net enrolment in primary education. Proportion of pupils who start at grade 1 and reach last grade of Primary. Ratio of annual budget allocation for primary education to total education budget. 	<ol style="list-style-type: none"> 6. Ratio of annual budget allocation for technical/vocational education to total education and training budget. 7. 2010 Class Motufoua and Fetuvalu where they are in 2015 and 2020. 8. Pass rate at final examinations in primary and secondary schools in Tuvalu. 9. Percentage of TMT graduates who find work on overseas vessels 2010-2015. 				
Strategies	Milestones				Implementation
Strengthen coordination of human resource priorities	<ul style="list-style-type: none"> Formulate a Human Resource Training Plan matching labour needs with employment demand over the next 5 years. 	<ul style="list-style-type: none"> Implement the Human Resource Training Plan. 	<ul style="list-style-type: none"> Unemployment rate down thru improved identification and coordination of training priorities. 	<ul style="list-style-type: none"> Unemployment rate reduced by 10-20%. 	MEYS
Manage and improve government scholarships	<ul style="list-style-type: none"> Review and rationalize GOT scholarship and training programs, incl. those donor-funded. S&T program approved by Cabinet. 	<ul style="list-style-type: none"> Strengthen performance monitoring of scholarship recipients. Maintain a robust selection criteria based on merit. Provide ongoing counselling and support for scholarship students. 	<ul style="list-style-type: none"> Minimize failure rate. Provide regular support services for scholarship awardees. 	<ul style="list-style-type: none"> Toward 100% completion rate for all government scholarships awardees. 	MEYS
Realize an inclusive pre service scholarship scheme for formal and vocational training	<ul style="list-style-type: none"> New scholarship and training program above: academic and vocational streams. 	<ul style="list-style-type: none"> Different student capabilities for scholarships recognized for counselling. 	<ul style="list-style-type: none"> Nepotism in the selection process eliminated. Merit-based only selection process. Equal opportunities thru vocational training. 	<ul style="list-style-type: none"> Increased equal government scholarship opportunities for academic and vocational training. 	MEYS

Reduce Youth Unemployment	<ul style="list-style-type: none"> • Create youth employment incentives and opportunities in business development. • Offer youth higher lending amounts to start small businesses. 	<ul style="list-style-type: none"> • Improve quality of private and public services offered to youth. 	<ul style="list-style-type: none"> • Continuously offer youth incentives for business development. 	<ul style="list-style-type: none"> • Reduce rate of youth unemployment. 	MEYS
Introduce Alcohol and Tobacco Consumption Tax	<ul style="list-style-type: none"> • Enforce under-15 restrictions on purchasing alcohol and cigarettes. • Promote awareness of health impacts on excessive alcohol and cigarette consumption. 	<ul style="list-style-type: none"> • Review and promote formal and informal initiatives educating youth in alcohol and cigarette consumption. 	<ul style="list-style-type: none"> • Increased rate of youth completing formal and informal education. 	<ul style="list-style-type: none"> • Increased rate of youth completing formal and informal education. 	MEYS, MHARD, Police, AG's Office, retail outlets
Implement Tuvalu National Youth Policy & Sports Policy	<ul style="list-style-type: none"> • Maintain funding to implement National Youth Policy. • Draft Sports Policy. 	<ul style="list-style-type: none"> • Review and promote formal and informal policy-related initiatives. 	<ul style="list-style-type: none"> • Improve understanding of tools re: National Youth Policy. 	<ul style="list-style-type: none"> • MEYS 	MEYS
Restructure Sports Dept.	<ul style="list-style-type: none"> • Consult on national sports priorities. • Develop goals to promote sports participation. • Implement Sports Policy. 	<ul style="list-style-type: none"> • Provide more sporting opportunities for youth. • Secure continued funding sources for sports activities. 	<ul style="list-style-type: none"> • Increased national participation in sport. • Increased healthy living habits. • Produce more elite athletes. • Ensure sports policy is adopted and widely recognized. 	<ul style="list-style-type: none"> • MEYS 	MEYS
Build outer island Sports Facilities	<ul style="list-style-type: none"> • Hire new dept. staff. • Align Sports Dept. initiatives with DOE. • Consult with OIs to site new sports fields. 	<ul style="list-style-type: none"> • Develop new Sports Dept. structure; create more local sports initiatives. • Increase number of new sports activities in the OIs. 	<ul style="list-style-type: none"> • Minimize spread of sports-related NCDs. • Access of OI athletes to overseas training. 	<ul style="list-style-type: none"> • Create more sports opportunities for youth and athletes. • Promote sports as a healthy lifestyle choice. 	MEYS
Building a multi-purpose gym	<ul style="list-style-type: none"> • Consult with TASNOC to develop a multi-purpose gym on Funafuti. 	<ul style="list-style-type: none"> • Fund and build a multi-purpose gym. 	<ul style="list-style-type: none"> • Organize more tournaments and develop more sports facilities. 	<ul style="list-style-type: none"> • Develop more potential athletes. 	MEYS

