Tuvalu

Diagnostic Trade Integration Study

2010 Report

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Preface

I am pleased to present the Tuvalu Diagnostic Trade Integration Study (DTIS). Endorsed at a national validation workshop in 2010, the DTIS is the first stage in Tuvalu's participation in the Enhanced Integrated Framework for Trade-Related Technical Assistance to Least Developed Countries (EIF), established in October 1997 under the auspices of the World Trade Organisation.

The EIF is a unique partnership between the international Monetary Fund, the International Trade Centre, the United Nations Conference on Trade and Development, the United Nations Development Program, the World Trade Organisation and the World Bank.

The Tuvalu DTIS is the product of several months of research by a joint national and international team, building on a broad consultative and participatory process which included the Government of Tuvalu, civil society organizations, the private sector, donors and partners, and EIF agencies.

The study analyses some of the constraints to trade and also opportunities for future growth, with the aim of helping Tuvalu benefit more from international trade. The study contains a detailed discussion of cross-cutting issues including the macroeconomy, business, trade facilitation, human development and environment, plus sectoral studies on tourism, fisheries and agriculture.

Tuvalu faces a number of trade-related challenges including the international economic crisis and climate change. But while the challenges are many, this is not cause for undue pessimism. Changes in the international economy bring with them new opportunities, which in turn can help support development. We must be more proactive in identifying new sources of economic growth, which means mainstreaming trade policy into the overall development strategy and devoting more resources to trade-related initiatives, particularly services exports like tourism and labour.

The DTIS makes a series of important recommendations as to how stakeholders and donors might support trade-related capacity-building over the short, medium and long-term. Throughout, the focus is on ensuring human development and equity, and on ensuring a sustainable future for our country.

It is now incumbent on the government and our donor partners to translate the recommendations into policies and action.

—Hon. Apisai Ielema
Minister for Foreign Affairs, Trade, Tourism, Environment and Labour

Foreword

The Integrated Framework for Trade-Related Technical Assistance to Least Developed Countries (IF) was established in October 1997 under the auspices of the World Trade Organisation (WTO).

The IF was conceived as a country-driven process leading to the integration of trade policy into national development strategies, and to co-ordinated delivery of trade-related technical assistance (TRTA) by development partners in response to identified needs. Following lessons learnt from early IF experiences, the Enhanced IF (EIF) was subsequently developed as a means of improving the delivery of TRTA. Accordingly, the EIF can be seen as an instrument of coherence to ensure optimal use of scarce resources in support of Least Developed Countries (LDCs) to become full players and beneficiaries of the world's economy and the multilateral trading system. To this extent, it is a unique international initiative based on a partnership through which the six core agencies, the International Monetary Fund (IMF), the International Trade Centre (ITC), the United Nations Conference on Trade and Development (UNCTAD), the United Nations Development Program (UNDP), the World Trade Organisation (WTO) and the World Bank, combine their efforts with those of LDCs and donors to respond to the trade development needs of the beneficiary countries.

An essential part of the IF process is the preparation of a Diagnostic Trade Integration Study (DTIS) as the analytical foundation for policy recommendations and actionable TRTA/capacity-building interventions. The DTIS has five major components:

1. A review and analysis of the country's **economic and export performance**;
2. A description and assessment of the country's **macroeconomic environment and investment climate**;
3. A focus on the international **policy environment** and **specific constraints** that exports from the country face in international markets;
4. A focus on a small number of **key labour-intensive sectors** where the private sector can contribute to a significant expansion of output and exports and a good *a priori* case can be made that the poor stand to benefit either in terms of employment and/or lower prices;
5. A set of **policy reform priorities** and required capacity-strengthening at the sectoral level to capitalize on the major opportunities identified in the strategy.

On the strength of the detailed analysis, the DTIS provides an Action Matrix comprising policy reform measures and capacity strengthening activities to serve as the basis for trade-related assistance and support.

At the request of the government, the Tuvalu Integrated Framework began in 2008, and preliminary mission was made during the same year. The main mission took place in September 2010. The DTIS team leader was Daniel Gay, who compiled the DTIS using background papers contributed by international and local consultants in a number of areas. Throughout the main mission each consultant held detailed discussions with relevant Ministries and Departments, NGOs, companies and other stakeholders, attempting to make the process as participatory as possible. Consultants' contributions were in some cases distributed between different chapters during the editing process. In alphabetical order the consultants, with their areas of specialisation in brackets, were as follows: Daniel Gay (macroeconomic environment, trade policy and trade facilitation); Dan Hetherington (institutional framework, human development, energy and the environment) Francis Hickey (fisheries); Simon Milne (business environment and tourism); Elisala Pita (fisheries and agriculture); Taukave Poolo (business environment and tourism); and Mainaga Taape (trade policy and trade facilitation).

In December 2010, the draft DTIS was circulated amongst government Ministries, IF partners and national stakeholders. The draft was presented and discussed at the DTIS validation workshop in Funafuti on 13 December 2010, at which all relevant Ministries and stakeholders were represented. Feedback was subsequently incorporated into the final text.

The team would like to express its particular thanks to Pula Haulangi, trade officer, for her organisational and administrative support, and her substantive input into the sections on trade policy and the institutional framework.

The team would also like to register its appreciation for the professional guidance and support of the UNDP Trade and Human Development Unit in Geneva and in particular to David Luke and Luisa Bernal. The staff at UNDP Fiji should also be thanked for their administrative assistance.

At the time of writing one US dollar was worth approximately 1.02 Australian dollars.

List of acronyms

ADB	Asian Development Bank
ALS	Agriculture Loan Scheme
AMAs	Agricultural Marketing Associations
ANZ	Australia and New Zealand
ASYCUDA	Automated System for Customs Data
BDM	Bêche-de-mer
BNPL	Basic needs poverty line
CFC	Community fishing centre
CMS	Compliance, monitoring and surveillance
CPI	Consumer price index
DBT	Development Bank of Tuvalu
DoT	Department of Trade
DOTS	Directly-observed treatment short course
DWFN	Deep water fishing nations
E8	Non-profit international organisation promoting sustainable energy, composed of the 10 largest global electricity companies
EEZ	Exclusive economic zone
FAD	Fish aggregation device
FAO	Food and Agriculture Organization of the United Nations
FDI	Foreign Direct Investment
FIC	Forum Island Country (all members of the Pacific Islands Forum except Australia and New Zealand)
FNU	Fiji National University
FPL	Food poverty line
FSSLP	FAO Food Security and Sustainable Livelihoods Program
FTF	Falekaupule[1] Trust Fund
GATS	General Agreement on Trade in Services
GDP	Gross Domestic Product
GNDI	Gross national disposable income (GNI plus net ODA flow and other unrequited transfers)
GoT	Government of Tuvalu
HIES	Household and Income Expenditure Survey
ICT	Information and communications technology
JICA	Japan International Cooperation Agency
JV	Joint venture

[1] *Falekaupule* refers to the traditional leadership on each island

MCTT	Ministry of Communications, Transport and Tourism
MFATEL	Ministry of Foreign Affairs, Trade, Environment and Labour
MFEPI	Ministry of Finance, Economic Planning and Industries
MNREAL	Ministry of Natural Resources, Environment, Agriculture and Lands
MoU	Memorandum of Understanding
MSY	Maximum sustainable yield
NAMA	Non-agricultural market access
NBT	National Bank of Tuvalu
NCD	Non-communicable disease
NTDMP	National Tuna Development and Management Plan
OCTA	Office of the Chief Trade Adviser
ODA	Overseas development assistance
PNA	Parties to the Nauru Agreement
PFTAC	Pacific Financial Technical Assistance Centre
PICTA	Pacific Island Countries Trade Agreement
PIDP	Pacific Islands Development Program
PIFS	Pacific Islands Forum Secretariat
QCF	Quality Control Facility
RMFO	Regional Fisheries Management Organisations
ROC	Republic of China (Taiwan)
SDE	Special Development Expenditures
SPC	Secretariat of the Pacific Community
SPSLCMP	South Pacific Sea Level and Climate Monitoring Project, an Australian government initiative sponsored by AusAID
SOE	State-owned enterprise
TA	Technical Assistance
TAC	Total allowable catch
TCP	FAO Technical Cooperation Program
TCS	Tuvalu Co-operative Society
TEC	Tuvalu Electricity Corporation
TIS	Trade in services
TK	Traditional knowledge
TMDP	Tuna Management Development Plan
TMTI	Tuvalu Maritime Training Institute
TNCW	Tuvalu National Council of Women
TNPSO	Tuvalu National Private Sector Organisation
TRTA	Trade-related technical assistance
TTF	Tuvalu Trust Fund
TTFAC	Tuvalu Trust Fund Advisory Committee
UNDP	United Nations Development Program
UN-OHRLLS	The United Nations Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and the Small Island Developing States
USP	University of the South Pacific
VDS	Vessel Day Scheme
WCPFC	Western Central Pacific Fisheries Commission
VMS	Vessel Monitoring Scheme
WCPO	Western Central Pacific Ocean

Executive summary

Tuvalu's estimated population of 11,810 is spread across an exclusive economic of 900,000km². By population the country is the world's ninth-smallest, and total land area is only 26km². Earnings from remittances, the .tv internet domain name and the Tuvalu Trust Fund have constituted the main sources of foreign exchange and government revenues, while aid is the equivalent to over half of economic output. Economic potential is limited by a lack of natural resources, especially land and fresh water, which are under substantial pressure from environmental change; a small domestic market; geographic fragmentation; difficult and expensive access to major international markets; a small private sector; and heavy government involvement in the economy. Per capita GDP is high for a least-developed country (LDC), at US$2,447 according to the IMF (2011), and Gross National Income very high, at US$4,398, but Tuvalu ranks 10th of 15 Pacific islands on the Pacific Human Development Index (HDI). Education is relatively good and the adult literacy rate is 99% although health indicators could be improved. The economy is rated as being highly vulnerable.

Although the national development plan, Te Kakeega II, has some well-founded objectives and has resulted in some proactive initiatives, it also suffers a number of shortcomings including unrealistic fiscal targets and over-ambitious objectives for the role of the private sector, without specific accompanying strategies for the accomplishment of these goals. More realistic macroeconomic policy objectives need to be considered, and policy objectives may need to be linked more closely to actual government activities.

The opportunities for private sector development are limited and it is unrealistic to expect the private sector to quickly become a major driver of economic growth. While there are challenges in enhancing the business environment, certain critical areas can be developed in a manner that increases economic opportunity, income and employment. Government should continue to encourage private investment through the creation of a conducive investment environment; managing the role of SOEs and bringing in more private sector involvement where possible. FDI is very low and could be increased. During consultations, and in the view of the DTIS team, tourism emerged as the sector with the biggest future potential for growth.

In Tuvalu as in a number of regional countries and LDCs, trade has been separate from development policy. This is partly because goods exports are so small, but also because the Tuvalu economy has relied on development assistance and rental income. Yet because income from conventional sources has diminished in recent years, Tuvalu has little choice but to be more proactive in identifying new sources of economic growth, which means mainstreaming trade policy into the overall development strategy and devoting more resources to trade-related initiatives, particularly services exports like tourism and labour.

The IF can make a useful contribution in this area, primarily through capacity-building in the Department of Trade. Using IF funds, it would be appropriate to employ three additional staff, focusing both on the design and implementation of IF projects as well as broader trade work. Tuvalu should also take as much advantage as possible of opportunities for regionalisation in trade facilitation, given the limited size of government. One immediate priority is a collaborative feasibility study on ASYCUDA in conjunction with Kiribati.

The trade agreements in which Tuvalu is currently involved have limited potential to make a significant contribution to raise economic growth, since the obstacles to trade development relate to the supply-side rather than demand. For a small administration, the negotiation and adjustment costs of trade negotiations are much bigger than is often realised. The administrative cost of the large number of agreements currently under negotiation should be weighed against the meagre potential benefits of trade agreements.

The concept of human development has particular relevance for a partly subsistence society such as Tuvalu, where people can have low incomes but are reasonably well-nourished and lead relatively fulfilling lives. Absolute or extreme poverty is rare, even if inequality is rising. Policies on trade, human development and the environment are not yet integrated. Yet fisheries and agriculture are sources of trade-related cash income and a traditional social safety net. The replanting of coconut trees would help support the copra industry and provide food for subsistence. Seafarers returning from overseas—a form of services trade—have increased the rate of HIV/AIDS infection, alongside other vectors of transmission. The tendency to increased reliance on imported food has worsened the domestic diet, increasing the incidence on non-communicable diseases. Climate change—which threatens to submerge some parts of Tuvalu—will have an impact on agriculture and subsistence livelihoods. Although government is active in the international arena, domestic policy as yet has little orientation toward climate change. Government will need to be increasingly aware of these linkages between trade, human development and the environment.

Tourism is one of the most promising sectors discussed in this report. Although Tuvalu has an attractive natural environment, tourism is small and underdeveloped, and a minimal effort could increase income from the sector. Tourism has proven economic potential in the Pacific islands, and travel to non-traditional regional destinations has grown in recent years. A focus on tourism yield would allow the economic benefits to be maximized without focusing purely on expanding visitor numbers in a potentially unsustainable way. The focus should be on increasing spend per visitor, ensuring that the economic benefits of tourism are better spread across the islands and across economic sectors and minimizing the 'leakage' of tourist spending.

Marine resources have long been central to Tuvalu's economy. While the government has succeeded in extracting significant revenues from the offshore sector, there is potential to further increase revenue, particularly by improving the performance of the relevant institutions. The involvement of communities in the management process is fundamental to the sustainable management of coastal resources. Environment-related legislation must be harmonized with the capacity of Island Councils to regulate at the local level.

Agricultural production mainly revolves around subsistence, with some cash production mostly for the domestic market. While subsistence and commercial agriculture remains critical to the domestic economy, Tuvalu's small land area, distance from major markets and unproductive soils limit the opportunities for export. Agriculture in Tuvalu will always struggle to compete at world prices, although certain niche products may be successful on a periodic basis. For this reason government and donor support for value-adding export-orientated activities should not assume a high priority. The country's low-lying atolls face occasional cyclones, increasing the prospect of marine inundation in the event of rising sea levels. The underground water lens is also under threat. A long history of failed government and donor initiatives confirms that commercial agricultural production faces severe challenges. The government is rightly focused on domestic commercial and subsistence production with a view to improving food security. Traditional farming techniques are in decline, yet particularly on the outer islands, they contribute to agricultural diversity and food security and better diets. It will remain important to raise awareness amongst youth and community leaders on the value of traditional agricultural and land management systems and knowledge.

Recommendations

Services exports are sometimes neglected. The traditional view is that only 'solid', value-adding or commodity-based industries like manufacturing or agriculture can generate export growth. But this does not always apply in small island developing states, which feature very low economies of scale and high transport costs. In the view of the DTIS team, there should be a general realignment of government priorities in favour of services exports. As shown in the chapter on trade policy and trade facilitation, new sources of labour mobility are promising, while tourism probably has the highest growth potential of any industry in Tuvalu. In recent years several island nations, including recent IF beneficiaries like the Maldives and Vanuatu, have based their development strategies on services exports like tourism. In an era of heightened international competition, all countries are being forced to specialize, and Tuvalu's comparative advantages are probably in rental-related activities, human resources and tourism rather than commodities export. Tuvalu has a large, attractive and unspoilt natural environment. The industry has proven economic potential in the Pacific region, and travel to non-traditional regional destinations has grown in recent years. The small and undeveloped nature of the industry means that relatively minor improvements to institutions, policy and infrastructure could lead to significantly higher income. An additional reason for prioritising the tourism sector is that some other conventional sources of income, such as remittances and fishing licenses, have declined, placing emphasis on finding new potential sources of economic growth.

In addition to sectoral re-prioritisation, cross-cutting, policy-related and institutional measures are likely to yield greater benefits than the promotion of individual economic activities. In such a small economy it is important to try to achieve as many objectives with as few policy measures as possible. This will also lead to greater donor and government policy co-ordination and coherence. Small agricultural projects, in particular, have a history of failure. The recommendation for a shift in emphasis away from specific project-based support comes in light of the lessons learnt from neighbouring countries and other specific sectoral projects. To this end, it is recommended that government bodies align their activities more closely with one another and that government as a whole attempt to simplify its strategies and development planning process. Capacity-building for the Department of Trade should form a core component of Tier 1 funding under the IF.

Given the need to prioritise, the DTIS does not propose the creation of new institutions. The government is already large and human resources limited. The task of government is to redirect its activities toward areas in which it has an advantage rather than to extend its remit. Other areas which are **not** recommended are government-supported microfinance or lending initiatives, which have a lower chance of success than private or non-government initiatives; and new intellectual property legislation. Transport has been identified as a critical cross-cutting issue, and together with recommendations on telecoms reform and infrastructure the discussion in the DTIS largely revolves around support for ongoing initiatives in these areas. Further work will be required as developments proceed.

The following is a list of recommendations by chapter. The list is not intended to be undertaken simultaneously; rather it should be addressed in stages subject to approval at the DTIS validation workshop. A fuller explanation of the issues at stake can be found in the relevant chapter. Further costing work will be required in collaboration with stakeholders and other donors. An attempt has been made to reduce reliance on short-term technical assistance in order to promote national ownership and because some domestic technical capacity already exists in a number of areas.

I CROSS-CUTTING RECOMMENDATIONS

1 MACROECONOMIC ENVIRONMENT

1.1 **While the national development plan, Te Kakeega II, is generally well-conceived and has a number of benefits, development objectives need to be aligned more closely with the actual activities of government.** Overall policy may need to be communicated and monitored better and sectoral plans linked with the activities of Departments.

1.2 **Support the strategic review of the various possibilities for the restructuring of state-owned enterprises (SOEs)**, taking existing work into account including the ADB project underway in this area. The weak management and inefficiency of some public enterprises (and the associated restriction of private sector growth) is one reason why economic growth has been sluggish. Telecoms, ports and accommodation are strategic areas in which deregulation may deliver better development outcomes. It is unlikely that any rapid program of wholesale liberalisation would win political approval or popular support. Wide-ranging consultation will be needed before further liberalisation takes place, while social goals should remain paramount. Appropriate institutional measures need to be put in place in order to ensure that economic advancement serves human development ends.

1.3 **Develop a trade policy, based on the DTIS, prioritising tourism and other services exports.** The DTIS should also be used as a focus for the government's prioritisation of trade-related activities with donors.

1.4 **Consider linking debt and budget deficit objectives to the economic cycle** rather than setting arbitrary targets. Even during times of economic growth, spending targets were not met, and considerable effort needs to be made to prioritise government expenditures, reducing unnecessary expenditures where appropriate.

1.5 **Support the ongoing work by the Secretariat of the Pacific Community (SPC) in statistics, and the improvements to data likely under World Bank and IMF membership.** The Pacific Financial Technical Assistance Centre (PFTAC), operated by the IMF, is the leading agency providing technical assistance on statistics to Tuvalu. Consider training other government officials, particularly within the Ministry of Commerce, in the use and interpretation of trade-related data.

2 BUSINESS ENVIRONMENT

2.1 **Conduct capacity-building activities among Business Development and Training officers.**

2.2 **Develop a clear ICT Strategy with a focus on enabling the private sector.** Look to develop web content and information for key sectors such as tourism. Enhance the ability for private sector operators to have IT hardware/ software problems fixed.

2.3 **Focus on renewable energy** and more particularly how it can be used as a tool to link to strengthen Tuvalu's 'brand'.

2.4 **Organise business training programmes targeting those who have already started a business** or who need some additional assistance in moving a good idea forward. Co-ordinate educational resources to develop skills in both the informal and formal sectors—create an over-arching education strategy.

2.5 **Strengthen the capability of the Town Council to manage and promote the Funafuti Marine Conservation Area.** Raise environmental awareness in local people and visitors and focus on enabling enforcement of environmental legislation.

2.6 **Review business licensing processes, procedures and fee structures,** and investigate the potential of establishing a National Business Licensing System.

2.7 **Evaluate issues around tourism/transport industry liability** and develop strategies to avoid major lawsuits. Focus on improving levels of safety in the tourism sector—especially offshore activities.

2.8 **Continue to review and support international air links** and to improve the reliability of domestic sea services. High airfares and low flight capacity limit tourism and labour mobility.

2.9 **Raise awareness of current investment and business environment online**—at present the material is dated and does not have direct links to the Tuvalu government.

2.10 **Establish appropriate mechanisms to sustain and develop the role of the TNPSO as the National Private Sector Organisation.**

3 TRADE POLICY AND TRADE FACILITATION

3.1 **Recruit three full-time IF staff.** Tier 1 provisions should include three additional full-time staff to be accommodated in the Department of Trade. These officers should work directly on IF project design and implementation, as well as broader trade facilitation work, but should avoid investing time in unnecessary negotiations, which will provide negligible benefits for the private sector. The IF should work closely with the government's Development Co-ordinating Committee.

3.2 **Appoint a donor facilitator.** No donors are currently represented on the Integrated Framework (IF) Steering Committee except for the UNDP (in its capacity as implementing authority). It will be critically important to co-ordinate donor activity and represent donors' views and experience—which can be particularly valuable during project design. Although finance is available from the IF trust fund, broader donor involvement in the IF is essential, and it will be important to improve donor representation on the Steering Committee.

3.3 **Support private-sector and civil-society involvement in trade policy.** Terms of reference for one IF officer should include one day per week to provide administrative support to TNPSO, to enable that organisation to participate more fully in the formulation of trade policy and design of IF programmes. Modest funding should also be made available for items such as the hosting of meetings and dissemination of information to the TNPSO membership.

3.4 **Prioritise only those trade meetings which hold commercial benefit for Tuvalu or which have indirect political importance.** Critical analysis should be used to assess whether international meetings provide greater benefits than alternative uses of officials' time. Those which do not serve the commercial interests of the Tuvalu private sector and for which non-participation will have no political consequences should be avoided. Regional organisations such as the Secretariat of the Pacific Community (SPC) and the Office of the Chief Trade Adviser (OCTA) will be able to provide informal advice on a case-by-case basis.

3.5 **Conduct a feasibility study for ASYCUDA,** in conjunction with Kiribati, with a view to making a detailed assessment of actual needs in each country, and developing a regional proposal reflecting the preferences of each administration in terms of approach, i.e. national, regional or a mix of the two.

3.6 **Evaluate the Recognised Seasonal Employer (RSE) scheme** with a view to increasing the number of workers involved and increasing the benefit of the scheme to Tuvalu. A number of studies have already been undertaken (see Chapter 3), including an academic study on Tuvalu, but the information needs to be operationalised. Draw on the experience of Vanuatu.

3.7 **Consider discussions toward a bilateral trade agreement with Taiwan.** Trade with Asian countries is displacing trade with ANZ. Tuvalu has a close donor relationship with Taiwan, and the negotiation of such an agreement would be unlikely to constitute a large administrative burden. One of the only instances of successful agricultural export in recent years was curtailed because of the relative tariff preferences extended by Taiwan to a competitor in the Marshall Islands.

3.8 **Consider reviewing wharf charges and stevedoring performance** with a view to reducing the costs for businesses and speeding up clearance times.

4 HUMAN DEVELOPMENT AND ENVIRONMENT

4.1 **Mainstream trade, poverty and human development policy.** At the national level, the broader development policy discourse lacks recognition of the importance of the mainstreaming of trade and human development. The Department of Trade should ensure that trade is mainstreamed and that ongoing national policy discussions take into account the linkages between trade and human development issues.

4.2 **Remain aware of the linkages between human development, trade, and the environment.** It may be necessary to study these further and to incorporate the findings into trade policy.

4.3 **Link trade negotiations with human development,** noting the following:

- Encourage foreign investments which have the potential to reduce inequality and serve human development ends;
- Ensure that revenue losses from tariff reduction can be compensated, enabling existing levels of social spending to be maintained;
- Ensure that trade policies (including intellectual property legislation) promote health and education benefits through access to medicine, resources for education and health and other items; and
- Ensure the full involvement of women in trade policy decision-making.

4.4 **Support environmental policy with tax incentives.** Due particularly to the lack of land area and fragile water cycle, certain consumption decisions have greater social costs in Tuvalu than in other economies. Many economies tax and subsidise consumer products based on their environmental impact. The rationale for doing so is particularly strong in Tuvalu, although in the past most environmental programmes have relied instead on education alone. In future, the Department of Environment and the Ministry of Finance could benefit from closer co-operation in the formulation of tax policy, to ensure that environmental policies designed to promote recycling, reduce the volume and toxic effects of landfill and improve water quality are supported by appropriate economic incentives.

4.5 **Seek donor investment in renewable energy.** Given the vulnerability of Tuvalu to sea level rise caused by climate change, the country is in a strong position to seek donor support to transition from diesel-generated electricity to greater use of renewable resources. While such change will have a negligible direct effect on the rate of climate change, if appropriately managed it should significantly reduce the operating costs of TEC. Without such support, TEC will either remain reliant on government subsidy, or will be forced to raise prices further, perhaps to the highest rates in the Pacific. Considering the importance of competitive energy pricing to a conducive business environment and the impact of high prices on poor households, further tariff increases would be highly undesirable.

4.6 The government should be congratulated for its proactive stance on climate change and should **continue to raise the profile of climate change in the international arena.**

4.7 **Identify a new labour mobility market.** While successful in the long-term, the Tuvalu Maritime Training Institute is currently suffering from the global economic crisis and may be forced to close temporarily. Diversification in vocational training for selected overseas markets would reduce vulnerability to global economic trends and could help to combat the current gender disparity in quality of educational opportunity at the vocational level. A pre-feasibility study should identify a target market (by country, sector and skill level), a partner accreditation institution in the target country, a Tuvaluan educational institution capable of accommodating a new course, and a donor prepared to offer financial support.

5 TOURISM

5.1 **Business development and networking.** Assistance is required for local tourism enterprises to design appropriate packaged services and products for target clients. Assist tourism enterprises to directly and collaboratively market their products. Review current success in the tourism sector in gaining access to microfinance funds and provide approached for an optimal route forward.

5.2 **Marketing and information.** Conduct a 'web-audit' of current online resources for the industry, with a focus on basic content and usability but also on network and linkage formation. Strengthen understanding between the telecommunications and the tourism sector and explore key bottlenecks—perhaps through the organization of a knowledge-sharing workshop. Develop an effective strategy for internet-focused marketing of the sector. Review and benchmark current online marketing activities. Develop the capability of local tourism operators and destinations to present their own information to the outside world via the internet.

5.3 **Linkage development.** Continue to build on the progress made by the Home Garden Project. Develop opportunities for visitors to view and participate in local food preparation. Develop improved links to the local fishing sector. Use online resources to highlight local food opportunities for visitors.

5.4 **Human resource development.** Conduct labour market needs assessments. Identify critical skilled labour 'weak points' in the industry. Ensure effective partnership between public and private sector in training provision. Look outside the square in terms of training opportunities—both inside and outside the country.

5.5 **Research and decision support.** There is a need to develop a clear understanding and definition of research needs. Develop a cost-effective tool to gather data and create, if possible, an ongoing barometer of visitor satisfaction, spend and industry performance. This should be web-based to reduce costs of data collection and entry. A barometer is necessary if progress towards meeting yield targets is to be measured effectively. Evaluate how statistical information can be more effectively disseminated to those that need it—and how this can be improved.

5.6 **Climate change, environment and sustainability.** Improve awareness of environmental issues in the tourism sector. Integrate global change issues into tourism planning, development legislation, branding and policy frameworks. Develop and strengthen the range of offerings on and around the Marine Conservation Area and broader Funafuti lagoon.

5.7 **Develop a tourism strategy.** This strategy should focus on yield maximisation and should be developed, underpinned and evaluated with robust visitor data.

6 FISHERIES

6.1 **Concentrate more on financial yield and management of the offshore tuna fisheries** including moving to the Vessel Day Scheme for seiners and longliners and include license conditions that increase employment benefits to Tuvaluan seamen and fishers and also shore-based processing options. This will require strengthening the negotiation of access agreements and follow-up monitoring of these agreements.

6.2 **Support the completion and implementation of the Tuna Development and Management Plan** to ensure the offshore fisheries sustainability with an emphasis on management and co-operation with regional fisheries management organisations (RFMOs). Include in the draft Tuna Management Plan (TMP) a provision to divert a percentage of funds derived from tuna vessel licensing to support the development of coastal fisheries including FAD programs and other priority coastal development initiatives such as co-operative and community-based management of coastal resources such as coastal monitoring and stock assessments.

6.3 **Support the recently launched initiative by the Ministry of Natural Resources and Environment, the Department of Fisheries and the Forum Fisheries Agency (FFA) to provide an institutional strengthening program for the Fisheries Department.**

6.4 **Closely assess and monitor the benefits and disadvantages of any current joint ventures** (JVs) already undertaken to fine-tune the conditions agreed to in any further JVs in the future. Draw upon expertise from FFA-SPC in negotiating JVs and learn from other PICs' experiences.

6.5 **Develop a bêche-de-mer management plan** to ensure the sustainability of the resource and potential for this resource to assist with rural livelihoods.

The plan should also ensure the safety of the divers if using compressed air through dive certification. Part of the plan should include licensing conditions with the Fisheries Department so that bêche-de-mer export data is submitted to them by the exporters and/or *Kaupule*.

6.6 **Develop national management plans for coastal fisheries adopting an ecological approach to fisheries** management to sustainably manage this fishery for national food security, livelihoods and sociocultural wellbeing.

6.7 **Support the Fisheries Department to undertake coastal monitoring and stock assessment work** in key areas in order to guide and inform coastal development and management plans. This should be co-ordinated with the climate change work undertaken in-country to assess climate change impacts.

6.8 **Increase the support for expanding the observer program** by training more observers to improve data collection and promote sustainability. Continued capacity-building for Fisheries Department personnel to analyse and interpret tuna statistics in collaboration with SPC/FFA will also be important to localize these skills.

6.9 **Consider strengthening the collaboration between the Department of Environment, the Department of Fisheries and the TANGO network** to enhance conservation initiatives. This could be facilitated by the creation of a Technical Working Group of representatives of these organizations to meet regularly and promote co-ordination and co-operation to optimise the use of funding available for conservation work.

6.10 **Harmonize the environmental and fisheries related legislation** including for the Island Councils and devolving more responsibility to the lowest possible level (Island Councils) in line with the Convention on Biological Diversity.

6.11 **Promote co-operative management approaches** with communities that integrate scientific and traditional knowledge (TK) of resources to enhance community-based coastal management. Linked with this is the strengthening and revival of management-related TK of fisheries and traditional tenure systems to assist to develop communities' sense of responsibility to manage their resources sustainably.

7 AGRICULTURE

7.1 **Continue to prioritise domestic agriculture, both on a commercial and a subsistence basis,** in order to promote food security and counteract the increasing reliance on imported foodstuffs. While agricultural export should not be discouraged, donor funds are not well-spent in this area and value-adding to agricultural exports has little chance of wide-ranging success.

7.2 **It may be worth considering biosecurity legislation and putting in place the appropriate institutional framework.**

7.3 **The government should consider a coconut replanting scheme** aimed at improving subsistence and supporting the possibility of copra production.

7.4 **Support local enterprises to engage in integrated trees, crops, and livestock production.** This strategy suits small atolls which lack land area.

7.5 **Subject to priorities in other areas, consider strengthening the Agriculture Department.** Training for staff may be required at a variety of levels. Attachment training should be arranged with commercial agricultural enterprises in other countries.

7.6 **Skilled and well-trained staff should be involved in implementing the extension program.** Pass the results of research at the Elisefou research station to farmers and improve the co-operation between the agriculture foremen on the outer islands and the Falekaupule or members of the island communities.

7.7 **Document traditional agricultural and environmental management and associated traditional knowledge.** Donors may consider scholarships for Tuvaluan students to pursue graduate work along these lines.

7.8 **Enact an awareness program (targeting youth and community leaders) aimed at strengthening traditional agricultural and land management systems and knowledge** to promote these solutions to food security and resilience to climate change-associated impacts.

DTIS Action Matrix

No.	Action recommended (* indicates priority)	Requirements			Agencies involved	Expected duration
		Implement existing policy	Change policy/ legislation/ Reform Institutions	Technical assistance/ investments		
	SECTION I. CROSS-CUTTING ISSUES					
1	Macroeconomic environment					
1.1*	Align development objectives more closely with the actual activities of government		✓		GoT	Medium/long-term
1.2*	Support the strategic review of the various possibilities for the restructuring of state-owned enterprises	✓	✓		MFEPI	Medium/long-term
1.3*	Develop a trade policy, based on the DTIS, prioritising tourism and other services exports		✓		MFATEL	Short-term
1.4	Consider linking debt and budget deficit objectives to the economic cycle		✓		MFEPI	Medium/long-term
1.5	Support the ongoing work in statistics	✓			MFEPI	Short-term
2	Business and investment					
2.1*	Increase capability of Business Development/Training officers			✓	MFEPI	Medium-term
2.2*	Develop a clear ICT Strategy with a focus on enabling the private sector; look to develop web content and information for key sectors such as tourism		✓		MCTT	Medium-term
2.3*	Focus on renewable energy and more particularly how it can be used as a tool to link to strengthen Tuvalu's 'brand'	✓			MCTT	Short/medium-term
2.4*	Organise business training programmes targeting those who have already started a business or who need some additional assistance in moving a good idea forward		✓	✓	MFATEL, MFEPI	Short/medium-term
2.5*	Strengthen the capability of the Town Council to manage and promote the Funafuti Marine Conservation Area	✓		✓	MFATEL, MCTT	Medium/long-term
2.6	Review all business licensing processes, procedures and fee structures, and investigate the potential of establishing a National Business Licensing System		✓		MFATEL, MFEPI	Medium/long-term
2.7*	Evaluate issues around tourism/transport industry liability and develop strategies to avoid major lawsuits		✓		MCTT	Medium/long-term
2.8	Continue to review and support international air links and to improve the reliability of domestic sea services	✓			MCTT	Medium/long-term
2.9	Raise awareness of current investment and business environment online.		✓		MFEPI	Short-term
2.10	Establish appropriate mechanisms to sustain and develop the role of the TNPSO as the National Private Sector Organisation		✓	✓	MFEPI	Short-term

No.	Action recommended (* indicates priority)	Requirements			Agencies involved	Expected duration
		Implement existing policy	Change policy/ legislation/ Reform Institutions	Technical assistance/ investments		
3	**Trade policy and trade facilitation**					
3.1	Recruit three full-time IF staff		✓	✓	MFATEL	Short-term
3.2	Appoint a donor facilitator	✓			MFATEL	Short-term
3.3	Support private-sector and civil-society involvement in trade policy	✓			MFATEL	Long-term
3.4	Avoid attending trade meetings with little commercial benefit for Tuvalu		✓		MFATEL, MFEPI	Short/long-term
3.5	Conduct a feasibility study for ASYCUDA, in conjunction with Kiribati			✓	MFATEL, MFEPI	Short-term
3.6	Evaluate the Recognised Seasonal Employer (RSE) scheme		✓		MFATEL, MFEPI	Medium-term
3.7	Consider discussions toward a bilateral trade agreement with Taiwan		✓		MFATEL	Medium-term
3.8	Consider reviewing wharf charges and stevedoring performance		✓		MFATEL, MFEPI	Medium-term
4	**Human development and environment**					
4.1*	Mainstream trade, poverty and human development policy		✓		GoT	Medium-term
4.2	Remain aware of the linkages between human development, trade, and the environment		✓		GoT	Long-term
4.3	Link trade negotiations with human development		✓		MFATEL, GoT	Short/long-term
4.4	Support environmental policy with tax incentives		✓		MFATEL, MFEPI	Long-term
4.5	Seek donor investment in renewable energy			✓	MFATEL, MFEPI	Long-term
4.6*	Continue to raise the profile of climate change in the international arena	✓			GoT	Short/long-term
4.7	Identify a new labour mobility market		✓	✓	MFEPI	Medium-term
	SECTION II: SECTORAL RECOMMENDATIONS					
5	**Tourism**					
5.1	Improve business development and networking		✓		MCTT	Medium-term
5.2	Update marketing and information practices		✓		MCTT	Medium-term
5.3	Develop linkages within the domestic economy		✓		GoT, MCTT	Medium/long-term
5.4*	Develop human resources		✓		MCTT	Medium/long-term
5.5*	Improve research and decision support		✓		MCTT	Medium/long-term
5.6*	Improve awareness of environmental issues in the tourism sector		✓		MFATEL, MCTT	Medium/long-term
5.7	Develop a tourism strategy		✓		MCTT	Medium/long-term

No.	Action recommended (* indicates priority)	Requirements			Agencies involved	Expected duration
		Implement existing policy	Change policy/ legislation/ Reform Institutions	Technical assistance/ investments		
6	**Trade and human development**					
6.1	Concentrate more on financial yield and management of the offshore tuna fisheries	✓			MNREAL	Medium/long-term
6.2	Support the completion and implementation of the Tuna Development and Management Plan	✓			MNREAL	Short/long-term
6.3	Support the recently launched Institutional Strengthening Program for the Fisheries Department	✓			MNREAL	Short-term
6.4	Closely assess and monitor the benefits and disadvantages of any current joint ventures		✓		MNREAL	Medium/long-term
6.5	Develop a bêche-de-mer management plan		✓		MNREAL	Medium/long-term
6.6	Develop national management plans for coastal fisheries		✓		MNREAL	Medium/long-term
6.7	Support the Fisheries Department to undertake coastal monitoring and stock assessment			✓	MNREAL	Medium/long-term
6.8	Increase the support for expanding the observer program by training more observers to improve data collection and promote sustainability		✓		MNREAL	Medium/long-term
6.9	Consider strengthening collaboration between the Department of Environment, the Department of Fisheries and the TANGO network		✓		MNREAL, MFATEL, TANGO	Short/long-term
6.10	Harmonize the environmental and fisheries related legislation		✓		MNREAL	Medium/long-term
6.10	Promote co-operative management approaches		✓		MNREAL	Medium/long-term
7	**Agriculture**					
7.1	Continue to prioritise domestic agriculture, both on a commercial and a subsistence basis	✓			MNREAL	Long-term
7.2	Consider biosecurity legislation and the appropriate institutional framework		✓		MNREAL	Medium-term
7.3	Consider a coconut replanting scheme	✓		✓	MNREAL	Medium-term
7.4	Support local enterprises to engage in integrated tree, crop, and livestock production		✓		MNREAL	Medium/long-term
7.5	Subject to priorities in other areas, consider strengthening the Agriculture Department		✓	✓	MNREAL	Medium/long-term
7.6	Skilled and well-trained staff should be involved in implementing the extension program	✓			MNREAL	Long-term
7.7	Document traditional agricultural and environmental management and associated traditional knowledge		✓		MNREAL	Medium/long-term
7.8	Enact an awareness program (targeting youth and community leaders) aimed at strengthening traditional agricultural and land management systems		✓		MNREAL	Medium/long-term

CHAPTER ONE

Macroeconomic environment

1.1 INTRODUCTION

This chapter presents the macroeconomic background and discusses some contemporary macroeconomic issues. First is some country information and an outline of the composition of GDP. The following section examines economic growth, per capita GDP and inflation, following which there is a comparison of Tuvalu's economic performance with that of other regional countries. The subsequent sections present the balance of payments, trade by composition and destination and macroeconomic policy. Finally, some preliminary conclusions are drawn on the basis of the discussion so far.

1.2 BACKGROUND

Tuvalu's estimated population of 11,810 is spread across an exclusive economic of 900,000km². By population it is the world's ninth-smallest country, and total land area is only 26km².[2] More than half of the population lives in the town of Funafuti on the island of Fongafale.

Tuvalu enjoys several economic advantages, including a well-managed trust fund established in 1987; a strong traditional culture, which promotes social stability and family welfare (although gender equity remains a concern); and under-exploited potential in tourism, low-skilled services exports and fisheries.

Economic potential is limited by a lack of natural resources, especially land and fresh water, which are under substantial pressure from environmental change; a small domestic market with little potential for economies of scale; geographic fragmentation; difficult and expensive access to major international markets (the country is nearly 1,100km from Fiji, its nearest market); a small private sector and a long-standing tradition of government involvement in the economy. As a result, diversification from a traditional reliance on rental-related activities has proven challenging. The nine atolls comprising the chain are low-lying, and the country is expected to suffer a significant impact from climate change as sea levels rise.

Although Tuvalu is not included on the latest official Human Development Index, an independent paper which calculates values for states not in the official Index estimates that Tuvalu would rank 169th out of 234 countries and territories (Hastings 2009). The country's index value of 0.711 would categorise it as having 'medium' human development. Tuvalu ranks 10th of 15 Pacific islands on the Pacific Human Development Index (HDI). While education is relatively good and

[2] By comparison, Geneva covers an area of around 16km².

the adult literacy rate is 99%, the infertility of national soil and the high annual volume of imported products mean that diets tend to lack balance, particularly in the capital, and diabetes is a growing problem. Per capita GDP is high for a least-developed country (LDC), at US$2,447 according to the IMF (2011), but Tuvalu has ranked very low on the UN economic vulnerability index since 1991, with a score of 50 or below for most of these years. A level of 100 is considered sufficient to consider a country for graduation from LDC status (alongside criteria on human capital and income).

1.3 COMPOSITION OF THE ECONOMY

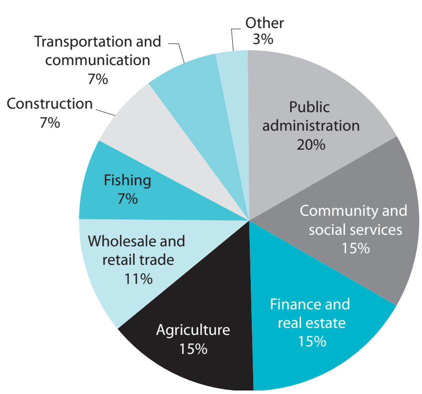
The government plays a dominant role in the economy. According to the IMF (2010) the public sector accounts for 70% of all employment, while public expenditure is estimated at 97.7% of GDP for 2010.[3] Public administration is the biggest single component of economic output according to official government statistics, accounting for 17% of GDP on average from 2004–9. The next largest category according to the official classification is community and social charges, at 16% of GDP. Finance and real estate is the next biggest, followed by agriculture. Wholesale and retail, fishing, construction, transport and communication make up the other major categories. Hotels and restaurants, manufacturing, electricity, gas and water together comprise 3% of GDP.

The subsistence and informal sectors comprise a large part of the economy.[4] The remittance of funds earned overseas to the outer islands tends to replace some traditional subsistence activities, and subsistence farming is said to be declining, with an accompanying loss of traditional knowledge. Subsistence fishing and agriculture nevertheless remain important sources of food for many people.

[3] According to ADB (2008), however, government spending has fallen. It was 150% to 220% of GDP between 1999 and 2003.

[4] The last Household and Income Expenditure Survey was conducted in 2004. A new survey was being compiled at the time of writing.

FIGURE 1.1 **Composition of GDP by major activity, average 2004–9**



Source: Government of Tuvalu/ IMF

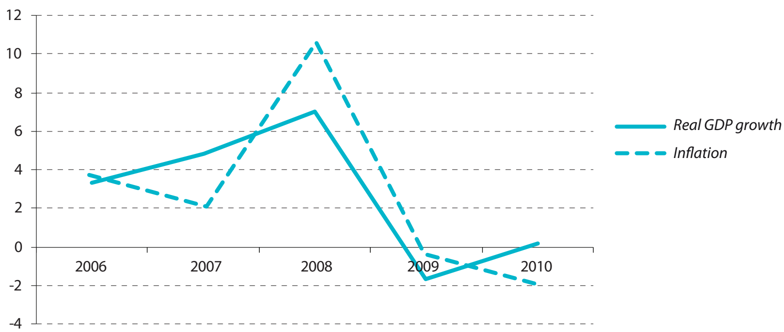
Aid plays a major role in the economy, being worth an estimated A$17.7 million in 2009, or 55% of GDP. Aid per capita is therefore around A$1,500, higher than even most Pacific island countries, which traditionally record the highest levels of aid per capita in the world.

1.4 ECONOMIC GROWTH AND INFLATION

After real annual GDP growth of around 5% in the 1990s, growth slowed in the new millennium to an annual average of 1.6% from 2001–9 (IMF 2010). The economy is highly dependent on global economic conditions, and a reduction in remittances from seafarers working abroad coupled with a reduction in earnings from the Tuvalu Trust Fund (TTF) had a significant impact on the economy. Income from the .tv domain name and the philatelic bureau has also fallen in recent years. In addition a number of construction projects came to an end, compounding the slowdown in 2009. The downturn contributed to an increase in the number of people living in poverty. An estimated 27% of people live below the national poverty line in Funafuti, compared with around 20% from 2004 to 2005.

FIGURE 1.2 **Real GDP growth and consumer price index, % change, 2006–10**

Source: IMF



Inflation has historically been moderate due to the use of the Australian dollar as the national currency, although the consumer price index rose 10.5% in 2008 as a result of the international food and commodity price boom. The slowdown in economic growth subsequently led to projected deflation of 0.3% for 2010, primarily a result of a reduction in the price of major foodstuffs, although petrol prices were expected to have risen.

1.5 COMPARATIVE ECONOMIC PERFORMANCE

Overall, the economy of Tuvalu has outperformed the Pacific region since 2007, having proven more resilient to the crisis. The prominent role of aid and government spending in the economy no doubt contributed to this relative stability. The economy grew faster than the Pacific islands as a whole from 2007 to 2010 despite a contraction in 2009. The ADB forecasts that GDP will outgrow the regional average in 2011, at 1.6%.

Of the 14 Asian and Pacific island economies included in the following graph of GDP growth forecasts, Tuvalu ranks fifth behind Timor-Leste, Papua New Guinea, Vanuatu and Solomon Islands. Several of the more dynamic regional economies have benefited significantly from increased tourism inflows. Timor-Leste, Papua New Guinea and Solomon Islands have major mineral and resource wealth and have gained from an upturn in international commodities prices in recent years. Tuvalu has a tiny tourism sector and no major mineral or resource wealth, although aid inflows have remained strong along with rental income until 2008–9.

FIGURE 1.3 **GDP growth, Tuvalu and Pacific islands, 2007–11**

Source: ADB

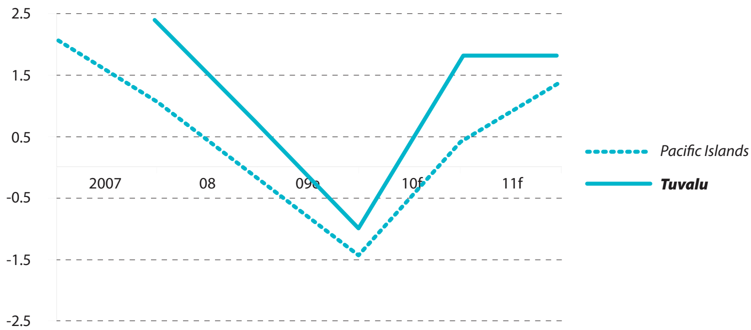
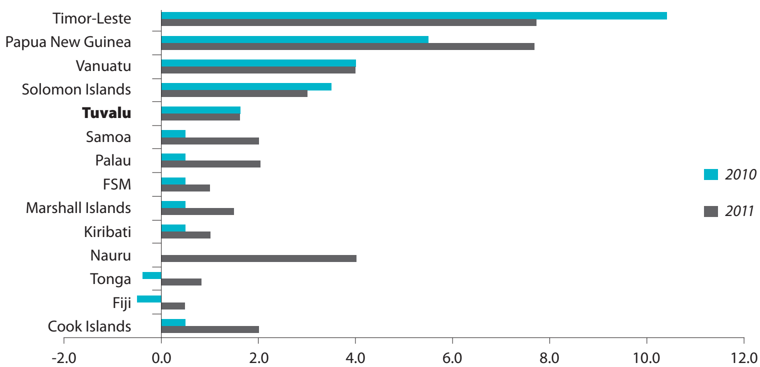


FIGURE 1.4 **Forecast GDP growth, Pacific Islands, 2010–11**

Source: ADB[5]



[5] The last Household and Income Expenditure Survey was conducted in 2004. A new survey was being compiled at the time of writing.

1.6 BALANCE OF PAYMENTS

Tuvalu has historically run a large trade deficit, financed chiefly by external grants but also by fishing license fees, income from the Tuvalu Trust Fund, the .tv domain name and remittances from seafarers. The trade deficit reached a peak of A$17.3 million in 2010 (see table below). The services deficit has expanded in recent years to a projected A$19.6 million in 2009 before moderating to an expected A$16.1 in 2010. The current account deficit in the same year was A$8.4 million including official grants, a sum worth 24.1% of GDP.

Gross official reserves are high compared with other Pacific island economies—8.2 months of import cover according to the latest figures. External debt is large, at 31.9% of GDP, although most borrowing is at concessionary rates. As noted below, the government cannot borrow domestically so it must make greater use of international lending facilities than some other comparable countries.

1.7 PERFORMANCE OF GOODS TRADE

Since independence the country has had no history of significant goods exports, a result of its geographic isolation, fragmentation and small size. Goods exports were approximately A$400,000 to A$600,000 a year from 2004 to 2009 (Tuvalu Government; IMF 2010). This is less than 2% of GDP, amongst the lowest of the Pacific island economies. The graph in figure 1.5 below, using earlier data from

TABLE 1.1 **Balance of payments, A$ millions, 2006–15**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Trade balance	−12.3	−13.9	−16.7	−16.0	−17.3	−14.5	−14.6	−14.7	−14.9	−15.0
Exports, f.o.b.	0.6	0.5	0.6	0.6	0.7	0.8	0.8	0.8	0.8	0.8
Imports, f.o.b.	−12.8	−14.4	−17.4	−16.6	−18.0	−15.3	−15.4	−15.5	−15.7	−15.9
Services (net)	−19.3	−16.2	−22.0	−19.6	−16.1	−14.8	−14.8	−14.9	−15.0	−15.2
Receipts	2.7	2.4	3.0	3.0	3.4	3.5	3.7	4.0	4.2	4.5
Payments	−22.0	−18.6	−24.9	−22.6	−19.5	−18.3	18.5	−18.8	−19.3	−19.7
Transportation	−4.1	−4.4	−5.6	−5.3	−6.2	−5.6	−5.7	−5.7	−5.8	−5.9
Travel	−6.1	−7.1	−8.7	−8.8	−8.9	−8.3	−8.3	−8.4	−8.7	−8.9
Other [6]	−11.8	−7.0	−10.6	−8.3	−4.3	−4.4	−4.5	−4.6–	4.8	−5.0
Income (net)	21.0	20.0	22.0	19.7	15.5	17.3	18.6	20.3	21.5	22.5
Receipts	22.0	21.0	22.9	20.6	16.5	18.2	19.6	21.3	22.5	23.5
Compensation of employees	3.1	3.6	4.2	3.6	2.2	3.2	3.3	3.6	3.9	4.1
Investment income	10.2	10.2	7.1	4.6	5.4	6.3	7.1	8.1	8.6	8.9
Other property income	8.7	7.2	11.6	12.4	8.8	8.8	9.2	9.6	10.0	10.5
Payments	−1.0	−1.0	−0.9	−0.9	−0.9	−1.0	−1.0	−1.0	−1.0	−1.0
Compensation of employees	−0.3	−0.2	−0.2	−0.1	−0.2	−0.2	−0.2	−0.2	−0.2	−0.2
Investment income	−0.7	−0.8	−0.7	−0.8	−0.8	−0.8	−0.8	−0.8	−0.8	−0.8
Current transfers	10.1	9.5	13.0	14.1	9.5	14.2	9.6	9.6	9.7	9.8
Private	−0.6	−0.7	−0.7	−0.7	−0.7	−0.7	−0.7	−0.6	−0.6	−0.6
Inflows	1.0	1.1	1.0	1.0	1.0	1.1	1.1	1.1	1.2	1.2
Outflows	−1.6	−1.7	−1.8	−1.7	−1.8	−1.8	−1.8	−1.8	−1.8	−1.8
Official	10.7	10.1	13.7	14.8	10.2	14.9	10.2	10.3	10.3	10.3
Inflows	11.1	10.8	14.6	15.3	10.7	15.4	10.7	10.8	10.8	10.8
Outflows [7]	−0.4	−0.7	−0.8	−0.5	−0.5	−0.5	−0.5	−0.5	−0.5	−0.5
Current account balance										
Including official grants	−0.5	−0.6	−3.7	−1.8	−8.4	2.2	−1.2	0.4	1.3	2.0
Excluding official grants	−11.6	−11.4	−18.2	−17.1	−19.1	−13.2	−12.0	−10.4	−9.5	−8.8
Capital and financial accounts	10.8	2.0	10.1	−0.7	0.5	−4.3	−4.0	1.5	0.9	0.3
Credits	10.8	6.4	8.9	4.4	3.6	3.6	3.6	3.6	3.6	3.6
Debits	0.0	−4.4	1.2	−5.1	−3.1	−7.9	−7.6	−2.1	−2.7	−3.3
Errors and omissions	1.2	1.5	3.9	1.1	3.7	0.0	0.0	0.0	0.0	0.0
Overall balance	11.5	2.8	10.3	−1.4	4.2	−2.1	−5.2	1.8	2.2	2.3
Financing	−11.5	−2.8	−10.3	1.4	4.2	2.1	5.2	−1.8	−2.2	−2.3
Change in official reserves (increase-)	−11.5	−2.8	−10.3	0.4	4.2	2.1	5.2	−1.8	−2.2	−2.3
Exceptional financing [8]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
Memorandum items										
Current account balance (percent of GDP)										
including official grants	−1.5	−1.9	−10.2	−5.2	−24.1	6.3	−3.4	1.0	3.3	5.1
excluding official grants	−37.0	−34.2	−50.6	−49.3	−54.9	−37.6	−33.2	−28.0	−24.7	−22.0
Gross official reserves	17.4	20.3	30.7	30.3	25.6	23.5	18.3	20.2	22.3	24.7
(in months of imports of goods and services)	7.7	7.8	10.3	10.0	8.2	8.5	6.5	7.1	7.7	8.4
External debt [9]	13.9	13.6	16.8	12.3	11.1	9.9	9.3	8.6	8.0	7.3
(as % of GDP)	44.7	40.7	46.7	35.3	31.9	28.1	25.9	23.1	20.6	18.3
External debt service	0.5	0.5	0.6	0.8	1.2	0.8	0.8	0.9	0.9	0.8
(as % of exports of goods and services)	14.1	6.1	17.2	22.8	28.8	17.9	18.3	18.2	16.9	15.6
NPV of external debt (percent of GDP) [9]	—	—	—	29.4	24.7	23.2	21.5	19.3	17.4	15.5

Source: IMF 2010 (Tuvalu authorities, PFTAC, and IMF staff estimates). [6] Includes construction services related to donor-funded projects. [7] Includes government's overseas contributions. [8] In 2009, part of the EIB loan to the Development Bank of Tuvalu (500,000 Euro) was converted to a grant. [9] Projections for 2011–15 are based on outstanding debt as of 2010, assuming no new borrowings.