Build a youth recreation Center	<ul style="list-style-type: none"> • Consult w/TNYC to develop a youth recreation center. 	<ul style="list-style-type: none"> • Build youth sports into youth policies. 	<ul style="list-style-type: none"> • Organise and employ unemployed youth in sports-related activities. 	<ul style="list-style-type: none"> • Engage more youth in sports. 	MEYS
Support local schools and youth in sport initiatives	<ul style="list-style-type: none"> • Work w/schools and youth communities to develop more sports initiatives. 	<ul style="list-style-type: none"> • Promote sports in youth communities and schools. 	<ul style="list-style-type: none"> • Increase opportunities for disabled athletes to participate in sports. 	<ul style="list-style-type: none"> • Represent Tuvalu in regional and international games. 	MEYS
Implement the revised DOE structure through the establishment of and new staff positions and realignment of functions	<ul style="list-style-type: none"> • Effective implementation of DOE duties. 	<ul style="list-style-type: none"> • Update/implement revised DOE organizational structure, focusing on recruitment procedures and support for admin capacity. 	<ul style="list-style-type: none"> • Institutional capacity strengthened with qualified staff. • Recruitment of expatriate teachers for specialized subjects. 	<ul style="list-style-type: none"> • MEYS 	MEYS
	<ul style="list-style-type: none"> • Strengthen DOE M&E capacity to carry out education initiatives. 	<ul style="list-style-type: none"> • Improved capacity to implement major reforms in education. • Establish sound education policies. 	<ul style="list-style-type: none"> • Ensure budgetary resources in place so re-structuring policies are implemented. 	<ul style="list-style-type: none"> • Achieve major objectives under the education restructure. 	MEYS
	<ul style="list-style-type: none"> • Strengthen MOU partnerships with communities, parents, Kaupule, NGOs and churches. 	<ul style="list-style-type: none"> • Establish partnerships w/ each Kaupule to establish clear roles classroom maintenance. 	<ul style="list-style-type: none"> • Strengthened school management programs to improve capacity of Kaupule and DOE. 	<ul style="list-style-type: none"> • MOU effectively implemented. • Monitoring and evaluation for SBM, integrated into TEMIS. 	MEYS
	<ul style="list-style-type: none"> • Strengthen partnerships with stakeholders on ways in which they can help deliver/facilitate educational services. 	<ul style="list-style-type: none"> • Partnerships established with education stakeholders. 	<ul style="list-style-type: none"> • Continued management of partnerships to achieve education goals. 	<ul style="list-style-type: none"> • Improved education service delivery. 	MEYS
	<ul style="list-style-type: none"> • Continued funding support to maintain and ensure key educational priorities are met. 	<ul style="list-style-type: none"> • Identify high priority education activities for budgets. 	<ul style="list-style-type: none"> • Establish a Policy and Planning Division within DOE to identify key education activities for GOT funding. 	<ul style="list-style-type: none"> • Allocated budget is targeted to meet basic education priorities. 	MEYS

	<ul style="list-style-type: none"> Implement the Medium-Term Expenditure Framework (MTEF) recommendations that prioritize budgets for basic/primary education. 	<ul style="list-style-type: none"> Implement MTEF recommendations to target budgetary resources on basic/primary education. 	<ul style="list-style-type: none"> Maximum returns from implementation of the MTEF. 	MEYS
		<ul style="list-style-type: none"> Integrate recurrent costs of aid-funded programs into GOT's budget so project impacts are sustained. 	MEYS	
	<ul style="list-style-type: none"> GOT grants to Kaupule earmarked for education to be separately itemized and expenditures enforced. 	<ul style="list-style-type: none"> GOT education grants to Kaupule are separately itemized. TEMIS integrated into HQ e-learning server. Fund safe adequately equipped classrooms to attract qualified teachers. 		
Effective and relevant quality of curriculum, assessment and learning programs	<ul style="list-style-type: none"> National Curriculum Policy Framework developed and implemented. 	<ul style="list-style-type: none"> Developed and implemented CPF for each sector: ECCE, Primary, Secondary & post-secondary TVSD. Strengthen internet connectivity. 	<ul style="list-style-type: none"> Improved resources to support teaching and learning. Contextualized Open Education Resources (OERs) developed for Years 9 and 10 by the MLRS for delivery by the Virtual School through the e-learning system. Extra-curricular e-resources from other sectors, ministries and NGO's hosted on eLearning system for effective dissemination to outer islands. 	MEYS

	<ul style="list-style-type: none"> Establish capacity building and teacher training to support implementation of sub-sector CPFs. 	<ul style="list-style-type: none"> Higher student achievement. 	Higher student pass rates.	MEYS
	<ul style="list-style-type: none"> Sustainable development and climate change incorporated into curriculum. 	<ul style="list-style-type: none"> Build resilience among students. Climate change courses introduced as a stand-alone subject. ESD integrated into the curriculum from ECCE to post-secondary. 	<ul style="list-style-type: none"> Teach greater awareness of climate change impacts and associated impacts on sustainable development. 	MEYS
Improve monitoring and assessing outcomes and learning programs	<ul style="list-style-type: none"> Tuvalu to adopt a standardized Test of Achievement (TUSTA) for Years 4 & 8. 	<ul style="list-style-type: none"> Provide extra support and tuition for Year 8 students performing poorly. 		MEYS
	<ul style="list-style-type: none"> Develop/implement literacy and numeracy testing for Year 2. Tokai School Improvement Program. 	<ul style="list-style-type: none"> TUSTA for Year 2 developed and implemented. Improved transition from preschool to primary. Improved literacy and numeracy. 	Toward 100% literacy pass rate for Year 2.	MEYS
	<ul style="list-style-type: none"> Provide on-going teacher support and training to deliver TUSTA objectives. 	<ul style="list-style-type: none"> Improved capacity to deliver TUSTA objectives to improve education standards. 	Improved student pass rates through improved teaching.	MEYS
	<ul style="list-style-type: none"> Preparation and administration of national and regional exam assessments. 	<ul style="list-style-type: none"> Improved admin of NYEE, TJC, TSSC, and SPFSC at year-end to monitor/report on student progress/results. 	Increase quality of national and regional examinations.	MEYS

		<ul style="list-style-type: none"> Analysis/reporting on exam results. 	<ul style="list-style-type: none"> Strengthen registration/ analysis/ reporting of exam results; disaggregated by schools, gender, etc. 	Increased registration, analysis and reporting of exam results.	MEYS
	<ul style="list-style-type: none"> Establish register of qualifications and accredited learning programs. 	<ul style="list-style-type: none"> Establish a National Qualification Authority. 	<ul style="list-style-type: none"> Register all qualifications and update learning programs. Improved coordination of instruction, aligned w/ student/labor mobility. 		MEYS
Development and Implementation of ICT in Education Strategy and Policy	<ul style="list-style-type: none"> eLearning pilot system finalized and start of implementation. 	<ul style="list-style-type: none"> CT in Education Strategy and Policy developed & implemented. National eLearning System implemented. Virtual school and Multimedia Learning Resource Studio (MLRS) established. 		<ul style="list-style-type: none"> Improved access to resources to support teaching/ learning, and curriculum coverage, assessment monitoring to improve teaching and learning methods. Improved SMS through eLearning and the use of ICT. Improved quality of access to resources, information to make teaching/ learning fun and constructive. 	MEYS
Improve Planning and Monitoring	<ul style="list-style-type: none"> TEMIS & SIMS developed and installed in schools. Quarterly Progress Report on implementation of TKill to MFED. 	<ul style="list-style-type: none"> Develop baseline indicators for TEMIS. 	<ul style="list-style-type: none"> Annual statistical digest published. Improved planning at schools and ministry level. Annual reporting on policy progress and key outcomes vs. national education indicators. 		MEYS