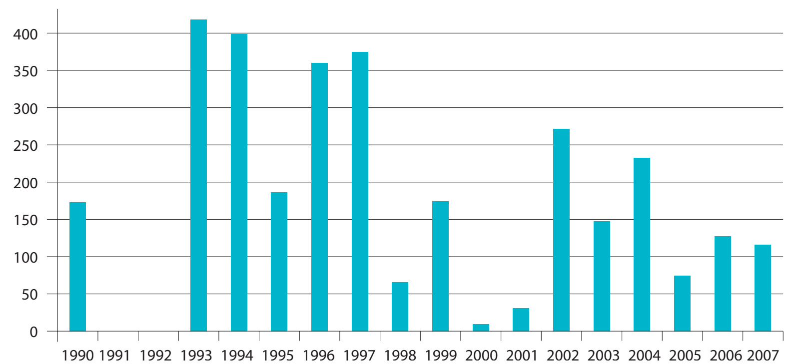
ADB (2009), shows a volatile, declining trend in visible exports from 1993 to 2007.

While it may be a mistake to try to identify a long-term trend on the basis of very low and volatile figures, the decline in exports is unlikely to be the result of changes in domestic policy or a reduction in productive capacity. Most Pacific island economies have found it progressively more difficult to compete on the international stage in the modern era. The period 1993–2007 coincides with tariff preference erosion and the increasing international prominence of the large, efficient producers to be found in many East Asian countries.

FIGURE 1.5 **Exports, A$ '000s, 1990–2007**

Source: ADB (2009)

n.b. Data for 1991 and 1992 are unavailable.

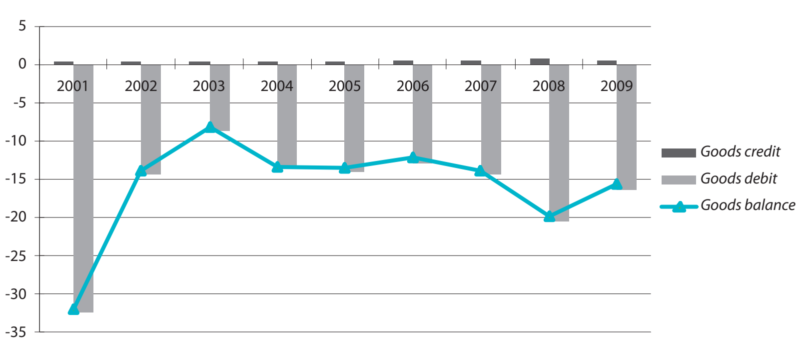


Government policy has focused on rental income and services exports rather than agricultural exports, processing or industrial products. To put the country's size into perspective, a land area of $26km^2$ is smaller than a single farm in many countries with which Tuvaluan agricultural exports might compete. A considerable proportion of land is taken up with housing (Funafuti is densely populated), while the country is spread across thousands of kilometres of ocean. Any potential fisheries processing or manufacturing would be similarly hampered by geographic fragmentation and the sheer lack of available space. As international trade liberalisation increases, Tuvalu will find it difficult to compete with the economies of scale and lower costs of more efficient global producers.

The import bill averaged A$15 million from 2004–9, approximately half of current GDP. From a peak of A$32 million in 2001, the goods deficit moderated in

FIGURE 1.6 **Goods credit, debit and balance, A$ millions, 2001–9**

Source: Government of Tuvalu



subsequent years before reaching a high of A$20 million in 2008 as a result of the increase in global food and commodities prices. The deficit has otherwise fluctuated from year to year without any discernible trend in nominal terms. Historically, Tuvalu has also exported to Germany, the United Kingdom, Italy, Poland, the Philippines, Denmark and France.

1.7.1 Direction of trade

Exports are so small that Tuvalu can be said to have no consistent export markets. Data from ADB (2009) show that the country exported products worth a total of around US$40 million to all countries from 1990 to 2009. Extrapolating to the previous decade, this suggests that total exports throughout the country's history since independence may have been somewhere in the region of US$60 million in nominal terms, an extremely small sum given that current GDP is more than half this value.

Raw customs data was obtained for the DTIS at the four-digit HS level. Using this data, the following table aggregates total exports for 2008, the most recent year for which complete export figures are available. As the table shows, exports went to only five destinations, with Fiji, Australia, Japan and Kiribati accounting for the bulk of the total. A single consignment of stamps (HS4907) to Australia, at A$100,000, was the only shipment worth a value of six figures or more. During the year 190 export entries were made.

TABLE 1.2 **Export destinations, A$, 2008**

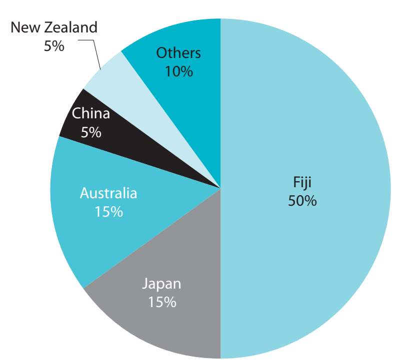
Source: Government of Tuvalu

Country	Exports, A$
Fiji	287,149
Australia	115,264
Japan	90,212
Kiribati	47,273
New Zealand	2,103

On the import side, from 1995 to 2005 approximately half on average came from Fiji, with Japan and Australia accounting for 14% each. China and New Zealand each contributed 6%.

FIGURE 1.7 **Imports by country, average 1995–2005**

Source: ADB (2009)



Fiji normally accounts for between two-fifths and three-fifths of imports, and the country has almost continuously been Tuvalu's biggest import partner over the last decade or more. New Zealand has consistently accounted for 5–10% of imports. The aggregate data, however, disguise a consistent displacement of imports from Australia between 1995 and 2005 with those from Asia. In 1995, Australia accounted for 30% of imports, while by 2005 the figure was only 8%. Over the same period Japan went from supplying 2% of imports to 19%. China accounted for 1% of imports in 1995 compared with 18% in 2005.

By 2009, using a different data series, the proportion of imports originating in Australia was 23% while China accounted for only 9% of imports.[10] Japan was the source of 3% of imports. Anecdotal observation, plus interviews with retailers, co-operative managers and government officials confirm that an increasing proportion of imports appear to be sourced from China.

[10] Using raw data from the Department of Customs, as opposed to the ADB data used in the graph

There may be discrepancies in the data, and it is possibly that rules of origin are incorrectly applied, particularly on Chinese goods shipped through Australia or Fiji. But it appears that Asia is slowly becoming a more important source of imports than Australia. This is despite the absence of bilateral trade agreements with Asian countries and Tuvalu's non-membership of the WTO. Over the same time period, the Pacific Island Countries Trade Agreement (PICTA) came into force, which would have been expected to boost trade with Fiji, although the average trade-weighted duty with all countries is relatively low, at 8%, and the average trade-weighted levy (applied separately) is 5%, suggesting that any trade diversion effect would be relatively small.

1.7.2 Composition of trade

Tuvalu imports most foodstuffs and almost all processed goods and manufactures. The import profile fits countries of a similar income, although because of the lack of domestic industrial base there are fewer imports of capital equipment or intermediate goods. Some degree of import substitution occurs, with people on the outer islands engaging in traditional fisheries and agriculture—principally in the form of root crops and coconuts. A hydroponic fruit and vegetable growing facility was recently established in Funafuti with Taiwanese assistance, although it is not big enough to supply the needs of the entire capital.

Re-exports form a high proportion of total exports, with no agricultural products featuring in official data for recent years. Interviews with the Tuvalu Coconut Trade Co-operative and private sector representatives confirmed that copra and coconut exports have ceased in recent years, while other fisheries and agricultural exports are also dormant. As noted earlier, the only significant income from fisheries is through licence fees for foreign vessels, from which Tuvalu benefits more than many other Pacific island economies, notably Kiribati.

Apart from the shipment of stamps to Australia in 2008, scrap metal features regularly in exports, with re-exports such as electrical goods and machinery also prominent. A number of exports, particularly to Fiji, are in fact non-commercial and have negligible value. Periodically, there have been larger one-off shipments of large items to European destinations but these are mostly re-exports of scrap or equipment.

1.8 MACROECONOMIC POLICY

The government has made a number of proactive decisions in macroeconomic policy, including joining the IMF in 2010 and enlisting the assistance of the ADB in public enterprise reform. The launch of the IF in 2010 is also an example of the government's recent more outward-looking stance. In the short to medium-term the government faces a budgetary shortfall as a result of the temporary cessation of payouts from the Tuvalu Trust Fund (TTF), together with lower tax receipts. High expenditure during the most recent period of economic growth contributed to the budgetary shortfall. Windfall revenue from the TTF and fishing licenses was rapidly spent on major public construction projects and subsidies and transfers rather than used for deficit reduction.

An important debate exists over future fiscal policy. It is clear that in the short to medium-term the government faces a testing fiscal environment and that fiscal management needs to be improved. Yet if the government is to continue to prioritise primary education, primary health care and employment-oriented technical and vocational education, as set out in the national development plan, it needs to balance budget cuts with the achievement of social and development goals. As shown in Chapter 4 of the DTIS inequality is increasing, and a certain level of social expenditure must be maintained in order to prevent the situation from worsening.

As in all economies, there is a risk that fiscal austerity will prove counterproductive, worsening the immediate economic downturn and setting the economy onto a lower future growth path. It is quite possible that tax revenues will be lower as a result, pushing the government finances further into deficit. A number of Pacific island countries have experienced economic downturns following public sector cuts. The Cook Islands experienced emigration to New Zealand after the downsizing of the public service in the late 1990s. Vanuatu experienced a recession and a decline in per capita GDP during the five years following the initiation of its own Comprehensive Reform Program in 1997. In Tuvalu, future economic policy should aim not only at better fiscal management but at job creation and the expansion of productive capacity. Recommendations for cuts in the short to medium-term should be tempered by the possibility of doing long-term damage to the economy.

Tuvalu is in the unusual position of having no private banking sector and therefore no ability to borrow domestically. Monetary policy is further limited by the use of the Australian dollar, placing emphasis on fiscal policy. The only options for covering the anticipated budgetary shortfall are to enact a major program of cuts (which would be contractionary in the short-term and politically and socially difficult to justify); to enact a corporatisation or privatisation program (which is on the agenda under the public enterprise reform program)[11]—or to borrow internationally. International debt is 31.9% of GDP, which is high by Pacific Island standards, but not internationally. Tuvalu's unique donor relationship, under which aid forms a significant proportion of GDP, puts the country in a positive situation regarding its future ability to finance government expenditures. The international lending institutions are well-disposed toward Tuvalu and can provide loans at concessionary rates.

[11] A new Public Enterprise Act was tabled in 2009, with the support of the ADB

Longer-term macroeconomic policy is set by Te Kakeega II, the National Strategy for Sustainable Development 2005–2015. It has eight strategic areas aimed at achieving more employment opportunities, higher economic growth, better health care and education, improved basic infrastructure, and continued social stability.

In macroeconomic policy the document outlines a number of reforms in order to raise economic growth and increase the contribution of the private sector to overall economic output. The matrix outlining its objectives is reviewed regularly with donors, the most recent review having taken place in 2008. The original document proposes structural reform, along with efficiency improvements and selective cost-cutting. As the strategy acknowledges: "With little to drive the non-government economy the prospect is for low rates of growth in the short to medium-term unless major public sector investments, as occurred in recent years, can be sustained and the private sector can increase its share of GDP" (Government of Tuvalu 2005: 19).

Macroeconomic Policy in Te Kakeega II

Objectives include:

- Sound macroeconomic management;
- Fiscal discipline and balanced budget;
- Clear budget expenditure priorities that offer high rates of return;
- Structural change, innovation and economic reform;
- Increase private sector share of GDP;
- Minimise external debt; and
- Lower subsidies to public enterprises.

Economic growth and stability priorities and strategies 2005–2015 are:

- National budget deficits not to exceed sustainable levels of 2–3% of GDP;
- Budget expenditure priorities: primary education, primary health care; and employment-oriented technical and vocational education;
- Implement structural changes, promote innovation, and initiate economic reforms;
- Increase private sector share of GDP by 50% by 2015;
- External debt not to exceed 60% of GDP; and
- Subsidies to public enterprises not to exceed 5% of GDP.

Source: Te Kakeega II: 18–19

While some of the overall macroeconomic goals are admirable—it would be difficult to disagree with the notion that macroeconomic management should be "sound"—one of the most important objectives in the first list conflicts with the second. A "balanced budget" is different to "National budget deficits not to exceed… 2–3% of GDP". It is not clear where the 2–3% figure is derived from.[12] The problem with assigning arbitrary figures and timelines to budget deficits irrespective of the stage of the economic cycle is that they can be unnecessarily restrictive or even pro-cyclical. Fiscal discipline, structural change, a reduction in external debt and lower subsidies are all contractionary, at least in the short-term. At a time when even developed countries have budget deficits of up to a fifth of GDP, and as noted above, such fiscal austerity appears particularly unrealistic for a tiny least-developed country with limited opportunities for private sector growth and a substantial aid donor presence.

By 2010, halfway through the timeframe covered by Te Kakeega II, three of the most important growth and stability priorities had not been met or were off-target. Budget deficits using the international definition and the government's own definition for the years 2005–2011 are shown in the following table.

[12] For comparison, the European Growth and Stability Pact prescribed maximum budget deficits of 3% in order for European countries to join the euro (a rule which most EU countries have by now broken). The target for national debt was also 60% of GDP. Obviously European targets are inappropriate for Tuvalu, but other regional examples may provide benchmarks—e.g. one of Samoa's fiscal targets is to maintain a budget balance within the range of −3.5% and +3.5% of GDP, except where larger deficits involve borrowing at concessionary rates to fund growth promoting infrastructure projects. While Samoa moved outside this following the GFC, the government reaffirmed its commitment to its fiscal policy targets in their 2010/11 Budget Fiscal Strategy Statement.

TABLE 1.3 **Budget balance, % GDP, 2005–2011**

Year	2005	2006	2007	2008	2009	2010 budget	2010 estimate	2011*
Budget balance, %, international definition	−8.9	−17.1	−13.4	−5.3	−3.7	−22.1	−28.7	−10.9
Budget balance, %, government definition	3.2	−4.8	−1.5	6.8	9.2	−8.4	−15.0	3.1

Source: IMF 2011.

* IMF staff proposal.

n.b. The government definition includes 4% of the maintained value of the TTF as revenue.

Using the international definition of the budget balance, only in 2005, 2008 and 2009 was the budget deficit in single figures, while 2010 saw a significant worsening of the deficit. According to the definition used by the government, which includes 4% of the TTF as revenue, the budget was in surplus in 2005, 2008 and 2009, although it appears likely to have ended 2010 in a significant deficit. Although the budget balance has been volatile in recent years, the deficit according to the government's definition has been manageable, and increased in 2010 largely due to the global financial crisis. Significant cuts in response are probably unwarranted.

The objective of increasing by half the proportion of GDP accounted for the private sector by 2015 appears unlikely to be met. It is not clear what performance measure is to be used, but total government expenditure increased as a proportion of GDP over the period concerned, rather than fell, as would be expected if private sector activity were to increase. Government expenditure is estimated by the IMF at almost 100% of GDP in 2010, as shown by the following table. Anecdotal evidence suggests that there has been a minor increase in retail-related activity, but most economic activity remains dominated by government, with all seven public enterprises remaining in state hands. Only one is profitable—the National Bank, and several are insolvent. Similarly the goal outlined on p.32 to: "Set fiscal policies, including subsidies to public enterprises, so it [sic] does not crowd-out the private sector" had not been met at the time of writing. Government continues to support public enterprises, in effect providing significant hidden subsidies.

TABLE 1.4 **Government expenditure, % GDP, 2005–11**

Year	2005	2006	2007	2008	2009	2010 budget	2010 estimate	2011*
Expenditure, % GDP	77.2	85.2	80.1	82.7	93.5	93.8	97.7	82.8

Source: IMF 2011

* IMF staff proposal.

In a larger economy one of the key arguments for liberalisation is to allow the market to co-ordinate economic activity. Centralised structures of command proved bad at co-ordinating production across the enormous range of activities that characterise the modern economy. State-run firms were particularly poor at activities like assessing the quantity of specific consumer goods that need to be supplied, or trying to guess the quantity of industrial goods to produce. In the economist Friedrich Hayek's phrase, only the 'man on the spot' can know exactly what he needs, and these requirements can only be realised in the marketplace. In a tiny economy like Tuvalu, however, this particular argument for domestic liberalisation is weaker. The population is so tiny and the cash economy based in such a small geographical area that it should be possible for a central authority to co-ordinate a considerable amount of economic activity—for instance to assess the goods that consumers need and what needs to be imported—and this is one reason why the co-operative movement has featured so prominently. There is only a tiny production base. Competition will always be very limited, if not non-existent, which means that there are fewer incentives for private companies to use efficient production techniques, to keep factor costs down or to source cheaper imports. In essence, some markets are unlikely to work as well as they might in larger economies.

In addition, small island states are simply confronted with costs that are so high that some private sector operations can be non-viable. As a World Bank Report says about small island economies: "In most cases the data suggest that capital would earn negative returns if it invested in a microeconomy and had to bear all the cost of the inefficiencies itself. Similarly, if the whole burden were visited on labour so that wages were zero in a micro-economy, total costs in manufacturing would still exceed world prices" (Winters 2004).

This is not to say that other motivations for giving a more prominent role to the private sector do not exist, the main argument being that most of the government-run enterprises can be so inefficient that they present larger hidden costs than is at first apparent. Closer international economic linkages make sense, as they will exert some degree of competitive pressure on Tuvalu as an economic unit and improve the flow of services trade—which is the country's main asset. Neither does this note of caution about the role of the private sector mean that Tuvalu should retain its government-dominated economic mindset. But it does throw into doubt any policy of rapid or wholesale liberalisation without supporting institutional structures or business and vocational training. There remains an argument in favour of a central agency or a well-run co-operative performing a back-stopping role.

1.9 DONOR ACTIVITY

Since the late 1990s the focus of most donor agency funding has been on a range of priorities including governance, capacity-building in central government agencies, education, health and infrastructure development. Donor expenditure is naturally channelled through government, helping support the very high levels of state expenditure.

The Government of Australia through AusAID is an important source of donor funds in Tuvalu and much of its recent work has focused on technical vocational education and training through the regional Australian Pacific Technical College. There has also been some support provided to the local Tuvalu Maritime Training Institute. Six staff at the government-run hotel have recently received training through APTC.

The New Zealand Government's Aid Program priorities in Tuvalu are outlined in a five-year program strategy 2002–2007 (the New Zealand-Tuvalu Development Cooperation Program Framework). The goal of the strategy is to support the efforts of Tuvalu's Government and people to achieve equitable and sustainable development. The strategy focuses on three key areas (which are also priority areas in Te Kakeega II): outer island development, financial management support, and human resource development. The program strategy is currently being reviewed and updated to cover the next 10 years.

The **Secretariat of the Pacific Community (SPC)** has provided technical assistance and training through its Statistics and Demography Program, working in particular with Tuvalu's Central Statistics Bureau on preparing a Statistical Master Plan. SPC have also provided assistance in designing a national information communication technology (ICT) policy.

The **Asian Development Bank (ADB)** has provided assistance in areas such as public financial management, State-Owned Enterprise governance, water supply, sanitation, and Education. Several donors have targeted waste management issues in Tuvalu, which have the greatest impact on the surrounding marine environment.

The New Zealand Aid Program, the **Global Environment Facility (GEF)**, the **European Union (EU)**, the **South Pacific Applied Geoscience Commission (SOPAC)**, the **South Pacific Regional Environment Program (SPREP)**, the **United Nations Environment Program (UNEP)**, and the **United Nations Development Program (UNDP)** all have activities targeting environmental and climate change issues.

The **Japanese International Co-operation Agency (JICA)** have also been active in developing projects that are of indirect value to the tourism sector. Ono (2007) notes that Japan has provided small funds for the 2005 improvement of the Tuvalu National Council of Women's Craft Centre (Funafuti) and the general strengthening of the TNCW. Japan also made a significant contribution (A$9.7 million) to the construction in 2000 of the inter-island vessel *Manu Folau*).

Taiwan's International Co-operation and Development Fund (ICDF) has been particularly active in the area of local agriculture development. The Home Garden Project uses a relatively large section of land on the ocean side of the airfield to grow an array of produce and provide important skills and knowledge to the local population. The project has also become an important source of local produce for the tourism sector. Such developments play important roles in building linkages between tourism and the surrounding economy and also provide to the visitor a far stronger 'sense of place' than can be achieved through the use of imported foodstuffs.

1.10 CONCLUSIONS

Tuvalu faces some particular challenges even beyond the normal disadvantages encountered by small island states, including a lack of economies of scale, distance from major markets, fragmentation and vulnerability. International flights and shipping are even more infrequent than in many other comparable countries, while domestic transport is an ongoing challenge. The country—the world's ninth-smallest by population—is spread over nearly a million km^2 of ocean, and there is no natural resource yet amenable to export. Fresh water supplies and land area are limited, reducing the opportunities for fisheries exports.

At almost 100% of GDP, government expenditure is amongst the highest in the world. The state-led nature of the economy meant that the country enjoyed some degree of macroeconomic stability during the global economic crisis. Coupled with significant donor spending, the government in effect cushioned the economy against a more serious decline. Tuvalu outperformed most of the Pacific region and was expected to rebound slightly more quickly during the subsequent two years. For the time being, Tuvalu remains one of the most prosperous LDCs, and it retains its least-developed status only due to its economic vulnerability. Per capita GDP is higher than most Pacific island nations. Yet the government-dominated nature of the economy has significant drawbacks. The country's main macroeconomic challenge is to finance an expected budgetary shortfall in 2011, partly the result of overspending during the years of economic growth and overreliance on the Tuvalu Trust Fund.

The private sector is small and lacking in dynamism. Growth rates have proven unsatisfactory over the last decade, while any slim progress in poverty reduction was reversed during the crisis. Over a quarter of people in Funafuti live below the national poverty line. In addition to the potential social costs, fiscal austerity could prove counterproductive, worsening the immediate economic downturn and curtailing future growth and tax revenues.

Only one state-owned enterprise, the National Bank, is profitable. Not only are most state-owned enterprises inefficient and therefore an unnecessary cost to government, but they largely fail to deliver aims consistent with Tuvalu's development objectives. Telecoms, for instance, are inadequate, with the mobile telephone service unreliable and the Internet intermittent, slow and expensive. Experience from other developing countries suggests that good telecommunications are essential for development. This is particularly the case in small, isolated island states.

The government is working with the ADB to improve the economic performance of public enterprises, and the new Public Enterprise Act aims to ensure that the state-owned enterprises become self-sustaining. Although government is behind the reform program, when more detailed plans become clear it is uncertain to what extent Ministers and officials will support plans for full corporatisation or privatisation, and any such plans will need to be approached cautiously. To embark on a radical and fast-paced liberalisation program would probably be ill-advised, not least for political reasons, but particularly given the experience of structural adjustment elsewhere. The economy is so tiny that competition is limited, placing considerable importance on effective regulation and oversight. Yet reform must take place in order to ensure that the economy becomes more productive and that development proceeds apace.

Tuvalu relies considerably on aid and rental-based sources of income. Earnings from remittances, the .tv internet domain name and the Tuvalu Trust Fund have constituted the main source of foreign exchange and government revenues, while aid comprises over half of economic output. The government recognises the importance of the country's existing services-based sources of foreign exchange, and because goods exports have always been insignificant, no overall trade policy exists. This is understandable in the sense that goods exports are unlikely ever to be large, but a coherent policy is essential if the country is to develop its full potential in services trade. Tourism in particular is so small that any improvement in this area could produce substantial economic gains.

Although Te Kakeega II has some valuable aims and it has produced proactive policies and initiatives in a number of areas, it also suffers a number of shortcomings, including unrealistic fiscal targets and over-ambitious objectives for the role of the private sector, without specific accompanying strategies for the accomplishment of these goals. It would be worth the government considering relating debt and budget deficit targets to the economic cycle rather than targeting arbitrary figures. While it is important to be bold, over-ambitious targets risk undermining confidence in the entire development strategy, cutting policy loose from realistic objectives. Government departments appear to have operated independently of official macroeconomic policy, with several indicators heading in the opposite direction to that which was intended. This suggests either that that more realistic macroeconomic policy objectives need to be considered, or that overall policy needs to be communicated and monitored better and that sectoral plans should be tied more closely to actual policies.

CHAPTER TWO

Business and investment

2.1 INTRODUCTION

This section focuses on the current business environment in Tuvalu. A particular emphasis is placed on enabling private sector development and growth and, if possible, encouraging inward investment, import substitution and trade. The discussion covers the following core areas:

- Main business structure and entities (SMEs, micro-enterprises, SOEs);
- Investment policy regime;
- Banking and finance sector, especially access to credit;
- Institutional framework for enterprise support;
- Feasibility of donor IF funding for small scale manufacturing;
- Training and HRD;
- Possible legislation for enterprise support; and
- Other enterprise support/development issues

A review of each of these areas is presented alongside a discussion of some key approaches that could enhance the business environment. Where appropriate, cases are drawn from the DTIS consultation process to highlight key characteristics of the business environment and how they influence the private sector.

The section concludes with some suggestions as to areas for future development and support. The focus is on concrete actions that can be achieved in a relatively cost effective and sustainable manner.

2.2 CONTEXT

The Government controls a range of service deliveries through its statutory corporations, and a variety of other activities, including stevedoring, fish supplies, and repair shops. The statutory corporations are Development Bank of Tuvalu, National Bank of Tuvalu, National Fisheries Corporation, Tuvalu Electricity Corporation, Tuvalu Media Corporation, Tuvalu Telecommunications Corporation, Tuvalu Maritime Training Institute, Tuvalu Philatelic Bureau, Vaiaku Lagi Hotel, and Tuvalu National Provident Fund.

Because many of these areas run at a loss, their fiscal deficits absorb the country's capital and increase difficulties for the private sector (ADB 2006; 2008; 2009; UNESCAP 2010). At the same time,, public sector pay rates are set at levels that the private sector simply cannot match (Mellor 2004; ILO 2010). It can be argued that a major cause of poor private sector development has been extensive state intervention in areas better left to private enterprise, coupled with the state's inability to provide an effective enabling environment for business. (UNESCAP 2010; ADB 2006a, 2006b, 2006c).

Current formal private sector business activity is focused on retail. Other popular activities for formal businesses are construction, farming, and provision of business, financial, and personal services. There are also a number of businesses engaged in the tourism industry—with most focusing on the accommodation sector.

Informal sector business activities tend to be focused on fishing, baking, the operation of small canteens and shops, and the sale of tobacco. Handicrafts also represent an important informal source of income for many families. The Tuvalu National Council of Women estimates that approximately 250 women earn some income through sales of handicrafts in their outlets.

A few local contractors are engaged in housing, road maintenance and infrastructure projects. There is only a very limited manufacturing sector in Tuvalu.

With its low-lying atolls and poor soil quality, Tuvalu struggles in agricultural production. Its only export commodity is copra and limited production of pork and poultry takes places for local consumption. Almost all of Tuvalu's goods are imported and sold in small retail shops located throughout the islands. (PITIC 2008).

The tourism industry is small even by Pacific Island standards. Visitor numbers have struggled to grow and remain largely focused on business travel and 'visting friends and relatives' traffic. Nevertheless it is in the tourism sector, according to the clear majority of those consulted for the DTIS, that holds the greatest potential for income and employment generation.

The level of private sector employment in micro-enterprises, as recorded by the Tuvalu National Provident Fund, has risen over the years. In 1999, there were 251 registered contributions to the Tuvalu National Provident Fund from private sector enterprises, by 2007 this had risen to 615 with a peak of 729 reached in 2003 during the public sector construction program. Such figures are difficult to rely on, however, and may cloak the fact that many firms are actually dormant. Currently, the TNPSO estimates that there are approximately 160 private sector businesses in operation that are active enough to be part of its organisation.

Tuvalu continues to receive remittances from seafarers working on overseas boats but the global financial crisis which began in 2007 and continued through 2008 and 2009 has forced many shipping companies to reduce their activities and to lay off crew. The situation subsequently reduced the remittances from this source of revenue during the years 2008 and 2009 (ADB, 2010; UNESCAP 2010).

ADB (2007) argues that there are many opportunities to develop the private sector, especially in competing with imports, exporting more labour, and taking on activities currently undertaken by the public sector. Competition with imports may be possible in the area of power generation—at least on the Outer Islands where petroleum is especially expensive and coconut oil has become more attractive to use. But the primary opportunity is argued to lie in increasing the amount of local food that finds its way to market.

The DTIS consultation revealed a mildly positive outlook towards the future of the private sector. While problems and issues were highlighted, and many SMEs are facing difficult times, there was a feeling that good opportunities are beginning to emerge as the government begins to implement new policies. There was particular attention given to the positive impact that the recent demise of the Tuvalu Co-operative Society has had on SME development. There was a much less positive view expressed about the prospects of attracting foreign investment to the country. At the same time,, however, the DTIS consultation revealed a strong will to continue to try and attract FDI.

Local businesses and policy makers feel that a number of conditions are needed to enable development of private enterprise, whether it be driven by domestic or foreign investors. There is a feeling that more needs to be done to develop entrepreneurial skills and business sense. There was also a desire for better access to start-up and working capital.

The cost of public utilities was also highlighted as a problem—with a focus on telecommunications, water and electricity. From an infrastructural perspective there is a general consensus that domestic and international shipping services require investment and improvement but are reasonably reliable. Most concern was instead focused on the handling of goods once they are landed in country—with considerable criticism of wharf charges and related services. While it is generally considered to be relatively easy to access labour—it is not always easy to find employees with the right skills and work ethic.

DTIS consultations revealed, unsurprisingly, that SMEs feel tax rates are generally too high. There was also a general feeling that the efficiency and overall training of government officials needs to be improved. In terms of business start up or foreign investment, it is felt that the processes are more complex and drawn out than they should be and that they could be streamlined and made more transparent. Access to land is an issue throughout the nation but particularly in the capital where inward migration means that land is at a premium.

In addition to the trade-related objectives discussed in Chapter 1, Te Kakeega II highlights several priorities and strategies for infrastructure and support services:

- Improve management, operation and maintenance of infrastructure and support services;
- Provide additional infrastructure where it is economically viable;
- Lower or eliminate subsidies to public utilities;
- Seek out alternative providers of infrastructure and utilities within the private sector to create competition;
- Improve quality, frequency and cost-effectiveness of transport services to the outer islands;
- Improve international air service links;
- Improve ICT services and extend ICT service nationwide, especially to schools, clinics and *Kaupule*;
- Expand collection and storage of water for housing, businesses and other structures (especially in Funafuti); and
- Promote water conservation through education and awareness programmes.

If even some of these priorities are met there will be a significant improvement in the business environment. However, the combination of lack of business skills and experience, relatively few opportunities, and constrained access to capital will not allow a rapid-growing private sector. It should also be remembered that traditional egalitarian approaches to life on Tuvalu do not match well with the private sector profit motive.

2.3 INVESTMENT POLICY REGIME

The Foreign Direct Investment Act 1996 covers all foreign investments in Tuvalu. The Government of Tuvalu states that it is enthusiastic about welcoming all investments and deals with each proposal on a case-by-case basis. The institution tasked with overseeing investment activities is the Foreign Investment Facilitation Board (FIFB). The FIFB is supposed to provide all necessary information regarding investment opportunities in the country and all application proposals must be submitted to the Board for consideration. In addition applicants are obliged to complete a Foreign Direct Investment Questionnaire (FDIQ) which requires information such as the size and nature of the project, its projected costs and benefits, land requirements.

All investment proposals are appraised by the FIFB and recommendations are made to the Minister responsible for final approval. The standard Investment Approval procedure is:

1 Submission of investment proposal to FIFB;
2 Appraisal of the investment proposal by the FIFB;
3 Report and recommendation made by FIFB to the Minister responsible;
4 Approval or rejection of the investment by the Minister; and
5 Post-report activities of the Board.

The normal processing time for the Minister's review and consent is approximately 30 days; however any large investments may be referred to the Cabinet for consideration and approval. Companies wishing to undertake business in Tuvalu must also be registered with the Registrar of Companies.

Incentives are granted on a case-by-case basis as there are no specific or fixed guidelines. There is certainly a desire to encourage FDI in some of the outlying islands but to date this has not been successful. Under certain categories, the Minister can at their discretion, grant exemption for certain periods. Such areas include tourism and other pioneering industries (PITIC 2008).

At the moment the main information provided for investors can be found on the Pacific Islands Trade and Investment Commission (PITIC) website. It is also possible to access some key investment information via downloadable PDFs. Unfortunately it does not appear to be easy for a potential foreign investor to get the broader range of information they need to make informed decisions. A simple audit using the search phrase 'Invest in Tuvalu' reveals a rather limited and outdated array of information on the first page of search results (see top five links in Table 1.1). None of the top five links point to any sites directly controlled or managed by the Government of Tuvalu.

TABLE 1.1 **Google search results: Invest in Tuvalu**

1.	The Pacific Islands Trade and Investment Commission, **Sydney**—Web … **Invest in Tuvalu** The Government of **Tuvalu** has recently taken steps to develop guidelines for foreign direct **invest**ment making **Tuvalu** more attractive to … **www.pitic.org.au/index.php?option=com_weblinks&catid…**
2.	**Tuvalu** | PRO€**INVEST** Name: **Tuvalu** Surface: 26.okmÂ… … **Tuvalu**. Name: **Tuvalu**. Surface: 26.0km². ISO 3166 alpha3: TUV. Capital: Vaiaku. Population: … Pro€**Invest** Interactive … **www.proinvest-eu.org/country/tuvalu**

3. Coin **Invest** Trust—Your Partner for Coins and Medals
Coin **Invest** Trust—Your Partner for Coins and Medals. … **Tuvalu** is an island group located in the south western part of the Pacific Ocean and has been …
www.coin-invest.li/products/details.asp?id_programm=304

4. TV Investors Take Note, **Tuvalu** Is Not Happy With The Deal They …
5 Jul 2010 … Something to keep in mind as you invest in the extension … But I do think **Tuvalu** have the right to go for a little more than 2 mil a year, …
www.thedomains.com/…/tv-investors-take-note-tuvalu-is-not-happy-with-the-deal-they-have-with-verisign/

5. **Tuvalu** profile—For Australian exporters—Austrade—Austrade
25 Feb 2010 … Austrade's **Tuvalu** country profile provides Australian exporters with … **Invest** Home We are the first national point

The information provided by the PITIC site is basic and a little dated. The Proinvest site provides no information and indicates that there are no investment projects in Tuvalu—hardly a ringing endorsement for the country. The final in the list of five links does provide limited information from a Market Information and Research Section provided by the Australian Department of Foreign Affairs and Trade. In real terms there is no way to access the basic information and contact details that one would hope to find as a would-be investor. There is no easy access to the FDIQ.

Business income is taxed on net profits at a rate of 30%, however exemptions may be applied. There is a 10% room tax levied on accommodation operations. Additional taxes put in place include taxes on dividends, rents, and royalties. Sales tax is imposed on imported goods (ADB 2009). Customs duties are placed on imports and a special import levy applies in addition to the normal customs duties. Most capital items, including plant, machinery and vehicles for newly established businesses, are exempt from duty upon application and all building materials are imported duty-free. While reforms to taxation have been introduced in 2009 (UNESCAP 2010), it is impossible to find details online.

There is no focused investment unit and there is no 'one-stop-shop' approach for investors in terms of information retrieval. The little foreign direct investment (FDI) that is occurring has been in the bêche-de-mer sector which is difficult to track and which is gathering a reputation for workplace accidents. There is also some limited joint venture activity between the Government of Tuvalu and Taiwanese companies in the tuna fishing sector.

2.4 BANKING AND FINANCE—ACCESS TO CREDIT

The National Bank of Tuvalu was set up in 1980 and is 100% owned by the Government of Tuvalu. The bank offers a range of personal and commercial financial services with commercial loans having a maximum of five years. Loans are usually provided for up to A$50,000 (PITIC 2008).

The Development Bank of Tuvalu (DBT) provides finance for all types of business ventures, with emphasis on the provision of concessional loans to commercially viable projects. Commercial loans are divided into two segments:

- Agriculture and fishing—maximum loan is 80% of project cost;
- Commercial and industry—maximum loan is 65% of project cost.

Available loans to all applicants range from A$500 to A$50,000.

Most retailers and tourism business operators have received some funding and support from the DBT. There has been a directive to focus more on import substitution rather than export development but to date the DBT have managed to keep loan defaults relatively low and satisfy the EIB—the source of DBT funds.

Every private business consulted had received some form of support from the DBT. In every case, however, there was the request made to make more funding available. The DBT is playing a vital role, but the private sector wants to place yet more demands upon its resources. An example of the benefits that flow from DBT loans is outlined in the following case study.

BOX 2.1 **A small textile printer**

Samantha Design started business in 2009 close to the centre of town. A loan of $1500 from the DBT enabled the husband and wife team to purchase a floor mat for their small studio, dies, colours and basic equipment. They aim to have the loan and interest paid back in 2–3 years. Like a lot of small businesses the collateral for the loan was based on Provident Fund holdings and their family assets. They received assistance from the DBT to complete the application.

The business makes use of low-cost materials and uses some innovative design and development approaches. In addition to wood print pattern blocks bought in Samoa the owners also design their own stencils for printing—using old x-ray film from the hospital. The owners buy imported tee-shirts from local shops, or people bring their own, they also make *sulu*, pillow cases and bed sheets.

Business has been doing well and sales are now fairly evenly split between locals and visitors. The fees charged are quite modest—$10 for a printed tee shirt; $20 for *sulu*, $5 if the client brings their own tee-shirt. Local business has expanded into group sales rather than simply sales to individuals. The company did the tee-shirt printing for the Tuvalu Commonwealth games team, the King Tide festival and also for church events both locally and overseas. As the owners noted, "our [tee-shirts] are selling Tuvalu to the world."

The owners need help in areas such as marketing, pricing and product development. They find that utilities costs and other issues are not a major problem as they run a small business with minimal communications and electricity requirements. What they are looking for is support to help them move from a successful start up to a sustainable local business. The owners are also looking for ways to build links to the major accommodation providers to see if their shorts could be sold through those outlets as well.

On the export front, they are trying to send more shirts printed in Tuvalu to the Auckland Pasifika festival. In the past there have been successful sales to the festival—but they have relied on friends and family to assist with this.

2.5 INSTITUTIONAL FRAMEWORK FOR ENTERPRISE SUPPORT

The Ministry of Finance, Economic Planning and Industries (MFEPI) has a critical role to play in stimulating and developing the business environment. MFEPI hosts the Tuvalu Business Centre (TBC). Initiated in 1998 by the UNDP, the TBC aims to strengthen and expand the business sector in Tuvalu. It provides training, courses and individual assistance for existing businesses and potential entrepreneurs.

The Centre is currently split into a Business Promotion Centre and a Business Regulation Centre. The latter handles consumer protection, intellectual property, price control, company and business registration, licensing and also the regulation of co-operatives. The Promotion Centre focuses on promoting trade and industry, providing business advisory services, and also co-ordinates foreign investment.

Several scheduled courses are planned throughout the year including some in the outer islands. Individual assistance to businesses and entrepreneurs includes feasibility studies, business plans and funding proposals. The TBC used to be housed in the Trade Department but is now in the Ministry of Finance. A comment to emerge from the DTIS consultation was that the TBC should be allowed to settle in one Ministry rather than be continually relocated.

The Business Centre currently has two officers focused on enhancing business activity—one on business development and the other on training. The Business Development Officer works with clients on how to start a business and how to develop a business plan. He also advises on loan policies and refers businesses to the TDB. A fee of $5–10 will be introduced in the future to cover the costs of this help but at the moment it is provided gratis. The Training officer also focuses on business start-up training. Usually these are one-day intensive courses held in community settings.

Both officers would gain from greater training in entrepreneurship and business development and from building on previous studies: one has a Diploma in Information Systems from USP and the other a Diploma in Business from FIT. Both officers would also benefit from more training in facilitating and running workshops.

Many of the needs of business cannot be met by MFEPI alone. The concerted effort of several ministries, public enterprises, local councils, and financial institutions is required if forward momentum in private sector development is to be achieved. The MFEPI will need to engage with other government ministries and agencies if an 'all of government' approach to enhancing the business environment is to be achieved.

The Tuvalu National Chamber of Commerce (TNCC) was established in 1978 to serve the needs of businesses by working together and promoting an enabling business environment. The TNCC suffered from a lack of commitment by its members and many withdrew to establish the Private Sector Organization of Tuvalu (PSOT). Due to a lack of recognition by the Government, which does not want to see two business associations in Tuvalu, PSOT also floundered.

In response to this impasse the Tuvalu National Private Sector Organisation (TNPSO) was set up in early 2010. It features seven sectors: fisheries/marine; retail/wholesale/exporter; services; tourism development; construction; land; transport; agriculture and food processing. The Chamber of Commerce, PSOT and TNCW are also involved. Each group elects a representative on the TNPSO board, the 10 representatives then elect a President and Vice President. TNPSO currently has 60–70 members out of the estimated 160 private businesses operating in Tuvalu. The largest sub-group at present is the wholesale/retail sector.

Membership entails a yearly $20 fee. The TNPSO works closely with the Business Development Centre. By working together, it may be possible to resource training initiatives that have not been possible to fund to date. The hope is that the small fees to be charged by the Business Development Officer for services rendered will be able to sustain more educational outreach.

2.6 FEASIBILITY OF DONOR FUNDING FOR SMALL-SCALE MANUFACTURE

While Tuvalu is hindered by its scarce land and limited resources, a number of past studies have highlighted sectors that may have the potential to develop. While fish processing has been highlighted in the past there has been little development in this area aside from bêche-de-mer activities. Past plans to develop hydroponics-based agricultural producers have never eventuated but it is clear that the very successful Taiwan-funded Home Garden Project (discussed further in the tourism and agriculture chapters) is building skills and interest in a sector that has been identified by the ADB (2007) and others have having the greatest capacity for import substitution (alongside related dietary and cultural benefits). Some commentators have argued that Tuvalu has the ability to develop web based ICT businesses. Realistically the telecommunications infrastructure is simply not able to meet the needs of this sector, and there is not the critical mass needed to grow the nation as a hub in IT services. This highlights the importance of foreign investment in telecoms.

It is instructional in this case to note that all business development officers and businesses involved in the DTIS consultation felt that tourism, not manufacturing, is the sector most likely to create strong economic returns and local employment. UNCTAD (2009) also notes that the economic specialization of Tuvalu is bound to remain tied to rental income based on exotic characteristics of the nation, with the one exception being tourism.

2.7 TRAINING AND HUMAN RESOURCE DEVELOPMENT

The ability to find suitably trained labour is a critical issue for many businesses. At the same time, managers, owners and senior staff are looking for ways to upgrade their core skills. There is also an important need to think about training workers with skills that will be of value when and if people are required to migrate from Tuvalu in the future.

School leavers have a range of educational options open to them should they wish to pursue further training. Some will move into the Augmented Foundation Program at the USP campus (government funds the AFP year at USP as the school system does not include 7th form). There are approximately 220 students enrolled in USP courses with 80 of these in the AFP. At present, tourism, economic, management, accountancy and ICT are the most popular programs. There is a focus at the moment on trying to increase the number of students undertaking sciences. The distance learning offered on campus is facilitated by excellent telecommunications facilities.

A further area of direct relevance to national HRD is the AusAID-funded Australia-Pacific Technical College (APTC), which aims to deliver vocational training across the Pacific to a standard accredited in Australia. Several staff from the government-run hotel and also from USP are receiving training at the APTC—effectively building educational capacity in the nation.

The Tuvalu Maritime Training Institute is an under-utilized facility. While it continues to train seafarers, it could also play a valuable role in hospitality training, perhaps partnering with the government-run hotel in terms of use of facilities for training purposes. The TMTI is aware of the possibilities for expansion and has made a number of proactive suggestions for broadening its remit, including training welders, engineers and cooks.

Community Training Centres also have a role to play in building skills and capabilities. CTCs were phased out in the late 1980s as the move to compulsory schooling to age 18 was introduced. In 2009 there was a decision to revitalize the CTCs—to help develop vocational skills among youth that were not going to pursue higher education and also to provide community outreach. The CTCs involve school, community and Town Council in partnership and the core focus of training is on language, mathematics and enterprise skills. One area of particular importance, given its links to tourism and the need to keep traditions alive, is training in handicrafts and sewing. Sewing is an area with potential for linkages into the tourism sector, with sales of locally sewn and patterned pillow cases to visitors growing and now accounting for approximately 20% of total annual sales from the TNCW airport outlet. There is some talk of exploring links between CTCs and New Zealand's Open Polytechnic, this would involve some staff coming in from New Zealand but also include train the trainer type programs.

The Taiwan-funded Home Garden Project has also brought important skills to the nation. Increasing numbers of local people are gaining knowledge of growing their own food supplies and At the same time, linkages with the tourism and hospitality sector can begin to develop.

There is clearly a need for up-skilling of management level staff and SME owners. Running a business in the rapidly changing tourism industry requires business people to keep abreast of trends and developments. Important questions remain as to how these key stakeholders can continue to grow and develop as individuals so they can expand their businesses. This is particularly critical for SME start-ups and those going through early expansion.

Many stakeholders feel that the Government needs to create a strategic plan to guide education development and its influence on the economic environment and future of the country. Many feel that the time has come to share resources and skills to create optimal outcomes for the labour force and business owners. There are also opportunities to tap into broader regional networks and organizations such as the Regional Centre for Community Education in Fiji.

2.8 LEGISLATION FOR ENTERPRISE SUPPORT

Two years ago, the Central Committee of the Tuvalu Co-operative Society, which ran shops on the main island and on offshore islands, was terminated and the Society ceased retailing operations. Since this time, a range of small businesses have expanded to fill the gap left by the Society. No longer 'crowded out', businesses have moved into retail activity at a rapid rate, especially in the outer islands. There is no question that there is an entrepreneurial 'buzz' in the air with recent years seeing a number of new business openings.

The changes created by the Co-operative's demise could be enhanced through the Public Enterprise Performance and Accountability Act (which has gone through a first reading). This initiative has been largely driven by ADB funding and is focused on improving the financial performance of public enterprises and on making sure that they do not encroach too far into the private sector territory.

A number of other legislative initiatives are in the pipeline or have just recently been enacted:

- Government implemented a number of reforms to underpin the management of public finances;
- A debt risk management and mitigation policy has also been endorsed to ensure all future borrowing is subject to a detailed process involving financial analysis, consultation, cabinet approval and eventual approval by Parliament;
- A Banking Bill was passed in August 2010. The Bill provides a legal framework for managing the financial institutions in Tuvalu; and

- Tuvalu became a member of the IMF/World Bank in June 2010 enabling it to obtain more opportunities for technical assistance and projects, and to meet international guidelines, thus improving Tuvalu's financial management systems.

2.9 OTHER ENTERPRISE SUPPORT/ DEVELOPMENT ISSUES

A range of other issues were raised during the DTIS consultations into the Tuvalu business environment. This section reviews the key areas briefly, and several of them are returned to in more detail during the sector-specific sections that make up the latter part of the DTIS.

The Tuvalu Energy Plan is focused on meeting energy demand from renewable sources by 2020. The Ministry of Works Communications and Transport will be involved in installing and running the infrastructure. The use of solar, wind and some biofuel will be the basis of a reliable supply of energy. Technical Assistance from the New Zealand Aid Program has already been received, and in late 2010 there will be a focus on improving the efficiency of government energy use—which accounts for approximately 30% of all demand on the main island. There is also a need to educate visitors and communities in good environmental behaviour.

Power supply outages on Funafuti appear to now be a thing of the past: there have been no major outages since 2007. On the outer islands things are less consistent and power is usually rationed to 18 hours per day. The focus on renewable energy development on the outer islands is to bring this energy access up to 24 hours a day.

Water is another critical issue—but it is noticeable that matters have improved in recent years. In the mid-2000s it was common to hear of visitors that were unable to get water in the main hotel and of small businesses and households struggling with water supply. The increased development of storage plus the development of things like composting to reduce water use and leakage have reduced problems. Ground water is, however, very contaminated by salt and human/animal waste and people are encouraged to boil their water. The existing desalination plant is powered by diesel and is therefore expensive to run—there is serious consideration being given to some form of solar powered desalination.

Rainfall appears to be lessening so there is an ongoing need to improve storage. At present there is no comprehensive water policy in place, though there is an aim to have one in place by early 2011. Water use and management desperately needs to be co-ordinated across Departments and Ministries—the town council must also be engaged in discussions as they have rights to distribute water.

There are plans to develop telecommunications over the next five years, with a focus on creating 24-hour telecommunications access for outer islands using ADSL. The plan is to introduce 4G services and this will be driven by extra bandwidth. They will move out of retailing handsets. Roaming is a service that is increasingly in demand—especially by those providing services in the tourism sector—if Tuvalu Telecom are able to strike a suitable financial deal with Fiji Vodafone they hope to have roaming in place in the near future.

While the cost and reliability of telecommunications is the main concern for many business people there is another critical area that must be addressed—servicing of equipment. On numerous occasions, the DTIS consultation revealed business downtime due to equipment that needed repair or connectivity work.

A shortage of trained staff in this area is a major problem for the private sector.

The DTIS consultation revealed that people felt inter-island shipping was providing a reasonable service but was unreliable. There were also several concerns expressed over the efficiency and cost of services at the main wharf. Most focus is on the international links however. While shipping services were considered to be adequate in most cases it is the international air links that must be maintained, nurtured and developed.