		<ul style="list-style-type: none"> Integrate new features for TEMIS and School Management Systems. 	<ul style="list-style-type: none"> Efficient and effective data collection. 		MEYS
Improve teaching and learning	<ul style="list-style-type: none"> Develop a competency Standards Framework for teachers and school leaders. 	<ul style="list-style-type: none"> Implement and administer teacher standards through capacity building and school-based management. Teachers and school leaders trained; appraised on fixed standards. 	<ul style="list-style-type: none"> School committees and Kaupule empowered through SBM. Upgrade/strengthen pool of school leaders and teachers; teaching quality and learning quality. 		MEYS
	<ul style="list-style-type: none"> Teacher training and capacity building using eResources integrated into eLearning teaching systems. 	<ul style="list-style-type: none"> Teacher training and capacity building using eResources integrated into eLearning systems. Improve teacher training and capacity building. 	<ul style="list-style-type: none"> Effective delivery of eResources to outer islands. SIMS integrated into school eLearning servers. 		MEYS, Kaupule, MHARD
Technical and Vocational Skills Development	<ul style="list-style-type: none"> Community Training Centers established (CTCs). 	<ul style="list-style-type: none"> Strengthen CTCs for vocational skills development (TVSD). Increased financial and in-kind support from GOT to Kaupule to run CTSS. 		<ul style="list-style-type: none"> TVSD teachers paid by Kaupule from GOT budget. CTC well-resourced. Improved island development thru better education on sustainable development 	MEYS
	<ul style="list-style-type: none"> Improved skills for sustainable development. 	<ul style="list-style-type: none"> Develop and implement TVSD policies. Develop a competency-based approach for TVSD subjects and align it to national qualification standards. Strengthen teaching skills for sustainable development curricula. Improve quality of TVSD providers. Strengthen partnerships with national, regional and global TVSD partners. 		<ul style="list-style-type: none"> Increased number of skills development programs taught face-to-face and thru national providers. Increased number of accredited national TVSD providers. Improved access to TVSD programs. Improved linkages to and alignment of TVSD to student and labor mobility. 	MEYS

Early Childhood Care and Education	<ul style="list-style-type: none"> • Training for ECCE professionals. 	<ul style="list-style-type: none"> • Improve teacher effectiveness by training, recruiting and retaining teachers, and supporting them to provide good quality ECCE education. 	<ul style="list-style-type: none"> • Improved centre-based childcare skills, staff training and qualifications to work with infants. • Revise pay and quality of ECCE teachers. 	MEYS
Inclusive Education	<ul style="list-style-type: none"> • School readiness. 	<ul style="list-style-type: none"> • Implement and monitor Early Learning Development Standards. 	<ul style="list-style-type: none"> • TuEHC survey conducted and analyzed. Results to ensure children are ready for school. • Intervention programs and strategies developed and implemented. • Early grade reading assessment. • Multi-sectoral approach developed to support the health, cognitive, social & emotional development of young children. 	MEYS
Improved facilities to store and archive national public records, library books, and other library resources	<ul style="list-style-type: none"> • Better storage facilities housed in a new 2-storey library/archive complex at existing or new site. • Expanded library/archive space for increasing number users. 	<ul style="list-style-type: none"> • Improved facilities to store all national public records. • More storage and conservation space to house the national archives. • Promote the use of the National Library and Archives. 	<ul style="list-style-type: none"> • Effective use of archives and library services. • Effective/efficient data collection/recordkeeping. • Upgrade standard of data/information storage retrieval and records (hard copy & electronic). • Equipment to digitize archived documents. 	MYES

ANNEX 8: Strategic Area 8: Natural Resources Matrix

Goal: Maximize social and economic returns from the management and sustainable use of Tuvalu's natural resources

Key Performance Indicators	Milestones				
	2016	2017	2018	2019/2020	
<p>1. Sustained increase in fisheries contribution to government budget.</p> <p>2. Increase in Tuvaluan employment on fishing boats that operate in Tuvalu's EEZ.</p> <p>3. Increase in fish stocks/coastal marine life for artisanal and semi-subsistent fishermen.</p> <p>4. Increase in detection and prosecution of illegal fishing and amount of fines they pay.</p> <p>5. Increase in quantity and quality of locally produced food for markets.</p> <p>6. Increase farmer productivity: traditional crops, vegetables, biodiversity food.</p> <p>7. Number of farmer-entrepreneurs and school gardens assisted by Ag. Extension.</p>	<p>8. Open market for local products in Funafuti.</p> <p>9. Land available for business and residence on Funafuti.</p> <p>10. Number of Agricultural Associations registered with the Department of Agriculture.</p> <p>11. Gauge the potential to mine deep seabed minerals.</p> <p>12. TUVLIS database available online.</p> <p>13. Coastline shifts and acreage loss due to erosion in the year.</p>				
Strategies					
FISHERIES					
Improve management of fisheries resources for growth.	<ul style="list-style-type: none"> • Augment MNR staff for economic/legal analysis re: international fisheries negotiations. • Fisheries revenue contribution sustained above \$10 million. 	<ul style="list-style-type: none"> • NAFICOT, reformed as a commercial firm in JVs w/ foreign companies. • Est. JV w/2 purse seiners & 1 long liner. • Implement the new management/HRD plan. 	<ul style="list-style-type: none"> • Appoint Directors outside GOT to NAFICOT Board. • W/TMTI train seafarers to work on fishing boats. • Study on ways to self-finance TFD. 	<ul style="list-style-type: none"> • DWFN to employ a min. no. of Tuvaluans – a condition for granting fishing licenses. • Agents to work w/DOF to place TMTI grads on fishing boats. • 250 seafarers employed on fishing boats. • 100 work on fishing boats as observers. 	MNR, TMTI
Ensure compliance w/ international markets standards, incl. hygiene/sanitary for fish products.	<ul style="list-style-type: none"> • Compliance in full with WCPFC requirements. • Fish hygiene/sanitary legislation enacted. 	<ul style="list-style-type: none"> • Removal of EU Yellow Card. 			MNR, AG
Improve surveillance/detection of illegal fishing in Tuvalu EEZ.	<ul style="list-style-type: none"> • Increase in detection/ prosecution of offenders. • Increase fines for illegal fishing. 	<ul style="list-style-type: none"> • Closer collaboration between Sea Police and DOF on EEZ enforcement. 	<ul style="list-style-type: none"> • Court fines increase and collaboration continues. 		Sea Police, MNR
AGRICULTURE					
Enabling environment for agricultural development	<ul style="list-style-type: none"> • Ag. policies/ legislation updated. • Land use policy dev. 	<ul style="list-style-type: none"> • Innovative system for ag. credit, developed with IFAD/DBT/NBT. 	<ul style="list-style-type: none"> • Trained entrepreneurs in ag prod/ marketing. 		MNR, FAO, SPC, IFAD, DBT, NBT, TNPSO

Institutional strengthening in Agriculture	<ul style="list-style-type: none"> • Elisefou Ag Station to incl. CC adaptation. • Staff assessment based on strict job descriptions. 	<ul style="list-style-type: none"> • Est. plant breeder for root crops. • New staff: 7 OI Ag. officers, 5 ext. officers. 	<ul style="list-style-type: none"> • Est. home economics/ processing unit. • Re-designate ALO as Ag. Information Officer. 	MNR, FAO, SPC, SPREP
Increase productivity of farmers	<ul style="list-style-type: none"> • 30% prod. increase in local plants/crops. • 30% increase in home vegetable produce. • Conduct study on incentives to boost local food production. 	<ul style="list-style-type: none"> • Expand by 15% agro-forestry farming on all islands. • Increase by 20% production of crabs, lalulu, etc. 	<ul style="list-style-type: none"> • Training in organic farming & conservation on all islands. 	<ul style="list-style-type: none"> • Review Disaster Preparedness Plan. • Distribute to all islands info on disaster preparedness.
Establish marketing System of local agricultural products.	<ul style="list-style-type: none"> • Establish the Ag. Domestic Marketing Authority (ADMA). 	<ul style="list-style-type: none"> • Develop Marketing Policy including potential for import-substitution crop. 	<ul style="list-style-type: none"> • Establish an open market facility on Funafuti for agricultural produce incl. fish. 	MNR, MHARD, Farmer Associations, Kaupule, ROC, women, landowners, SPC, FAO, MFEED, DMO
Increase community participation in agriculture.	<ul style="list-style-type: none"> • Islands encouraged to register at least 2 farmer associations. 	<ul style="list-style-type: none"> • Islands to have at least one ag. project for youths. 	<ul style="list-style-type: none"> • School organic gardens for demonstration, student managed w/Ag. ext. guidance. 	MNR, Kaupule
Raise awareness about the value of nutritious food for a healthy body.	<ul style="list-style-type: none"> • Review Nutrition and Food Policy. • Workshop on nutritious food production/ prep. 	<ul style="list-style-type: none"> • Public awareness campaign on growing nutritious food. 	<ul style="list-style-type: none"> • Feasibility study on a price support scheme for nutritious food produce. 	MNR, MOH
LANDS				
Assist expedite land dispute resolution and proper management of Cadastral Survey 1980s.	<ul style="list-style-type: none"> • Assist Lands Court and Appeals Panel settle disputes. • Write an annual Operation Plan for DLS. 	<ul style="list-style-type: none"> • Monitor boundary changes/ establish control survey stations. • Monitor coastline shifts & changes. 	<ul style="list-style-type: none"> • Make TUVLIS available online. • Greater transparency in land records. 	MNR

ANNEX 9: Strategic Area 9: Infrastructure and Support Services Matrix

Goal: Provide efficient, high quality infrastructure and support services

Key Performance Indicators	<ol style="list-style-type: none"> 1. Enough water in storage to last all the islands through 6 months of drought. 2. Reduce the number of buildings without good guttering and water tanks. 3. Power production by renewable energy; energy efficiency gains. 4. Installation of wind power. 5. Reduction in fuel use by the transport sector. 6. Increase in power production – diesel vs. RE. 7. Number of buildings/homes using alternative energy sources. 8. Volume of imported fossil fuels per year in the last 5 years. 9. Number of profitable PEs over previous 5 years. 	<ol style="list-style-type: none"> 10. Annual GOT CSOs paid to PEs over 5 years. 11. Number of green houses built. 12. Building coded in use cyclone-proofing housing and infrastructure. 13. Number of households with internet access, phones, mobile phones. 14. Feasibility studies for introduction of domestic air services and relocation of international airstrip completed. 15. Number of OIs with airstrips. 16. Legislation for domestic air services and land transport approved by Parliament. 17. Maintenance plan for all government vessels in place and enforced. 		
Strategies	Milestones			
Sustainable energy	2016	2017	2018	2019/2020
	<ul style="list-style-type: none"> • Translate INDC policies into energy-related initiatives from 2016 forward. • Identify implementation baselines to achieve 100% renewable energy consumption by 2020. • Study options to reduce fuel consumption in the transport sector. • More aggressively explore use of RE sources e.g., grid-connected wind power. 	<ul style="list-style-type: none"> • Funding secured for new RE projects. • Increase import tariffs on petrol/diesel-powered vehicles, and duty-free and other incentives to import hybrid/electric vehicles. 	<ul style="list-style-type: none"> • Review 100% RE policy against baselines. • Grid-connected wind power installed on Funafuti. 	<ul style="list-style-type: none"> • 100% power production using renewable energy by 2020. • Increase energy efficiency on Funafuti by 30% by 2020.
Renewable energy modelling and studies.	<ul style="list-style-type: none"> • A modelling study RE mix solar and wind. 	<ul style="list-style-type: none"> • Study Biofuel & Biogas power generation in OIs 		MPUJ, TEC, SPC
Residential power generation.	<ul style="list-style-type: none"> • National feed-in tariff. • Template for flexible Power Purchase Agreements (PPA) betw IPPs and TEC. 			MPUJ, TEC, IUCN
Energy-related legislation.	<ul style="list-style-type: none"> • Review Petroleum Act. 	<ul style="list-style-type: none"> • Draft Energy Act. 		AG, PUI, MFATTEL