The following example of a locally owned retail shop serves to show the particular issues that arise around infrastructure.

BOX 2.2 **Retail on Funafuti**

The general retail shop has now been operating for three years. It follows on from an earlier foray into tourism accommodation. The shop has recently had frozen goods added to its offerings.

The owners are highly critical of the Port Authority, citing delays and high prices. Local shipping can also be a problem—they have a small outer island shop that can be difficult to supply at times due to limitations in reliability .

The business finds that telecommunications are expensive—but the main problem is finding people to fix problems when they arise. Electricity is also expensive—they pay $500–600 per month and they expect this will increase considerably with the move into frozen goods.

The owners also say that they have difficulty competing with new Chinese-owned shops. There is a sense that these 'outsiders' have access to offshore capital and expertise that is unavailable to many local operators. It is worth noting that the issue of Chinese enterprises having access to global networks was often raised as a concern by Tuvaluan operators.

The final point stressed by the owner of this small but growing enterprise is that despite the benefits and good service it has received from the DBT the level of service in other government departments is very poor, as one of the owners noted: "there needs to be more emphasis on the 'service' part of public service".

2.9.1 Land

Land tenure remains a critical issue. The land holding system is clan based and there is no option of freehold ownership. The maximum lease available to an investor is 25 years but that can be extended if the land is crown owned. Given the dearth of investment the challenges of foreign companies trying to engage with local land issues have not yet been faced. This does not mean, however, that the issue should be simply ignored. It would be of great value for clearer information about land and its role in the investment/business development process to be made available (preferably online) for potential investors.

2.9.2 The Environment

The issues of environmental sustainability and climate change are examined in more detail in the chapter on human development, energy and the environment. But they are also critical for the future development of the business environment. The area of climate change was rarely raised in the DTIS consultations—but was identified by a small number of individuals, primarily those in the tourism sector, as an issue that is likely to create difficulties in the future. It is important that the industry become more aware of both its own vulnerability and necessary adaptive dimensions.

One key issue for the private sector and Tuvaluan people more generally is its own environmental performance. Tourist awareness of environmental issues is often heightened by policies in their home country—for example recycling programs, emissions regulations and reductions in plastic bag use. Poor environmental performance on the part of the tourism industry has a negative impact on visitor satisfaction and also on the broader environment. There is clearly an opportunity for awareness building in the area of business environmental performance and to assist business to better understand how it can be more efficient.

The jewel in the tourism crown, and therefore a key element in the business environment, is the Marine Conservation Area. The challenge here is to manage the resource and also open it to greater (carefully managed) visitor use. Unfortunately there is only one conservation officer with limited equipment at their disposal. At this time the lack of equipment, and also trained dive instructors, limits the growth of a potential source of income and jobs.

The Energy Plan and its goals are also an important potential area to brand and develop and could be tied into the successful King Tide Festival. Tuvalu can certainly take advantage of its centre stage role in publicising the threat posed by global sea level change but it can do so in a way that does not simply paint it as a victim. The development of scientific tourism, small scale tours to look at the way of life of Tuvaluans, and a range of other opportunities exist, but can only be developed in an environmental and cultural context that is well managed and sustainable. The emerging national 'brand' would show a nation leading the way in making an environmental difference through innovative energy policies and sustainable development strategies.

2.10 CONCLUSIONS

The UNCTAD (2009) report on Tuvalu's vulnerability profile includes the following rather sobering statement: "In the absence of any meaningful progress in the human capital, investment climate and public infrastructure, the scope for enhancing productive capacities is nearly non-existent".

Opportunities for private sector development are limited and it is unrealistic to expect a rapidly expanding private sector to drive economic growth. While there are challenges in enhancing the business environment, certain critical areas can be developed in a manner that increases economic opportunity, income and employment.

Government should continue to encourage private investment through the creation of a conducive investment environment; managing the role of SOEs and bringing in more private sector involvement where possible; and also facilitating availability of land for development purposes. It is also important to ensure adequate, efficient and cost-effective infrastructure is available; especially power, water and transport and communications services. Perhaps most importantly it is vital to promote the development of niche-market tourism. Tourism was highlighted continually during the DTIS consultation as the only sector possessing any possibility of developing sustained income and employment. The industry also offers the opportunity to link into local food and handicraft sectors and to engage with a range of other businesses.

An example of how tourism links to many sectors and of the array of challenges that face small enterprises in Tuvalu comes from a relatively new entrant to the restaurant sector.

BOX 2.3 **A small restaurant in Funafuti**

Unlike most small restaurants on the main island this new addition has an appealing façade and a pleasant feel, it is a place where both locals and visitors can feel comfortable dining. As an Indian restaurant, it also provides a different culinary experience to Tuvalu, which uses local produce but also widens the range of culinary experiences for tourists and locals alike.

The restaurant started in May 2010 with a Fijian and Tuvaluan partner. It was difficult initially to find good tradesmen to conduct renovations to the restaurant building. The business license took three weeks to obtain and cost $10 and there was also a payment of $300 to the Town Council for a bar/restaurant license. To date, there has been no health and safety or fire inspection, the owner is not worried about passing but cannot understand why these checks have not been made. The Fijian co-owner and chef also had to get a work permit that took more than two months to process and $220 for one year.

The business began well and was largely full for the first two months, numbers then started to reduce as the novelty wore off for locals. In recent months things have picked up again—largely on the back of the tourist trade. A 80/20 (local/visitor) split has now almost reversed to a 30/70 split. The owner is, however, also working on a more 'local menu' that can be provided to meet local palates (larger portions, less spicy). The restaurant has created important links to the local economy—fish and vegetables are purchased locally, the latter coming from the Taiwan-funded Home Garden in most cases.

A number of challenges have made it difficult to establish and sustain the business. To begin with there was no information easily available about how to run/start a small business in Tuvalu. The owner has also found that it can be difficult as an outsider to gain access to existing business networks and relationships, forcing her to rely on her Fijian network for supplies and advice. She has also struggled with aspects of local infrastructure—in particular the cost of electricity. Her first bill in May was for $895 and her next was for $120 in July. She has paid neither and is waiting for clarification on the discrepancy in the figures—this creates considerable uncertainty from a budgetary perspective.

The other major challenge the owner has faced is the difficulty in finding and keeping local staff. Skills can be provided to workers in service but the big challenge she finds lies in work ethic and reliability.

This operator that has brought new experiences, income and employment to Tuvalu. While the business has struggled, there is a strong will to make it work and by tapping into the tourist market, things are beginning to turn around.

This case shows us something that must be constantly kept in mind—as with any private sector SME, the answer to survival and success lies in personal skills and perseverance and also in the broader support provided by the business environment. It is vital that the Tuvalu government continues to enhance and improve this broader business environment.

CHAPTER THREE

Trade policy and trade facilitation

3.1 INTRODUCTION

In Tuvalu as in a number of regional countries and LDCs, trade has been separate from development policy. This is partly because goods exports are so small, but also because Tuvalu has relied on development assistance for foreign exchange, together with other sources such as fisheries, remittances, the Tuvalu Trust Fund and income from rental activities such as the .tv domain name. Yet because income from traditional sources has diminished in recent years Tuvalu has little choice but to be more proactive in identifying new sources of economic growth, which means mainstreaming trade policy into the overall development strategy and devoting more resources to trade-related initiatives, particularly services exports like tourism. Given that goods exports are almost non-existent and unlikely to grow much in future, it is probably best to look at trade facilitation as a services export-oriented activity rather than in the usual way, involving the facilitation of goods trade.

This chapter devotes considerable attention to an analysis of institutions and policy, an area where the IF can make perhaps its biggest contribution, before discussing the future of trade in government. An outline of trade-related legislation comes next. Labour mobility opportunities—which can be looked at as a form of trade facilitation—have critical implications for Tuvalu, and the following section examines new regional opportunities in this area. The subsequent section is devoted to the various regional and multilateral trade agreements with which Tuvalu is involved, suggesting basic approaches to each agreement. Next is a look at customs quarantine and SPS, followed by ports and stevedoring. Finally, the chapter looks at transport and infrastructure, and regional approaches to trade facilitation, before concluding.

3.2 INSTITUTIONS AND POLICY

Te Kakeega II includes no separate section on trade, and government officials have expressed interest in using the DTIS as the basis of a new trade policy. Te Kakeega II does, however, include some ad hoc trade-related measures. For instance on p.31, under Private Sector and Employment, the goal of "Improv[ing] access to export markets" is mentioned. On p.32 priorities and strategies include the following: "Ensure compliance with PICTA and PACER," and "Tax and tariff reform." The 2008 update of the Te Kakeega matrix shows that a number of activities have been undertaken, mostly with the assistance of international donors.

TABLE 3.1 **2008 matrix update of Te Kakeega, selected trade-related activities**

Source: Tuvalu Government (2008)

Projects and programmes	Funded activities	
2. Ensure compliance with PICTA and PACER (MFEPI)	**2006**	GoT: PICTA and PACER National Task Force.
	2007	• GoT and EU/PACREIP/PIFS facilitation; • Trade related Workshops; • TA Taxation (ADB); • National Trade Facilitation Committee; • Integrated Framework Program (WTO). *Note: Initial planning and feasibility work underway by PIFS on establishment of a regional customs service, consistent with the Pacific Plan, to be presented at July '07 FEMM.*
	2008	• National Stakeholders Consultations on proposed PICTA Trade In Services and TMNP structure; • Negotiations amongst FICs on the extension of PICTA to PICTA Trade In Services (regional), PICTA TIS to be finalised by October 2008; • Commencement of informal talks on PACER between FICs and Aust/NZ; • Ongoing ADB TA.
3.Tax and tariff reform (MFEPI)	**2006**	• PIFTAC/GoT (review of tax and tariff regime).
	2007	• Taxation Reforms (ADB/PACREIP); • Review of tax legislation (PIFTAC, with possible ADB support).
	2008	• 2007 items remain ongoing (ADB-funded); • ADB/AusAID: Joint TA on tax reform.

Several of the trade-related policy proposals in Te Kakeega II are misdirected. As an LDC, Tuvalu is already entitled to preferential access in most export markets. As UNCTAD (2009) notes: "this benefit is more prospective than real, as Tuvalu presently exports no merchandise other than small quantities of bêche-de-mer." Improving access to export markets is misplaced given that Tuvalu is a services and rental economy with no history of goods exports. The barriers to increased goods export are not on the demand side; if Tuvalu could generate enough consistency and quantity of supply it could probably export to Fiji, Australia and New Zealand under the South Pacific Area Regional Trade and Economic Cooperation Agreement (SPARTECA) or the Pacific Islands Trade Agreement (PICTA). The problems lie in clear and long-term supply-side constraints due to geographical fragmentation, size and distance from major markets. These issues are probably intractable and certainly will not be overcome quickly.

Similarly, ensuring compliance with PICTA and the Pacific Agreement on Closer Economic Relations (PACER) are somewhat inappropriate. However compliant Tuvalu is with regional trade agreements it is unlikely to be able to produce in sufficient quantities to export under these agreements. PICTA and PACER may have advantages in the form of improved services trade and the temporary movement of natural persons (TMNP), but these benefits have yet to be realised. There is an argument in favour of trade liberalisation in that it is intended to lower the 'deadweight loss' in the form of a reduction in the price of consumer goods. However Tuvalu, like many other small island states, has embarked on a process of tax reform to replace tariffs with consumer tax and possibly excise taxes in future. Border taxes are easier to collect. The likely outcome of import duty reform is simply an increased administrative burden.

3.2.1 Institutional framework

The Department of Trade is situated in the Ministry of Foreign Affairs, having moved from the Ministry of Finance in October 2010 following the general election on 16th September. It currently consists of a single full-time trade officer, supervised by the Assistant Secretary and Permanent Secretary of Foreign Affairs. The current officer is on a three-year fixed-term contract, replacing a permanent officer who is on study leave until June 2012. Some administrative support is also provided by Ministry staff whose time is split across work areas.

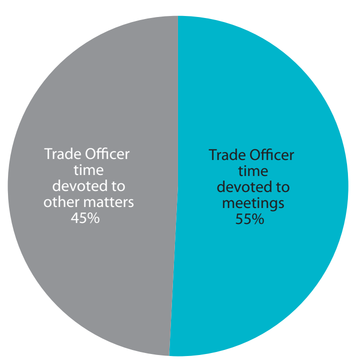
The Tuvalu National Private Sector Organisation (TNPSO) was recently established by government to represent the private sector and NGOs with commercial interests, and currently has around 90 members. Some civil society groups are represented, including a group representing women in business. It is unable to support either permanent staff or a physical office, as its membership fees are capped by government at $20 per member, and receives no direct financial support from government. There is also a Chamber of Commerce, which is also member-supported and is itself a member of TNPSO. The TNPSO executive is well represented in the IF National Steering Committee (NSC).

The IF NSC meets quarterly. As in many Pacific countries, consultation on general trade issues is conducted on an *ad hoc* basis and is largely driven by the international meeting schedule. The Department of Trade produces written reports of all meetings attended, which often supplement written materials supplied by the Forum Secretariat or other meeting host, and are circulated within government and to stakeholders as appropriate. Most stakeholder meetings, whether preparatory or follow-up are conducted sequentially with individual stakeholders as it is often difficult to secure high attendance at larger meetings. Generally speaking, the quality of reporting and consultation on international meetings is high by Pacific standards, and remarkable considering the few resources the Department of Trade has at its disposal. Such a written record is of acute importance in a one-person department, where maintaining institutional memory in the face of staff turnover is a particular difficulty.

There is no formal process for generating national positions on trade issues in the face of competing interests. However, the Trade Department reports that this rarely if ever creates problems, as conflicts are so rare. For instance, unlike for other Pacific economies, there were few identifiable benefits of signing an Interim EPA with the European Union, therefore no need to mediate between competing claims.

FIGURE 3.1 **Trade officer's office presence**

FIGURE 3.2 **Trade officer's time allocation**

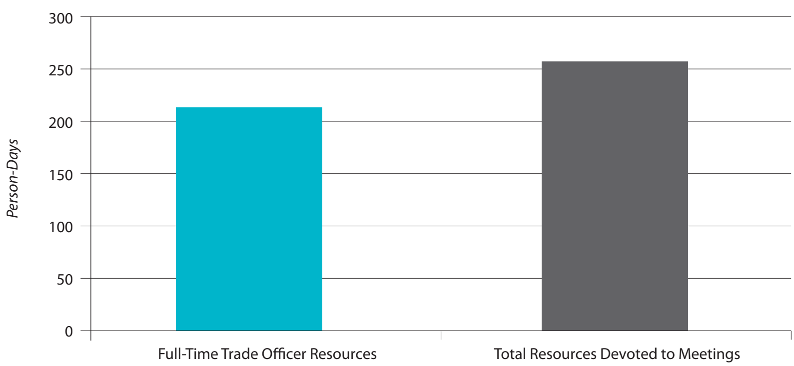


This may not always be the case in forthcoming negotiations, so that future consultative processes may pose difficulties not previously encountered.

As in most Pacific trade departments, the international meeting agenda places a considerable strain on available resources, and results in a bias towards regionally co-ordinated work programmes, particularly liberalisation-focused negotiations. As can be seen in Figures 3.1 and 3.2 (compiled from DTIS consultations), a disproportionate amount of the trade official's time is spent out of the country and the majority is devoted to international meetings and work directly generated by them (ie back-to-office reports).

The effects of these meetings are not only felt by trade officials, but also in other areas of government. The EPA negotiation in particular is routinely attended by a five-strong team, including representatives of the attorney general's office, customs and fisheries. When these time commitments are factored in, more resources are expended on trade-related international meetings (in terms of person-days' labour) than the total available to full-time trade staff (see Figure 3.3).

FIGURE 3.3 **Comparison of resources required for meetings with resources allocated to trade**



Given this significant devotion of resources towards international meetings, their importance relative to other trade priorities should be critically analysed on an ongoing basis. Is liberalisation of foreign markets so great a priority that more than half of the Trade Department's time should be devoted to it? For a country that faces such considerable supply-side constraints, this prioritisation appears questionable. However, in reality there are inducements to prioritise the negotiation of trade agreements other than Tuvalu's commercial interests. The first is that most negotiations involve major donors that have an important presence in Tuvalu (currently the European Union, Australia and New Zealand). There are therefore obvious political reasons for, at minimum, participating in the negotiation process. Secondly, if political pressure is ever sufficient to induce Tuvalu to enter a major free-trade agreement, then it is felt that the experience of participating in the negotiation of agreements such as the EPA and PICTA will provide officials with the experience necessary to protect Tuvalu's interests in such a deal. Finally, trade officials in most Pacific countries, including Tuvalu, are underpaid to such an extent that generous expenses given to officials attending international meetings are often needed to raise their salaries to a competitive level. This is well understood by negotiating partners and international organisations seeking to boost attendance at meetings that they administer.

These considerations notwithstanding, there are a minority of international meetings that are simply a drain on government resources, without any rational justification for attendance. For instance, WTO events such as the June workshop on NAMA modalities have little relevance for a country like Tuvalu that has no immediate prospect of joining the WTO, and which would be little affected by the completion of Doha.

3.3 TRADE MAINSTREAMING

Staffing levels in the Trade Department are currently insufficient to support a work program that extends much beyond basic participation in international meetings. The IF provides an opportunity to widen the scope of operations of the Trade Department and provide a stronger focus on the binding constraints on trade in Tuvalu. Using IF funds, three additional staff could be usefully accommodated, to focus both on the design and implementation of IF projects as well as broader trade facilitation work. At least initially, it would be undesirable to divide trade activities into separate IF and trade offices, although it will be necessary to ensure that additional staff retain a focus on in-country activities and do not become unnecessarily involved in international negotiations.

The costs and benefits of participation in international meetings should be critically analysed. Staff should avoid wasting time on meetings whose focus has no direct relevance for the work of the Trade Department in Tuvalu, and for which there would be no political consequences of non-attendance. Regional organisations such as the Secretariat of the Pacific Community (SPC) and Office of the Chief Trade Adviser (OCTA) are able to provide informal advice on the relevance of regional meetings for Tuvalu. When determining the appropriate level of remuneration for IF staff, the generous expenses that comparable trade officials receive for participation in overseas meetings should be taken into account. IF staff should receive competitive salaries so that they do not need to attend valueless meetings in order to bolster their base salaries.

One significant concern in the expansion of the Trade Department is office space. Most government departments are currently housed in the central government building on Fongafale. It would be disadvantageous to move outside of this building, as it provides easy access to almost all branches of central government, and appropriate office space is scarce on Fongafale. However, the feasibility of housing extra officers will become clearer once the implications of the Department's move to the Ministry of Foreign Affairs are known.

Many Pacific trade departments have moved numerous times between ministries of finance and foreign affairs. Experience has shown that for most countries, each location is viable and has its advantages. Location in the Ministry of Finance often helps to give a trade department a stronger voice in the adjustment of trade taxes, whereas the foreign affairs portfolio can offer synergy in international negotiations. As a relatively technical and complex area, the location of the trade department is often based on the relevant ministers' backgrounds and willingness to engage in trade issues. As this latter factor is often decisive, it is understandable that trade departments often move ministries as a result of a cabinet reshuffle. In the GoT, where both ministries are located in the same central building, such a change can be made with minimal administrative effort.

Participation of the private sector and civil society in trade policy formulation is limited by the lack of capacity of TNPSO. While it is a positive sign that government demonstrated initiative and prioritisation of the private sector in establishing this organisation, it is questionable whether it will reach its full potential unless it has sufficient resources to support its own routine activities. It is therefore recommended that, if TNPSO agrees, secretarial support could be provided to this organisation by one of the IF officers. Terms of reference for one officer should include one day per week devoted to TNPSO activities, including arranging and minuting TNPSO executive and subcommittee meetings, responding to correspondence and preparing informative resources for TNPSO members. The IF budget could also provide modest financial support to cover expenses such as hosting meetings, informative materials and maintenance of a website. The use of an IF project officer in this role will help to circumvent the barrier between government, the IF and private sector and civil society stakeholders.

As national trade policy grows to focus more on tourism and labour mobility and less on export promotion, the pattern of consultation that the Trade Department conducts will need to shift. Educational and training institutions will have an important role to play in helping to ensure that Tuvaluans' skill set matches market demand in target countries, and in the process of improving overseas recognition of qualifications obtained in Tuvalu and major regional educational centres such as USP. The Tuvalu Maritime Training Institute and Motufoua Secondary School on Vaitupu presently have excess capacity and could lead in the development of new vocational courses with overseas accreditation in order to exploit new regional employment opportunities. Representatives of women's interests such as the Tuvalu National Council of Women (TNCW) and the Department of Women will play an important role in any successful effort to improve the gender balance in opportunities for post-secondary education, and employment overseas or within the private sector. Primary schools throughout the country are currently in the process of strengthening vocational training for early school-leavers—the focus of this training will be a key factor in determining whether the current disparity in formal-sector employment between men and women continues.

3.4 LEGISLATION

Apart from the suggestions in Chapter 2 and possible changes to labour laws with a view to taking advantage of new regional opportunities in labour mobility (see below), it is not recommended that significant new legislation be introduced, to avoid adding to the administrative burden. During consultations, it was suggested that the government pass a Fair Trading Act, something to which consideration could be given, although it should not be a priority. The law could be based on that of Fiji, covering competition policy (restrictive trade practices), consumer protection, conditions of warranties, and information and safety. Tuvalu already has three consumer protection acts.

The following are the main existing pieces of trade-related legislation.

3.4.1 Importation: Customs Regulations and Exchange Control Ordinance (1981)

It is likely that in the event of trade policy reform under PICTA or PACER, import duties will converted into excise. Revenue losses will be minimal, meaning that the main issue will be administrative costs related to the transition away from import duties toward excise.

3.4.2 Business formation: Foreign Direct Investment Act (1996),[13] Companies Act (1991),[14] Partnership Act (1991) and Companies and Business Registration Ordinance

Foreign direct investment is another area in which Tuvalu's situation differs so significantly from a typical economy that 'model legislation' would be of little use. The natural and cultural barriers to foreign investment (including geographical barriers, small market size and issues such as the lack of freehold) are so substantial that there is a strong rationale for handling investment on a case-by-case basis, enabling government to provide tailored assistance as necessary. This type of 'micromanaging' may be inappropriate and indeed damaging in a larger economy, but Tuvalu's market size and the pervasive reach of state-owned or –supported enterprise in so many markets makes a more *laissez faire* approach unfeasible.

[13] An act to encourage and facilitate private foreign direct investment in Tuvalu, and for connected purposes.

[14] An act to provide for the incorporation and regulation of companies with matters connected therewith.

3.4.3 Income taxation: Income Tax Act (1992) and Income Tax (Removal of Tax Exemption) Regulations (1995)

A confidential trade report for the Tuvalu government advocated a flat tax under which all people pay the same rate. This would be a bad idea as it would be regressive and hence unfair. In a communitarian society like Tuvalu, with a reasonably even income distribution, it would probably also be unpopular. Any relative move toward higher consumption and border taxes and away from income tax would, for similar reasons, prove potentially unworkable and unpopular.

3.4.4 Consumer protection: Licenses Ordinance, Price Control Act (1990),[15] Sale of Goods Act (1991),[16] Food Safety Act (2006)[17]

The Price Control Act lists 22 basic commodities that fall under its remit, and establishes a price control board composed of representatives of retailers, consumers and co-operatives selected by government. Even much larger Pacific island economies frequently find that markets are not of sufficient size for competitive forces to prevent retailers from exploiting a dominant market position, and legislation enacting price controls is a common response. However, implementation always poses significant challenges, including the technical and political difficulty of ensuring that price limits remain fair, and the practical difficulty of enforcement, especially outside the capital.

[15] An act to establish the price control board for controlling prices, and for connected purposes.

[16] An act for codifying the law relating to the sale of goods and consolidating with its provisions relating to mercantile agents.

[17] An act to promote public health and safety with regard to food, to regulate the preparation, sale and use of food, to assist consumers make informed choices on food, to promote fair trading practices in relation to food and for related matters.

3.5 LABOUR MOBILITY

Historically, a large number of Tuvaluans have been employed as seafarers, with remittances contributing substantially to household incomes. The number of seafarers has declined in the last few years with the downturn in the global shipping industry. However, the new Recognised Seasonal Employer (RSE) scheme introduced by New Zealand represents a useful opportunity for Tuvalu.

The Department of Foreign Affairs and Labour in Tuvalu has prepared a pool of Tuvaluan citizens for RSEs to recruit from. Seasonal workers attend an information seminar before their departure to New Zealand. Two New Zealand employers in the first year (2007/08) between them recruited 99 Tuvaluan workers. For the 2008/09 season only one of the employers used the scheme again, employing 48 workers, which was the total number of Tuvaluans employed under the RSE in 2009. A number of evaluations of the RSE scheme have been undertaken, including an academic study of Tuvalu's experience.[18]

The New Zealand Department of Labour provides some assistance to the

[18] NZ's Department of Labour led an extensive evaluation of RSE, which included discussions with Pacific Island Governments (www.dol.govt.nz/publications/research/rse-summary/rse-summary_01.asp).

Tuvalu Government but the Tuvalu Government has to take a proactive approach to market Tuvaluans in New Zealand if the number workers under the scheme is to increase. It may be worth looking beyond seasonal agricultural work, since opportunities might exist in the tourism and hospitality arenas in New Zealand. This would fit well with Tuvalu's aspirations in tourism.