Telecommunications and internet connectivity.	<ul style="list-style-type: none"> Feasibility study on connectivity options (NZ and World Bank. TTC plans to develop mobile/ WiFi services over ten yrs. Broadband access today to plan for mobile/internet usage growth over 3-5 yrs. Consider liberalizing telecom sector. Enact ICT legislation on, e.g., cybercrime. 	<ul style="list-style-type: none"> Cabinet finalises decision on marine cable, satellite, or both. Upgrade OI internet bandwidth. GOT funds secured for free/ low-cost broadband, WiFi, other services. 	<ul style="list-style-type: none"> Infrastructure installed for free/ low-cost broadband nationwide. Funds secured for expanding internet connectivity. Maintenance of OI telecom equipment. 	TTC, MCT, AG, MPUI, MHARD
Transport services – domestic and international.	<ul style="list-style-type: none"> Feasibility study on domestic air services. Decide on the best operation model for the provision of domestic air services. Feasibility study on new international airport sites. Maintenance plan for all government vessels. 	<ul style="list-style-type: none"> Feasibility study on domestic air services. Survey sites for OI airstrips. Re-construct Nanumea & Nukufetau airstrips. Enact legislation for domestic air services. Seek funding for new international airport. Enact legislation to est. Land Transport Authority. 	<ul style="list-style-type: none"> Seek funding to construct airstrips on islands w/limited lagoon access, e.g., Nanumaga and Niutao. 	MPUI, MHARD, AG, Kaupule
Energy development plans & programmes.	<ul style="list-style-type: none"> Energy Efficiency & Conservation Programme (EECP): energy audits, consumer awareness, appliance standards. 	<ul style="list-style-type: none"> Bioenergy Plan 2015-2020: training & research 		OPM, PUI, MFATTEL
Improving Sanitation Systems.	<ul style="list-style-type: none"> Identify land for waste disposal in Ols. Expand/improve waste disposal systems. Procure waste disposal-related equip. for SWAT. 	<ul style="list-style-type: none"> Design reticulated Funafuti Sewage System. 		MHARD, OPM, PUI, MFATTEL
Building Design.	<ul style="list-style-type: none"> Develop a Green Housing Policy. Draft green housing design. 	<ul style="list-style-type: none"> Adopt and enforce building codes, particularly for the residential sector. 		OPM, MFATTEL, PUI

ANNEX 10: Strategic Area 10: Environment Matrix

GOAL: Protect, restore and promote sustainable use of terrestrial ecosystems; halt and reverse land degradation; protect and prevent biodiversity loss

Strategies	Key Performance Indicators	Milestones			Implementation
		2016	2017	2018	
Integrate climate change into national planning and across sectors.	<ol style="list-style-type: none"> Increase afforestation and reforestation. Reduce degradation of natural habitats. Halt biodiversity loss, and protect/prevent extinction of threatened species. Increase financing to protect ecosystems, and for sustainable use of biodiversity. 	<ul style="list-style-type: none"> CC syllabus completed/taught in schools. Review/implement National Energy Policy. NAPA: Health component implemented. 	<ul style="list-style-type: none"> Large-scale replanting project: coconut & other trees to increase forest cover. Survey to estimate qty of fish stocks across Tuvalu, excl. pelagic fisheries. 	<ul style="list-style-type: none"> Protect species by regulating harvest seasons and size of specie caught. 	MFATTEL, MNR, PUI, MEY, MFED, NAPA
Environmental laws, rules and regulations.	<ol style="list-style-type: none"> 1. Increase afforestation and reforestation. 2. Reduce degradation of natural habitats. 3. Halt biodiversity loss, and protect/prevent extinction of threatened species. 4. Increase financing to protect ecosystems, and for sustainable use of biodiversity. 	<ul style="list-style-type: none"> Review NBSAP legislation and rules to improve execution. 	<ul style="list-style-type: none"> ODS regulations reviewed and up-skill local technicians and Customs officers in application of ODS. 	<ul style="list-style-type: none"> Legislate the protection of species – time of harvest and size of specie caught. 	MFATTEL, MNR, AG and Kaupule.
Conservation/protection of the environment.	<ul style="list-style-type: none"> Document traditional C&P methods. 	<ul style="list-style-type: none"> Est. network of traditional conservation practitioners. 			MFATTEL
Protection of biodiversity.	<ul style="list-style-type: none"> Protection Against Invasive Species Policy. Biodiversity Database created. 				MFATTEL

ANNEX 11: Strategic Area 11: Migration and Urbanization Matrix

GOAL: Mitigate the adverse impacts of internal migration and urbanisation; capitalise on opportunities offered by migration and urbanisation

Key Performance Indicators		1. Number of workers leaving Tuvalu on termed employment abroad a year. 2. PAC, SWP & RSE workers becoming permanent residents in NZ and Australia 2016-2020. 3. Acreage added from land reclamation in Tuvalu. 4. New residences added every year on Funafuti. 5. Increase the amount of Hardship Assistance Allowance (HAA) paid out.			6. Uniform health and edu. services in Tuvalu (medical treatment, entry to secondary schools, etc). 7. Increase in biodiversity of coastal marine life on Funafuti due, inter alia, to investments to protect and rejuvenate the coastal environment. 8. National Migration Policy developed and implemented.				
Strategies	2016		2017		2018		2019/2020		Implementation
	• Clear policy on migration approved by Cabinet. • Encourage private sector migration agencies.		• Request NZ to make it easier for PR under PAC scheme. • Expedite provision of housing in Funafuti. • Encourage Funafuti people to develop & relocate to Funafala.		• Continue expansion of RSE and SWP schemes in ANZ seafarers more market competitive. • Improve the HH water supplies. • Improve solid and liquid waste collection/disposal.		• Protect species by regulating harvest seasons and size of specie caught. • Legislate the protection of species – time of harvest and size of specie caught.		
Improve economic and social services to urban population.	• Produce land reclamation plan (LRP) for Funafuti. • Improve health and education infrastructure on Funafuti.		• Produce LRP for Oils • Construction of sea defenses on all islands.		• Implement the LRP and sea defenses • Implement OI infrastructure plan in other thematic areas.				
Improve provision of social and economic services in OIs.									