The RSE scheme started in 2007, offering 5,000 Pacific Islanders from Kiribati, Tuvalu, Vanuatu, Samoa and Tonga the opportunity to work on New Zealand farms in horticulture and viticulture on a seasonal basis. I-Kiribati and Tuvaluan workers are able to stay in New Zealand for up to nine months within an 11–month period (compared with seven months for other RSE workers). The cap was raised to 8,000 in 2008 and all Pacific island countries except Fiji were made eligible. The scheme works as follows:

- Upon satisfying authorities that no New Zealanders are available to fill positions and being certified by the NZ Department of Labour, employing companies are able to recruit from any eligible Pacific Island Country (PIC).
- Recruitment is largely carried out within the Pacific Island Countries with varying levels of involvement by national authorities. A checklist of common requirements covers medical checks, police clearances and visa processes.
- Employers contribute 50% of workers' air fares and undertake to provide accommodation and a minimum of 30 hours' work per week. For Kiribati and Tuvalu, employers have to contribute 50% of the workers airfare from Fiji rather than the workers' home country. Should workers prefer to arrange their own accommodation off-site, they are guaranteed this option.
- Employers also undertake to provide basic pastoral care such as helping workers settle into local communities.
- Within New Zealand, the Department of Labour is responsible for certifying employers and monitoring potential abuses of workers' rights, including low pay, breaches of safety, holiday entitlements and substandard accommodation.
- In addition, PIC Departments of Labour are invited to participate in the monitoring process, especially when complaints are received. Reports are also made by workers on their return home.
- The NZ Department of Labour also works with employers to get their workers insured under an affordable medical and health insurance scheme.
- Various channels of communication are open for workers to express concerns, including to Departments of Labour or New Zealand High Commission in the workers' home country, Pacific Island Country representatives in New Zealand, or unions.
- New Zealand initially provided 'kick-start' countries with some assistance in marketing and awareness raising activities around the RSE, as well as providing a database and supporting monitoring. Since mid-2008 New Zealand has helped all six kick-start countries to strengthen their systems to ensure their sustainable participation in the RSE.
- Some New Zealand employers are encouraging workers to transfer their knowledge to their own agricultural work once their contracts end and investigate potential opportunities to develop exports or invest in the PICs.

Although Tuvalu is much smaller, lessons can be learnt from the Vanuatu model, where legislation was put in place ensuring that recruitment is conducted by pri-

(Continued from previous page)
Academics have explored the case of Tuvalu (see Bedford, C.E., Bedford, R.D. and Ho, E.S. (2009) 'Engaging with New Zealand's Recognised Seasonal Employer (RSE) work policy: The case of Tuvalu', *Asian Pacific Migration Journal*). The World Bank and University of Waikato published an evaluation of the impact of RSE in Tonga and Vanuatu (http://go.worldbank.org/UYNT1WTFR0)

vate-sector agents. Recruitment of seafarers has long been conducted by the private sector, so in principle they should be able to manage the RSE or other labour mobility schemes.

BOX 3.1 **The 'Vanuatu Model' in the NZ Recognised Seasonal Employer Scheme**

In Vanuatu, a number of proactive initiatives were taken—in addition to New Zealand's own guidelines. Following internal consultations over the best way to manage recruitment issues, the government agreed in 2006 to a framework in which only approved and licensed private recruitment agencies would be permitted to recruit and supply workers. While Vanuatu still has licensed recruitment agents, this is no longer the only way in which NZ employers can recruit RSE workers from Vanuatu.

In 2007, legislation was adopted to that effect regulating all aspects of the licensing, regulation, and disciplinary procedures of approved seasonal worker recruitment agencies. Vanuatu had a history of bad experiences in relation to labour mobility schemes, particularly one which involved millions of dollars of lost wages for workers recruited onto commercial fishing boats during the 1980s, as well as several cases of con-men within Vanuatu who are able to exploit people's desire to seek employment opportunities overseas.

In the year to June 2010, 2,137 Vanuatu workers were employed in New Zealand. Mostly as a result of a proactive approach to responding to the opportunities of the RSE scheme, they are the most represented PIC in terms of workers. Recruitment agencies, although not the only way that workers can be recruited, play an important role in the scheme, and are envisaged to provide individual services in a number of areas:

- Designing application and selection procedures. One method currently being used is to combine an initial screening of application forms with an interview and a nomination submitted by, for example, a village chief or pastor;
- Arranging medical tests, police clearances and visa applications for successful applicants;
- Contacting or receiving requests from employers, and fixing contracts;
- Giving workers a pre-departure briefing on what to expect on arrival in New Zealand and their rights and duties;
- Being involved with authorities in monitoring workers' welfare, and also liaising with employers to monitor performance; and
- Doing this at competitive and minimal cost and without charge to workers, if the scheme is to be successful.

Countries that have taken a proactive stance on labour mobility have been the most successful in reaping the benefits. This entails more than just government-to-government lobbying for inclusion—it means putting in place domestic policies and a framework to support and facilitate the participation of Tuvaluans.

In the run-up to the start of the NZ scheme, the World Bank supported Vanuatu's Department of Labour, starting with the convening of a meeting of the most senior government officials to ensure that all stakeholders (including heads of ministries of trade, education, immigration and labour) were aware of what was being proposed and were able to go forward with common positions on the key issues and responsibilities. Once this was done, responsible departments could forge ahead with developing necessary processes, guidelines and regulations (particularly in the areas of recruitment and worker welfare) and increase their capacity.

Beyond organisation, the design of the recruitment process is important. It may be possible to find ways of assessing applicants' potential to save and invest earnings, rather then spend them while abroad. Similarly existing social structures may be used to mitigate the risks of overstaying if others in the community[19]—are asked to vouch for a person's character, giving both parties an additional stake in ensuring good behaviour.

Even in countries that have benefited from the scheme, challenges remain. A major problem is the current high cost of remitting through established money transfer systems.[20] However, this appears to be primarily a problem of a lack of awareness amongst workers about alternative ways of sending money—such as through banks—with a potential solution being to provide advice and information prior to departure. Remittance costs are falling in New Zealand and are likely to fall further as workers and migrants become better informed about potential competitors to their services. A regulatory change in New Zealand in 2008 resulted in a new lower-cost remittance product being launched.[21] In January 2009 a website was launched, www.sendmoneypacific.org, funded by Australia and New Zealand, enabling the costs and services of different money transfer operators to be compared.

It may be worth considering forced remittances. A degree of 'forced saving' (25% of total earnings) is a feature of the successful Caribbean-Canadian Seasonal Workers Scheme, with research here suggesting that a majority finds the requirement to be beneficial in disciplining their spending and ensuring a pool of capital is available at home at the end of the season. Forced remittance is not being incorporated into the RSE scheme however, primarily because New Zealand tax and labour legislation stipulates that wages must be paid into a bank. Again there may be a role here for greater information, given that workers may be able to make voluntary arrangements with the bank to remit funds on a regular basis.

On tax itself, another problem is that in the past, claiming tax back was often complicated and left to the workers themselves. Few are likely to have seen a tax form before, let alone one in a developed country like New Zealand. Indeed, some may not be aware that they can claim back tax on their earnings up to a certain level. In response, New Zealand introduced a simplified flat tax rate for RSE workers of 15%. Furthermore, New Zealand has announced that this would fall to 10.5% from 1 April 2011 to better accommodate the income levels earned by RSE workers.

[19] In Vanuatu, local chiefs are also playing roles as guarantors, risk assessors and enforcers within Vanuatu's proposed Secured Transactions Framework.

[20] See Gibson, McKenzie and Rohorua (2006) 'How Cost Elastic Are Remittances? Estimates from Tongan Migrants In New Zealand', *Pacific Economic Bulletin* Vol. 21:1

[21] In December 2008 Westpac launched a new '2-card' remittance product utilising ATM and EFTPOS networks, with a fee structure considerably cheaper than other products.

3.6 TRADE AGREEMENTS AND NEGOTIATIONS

Progress in the range of trade agreements with which Tuvalu is involved has slowed since 2008, when Fiji and Papua New Guinea signed an interim Economic Partnership Agreement (EPA) with the European Union. Since the splintering of the Pacific ACP (PACP) group, there appears to have been a slow regional disillusionment with the negotiation of trade agreements. In some areas, a gap has emerged between Pacific demands and the offers of negotiating partners, with neither party showing a willingness to compromise. In addition, questions have recently arisen over the proficiency of the Pacific Islands Forum Secretariat (PIFS) to negotiate the EPAs on the Islands' behalf (Pacific Islands Business, October 2010). Trade officials criticised the Forum on the grounds that no EU/ PACP meeting was organised for over 12 months until late 2010. Whether this questioning of the proficiency of the Forum is appropriate or not, it will undermine the institution's legitimacy in future trade negotiations. The global economic crisis presents a difficult backdrop, particularly as it may make negotiating partners less ready to make concessions in negotiations.

A number of Pacific Island States have questioned the ability of regional trade agreements to deliver development objectives. After a decade or so of attempts to liberalise tariffs under PICTA, intra-regional trade has not risen as a proportion of the total. Although Fiji is Tuvalu's biggest import partner, no imports come from other Pacific Island States. Australia accounts for around a quarter of imports and New Zealand 5–10%, although, as noted in section 1.7.1, Asian countries are becoming increasingly important as sources of imports—and may be more important than the data suggests owing to misapplication of rules of origin in Australia, Fiji and New Zealand. Goods exports from Tuvalu are negligible. A number of island states have found it administratively difficult to enact proposed tariff reductions, and there is a growing belief that tariff reform will simply mean an administrative cost as countries shift tariffs and duties into excise tax.

In terms of trade agreements, a focus on Asian markets may be more appropriate than regional liberalisation. Given the past successful export of *nonu* to Taiwan (discussed in the chapter on agriculture), and Taiwan's large donor presence in Tuvalu, it may be worth considering discussions toward a bilateral agreement. The Tuvaluan *nonu* exporter was deterred from further export because of the 20% relative tariff preference enjoyed by producers in the Marshall Islands.

However, overall Tuvalu has limited productive capacity, reducing its ability to produce enough for export to new markets. While the general questioning of trade agreements is not to suggest that negotiations should be abandoned, it does sound a note of caution at a time when, as noted above, Tuvalu is considering the deployment of considerable human resources toward trade negotiations. The following is a list of the various regional and multilateral agreements, ranked in order of importance.

3.6.1 PACER Plus

In July 2007, Australia and New Zealand (ANZ) triggered Article 6 of the Pacific Agreement on Closer Economic Relations (PACER), allowing ANZ to seek consultations toward a new economic partnership agreement to be known as PACER Plus, a pact which is likely to extend beyond a conventional trade agreement into areas like services, trade facilitation, development assistance, labour and training. Until now, trade relations between Tuvalu, Australia and New Zealand (ANZ) have been largely governed by SPARTECA. In addition to criticisms of its definition of RoO, SPARTECA has also been criticised for failing to address the more restrictive non-tariff and technical barriers to trade, such as quarantine, sanitary and phytosanitary (SPS) measures and standards. The 'plus' of the PACER Plus needs to be explored and defined through national stakeholder consultations and through discussions with other FICs.

PACER Plus is often said to hold general advantages in a number of areas, but specifics are often lacking. Improvements to the business environment and a more private-sector orientated economy are sometimes cited as one of the potential attractions, yet few details have been offered to support this view. In truth it is likely to be the government that is best-placed to improve the business environment, with any PACER Plus agreement perform a supporting role at best. Time will tell whether the other proposed benefits, such as enhanced trade facilitation, will be realised in practice. Past experience counsels caution in this area. The Regional Trade Facilitation Program (RTFP) was very small, at US$2.7m for all 14 countries over five years, and most countries benefited little at the national level. In order to avoid generalities and to focus on the tangible areas, five key benefits and opportunities are outlined below, together with three challenges.

Key potential benefits

1 *Labour mobility.* The Government should consider negotiating the inclusion of seasonal workers into New Zealand's RSE scheme and Australia's Pacific Seasonal Work Scheme as part of the PACER Plus Agreement. Tuvalu could also benefit from Mode 4 (temporary movement of natural persons) access to ANZ, especially as temporary out-migration is likely to produce more benefits than permanent settlement, and reduce brain-drain. However, improvements to labour mobility may be possible independently of PACER Plus. The original Recognised Seasonal Employer scheme in New Zealand was negotiated outside any trade agreement. The one caveat is that it is better to negotiate for labour mobility as Mode 4 access within a trade agreement because it is more difficult to reverse once it has been agreed in law.

2 *An opportunity to improve labour policy.* It may be possible to request assistance with training. As part of negotiations, the Tuvalu Government should consider requesting funding for increased training to prepare workers for employment in ANZ. Improvements to labour policy may be possible in the areas of the mutual recognition of qualifications and regional collaboration.

3 *Enhancing the establishment of regional organisations and co-operation between existing ones.* A number of functions currently performed at the national level can be shared regionally, including in customs, labour and immigration.

4 *Development assistance.* ANZ are aware of the adjustment costs involved and that funding will be required in order to help with the transition. Several of these adjustments will net benefits rather than changes made simply to comply with PACER Plus. ANZ are particularly interested in protecting their SPS environments, and may be willing to offer assistance with quarantine, testing and standards.

5 *Australia and New Zealand are potentially lucrative new tourism markets.* Tuvalu may benefit from closer ties with ANZ in the area of services trade in general, and tourism in particular. International tourism to niche markets is growing, and tourism represents a major area of potential.

Key challenges

1 *Tuvalu would have little to gain from goods trade under PACER Plus.* The country has long run a visible trade deficit, and exports do not contribute to economic growth. This situation is unlikely to change as a result of better market access, as the challenge is mostly on the supply-side rather than the demand side. The inflexibility of the trade structure coupled with high international transport costs means that any new trade arrangements would be unlikely to lead to the creation of significant new goods trade with ANZ or FICs. For this reason, apart from global sourcing, the redefinition of RoO has few direct implications for Tuvalu, although the PICs position should probably be supported in order to support regional cohesion.

2 Negotiating a complex agreement like PACER Plus would weigh heavily on Tuvalu's capacity-constrained government. Most PICs have found their trade departments too small to negotiate a number of trade agreements simultaneously. Tuvalu is no different. It is difficult to source technical expertise in such a small population. Travel to international meetings takes staff away from important domestic issues. Political consensus is often difficult to achieve, reducing the ability of PICs to establish a balanced final position on trade agreements.

3 If PACER Plus were successfully negotiated, the adjustment costs would be significant. Additional adjustment assistance would probably be required in at least the areas of tax and fiscal administration; infrastructure, marketing, trade facilitation, policy and regulatory review and reform and legal reform. Unlike many other PICs, however, the potential tariff revenue losses under PACER Plus would be insignificant. Tariffs are low by regional standards and a very small proportion of tariff revenues come from ANZ imports.

3.6.2 Economic Partnership Agreement (EPA) with the EU

By the end of 2007 the African, Caribbean and Pacific (ACP) group of countries was supposed to have negotiated a series of separate trade agreements with the European Union. The Cotonou Agreement, signed in the capital of Benin in 2000,[22] superseded the old Lomé conventions which had governed Europe's trade relations with its former colonies. The deal was for the first time to be reciprocal—meaning that what Brussels would expect the same access abroad as it was prepared to concede at home, subject to some negotiated asymmetry.

[22] Which would have been signed in Fiji had not the June 2000 Speight coup intervened.

The Pacific, like a number of other regional groupings, could not reach a deal. Fiji and Papua New Guinea agreed to sign individual agreements under an interim EPA to maintain preferential access to European markets for their fish and sugar producers. These agreements will set a precedent for other countries, should they wish to sign in the future. At the time of writing no PACP meeting had been held with the EU for over a year. It is essential that Tuvalu establishes a government-wide position on the EPAs and allows all relevant personnel to travel to negotiations, to avoid a particular faction dominating the negotiated outcome.

Depending on what happens in the negotiations, it is possible that Tuvalu and other Pacific states would have to begin reducing some tariffs on imports from the EU. A more likely scenario is that, on signing up a trade in goods agreement, PICs will begin by binding their tariffs at current rates for a set period of time, before a schedule of tariff reductions starts at some later date. However, since little is known for certain at this stage, it makes sense to adopt a cautious approach.

While imports from the EU are currently minimal, it will be important for Tuvalu to be aware of the possible precedent that an EPA trade-in-goods agreement may have for a future agreement with Australia and New Zealand under PACER Plus. Ideally within an EPA with the EU, negotiations will therefore lead to:

- Long transition and adjustment periods, given the importance of tariff revenues;
- Flexibility with regard to coverage of tariff lines;
- Support in the form of technical assistance to adjust to a new taxation system; and
- Supports for existing regional integration efforts, by providing sufficient time for any positive 'trade creation' effects of the PICTA trade agreements to take effect (while balancing against negative 'trade diversion' effects).

From an administrative and trade facilitation point of view, there is a strong rationale for having the same schedule of tariff reductions, covering the same goods, for both the EPA and PACER Plus agreements. This would prevent a situation in which every year the Department of Customs had to update several different schedules, and more importantly avoid Customs having to administer and monitor possible fraud when there are several different possible duty rates at the border. This highlights again the need for co-ordination and balance between trade facilitation and broader trade policy goals.

A report by the Economic and Social Commission for Asia and the Pacific (ESCAP) Pacific Operations Centre, based in Fiji, estimates the total potential costs of adjustment to a regional EPA with the EU over a five-year period to be €170 million. Initially, many Forum countries thought that the EU would compensate for this loss via the provision of greater aid or direct budgetary support—however recently the EU indicated that it prefers to use the EDF 10 (its regular aid program) to help the Pacific islands to manage these effects. However, the EDF 10 program does not have sufficient new funds (EU estimates it will need about an additional €50 million for the whole region) to meet these needs.

3.6.3 World Trade Organisation (WTO)

Tuvalu is neither a member of the WTO nor an observer. Any consideration of membership should weigh the expected benefits of multilateralism against the significant costs and administrative burden on a small administration. The experience of Vanuatu, which at the time of writing was on the verge of acceding after a 15-year-long accession process, should be taken into account. Lessons can also be learnt from Tonga and Cape Verde, both of which have recently acceded. Few of these countries have major commercial reasons to join the WTO; on the other hand the single undertaking principle means that small countries can gain major peripheral benefits from representation at the WTO.

While the accessions of Tonga and Cape Verde were more straightforward, more has been written about Vanuatu's WTO accession, including Grynberg and Joy (2001), Hayashi (2003) and Gay (2005). The Tuvalu DTIS team also worked extensively in Vanuatu, and several members of the team worked on the Vanuatu DTIS. In terms of administrative cost and negotiation time, Vanuatu represents something of a worst-case scenario, but a case which must be acknowledged if the Tuvalu government were to consider beginning the process. Vanuatu would have been the first LDC to join the WTO and would therefore have set a precedent for other LDC accessions. Vanuatu began its attempt to join the WTO in 1995 and completed negotiations with members of the working party during subsequent years. In 2001, just before the Doha Ministerial conference when Vanuatu was due to accede, the Minister of Trade withdrew a finalised working party report, citing 'technical reasons'. During subsequent years little progress was made towards accession, although in 2004 Vanuatu began another attempt to accede by attempting to again discuss its GATS schedule, in particular health, education, environmental services and audiovisual services. Under the original WTO schedule of tariff concessions all bound rates were above applied rates (and remain so), meaning that WTO accession would have no immediate implications for tariff rates.

The costs of accession are often ignored, but for microstates they can be significant. Midway through accession the Vanuatu government estimated that administrative and travel costs related to accession were at least US$150,000 (UNESCAP 2003). These funds came from the government budget rather than directly from donors. The annual payments to the WTO by observers were also considered unaffordable, at around US$20,000. A donor needed to pay the accumulated unpaid fees, which were more than the entire annual budget of the Department of Trade.

Extensive interviews with Vanuatu government officials, and examination of the Vanuatu DTIS, reveal that problems with the initial accession process stemmed largely from a lack of national ownership and understanding at the political and the public levels. Several entities which opposed WTO accession were unable to transmit their concerns and hence campaigned against accession at a late stage. The opportunity must exist for critics to make their voice heard, while politicians must be briefed regularly. Successful accession is likely to be achieved not simply as a technical process between civil servants and international partners; it requires popular participation and active political backing.

3.6.4 The Pacific Island Countries Trade Agreement (PICTA)

Tariff reductions under PICTA began in 2007, after the agreement entered into force in 2003. Under the agreement, which includes 14 of the countries of the Pacific Island Forum Secretariat (Australia and New Zealand are excluded), tariffs on goods imports from Pacific island countries are supposed to hit zero by 2021. PICTA goods are defined as those with 40% local content. Provision exists for a negative list of sensitive industries.

The implementation of PICTA has proven difficult, with a number of countries failing to embark on the required tariff reduction program. Given that intra-regional trade is very low, the agreement is unlikely to make a considerable difference to Tuvalu. The country's economic inflexibility and lack of productive capacity means that trade creation under PICTA is likely to be minimal.

Work began on the extension of the PICTA to include trade-in-services (TIS) in 2001, after Forum trade ministers decided to begin preparing for negotiation of a new GATS-compatible agreement among the 14 Forum island countries (FICs). There followed six years of preparatory work and national consultations before negotiations were finally launched and an initial legal text drafted, in 2007. Countries aimed to complete the negotiation of text and comprehensive schedules (as the GATS requires) within 14 months, but this proved over-optimistic. During the first four rounds of negotiations, substantial further consultations were found to be necessary in each of the FICs, and additional training was needed for trade officials involved in negotiations.

A key aim of PICTA TIS has always been to ensure that liberalisation between Forum island countries remains more generous than treatment given to developed trading partners such as the European Union, Australia or New Zealand. This aim was reaffirmed as late as 2008, and yet the technical complexity of developing comprehensive GATS-format schedules across all service areas proved to be beyond the resources available to the smaller negotiating partners, and in 2009 the FICs decided to begin by prioritising sectors of the greatest economic importance within the region: tourism, transportation and business services. While countries have retained the commitment to consider additional sectors in future, this approach is designed to ensure the limited areas that are to be scheduled at first can be subjected to appropriate scrutiny and stakeholder consultation.

Given that PICTA TIS was designed, in part, to prepare Pacific island countries to enter negotiation of GATS-compatible liberalisation agreements with developed partners, it is important to remain mindful of the experience of PICTA TIS when considering what future arrangements are feasible. Ten years have already passed since the first feasibility research was conducted, and the schedules currently under consideration are significantly more modest in economic scope than was envisaged early in the process. Technical scheduling challenges and the time required for in-depth stakeholder consultation have stretched the smallest Pacific trade departments to their limits. The experience of negotiating PICTA TIS has not fully prepared officials for future negotiations. The rate of staff turnover in trade departments is high enough that there are few remaining officials in any Pacific administration with experience of the entire PICTA TIS process. Further, as the EPA has illustrated, the experience of negotiating with developed partners is quite different in style and substance to that of negotiating with similar Pacific islands. Tasks such as stakeholder consultation, management of public relations, and negotiating meetings themselves will be more challenging with partners that have aggressive offensive interests in Pacific economies.

3.7 CUSTOMS, QUARANTINE AND SPS

The main administrative issue facing the Department of Customs is the introduction of ASYCUDA, an area where the IF is well-placed to assist. Work should be synchronised with that of the Oceania Customs Organisation (OCO), which is responsible for Customs reform in the region. Initial contact with the OCO suggests that the IF may be able to contribute usefully in this area, with a feasibility study a matter of immediate priority, possibly in conjunction with other regional countries such as Kiribati. A move to ASYCUDA should be seen as an advance on the existing system. Amongst other things it would help improve risk assessment and better co-ordinate data across government.

The Department of Quarantine, based within the Ministry of Agriculture, has three staff based near the port in Funafuti. The department's main activities include issuing SPS certificates for importers and individuals travelling overseas. Equipment is minimal, and the department has no laboratory, instead inspecting incoming cargo visually. Staff members have requested training. Tuvalu has no serious pest-related issues, partly a result of its small size, lack of biodiversity and limited agricultural production, although there have been outbreaks of coconut scale and fruit fly infestation, both of which originated in the outer islands. Imported soil also often contains foreign weeds and the Department has no means of detecting this problem.

Building SPS capacity is most relevant in terms of import quarantine and domestic food safety rather than in increasing production for export. Food safety is a growing concern and is important for health reasons as well as for the development of tourism. In 2008, the SPC developed the IPPC phytosanitary capacity evaluation tool, which gives a good overview of phytosanitary capacity-building needs.[23] The results of the tool should be used to formulate follow-up projects.

One of Tuvalu's advantages is the concentration of commercial economic activity in a single area. The port is small, reasonably well-equipped and based very near the centre of Funafuti. This reduces the potential dispersal of biological threats, and having only one international port means that the Department of Quarantine has good access to all incoming and outgoing cargo. Further, given the lack of export commodities, and the scarcity of resources, it is not recommended that Tuvalu embark on any significant new export-orientated quarantine activities as part of the IF.

[23] The tool was applied—and three people were trained—with STDF funding under project STDF/PG/133. The final project report contains a summary of the key constraints and is available at: http://www.standardsfacility.org/files/Project_documents/Project_Grants/STDF_133_Final_Report_Apr-10.pdf.

3.8 Ports, stevedoring and storage

The small size of the port means that loading and unloading can be conducted relatively easily. A forklift and tractor donated by Dai Nippon are used to unload vessels, and no crane is required. Domestic ships visit from the islands around once or twice a month, and the *Nivaga II* docks from international destinations approximately once or twice a year. Storage facilities are good, although space is limited. Japan has agreed to build a new wharf, constructing a separate platform on which dangerous goods can be stored to separate them from other items.

Some business owners consulted under the DTIS were highly critical of the Port Authority. Problems with the forklift at the Port and slow work by stevedores has meant delays. The cost of moving a container from wharf to storage shed (a journey or approximately 50 metres) is now $117, a figure which many businesses struggle to cope with. The manager of the Port Authority was asked about the high charges, attributing them to the high cost of maintaining the forklift. She explained that they use about six tyres per year, costing A$3,500. However, this cannot alone explain the high cost of stevedoring, and the high cost structure is probably due to corporate inefficiencies, some of which may be tackled through the corporatisation proposed under public enterprise reforms, although competition in stevedoring is unlikely.

3.9 Transport and infrastructure

The acquisition by the Government in 2001 of a share of Air Fiji gave Tuvalu greater control of its airline access and therefore the potential to develop tourism. The Air Fiji link was notorious for its lack of reliability. The recent take-over of the route by Air Pacific has had a definite impact on the regularity of the service and means that Tuvalu is now linked into the broader One World alliance network. The current schedule of flights is Suva/Funafuti/Suva: Tuesday and Thursday with an ATR aeroplane providing the service.

The airport on Funafuti struggles to meet international standards for safety in a number of areas. The airport has no navigation aids, inconsistent fire service cover, no runway lighting and no perimeter security. The airport has limited capacity for handling baggage, with no automatic conveyor system in place. There is no domestic air service.

The only way to travel between the islands is by sea. The *Nivaga II* and the *Manu Folau* are the two vessels used for the scheduled domestic transport of both people and cargo. While a sailing schedule exists it is not always adhered to—which creates real difficulties for international visitors with ongoing travel connections and makes it difficult for tourism to develop on the outer islands. There are two established ports, located at Funafuti and Nukufetau. Only the main port in Funafuti is capable of handling containerized shipping.

A number of infrastructural issues have a major impact on trade-related activities, particularly the tourism industry. Water supply remains an ongoing problem. Water is in short supply and ground water is undrinkable in its untreated state. The government has renovated and expanded the system of water catchment to take advantage of relatively frequent rainfall. As a result of these storage developments, the problems of inconsistent water supply that plagued the main hotel in the past have diminished. The government has also installed a desalination plant to improve water supply during periods of limited rainfall.

The reliability of electricity supply has also improved in recent years with a major focus now placed on developing renewable sources of energy. The Tuvalu Energy Plan focuses on achieving 100% renewable energy by 2020 with a focus on solar, wind and biofuels. A focus at the moment is on energy efficiency especially within government, which currently accounts for 30% of total electricity consumption. There has also been a focus in recent years on developing improved reliability of electricity supply on the outer islands.

Telecommunications services have struggled until very recently to provide reliable services to the tourism industry. A lightning strike in 2007 destroyed the network on Funafuti and this was not fully operational again until 2009. Services are currently provided by The Tuvalu Telecommunications Corporation with some additional provision from the Information and Communications technology section of the Ministry of Works, Communications and Transport. Telecom is facing challenges from the growing use of Skype and other services that are reducing the revenues associated with long-distance calling. Three privately-run Internet cafés exist in Funafuti, while Telecom itself runs the cafés on outer islands. Digicel was invited to enter the sector but this did not develop further due to differences of opinion over JV structures and relationship management. Telecom has, however, entered into a joint venture with Pactel International (an Australian company) to enhance mobile service. The first mobile service has just started on Vaitupu, the first in the outer islands. Demand for roaming services exists among visitors but the high cost to Telecom (approximately US$5,000 per month) means they have not been able to reach an agreement with Vodafone Fiji.

A tar-sealed road in good condition exists on Funafuti, other roads are unsealed and are difficult to traverse in wet weather. Waste management facilities are limited and visitors are often confronted with a considerable amount of rubbish. The New Zealand army has recently removed car wrecks and other detritus to the main council dump at the Northern end of Funafuti.

Another area critical area of infrastructure from a tourism perspective is the lack of ATM or credit/debit card facilities. Credit cards are not accepted anywhere, nor can they be used at the National Bank of Tuvalu for cash advances. All money must be bought in by the visitor. This has led to difficulties for several tourism operators—with a need to rely on 'IOUs' from visitors who have simply not brought enough cash to Tuvalu. It is worth noting that the government's tourism website, while informing the visitor about the inability to use credit cards, does not mention this problem.

3.10 REGIONAL APPROACHES TO TRADE FACILITATION

In Tuvalu, as in all the Pacific Island States, a number of trade facilitation functions currently performed at the national level could be shared regionally, including at least customs, labour and immigration. This is particularly true in the area of standards, where the government struggles to devote the required resources and technical expertise to the task at hand. A number of states duplicate activities that could be performed jointly, and there has been something of a reluctance to relinquish sovereignty over certain activities, although this tendency seems to be declining with the trend toward regionalism. Membership of PACER Plus, covered in the section on trade policy, could assist the establishment of regional organisations and co-operation between existing ones.

Regional organisations led by the Pacific Islands Forum Secretariat (PIFS) have also been implementing the Regional Trade Facilitation Program (RTFP), which has now ended. It focused on customs, quarantine and standards. Tuvalu did not benefit much from the program at the national level. Separately, Australia, New Zealand and the EU are providing continuing support to the Oceania Customs Organisation (OCO). Australia is addressing the quarantine component through their PHARMA program.

TABLE 3.2 **Summary of activities in regional trade facilitation (including RTFP)**

Source: PIFS

Customs	Quarantine	Product Standards and Conformance
Funding for: • Strengthening the Oceania Customs Organisation • A rules of origin committee for PICTA	**Funding for:** • Technical advisory unit for import-export biosecurity • Dedicated Pacific quarantine officers in Australia and NZ	**Funding for:** • Studies on: legislative and regulatory frameworks; metrology; regional and national standards bodies; accreditation bodies; testing and inspection centres and systems
Assistance in: • Adopting the HS • Adopting WTO customs valuation agreement • Updating laws and regulations • Adopting revised Kyoto convention • Risk Management • Customs Integrity	**Assistance in:** • Improving capacity to conduct Import Risk Assessments • Developing market access proposals for exports	**Assistance in:** • Integrated Food Standards Project to update legislation, provide training

Funded by Australia and New Zealand under the Pacific Agreement on Closer Economic Relations (PACER), the RTFP is a modest US$2.7m, five-year program which began in 2005, designed to complement existing regional integration efforts. In addition to PIFS, the program also draws upon the resources of two technically focused organisations: the Oceania Customs Organisation (OCO), and the Secretariat of the Pacific Community (SPC). The RTFP has three main components, which are summarised in the table above.

1. Support for strengthening customs regionally and nationally;
2. Support for a regional quarantine centre and training; and
3. Support for developing import and export product standards

Like the push towards a Pacific-wide free trade area, efforts at integrating customs systems at the regional level are still at an early stage. The major initiative so far has been the customs component of the RTFP. This has been delivered by the OCO in Fiji and has eight main goals:

1. Strengthen the OCO with a new Trade Facilitation Officer;
2. Establish a new Rules of Origin committee for the PICTA Agreement;
3. Adopt the Harmonised System for classifying imports and exports across the Pacific region;
4. Adopt the WTO Customs Valuation Agreement on valuing goods across the Pacific region;
5. Update Customs Laws, Regulations and Administrative Arrangements across the Pacific region;
6. Assist with adopting of the revised Kyoto convention on the simplification and harmonisation of Customs procedures;

7 Provide technical assistance to help countries develop and implement customs risk management policies; and
8 Annual training to improve procedures on customs integrity.

One problem with the program is the level of difference in customs administrations within the Pacific, as some are more advanced than others. In many respects, the goals of the RTFP have been designed to achieve uniform minimum standards across the Pacific—for example in the adoption of the Harmonised System of goods classification, application of the WTO Customs Valuation Agreement, standards in customs integrity, updated biosecurity or food safety laws.

Beyond the RTFP a number of other opportunities exist for pooling of resources at the regional or subregional level. Bilateral co-operation agreements with other neighbouring developing countries could be of great benefit for Tuvalu. Some potential areas for greater regional integration are considered below. In terms of general approaches that could be adopted by the Pacific Island Countries, a paper by Nathan Associates (2007) on regional approaches to integrating small economies into the global economy summarises the issues well, in recommending that future approaches:

- Begin with a core of the most committed countries;
- Focus on concrete results, not commitments;
- Address technical issues technically (i.e. apolitically);
- Minimise regional bureaucracy; and
- Connect with large, developed countries.

3.11 CONCLUSIONS

Trade-related activities need to be mainstreamed into development planning and policy. Currently, minimal resources are allocated to trade policy, and there is only one trade officer. The IF can make a useful contribution in this area, primarily through capacity-building in the Department of Trade. Three additional staff are required, to focus both on the design and implementation of IF projects as well as broader trade facilitation work. At least initially, it would be undesirable to divide trade activities into separate IF and trade offices. Tuvalu should take as much advantage as possible of opportunities for regionalisation, given the limited size of government. A collaborative feasibility study on ASYCUDA under the IF in conjunction with Kiribati is a priority.

Fiscal reform due to the prospect of regional trade integration is less pressing than in some other Pacific Island States, since tariffs are reasonably low. However, if import duties are converted into excise, the main challenge of trade reform will be the administrative costs of transition and implementation to the new tax regime.

No significant new trade legislation needs to be introduced at this stage, except perhaps relevant amendments to the labour laws with a view to taking advantage of the RSE scheme. The other existing trade-related laws are reasonably comprehensive in nature, and it would not be a good idea to add to the administrative burden when government already struggles to enact existing legislation. During consultations, requests were made for a fair trading law, and this may be considered over the long-term, although consumer protection legislation already exists.

Employment overseas has featured strongly in Tuvalu's history, although remittances from seafarers are declining. A number of new opportunities have emerged in recent years, and to benefit from them more, Tuvalu may wish to take note of lessons learnt from other countries. It is worth considering the experience of Vanuatu, where legislation was put in place ensuring that recruitment is conducted by private-sector agents rather than government.

For a small administration, the negotiation and adjustment costs of trade negotiations are much larger than is often realised, and it is difficult for development partners to entirely compensate in these areas. However much funding is provided by donor partners, there simply may not be enough staff to deal with the full range of negotiations, even after IF assistance. The cost of sending officials to the frequent overseas meetings should be measured in more than just airfares and expenses. In a small department, considerable work can be left undone as a result of officials' absence.

The trade agreement with the biggest immediate implications is PACER Plus. Tuvalu is unlikely to gain much from PACER Plus in the area of goods trade, given its negligible goods export. Realistically, significant new goods trade with ANZ is unlikely given the inflexibility of the domestic economic structure and high international transport costs. The main benefit of PACER Plus would probably be in labour mobility, particularly the temporary movement of workers. Improvements to labour policy, particularly training, are possible. Enhanced tourism from ANZ could also potentially benefit Tuvalu. The provision of additional development assistance under the EPAs and PACER Plus is touted as a potential benefit, yet Tuvalu already has a strong development partnership with ANZ and other donors. It is uncertain whether development assistance and funding for adjustment costs will be additional, or whether existing arrangements will continue. Experience with the EU under the EPAs suggests that additionality is unlikely, reducing the benefits of the agreement for Tuvalu.

CHAPTER FOUR

Human development and environment

4.1 INTRODUCTION

The concept of human development has particular relevance in a partly subsistence society such as Tuvalu, where people can have low incomes but lead reasonably well-nourished and relatively fulfilling lives. Absolute or extreme poverty is rare, and many people, particularly on the outer islands, fulfil nutritional requirements by fishing and collecting food from their gardens. Trade can contribute to human development, but only if focused in the areas in which Tuvalu has an actual or potential comparative advantage; namely certain services export and rental-related activities. Labour mobility, if not properly managed, has the potential to undermine human development goals in a number of ways e.g. 'brain drain' and the spread of disease. It will therefore be important for government to be conscious of these linkages and enact policies aimed at mitigating their impact.

This chapter first outlines Tuvalu's overall human development situation before looking at income, poverty and inequality. The next section examines the links with trade. After this is an discussion of health, education, and the environment, with a specific focus on climate change. Finally the chapter discusses energy, waste management and recycling.

4.2 HUMAN DEVELOPMENT SITUATION

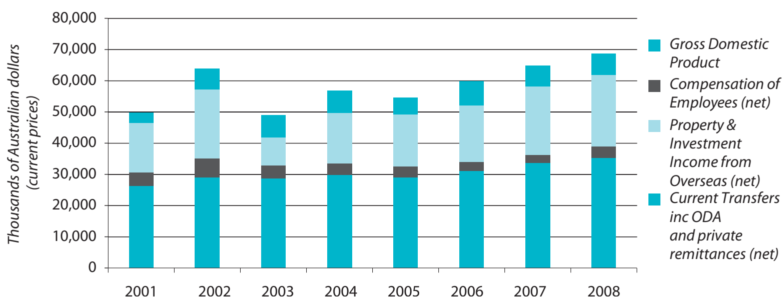
Although Tuvalu shares characteristics with other Pacific LDCs, it is not typical of the LDC group worldwide. Gross national income per capita currently stands at USD4,398[24]—more than four times the LDC 'graduation threshold' of USD1,086 set by UN-OHRLLS in 2009. The status of human capital is also reasonably high relative to other LDCs: youth literacy stands at over 98% , and while maternal mortality is difficult to statistically quantify in a country so small, under-five mortality is less than one sixth of the LDC average of 160 deaths per 1,000 live births. Instead, Tuvalu's status as an LDC is largely based on its extreme vulnerability: its smallness both in population and land area, its remoteness, the instability of its participation in the global economy and its vulnerability to natural disasters and climate change. The difference between its GNI per capita, at US$4,398, and its GDP per capita, at US$2,511, gives some sense of its extreme dependence on remittances and Trust Fund dividends, especially as government expenditure represents around 85% of GDP. And the fragility of that dependence is illustrated by the fact that of its current stock of 800 seafarers, the primary source of remittances, only 200 currently

[24] Figures in this paragraph are based on the most recent IMF data in USD, making them more easily comparable with international benchmarks.

have employment due to the global economic crisis.

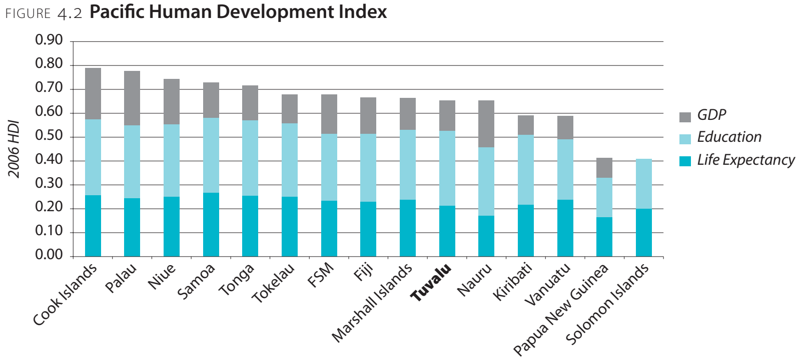
As with most microstates, Tuvalu is highly vulnerable to trends in international trade and the global economy, to such an extent that progress in human development is difficult when faced with highly adverse global economic conditions. Global financial markets impact Tuvalu directly through the Trust Fund, global trade affects the employment of seafarers and therefore remittances, commodity prices dictate the rate of domestic inflation, the regional climate influences income from fishing licenses, global unemployment affects the level of remittances from expatriate families, development partners' economic situation influences ODA receipts, and the AUD-USD dollar exchange rate determines the domestic value of the majority of the foregoing. Each of these mechanisms affects the government's fiscal position as well as household income and the incidence of poverty and hardship throughout the country (Abbott 2009b). As a result, improvements in the human development situation experienced in the late 1990s and early 2000s, particularly in areas relating to income, have come to a halt more recently and some have slipped into decline.

FIGURE 4.1 **Composition of Gross National Disposable Income**



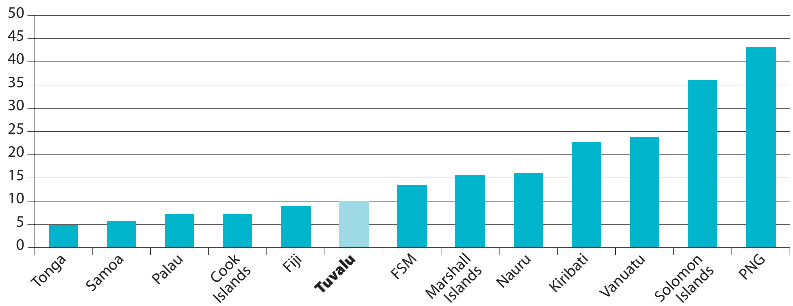
The figures below compare Tuvalu to its Pacific neighbours in terms of the Pacific Human Development Index (HDI) and Human Poverty Index (HPI). Both metrics have been designed specifically for the Pacific, and differ in detail from comparable global metrics. The HDI gives equal weight to indicators of income, education and health outcomes. Tuvalu ranks 10th of 15 Pacific islands. The HPI aims to measure deprivation, combining data on vulnerability to early death, illiteracy, child malnu-

FIGURE 4.2 **Pacific Human Development Index**



trition, lack of access to clean water, and lack of access to basic healthcare, a higher numerical value indicating a higher incidence of poverty. Tuvalu ranks 6th of the 13 countries for which HPI data is available.

FIGURE 4.3 **2006 Human Poverty Index**



4.3 INCOME, POVERTY AND INEQUALITY

Private sector activity in Tuvalu represents a tiny minority of gross national disposable income (GNDI). GDP contributes only 51% to GNDI, while government expenditure has accounted for more than 80% of GDP in recent years. With no independent currency, the government faces far stricter fiscal constraints than most, and its level of expenditure is dependent on the performance of the Trust Fund and ODA contributions. It is understandable, therefore, that household income is highly vulnerable to global economic conditions.

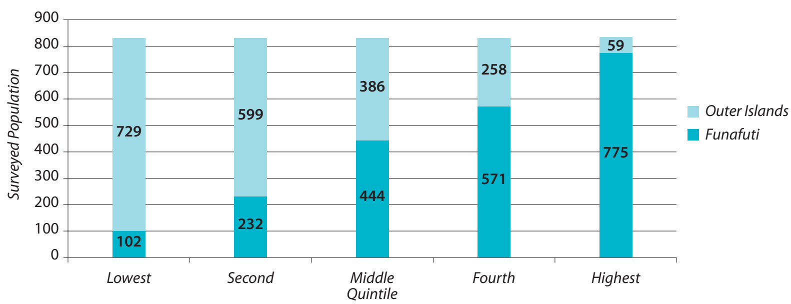
Between 1994 and 2004–05, domestic inflation averaged a moderate 2.7% per annum. Between 2004–05 and the first quarter of 2010, this had risen to an average of 3.8% per annum, following a rise of 10.4% in 2008 alone. As a consequence, poor households in Funafuti have experienced virtually no increase in real expenditure since 2004–05, while the expenditure of poor households on the outer islands have fallen in real terms by 15% during the same period. The consequence has been a sharp increase in poverty and hardship on the outer islands (Abbott 2010). Again, use of the Australian dollar prevents the government from manipulating the currency, indicating that import pricing is the dominant reason for the increase and volatility of inflation rates.

Own food production makes an important contribution to typical households in Tuvalu, and the proportion of such production in consumption is an important indicator of the insulation of households from commodity price volatility. The contribution of own food production to consumption has fallen in Funafuti since 2004–05, especially for the poorest households. This reflects the particularly rapid increase in average household size for the poorest quintile in Funafuti, rising from 7.8 to 9.4 members over the last five years, forcing these households to rely further on purchased foodstuffs. While there has also been a decline in the contribution of own production to food consumption on the outer islands, this is attributable disproportionately to the most affluent households; proportion of own production in the poorest households has fallen only 6.4% since 2004–05, remaining 30% higher than in 1994 and still representing almost three fifths of those households' consumption.

4.3.1 Inequality between Funafuti and outer islands

The figure below compares Funafuti to the outer islands in terms of an index representing household wealth. The index is designed to act as a proxy for the household's long-term standard of living. The index is based on the quantity of household assets such as refrigerators, televisions and cars, physical characteristics of the household dwelling such as floor material, type of drinking water source and toilet facilities, and other characteristics related to wealth status (SPC 2007). It illustrates, for instance, that 729 of the 831 individuals living in households in the lowest wealth index quintile (88%) live in the outer islands, whereas just 59 of the individuals in households in the highest wealth index quintile (7%) live in the outer islands.

FIGURE 4.4 **Distribution of wealth quintiles between Funafuti and outer islands**

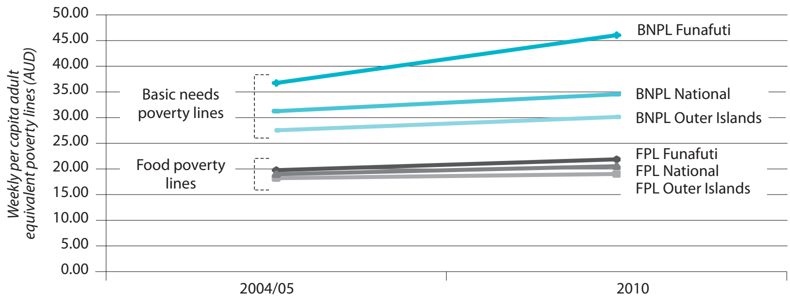


4.3.2 Poverty

An alternative approach to comparing the material wellbeing of Funafuti households with those on the outer islands is based on constructed poverty lines. The food poverty line (FPL) is based on the cost of a 'model diet'—a diet typical to the relevant community—that provides 2,100 kilocalories per day per adult-equivalent household member.[25] A different model diet is used for Funafuti and the outer islands (taken as a single group). The basic needs poverty line (BNPL) attempts to incorporate non-food basic needs such as shelter, clothing, utilities, education, health and transport costs. It does so by adding the average non-food expenditure of the poorest 30% of households to the FPL. This again is done separately for Funafuti and the outer islands, to derive poverty lines tailored to the circumstances of each. The major vulnerability of the BNPL is that it embodies the assumption that the poorest 30% of households, on average, meet but do not exceed their basic non-food needs. If the poorest 30% of households are unable to meet these needs, then the BNPL will underestimate those needs and therefore the level of basic needs poverty. There will also be a tendency, as the population becomes more affluent, for the BNPL to incorporate a greater proportion of 'non-basic' needs, as the poorest 30% of households become better able to incorporate more non-basic expenditure into their consumption basket. For the same reason, when two separate BNPLs are computed to compare the affluence of two regions, the metric will tend to underestimate inter-region inequality, as expenditure of the poorest 30% of households in the more affluent region would be expected to contain a higher proportion of non-basic needs expenditure than it would in the poorer region. Nevertheless, the FPL and BNPL provide a useful alternative means of charting changes in affluence over time and comparing Funafuti to the outer islands, this time based on income rather than accumulated wealth. They can also be used as an alternative to the consumer

[25] This is the minimum level recommended by the Food and Agricultural Organisation and World Health Organisation for an average active person.

FIGURE 4.5 **Change in poverty lines 2004/5–2010**



price index as a measure of the change in the cost of meeting basic needs—in other words, a pro-poor measure of inflation.

Figure 4.5 above illustrates the changes in different poverty lines over the last five years. It shows that all FPLs rose at less than half the rate of the consumer price index. This partly reflects a narrowing in the range of food items used as a source of calories (Abbott 2010), but encouragingly suggests that the poorest households have not suffered as greatly from price rises as is suggested by CPI data. The outer island BNPL also rose less quickly than inflation, whereas the Funafuti BNPL increased slightly more rapidly than the CPI.

The figure below illustrates the changes in incidence of different types of poverty since 2004–05 and 1994 respectively. Figure 4.6 shows changes in the proportion of the population classified as 'very poor' (i.e. with per capita income beneath the applicable FPL) and 'poor' (i.e. with per capita income equal to or above the applicable FPL but beneath the applicable BNPL). It can be seen that over the last five years, food poverty (also known as 'extreme poverty'—the proportion of 'very poor' people) fell slightly at the national level, but increased on the outer islands while falling to beneath 1% in Funafuti. At the same time, 'basic needs poverty' (the proportion of 'poor' people) rose across the country, although the proportion of 'total poor' people (i.e. the sum of poor and very poor people) remained constant, indicating that the increase in basic needs poverty corresponded to the reduction in food poverty (in other words, the increase in basic needs poverty was due to people rising, rather than falling, into this category in Funafuti).

FIGURE 4.6 **Changes in poverty 2004/5–2010**

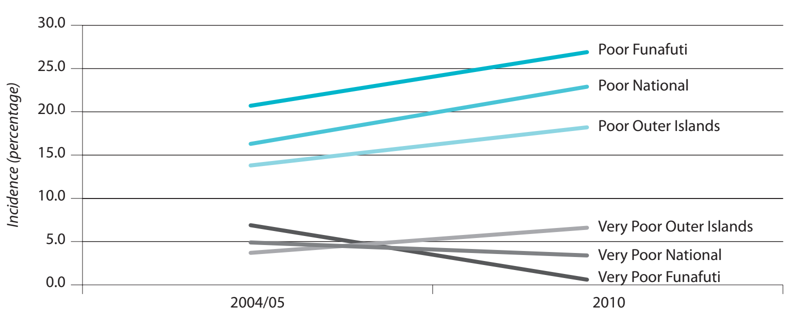


FIGURE 4.7 **Changes in total poverty**

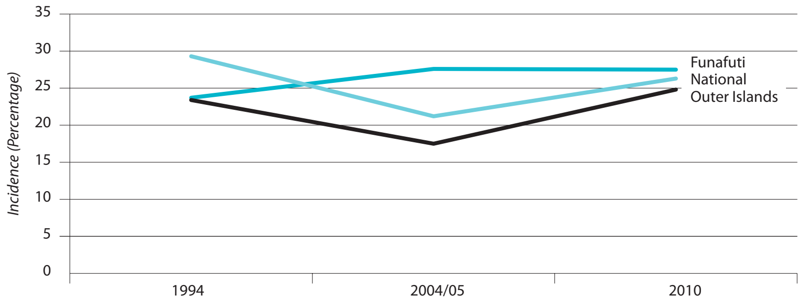


Figure 4.7 shows that the essential trends from 1994–2004 were reversed in the following half-decade: in Funafuti, rising poverty levelled off, while falling poverty on the outer islands began instead to increase. It can be noted that in 1994, poverty in both Funafuti and on the outer islands stood at approximately 23%, while the national poverty rate was considerably higher, over 29%. It may appear counter-intuitive that the average national value should be higher than either of the nation's constituent regions, but it should be recalled that the criteria by which households are judged to be poor are different in each of the three cases. The reason for the higher national poverty level is the number of outer island households that are not poor according to the outer island BNPL but which *are* poor according to the national BNPL, which is higher due to the effect of higher basic needs expenditure on Funafuti.

On Funafuti, one quarter of all households are female-headed. Only 12.7% of these households fall below the BNPL, compared to 27.5% of all households—female-headed households are less than half as likely to be poor. It is probable that at least some of these households are only temporarily female-headed during the absence of a seafaring male, and therefore benefit from remittances. On the outer islands, around one in six households has a female head. 25.4% of these fall below the outer island BNPL, very slightly above the 24.8% average for all outer island households. Nationally, female-headed households are less likely to be poor than others. Households containing children under 15 years are almost exactly as likely to be poor as other households both on Funafuti and outer islands.