ANNEX 12: Strategic Area 12: Ocean and Seas Matrix

GOAL: Conserve the oceans, seas and marine resources for sustainable development

Key Performance Indicators		1. Prevention and reduction of marine pollution, incl. marine debris, liquid waste, and nutrient pollution. 2. Assessment of coastal fish stocks and marine life across Tuvalu, as baseline for measuring impact of protection and rejuvenation measures. 3. Conserve at least 10% of coastal and marine areas, consistent with international law, based on the best scientific evidence.			4. Access of small-scale artisanal fishers to marine resources and markets 5. Enhance the conservation and sustainable use of oceans by implementing international law as in UNCLOS				
Strategies	2016		2017		2018		2019/2020		Implementation
	• Set up database on coastal or inshore fisheries info. • Survey of coastal marine life across Tuvalu. • Determine stock levels for planning purposes.		• Strengthen env. management on Funafuti to control/reduce liquid waste seepage from densely populated areas. • Fisheries management plans for all islands.		• Enforce harvesting dates and size of fish harvested. • Open/close fishing locations to control overfishing and allow species rejuvenation.		• Increase the total area designated for conservation to 10% of the 9 islands in Tuvalu.		
Protection of coastal ecosystems.	• Coordinate w/DOF surveillance, arrest & prosecution of illegal fishing in Tuvalu EEZ. • Train Sea Police in border security procedures.		• Train Sea Police in border security procedures. • Purchase surveillance tools & equipment for border security.		• Train Sea Police in border security procedures. • Maintenance of border security vessel, tools and equipment. • Review border security.		• Train Sea Police in border security procedures. • Review adequacy of border security laws and regulations.		Police, MNR, AG

ANNEXES 13

Malefatuga Declaration II



National Summit on Sustainable Development

Funafuti, Tuvalu, 11-14 November 2015

Malefatuga Declaration II

In the spirit of sustainable development, the plan for the development of Small Island Developing States (the Samoa Pathway) and the Rio Principles of Sustainable Development; we the island representatives to the National Summit on Sustainable Development as well as representatives from Non-Governmental Organizations, the private sector and business community, government ministries and departments and representatives from the Tuvalu diaspora:

We acknowledge and declare the importance of sustainable development – today's development that does not compromise the ability of future generations to develop themselves.

We affirm our support for the vision that *by 2020, as a result of our spiritual belief in the national crest – Tuvalu is for GOD – that Tuvalu will enjoy good health, knowledge and understanding from schools, peace and prosperity in different fields of endeavor.*

We believe that the arrangements and management of sustainable development is an important part of efforts to achieve good health, peace and prosperity.

We are concerned about the many challenges that confront Tuvalu due to diseconomies of scale and the poverty of opportunities, isolation and vulnerability that are further compounded by climate change and sea level rise.

We declare that the development of the country will be guided by the 12 Strategic Areas, as agreed to at this Summit, regardless of future changes in government:

- Climate Change;
- Good Governance;
- The Economy: Stability and Growth;
- Social Development and Health;
- Falekaupule and Island Development;
- Private Sector, Employment and Trade;
- Education and Human Resource;
- Natural Resources;
- Infrastructure and Support Services;
- Environment;
- Migration and Urbanization; and
- Oceans and Seas.

We further declare that we will closely monitor the implementation of these decisions and evaluate their impacts on the national sustainable development strategies in TKIII.

We wish to thank the Government of Tuvalu for organizing the Summit, countries and friends that have contributed to the Summit, and all Tuvaluans inside and outside Tuvalu.

We are grateful to the Summit Chairperson, Hon. Maatia Toafa, MP, Deputy Prime Minister and Minister of Finance and Economic Development, and also the Deputy Chairperson, Hon. Kausea Natano, MP, representing members of Parliament who are not in the government.

We affirm the declaration of *Malefatuga II* by our signatures below.

His Excellency the Governor General

Sir Iakoba Taeia Italeli

Prime Minister

Hon. Enele Sosene Sopoaga

Chairperson

Hon. Maatia Toafa

Deputy Chairperson

Hon. Kausea Natano

Pule Fenua o Nanumea

Mr. Tailolo Petio

Hui Tupu o Nanumaga

Mr. Reete Talu

Ulu Aliko o Niutao

Mr. Togiga Lisale

Pule Fenua o Nui

Mr. Sapakuka Kapai

Ulu Aliko o Vaitupu

Mr. Samia Lopusini

Ulu Aliko o Nukufetau

Mr. Siaso Samuelu

Ulu Fenua o Funafuti

Mr. Andrew Ionatana

Ulufenua o Nukulaelae

Mr. Aifou Tafifa

ANNEXES 14

UN Sustainable Development Goals



UN Sustainable Development Goals

The UN Sustainable Development Goals are accompanied by targets (below) and measured by indicators focused on results (not cited here). The SDGs constitute an integrated, indivisible set of global priorities for sustainable development.

Targets are action oriented, global in nature and universally applicable. They take into account different national realities, capacities and levels of development and respect national policies and priorities. They build on the foundation laid by the MDGs, seek to complete the unfinished business of the MDGs, and respond to new challenges. Targets are defined as aspirational and global, with each government setting its own national targets, taking into account national circumstances, but guided by the SDGs global-level of ambition.

The goals and targets integrate economic, social and environmental aspects and recognize their interlinkages in achieving sustainable development in all its dimensions.

Goal 1: End poverty in all its forms everywhere

- 1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day.
- 1.2 By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions.
- 1.3 Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable.
- 1.4 By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance.

- 1.5 By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters.
- 1.a Ensure significant mobilization of resources from a variety of sources, including through enhanced development cooperation, in order to provide adequate and predictable means for developing countries, in particular least developed countries, to implement programmes and policies to end poverty in all its dimensions.
- 1.b Create sound policy frameworks at the national, regional and international levels, based on pro-poor and gender-sensitive development strategies, to support accelerated investment in poverty eradication actions.

Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture

- 2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round.
- 2.2 By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons.
- 2.3 By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment.
- 2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural

- 2.5 By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed.
- 2.a Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries.
- 2.b Correct and prevent trade restrictions and distortions in world agricultural markets, including through the parallel elimination of all forms of agricultural export subsidies and all export measures with equivalent effect, in accordance with the mandate of the Doha Development Round.
- 2.c Adopt measures to ensure the proper functioning of food commodity markets and their derivatives and facilitate timely access to market information, including on food reserves, in order to help limit extreme food price volatility.

Goal 3: Ensure healthy lives and promote well-being for all at all ages

- 3.1 By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births¹⁴.
- 3.2 By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal

mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births.

- 3.3 By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases.
- 3.4 By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being.
- 3.5 Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol.
- 3.6 By 2020, halve the number of global deaths and injuries from road traffic accidents.
- 3.7 By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes.
- 3.8 Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all.
- 3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.
- 3.a Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries, as appropriate.
- 3.b Support the research and development of vaccines and medicines for the communicable and non-communicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration on the TRIPS Agreement and Public Health, which affirms the right of developing countries to use to the full the provisions in the Agreement on Trade Related Aspects of Intellectual Property Rights regarding

- flexibilities to protect public health, and, in particular, provide access to medicines for all.
- 3.c** Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and Small Island Developing States.
- 3.d** Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks.

Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

- 4.1** By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes.
- 4.2** By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education.
- 4.3** By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university.
- 4.4** By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship 15.
- 4.5** By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations.
- 4.6** By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy.
- 4.7** By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among

others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development.

- 4.a** Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, nonviolent, inclusive and effective learning environments for all.
- 4.b** By 2020, substantially expand globally the number of scholarships available to developing countries, in particular least developed countries, small island developing States and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes, in developed countries and other developing countries.
- 4.c** By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing States.

Goal 5: Achieve gender equality and empower all women and girls

- 5.1** End all forms of discrimination against all women and girls everywhere.
- 5.2** Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation.
- 5.3** Eliminate all harmful practices, such as child, early and forced marriage and female genital mutilation.
- 5.4** Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate.

- 5.5** Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life.
- 5.6** Ensure universal access to sexual and reproductive health and reproductive rights as agreed in accordance with the Programme of Action of the International Conference on Population and Development and the Beijing Platform for Action and the outcome documents of their review conferences.
- 5.a** Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws.
- 5.b** Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women.
- 5.c** Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels.

Goal 6: Ensure availability and sustainable management of water and sanitation for all

- 6.1** By 2030, achieve universal and equitable access to safe and affordable drinking water for all.
- 6.2** By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.
- 6.3** By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally.
- 6.4** By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and

substantially reduce the number of people suffering from water scarcity.

- 6.5** By 2030, implement integrated water resources management at all levels, including through trans boundary cooperation as appropriate.
- 6.6** By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes.
- 6.a** By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies.
- 6.b** Support and strengthen the participation of local communities in improving water and sanitation management.

Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all

- 7.1** By 2030, ensure universal access to affordable, reliable and modern energy services.
- 7.2** By 2030, increase substantially the share of renewable energy in the global energy mix .7.3 By 2030, double the global rate of improvement in energy efficiency.
- 7.a** By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology.
- 7.b** By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked developing countries, in accordance with their respective programmes of support.

Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

- 8.1** Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries.
- 8.2** Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors.
- 8.3** Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services 17.
- 8.4** Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programmes on sustainable consumption and production, with developed countries taking the lead.
- 8.5** By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.
- 8.6** By 2020, substantially reduce the proportion of youth not in employment, education or training.
- 8.7** Take immediate and effective measures to eradicate forced labour, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labour, including recruitment and use of child soldiers, and by 2025 end child labour in all its forms.
- 8.8** Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in

particular women migrants, and those in precarious employment.

- 8.9** By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products.
- 8.10** Strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all.
- 8.a** Increase Aid for Trade support for developing countries, in particular least developed countries, including through the Enhanced Integrated Framework for Trade-Related Technical Assistance to Least Developed Countries.
- 8.b** By 2020, develop and operationalize a global strategy for youth employment and implement the Global Jobs Pact of the International Labour Organization.

Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

- 9.1** Develop quality, reliable, sustainable and resilient infrastructure, including regional and trans border infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.
- 9.2** Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries.
- 9.3** Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets.
- 9.4** By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries

- taking action in accordance with their respective capabilities
- 9.5** Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending.
- 9.a** Facilitate sustainable and resilient infrastructure development in developing countries through enhanced financial, technological and technical support to African countries, least developed countries, landlocked developing countries and small island developing States 18.
- 9.b** Support domestic technology development, research and innovation in developing countries, including by ensuring a conducive policy environment for, inter alia, industrial diversification and value addition to commodities.
- 9.c** Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020

Goal 10: Reduce inequality within and among countries

- 10.1** By 2030, progressively achieve and sustain income growth of the bottom 40 per cent of the population at a rate higher than the national average.
- 10.2** By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status.
- 10.3** Ensure equal opportunity and reduce inequalities of outcome, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this regard.

- 10.4** Adopt policies, especially fiscal, wage and social protection policies, and progressively achieve greater equality.
- 10.5** Improve the regulation and monitoring of global financial markets and institutions and strengthen the implementation of such regulations.
- 10.6** Ensure enhanced representation and voice for developing countries in decision-making in global international economic and financial institutions in order to deliver more effective, credible, accountable and legitimate institutions.
- 10.7** Facilitate orderly, safe, regular and responsible migration and mobility of people, including through the implementation of planned and well-managed migration policies.
- 10.a** Implement the principle of special and differential treatment for developing countries, in particular least developed countries, in accordance with World Trade Organization agreements.
- 10.b** Encourage official development assistance and financial flows, including foreign direct investment, to States where the need is greatest, in particular least developed countries, African countries, small island developing States and landlocked developing countries, in accordance with their national plans and programmes.
- 10.c** By 2030, reduce to less than 3 per cent the transaction costs of migrant remittances and eliminate remittance corridors with costs higher than 5 per cent.

Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable

- 11.1** By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums.
- 11.2** By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those

- in vulnerable situations, women, children, persons with disabilities and older persons.
- 11.3** By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries.
- 11.4** Strengthen efforts to protect and safeguard the world's cultural and natural heritage.
- 11.5** By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations.
- 11.6** By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management.
- 11.7** By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities.
- 11.a** Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning.
- 11.b** By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels.
- 11.c** Support least developed countries, including through financial and technical assistance, in building sustainable and resilient buildings utilizing local materials.
- Goal 12: Ensure sustainable consumption and production patterns**
- 12.1** Implement the 10-year framework of programmes on sustainable consumption and production, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries.
- 12.2** By 2030, achieve the sustainable management and efficient use of natural resources.
- 12.3** By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses.
- 12.4** By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment.
- 12.5** By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.
- 12.6** Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle.
- 12.7** Promote public procurement practices that are sustainable, in accordance with national policies and priorities
- 12.8** By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature.
- 12.a** Support developing countries to strengthen their scientific and technological capacity to move towards more sustainable patterns of consumption and production.
- 12.b** Develop and implement tools to monitor sustainable development impacts for sustainable tourism that creates jobs and promotes local culture and products.

- 12.c** Rationalize inefficient fossil-fuel subsidies that encourage wasteful consumption by removing market distortions, in accordance with national circumstances, including by restructuring taxation and phasing out those harmful subsidies, where they exist, to reflect their environmental impacts, taking fully into account the specific needs and conditions of developing countries and minimizing the possible adverse impacts on their development in a manner that protects the poor and the affected communities.
- Goal 13: Take urgent action to combat climate change and its impacts***
- *Acknowledging that the United Nations Framework Convention on Climate Change is the primary international, intergovernmental forum for negotiating the global response to climate change.*
- 13.1** Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.
- 13.2** Integrate climate change measures into national policies, strategies and planning.
- 13.3** Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.
- 13.a** Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly \$100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible.
- 13.b** Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities. Acknowledging that the United Nations Framework Convention on Climate Change is the primary international, intergovernmental forum for negotiating the global response to climate change.
- Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development**
- 14.1** By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution.
- 14.2** By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans.
- 14.3** Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels.
- 14.4** By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics.
- 14.5** By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information.
- 14.6** By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation.

- 14.7** By 2030, increase the economic benefits to Small Island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism 2 Taking into account ongoing World Trade Organization negotiations, the Doha Development Agenda and the Hong Kong ministerial mandate.
- 14.a** Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries.
- 14.b** Provide access for small-scale artisanal fishers to marine resources and markets
- 14.c** Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in UNCLOS, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of The Future We Want.
- Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss**
- 15.1** By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and dry lands, in line with obligations under international agreements.
- 15.2** By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally.
- 15.3** By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world.
- 15.4** By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development.
- 15.5** Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species.
- 15.6** Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources, as internationally agreed.
- 15.7** Take urgent action to end poaching and trafficking of protected species of flora and fauna and address both demand and supply of illegal wildlife products.
- 15.8** By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species.
- 15.9** By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts.
- 15.a** Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems.
- 15.b** Mobilize significant resources from all sources and at all levels to finance sustainable forest management and provide adequate incentives to developing countries to advance such management, including for conservation and reforestation.

- 15.c** Enhance global support for efforts to combat poaching and trafficking of protected species, including by increasing the capacity of local communities to pursue sustainable livelihood opportunities.
- 16.b** Promote and enforce non-discriminatory laws and policies for sustainable development.
- 17: Strengthen the means of implementation and revitalize the global partnership for sustainable development finance**
- 17.1** Strengthen domestic resource mobilization, including through international support to developing countries, to improve domestic capacity for tax and other revenue collection.
- 17.2** Developed countries to implement fully their official development assistance commitments, including the commitment by many developed countries to achieve the target of 0.7 per cent of ODA/GNI to developing countries and 0.15 to 0.20 per cent of ODA/GNI to least developed countries; ODA providers are encouraged to consider setting a target to provide at least 0.20 per cent of ODA/GNI to least developed countries.
- 17.3** Mobilize additional financial resources for developing countries from multiple sources.
- 17.4** Assist developing countries in attaining long-term debt sustainability through coordinated policies aimed at fostering debt financing, debt relief and debt restructuring, as appropriate, and address the external debt of highly indebted poor countries to reduce debt distress.
- 17.5** Adopt and implement investment promotion regimes for least developed countries Technology.
- 17.6** Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge sharing on mutually agreed terms, including through improved coordination among existing mechanisms, in particular at the United Nations level, and through a global technology facilitation mechanism.
- Goal 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels**
- 16.1** Significantly reduce all forms of violence and related death rates everywhere.
- 16.2** End abuse, exploitation, trafficking and all forms of violence against and torture of children.
- 16.3** Promote the rule of law at the national and international levels and ensure equal access to justice for all.
- 16.4** By 2030, significantly reduce illicit financial and arms flows, strengthen the recovery and return of stolen assets and combat all forms of organized crime.
- 16.5** Substantially reduce corruption and bribery in all their forms.
- 16.6** Develop effective, accountable and transparent institutions at all levels
- 16.7** Ensure responsive, inclusive, participatory and representative decision-making at all levels.
- 16.8** Broaden and strengthen the participation of developing countries in the institutions of global governance.
- 16.9** By 2030, provide legal identity for all, including birth registration
- 16.10** Ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements.
- 16.a** Strengthen relevant national institutions, including through international cooperation, for building capacity at all levels, in particular in developing countries, to prevent violence and combat terrorism and crime.

- 17.7** Promote the development, transfer, dissemination and diffusion of environmentally sound technologies to developing countries on favourable terms, including on concessional and preferential terms, as mutually agreed.
- 17.8** Fully operationalize the technology bank and science, technology and innovation capacity-building mechanism for least developed countries by 2017 and enhance the use of enabling technology, in particular information and communications technology 23 Capacity-building
- 17.9** Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the sustainable development goals, including through North-South, South-South and triangular cooperation trade.
- 17.10** Promote a universal, rules-based, open, non-discriminatory and equitable multilateral trading system under the World Trade Organization, including through the conclusion of negotiations under its Doha Development Agenda.
- 17.11** Significantly increase the exports of developing countries, in particular with a view to doubling the least developed countries' share of global exports by 2020.
- 17.12** Realize timely implementation of duty-free and quota-free market access on a lasting basis for all least developed countries, consistent with World Trade Organization decisions, including by ensuring that preferential rules of origin applicable to imports from least developed countries are transparent and simple, and contribute to facilitating market access.
- 17.13** Enhance global macroeconomic stability, including through policy coordination and policy coherence.
- 17.14** Enhance policy coherence for sustainable development.
- 17.15** Respect each country's policy space and leadership to establish and implement policies for poverty eradication and sustainable development Multi-stakeholder partnerships.
- 17.16** Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the sustainable development goals in all countries, in particular developing countries.
- 17.17** Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships Data, monitoring and accountability.
- 17.18** By 2020, enhance capacity-building support to developing countries, including for least developed countries and small island developing States, to increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts.
- 17.19** By 2030, build on existing initiatives to develop measurements of progress on sustainable development that complement gross domestic product, and support statistical capacity-building in developing countries 24 Means of implementation and the Global Partnership.



**Government of Tuvalu
Vaiaku
Funafuti
Tuvalu**

TE KAKEEGA III