BOX 4.1 **Millennium Development Goal 1**

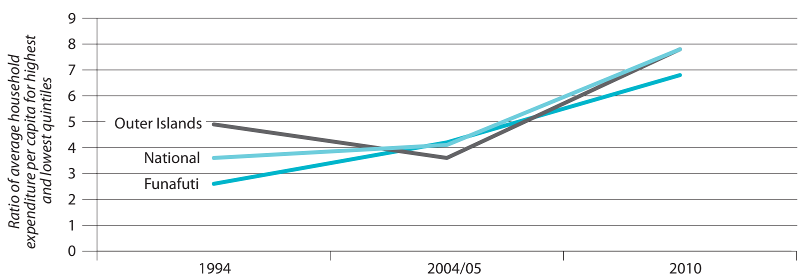
	Baseline		Latest Data	
1 Eradicate extreme poverty and hunger: halve poverty and malnutrition between 1990 and 2015				
Population below national BNPL (%)	23.2	*(1994)*	**26.3**	*(2010)*
Percentage share of income or consumption held by poorest 20%	7.0	*(1994)*	**10.2**	*(2005)*
Prevalence of underweight children under 5 (%)	3.0	*(1983)*	**1.6**	*(2007)*
Population below minimum level of dietary energy consumption (%)	6.0	*(1994)*	**3.5**	*(2004)*

Elderly-headed households are significantly more likely to be poor than other households, especially on Funafuti. Elderly-headed households that also contain children are even more likely to be poor than other households, and again this is particularly the case on Funafuti. One in nine households in Funafuti meet both of these criteria—of these, 40% are poor (Abbott 2010).

4.3.3 Inequality

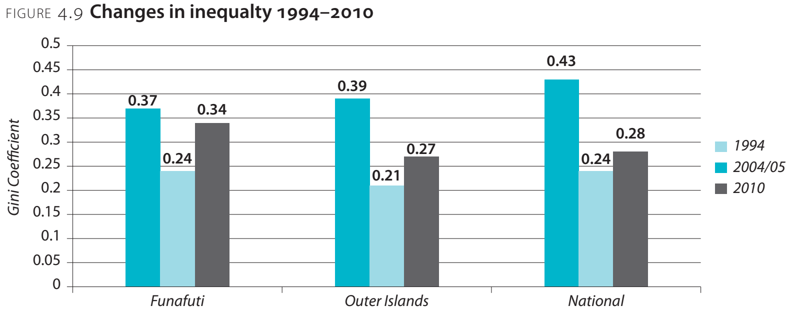
Inequality has been worsening in Funafuti in the last fifteen years, and in the last five years this worrying trend has spread to the outer islands, as illustrated in Figure 4.8. Between 1994 and 2010, the ratio of average per capita expenditure of top quintile households to that of bottom quintile households in Funafuti increased alarmingly from 2.6 to 6.8. Until 2004–05, incomes in the outer islands had been equalising, but in the last five years inequality has risen so quickly that the previous decade's progress has been undone and the equivalent ratio is now significantly higher than in 1994.

FIGURE 4.8 **Rising Inequality**



Data on the household Gini coefficient broadly supports this trend—inequality between households fell between 1994 and 2004–05, but had increased again by 2010, albeit not to such high levels as in 1994. It should be noted that these remain lower than Gini coefficients reported for other Pacific islands such as Fiji, the Federated States of Micronesia, Samoa and Tonga (Abbott n.d.). However, if the Gini coefficient is calculated for individuals instead of households, the figures are 0.48 for Funafuti and 0.52 for the outer islands, reflecting the larger size of less affluent households. This value is higher than for all of the Pacific comparator countries listed above. This illustrates the care that must be exercised when basing comparisons of inequality on Gini coefficients, especially values derived from

FIGURE 4.9 **Changes in inequalty 1994–2010**



different types of survey. It should be noted that these latter figures are based on crude assumptions about the intra-household allocation of expenditure, and might yield very different figures if more data on intra-household allocation was available.

TABLE 4.1 **Current Gini coefficients of inequality, using different atomic units**

	Household level	Individual level
Funafuti	50.73%	50.73%
Outer islands	0.28	0.52

4.4 POVERTY, HUMAN DEVELOPMENT AND TRADE

In a small, open economy that is heavily reliant on remittances and overseas investments, trade and the state of global economic trends will have an important impact on poverty and human development.

Tuvalu benefits from international labour mobility through its seafarers, whose remittances are an important source of national income. Ex-seafarers are in a strong position to use their overseas experience and accumulated capital to establish private sector operations later in their careers. However, there are also human development costs associated with this movement. Approximately 1% of trained seafarers have contracted HIV/AIDS, a virus that would have had considerably less effect on Tuvalu were it not for this transmission vector. This risk is mitigated through targeted educational programmes that have resulted in strong awareness—around 90% of all men show good understanding of the means of preventing HIV infection, and awareness is highest in the 25–29 age range (SPC 2009: 192–4). WHO supports the government by providing antiretroviral treatment free of charge for those living with HIV/AIDS.

Trends in international trade, and transport challenges, have an important impact on the domestic diet, with various negative health consequences. Government action aimed at improving nutrition—either by encouraging domestic production of healthier foods, or more nutritious imports—will take a long time to result in a significant reduction in NCDs, but will be worth the investment. Any improvement in the regularity, predictability and cost of inter-island shipping could serve to improve diet on Funafuti, at the same time as bolstering the incomes of fishermen and farmers on the outer islands.

State-owned enterprises have long played a crucial role in the Tuvaluan economy, in many cases ensuring the population of the outer islands have access to goods and services that the private sector would be unwilling to provide, or would only provide at a prohibitive cost. Together, they have often provided a lifeline to vulnerable groups in rural areas. In many cases, it would be difficult to privatise or restructure these enterprises so that they to operate on a commercial basis without a detrimental impact on poor and vulnerable groups. When examining the future of these enterprises, the need to improve transparency in government accounts and improve the fiscal position must be balanced with the needs of vulnerable communities that are already suffering the composite effects of a wide range of economic shocks—which together have lead to a nationwide deepening of inequality and an increase in total poverty in the last five years. For instance, changes imposed on the Development Bank to move towards self-sustainability will force the institution to abandon its former policy of actively supporting outer islands fisheries. This could have a variety of negative human development consequences, not just for the fisheries operators, their dependents and the local island economy in which they participate, but also for Funafuti consumers, in both financial and nutritional terms.

4.5 HEALTH

The government provides healthcare free of charge to Tuvaluans, including medicines and overseas care for conditions for which the domestic hospital is not equipped to deal. The most common major health threats in developing countries, such as malaria, tuberculosis, HIV/AIDS and diseases associated with malnutrition and poor sanitation are absent or less significant in Tuvalu. Malaria is not endemic to the country. Access to improved water and sanitation is high, and although problematic in their own way. The first case of HIV was identified in 1995, and since then there have been 11 confirmed cases including three fatalities. The main vector for transmission is through seafarers working on foreign-flagged vessels, with one case contracted while studying abroad. This means that approximately 1% of Tuvaluan seafarers have contracted HIV/AIDS. All Tuvaluans living with HIV/AIDS have access to antiretroviral treatment, provided with WHO support.

Of much greater concern is the level of non-communicable diseases (NCDs), particularly those related to low-quality diet. In 1996, the prevalence of diabetes for those over thirty years stood at 26% for females and 38% for males. In 2007, more than 90% of 40 to 49–year olds were classified as either overweight or obese (i.e. having a BMI of greater than 25, see Figures 4.10 and 4.11). Anaemia is also a concern, particularly in children. Its prevalence fell slightly between 1996 and 2007 from 77% to 61%. However, the WHO classify any rate above 40% as 'very high' with "critical public health significance" (SPC 2009).

In addition to the human development costs of these diseases, they place an enormous strain on government resources. At present, eight diabetic patients are receiving dialysis in Fiji, at a cost to Tuvalu's government of approximately

FIGURE 4.10 **Obesity in Men**

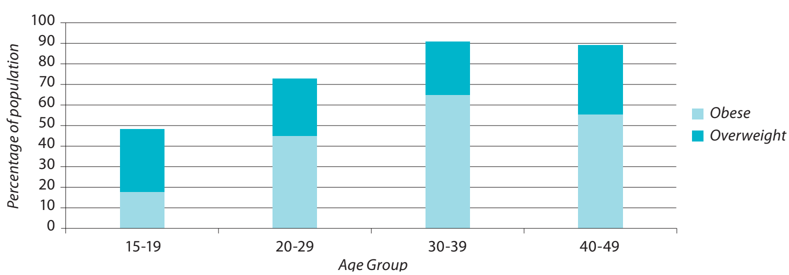
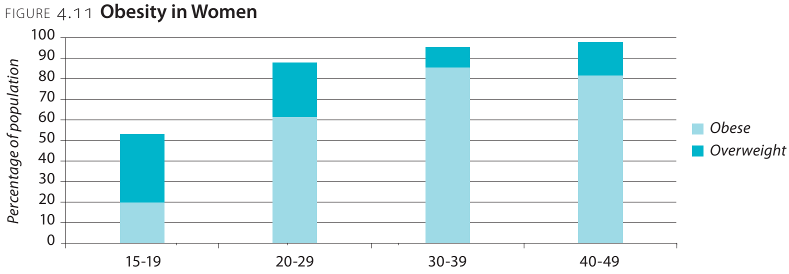


FIGURE 4.11 **Obesity in Women**



BOX 4.2 **Millennium Development Goals 4, 5 6 and 7**

	Baseline		Latest Data	
4 Reduce mortality in children under 5 by two thirds between 1990 and 2015				
Under 5 mortality rate (per 1,000 live births)	68.7	*(1991)*	24.6	*(2009)*
Infant mortality rate (per 1,000 live births)	57.3	*(1992)*	14.8	*(2009)*
Immunization, measles (% of children under 12 months)	94	*(1995)*	90	*(2008)*
5 Improved maternal health: reduce maternal mortality by three quarters between 1990 and 2015 and achieve universal access to reproductive health by 2015				
Maternal mortality ratio	1 death in 242 births	*(1990)*	0	*(2009)*
Births attended by skilled health staff	98–100% of births take place in hospital			
Contraception prevalence rate (%)	—		31	*(2007)*
Adolescent birth rate (per 1,000 women)	38.6	*(1991)*	44.0	*(2005)*
Antenatal care coverage (%)	—		97	*(2007)*
Unmet needs for family planning (%)	—		24.2	*(2007)*
6 Combat HIV/AIDS, malaria, and other diseases: halt and begin to reverse the spread of major diseases by 2015				
Prevalence of HIV, female (% of ages 15–24)	0	*(1990)*	—	
Contraceptive prevalence rate (% of women ages 15–49)	39	*(1990)*	32	*(2002)*
Number of children orphaned by HIV/AIDS	0	*(1990)*	—	
Incidence of tuberculosis (total number in the whole population)	23	*(1990)*	16	*(2004)*
Incidence of tuberculosis (new cases)	7	*(1990)*	0	*(2004)*
Tuberculosis cases detected and successfully treated under DOTS (%)	—		92	*(2004)*
7 Reduce by half the proportion of people without sustainable access to safe drinking water and basic sanitation				
Access to an improved water source (in percent of population)	90	*(1990)*	93	*(2006)*
Access to improved sanitation (in percent of population)	78	*(1990)*	89	*(2006)*

A$35,000 per patient per annum. The government also pays for surgery to correct cardiac conditions, for which poor diet is often a partial cause. Until recently, the total cost of such surgery plus post-operative care in New Zealand was approximately A$80,000, although recently these costs have been reduced by two thirds by switching to healthcare providers in India.

Economic incentives, and particularly the impact of trade patterns, are clearly an important contributory factor to these dire health challenges. Over the long-term, the proportion of imported foodstuffs in the average diet has increased, and due to the transport times and distances involved, imported foodstuffs are predominantly processed. Many imported fruits cost as much as $10 per kg, and the contribution of own production to food consumption is in decline (Abbott 2010).

Even without giving consideration to the high human costs of poor diet, the long-term fiscal impact of neglecting the problem is sufficient to justify considering market intervention. In a country like Tuvalu, constraints such as its small size and cost of transportation to major markets may dissuade government from intervening to promote local agriculture, particularly for export. However, the long-term costs of the lack of access to affordable fresh food, both financial and human, may prove a sufficient incentive to design a policy intervention that aims to provide affordable, high-quality fresh fruit and vegetables to the domestic market. The promotion of local import-substituting agriculture is one possibility, although the cost of such an intervention should be compared to the cost of achieving the same improvement in health through subsidy of nutritious imported foodstuffs, perhaps allied with the provision of improved, subsidised school meals, potentially supplied by school-maintained gardens. In this area, the Republic of China (Taiwan) has successfully established its Home Garden Project, providing materials and training to help Tuvaluans to use an area of land on Fongafale to grow food crops. Improved inter-island shipping would also enable greater supply of fresh foods to consumers in the capital. The proportion of own-produced food in household consumption is currently four times higher in the outer islands than in Funafuti (Abbott, 2010).

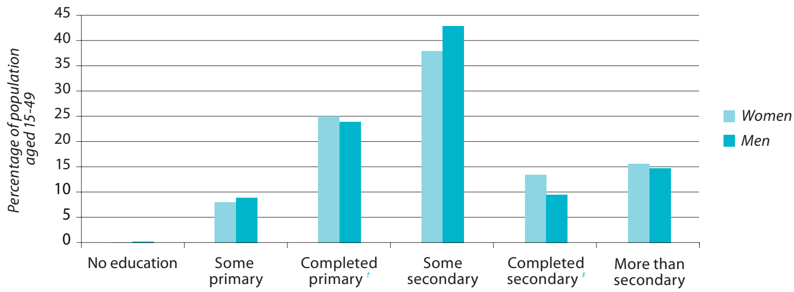
Not all of the MDGs can be quantitatively assessed in a meaningful way in a country as small as Tuvalu. For instance, the number of maternal deaths is either zero or one out of 200–300 births in most years, yielding a meaninglessly volatile ratio. Almost all births take place in hospital, so similarly it is not useful to measure the proportion attended by skilled health personnel, as fluctuations will be dominated by noise rather than any underlying improvement in healthcare provision. In many cases, statistics cannot be disaggregated without the risk of identifying individuals.

4.6 EDUCATION

Educational attainment is very high compared to other Pacific islands and LDCs, and this is not a new phenomenon. As the following figure shows, around 67% of the population in the age range 15–49 has at least some secondary education, and 15% have some post-secondary education. Literacy rates are above 98% and have been so for more than two decades. Less than 1% have no formal education. The only noticeable difference between genders is that more women have completed their secondary education as opposed to leaving during grades 9–12. Women are also slightly more likely to have education beyond secondary level.

Primary schools exist on all nine islands. A single secondary boarding school on Vaitupu caters to students from all islands. Individual teachers formally have no choice as to where they work—the Department of Education posts teachers as it sees fit, although concessions are made based on the location of spouses in government employment. This is seen as a means of ensuring that students from all islands have access to the same quality of teaching during their primary education, although it is acknowledged that the level of attainment of students in the outer islands is lower than on Funafuti. Education is compulsory from ages 6–16, and free at primary level.

FIGURE 4.12 **Educational achievement by gender**



† Completed 8 years of primary schooling (completed Year 8)

‡ Completed 4 years of secondary schooling (completed Year 12)

BOX 4.3 **Millennium Development Goals 2**

	Baseline		Latest Data	
2 Achieve universal primary education by 2015				
Net primary enrolment ratio (% of relevant age group)	99.5	*(1991)*	98.1	*(2007)*
Percentage of cohort reaching grade 8 (%)	81.3	*(1991)*	91.2	*(2007)*
Youth literacy rate (% of ages 15–24)	98.7	*(1991)*	98.6	*(2007)*

4.7 ENVIRONMENT

Tuvalu is one of the most vulnerable countries in the world to increases in sea level. It has a total land area of only 26 km² and a maximum elevation of just 4.5m, with an average elevation of around 1m. Global sea levels have risen 1.8mm/year (±0.5mm/year) between 1961 and 2003, and are projected to rise at a greater rate during the 21st century (see Box 4.4, Bindoof *et al.*, 2007). There are currently two sea level gauges on Fongafale, which have been collecting data since 1977 and 1993. The more recently installed Aquatrak acoustic gauge located at the main wharf has measured an average sea level increase of 4.7mm/year, or approximately 75mm over 16 years. While this is an alarming rate of increase, this dataset is too small to be used as a basis for meaningful predictions of future sea levels. As Hunter (2002) notes, combining data from both gauges, it is not possible to reject the hypothesis that sea levels are constant even at the 68% confidence level. That is not to say that sea levels haven't risen, but rather that random fluctuation is so large compared to the magnitude of long-term trends that there is not yet enough data to be confident that the trend of sea level change is positive, let alone to make predictions of its magnitude.

However, this uncertainty does not provide a justification for inaction. In the absence of more precise predictions, the government is justified in adopting a cautious approach that highlights the threat that the country will face if rates of sea level rise transpire to be nearer the upper bounds of current forecasts.

BOX 4.4 **Sea level rise**

Global sea levels have been rising since the Last Glacial Maximum, around 20,000 years ago. There are various reasons that levels fluctuate in the long-term, but the most important for the current trend are:

1. an increase in the temperature of ocean water is causing the water itself to expand, increasing sea levels;
2. increased global temperatures are causing a net melting of land-supported glaciers, causing water to return to the ocean;
3. variations in precipitation and run-off in Antarctica and Greenland can have a significant impact on sea levels; and
4. an increase in the amount of water persistently stored on land has probably reduced the amount of water in the ocean.

However, sea level relative to land at one particular location can deviate from trends in global sea levels for two reasons. Firstly, changes in global sea level can vary substantially by region, due to non-uniform changes in temperature and salinity, and changes in ocean circulation (Church *et al.*, 2001, Bindoff *et al.*, 2007). Secondly, land levels can themselves rise and fall at a rate of similar magnitude to sea level changes, which can act to exacerbate or mitigate sea level changes (Hunter, 2002).

Sea levels are also affected in the shorter term by waves, tides, and local and regional weather systems. Substantial variation in global sea levels has been observed even over the duration of decades—for instance, the period 1993–2003 saw sea levels rise at almost twice the average rate of the second half of the 20th Century (Bindoff *et al.*, 2007). Such changes—at least the bulk of them—should not be interpreted as a change in the trend rate of sea level change, but rather as random fluctuation around an underlying trend. Because such fluctuations, whether over seconds or decades, are so large relative to long-term changes in sea level, it can take an extremely long time to determine underlying trends in sea level change. It is a common weakness in much writing on relative sea level changes in Tuvalu that no attempt is made to calculate the confidence with which collected data can predict underlying trends. Hunter (2002: 2) explains the importance of considering the limitations of available data (emphasis added):

> Even using the full 24 years of available data, the uncertainties in estimated trend are presently undesirably large. It is shown that, using the 'cautious' analysis… **a further 56 years of data** would be required to reduce the uncertainty associated with environmental variability to, say, ±0.3mm/year (30%, if the rate of rise is 1mm/year).

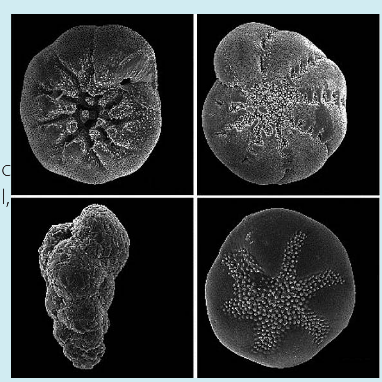
Annual reports on sea level change published by the South Pacific Sea Level and Climate Monitoring Project (SPSLCMP) only calculate trends in the raw data they have collected, rather than attempting to establish the range within which underlying long-term trends are likely to lie. As a result, the trends they calculate show significant variation as new data becomes available. Their assessment of trend sea level rises in Tuvalu fell from 5.7 to 4.7 mm/year merely between 2006 and 2009, while noting that an alternative gauge suggests the trend may actually be 0.9mm/year (SPSLCMP, 2006 and 2009).

We're going to be waiting around for a fair while before our estimates of sea level rise become statistically meaningful… Everyone presses you to give a number. We put a vast amount of effort into telling people that you should not be using numbers yet.

—Bill Mitchell, manager of the National Tidal Centre, Australian Bureau of Metrology *(quoted in Patel 2006)*

The potential impact of sea level rise in Tuvalu is likely to include acceleration of coastal erosion and increasing saltwater intrusion, which compromises taro crops and building foundations. However, just as uncertainty remains about the long-term rate of sea level increase, so too there is controversy about the best means to combat erosion. Traditional sea defences such as sea walls are typically designed for locations that have so little in common with Tuvalu's low-lying atolls that they may even prove counterproductive. As Lewis (1989) notes, Fongafale is so narrow that conventional sea defences would require the land form itself to be altered, and since coral rock porosity extends beneath the ordinary depth of sea defences, both land forms and defences would have to be protected from flooding from within. Instead, ongoing research by JICA may shed new light on the most effective means to reduce erosion. Noting that sand beaches dissipate wave energy before they hit the shoreline, reducing erosion, the project is mapping patterns of erosion and accretion of sand around the islets of Funafuti, processes that naturally lead to islets progressively changing shape over time. The project has observed a net erosion of sand on Fongafale, attributable partly to excavation to provide aggregate for construction, but possibly also due to the construction of a causeway towards the north of Fongafale. The causeway is believed to have prevented the natural flow of foraminifera (or foram—see Box 4.5), a single-cell organism that produces a "sand" made up of individual shells, into Funafuti lagoon where it had previously been deposited on the coast of Fongafale. This 'foram sand' is thought to have provided a barrier against erosion that has been lost since the construction of the causeway. It is believed that the construction of sea defences could further disturb this process of accretion, potentially accelerating rather than retarding erosion. Alongside its

BOX 4.5 **Foraminifera**



Source: http://en.wikipedia.org/wiki/Foraminifera

The Foraminifera, ('hole bearers') or forams for short, are a large group of amoeboid protists with reticulating pseudopods, fine strands of cytoplasm that branch and merge to form a dynamic net. They typically produce a 'test', or shell, which can have either one or multiple chambers, some elaborate in structure. These shells are made of calcium carbonate ($CaCO_3$) or agglutinated sediment particles. About 275,000 species are recognized, both living and fossil. They are usually less than 1mm in size, but some are much larger, and the largest recorded specimen reached 190cm.

monitoring of sand movement, the same JICA project is experimenting with stimulating the growth of foram.

If these tentative hypotheses are confirmed when JICA is in a position to publish the results of its research, the replacement of the causeway with a bridge could restart the flow of foram sand into Funafuti lagoon, which is projected to lead to tens of thousands of cubic metres of sand to be deposited on Fongafale annually. Such a bridge is likely to cost in the region of $1m. Other Japanese initiatives are experimenting with dredging sand from Funafuti lagoon to restore beaches and the creation of mangrove plantations on Funafala island.

4.8 ENERGY SECURITY

Energy security and distribution is of interest for a variety of reasons. Access to affordable energy is vital for a successful private sector as well being an important factor in human development. The environmental cost of electricity generation is a particularly sensitive issue in Tuvalu, given the threat that global warming poses to its population.

98% of the population of Tuvalu have access to electricity, and both this rate of coverage and quality of service are very high by Pacific standards. However, heavy reliance on diesel for the bulk of production is the cause of high operating costs, which despite substantial donor subsidy have lead to the third highest energy costs in the region. While there are opportunities for some efficiency savings within the Tuvalu Electricity Corporation (TEC), staffing levels have already been reduced by 15% in the last three years—yet the fact remains that diesel accounts for a very large proportion of the price of electricity, and limited improvements are possible without either a high level of continuous subsidy or fresh investment in alternative means of generation.

Current tariffs are set at 29¢/kWh for the first 50kWh (the so-called 'lifeline tariff'), 38¢/kWh for the next 50kWh, and 55¢/kWh thereafter and for commercial and government users. Diesel infrastructure is new and in good condition, and should not require significant new investment within the next decade, so TEC currently aims only to cover its operating costs, rather than attempting to recover the cost of capital investment. Ridgeway (2007) estimates the cost of diesel alone at almost 40¢/kWh, which illustrates the impossibility of TEC achieving commercial viability and absorbing fluctuations in the global oil market without either financial support or substantial increases in consumer pricing. This calculation preceded the peak of oil prices in 2008.

Over the last four years, TEC has recovered from technical insolvency largely with the support of Japanese aid, amounting to around $1m in diesel per year since 2006 (approximately 25% of operating costs), in addition to investment in diesel plant in that year. This support has enabled TEC to repay substantial debts, but the future of this subsidy is uncertain and may end this year. If so, TEC would require government or another donor to provide substantial support in order to avoid passing higher costs on to consumers (probably making Tuvalu the most expensive place to purchase electricity in the Pacific) or borrowing heavily.

Ridgeway (2007) recommended selling over-capacity generation plant in order to finance more appropriately sized (and therefore fuel-efficient) generators and investment in wind and solar equipment, but noted that the second-hand value of the equipment is falling rapidly due to the harsh saline environment in the outer islands. Further savings in fuel acquisition could potentially be realised through a joint procurement initiative under consideration by the Forum Secretariat.

The current system of diesel generators represents a relatively low capital expense, with high running costs that are vulnerable to fluctuations in the global price of diesel. Alternatives such as solar and wind, in comparison, have significantly higher capital costs but are less expensive to operate. TEC does not have the capital to replace a significant portion of its capacity with alternative sources at present, although limited donor-funded solar capacity has been installed both on Funafuti (where 5% of generation is solar) and Niulakita (the only atoll without an electrical grid). No wind capacity has yet been installed, but two years of wind data has been collected on Funafuti, and this suggests that wind generation is technically viable. It is possible that each turbine installed could reduce fuel costs by $100,000, equivalent to a tariff reduction of 2¢/kWh (Ridgeway 2007).

Given Tuvalu's vulnerability to climate change, it is easy to understand the political motivation for the government's stated objective of switching entirely to renewable energy by 2020. It should be noted that this target relates only to domestic electricity generation. The carbon emissions generated by current international flights in to and out of Funafuti amount to more than a third of those created by all electricity generation, so it may seem disingenuous to equate renewable electricity generation with national carbon neutrality (author's calculation based on Ridgeway 2007, PIFS 2006, Environmental Protection Agency 2005, Terrapass 2010, Jardine 2009). However, to generate even a significant fraction of its electricity using renewables, Tuvalu will be reliant on donor investment. Ridgeway (2007: 26, 33) lays out an indicative schedule of investment in wind and solar photovoltaic generation costing $2m between 2008–15 which would provide almost half of 2006 demand. Even with the overt symbolism of the policy, consumers, the private sector and government stand to gain significantly from lower prices and a reduced need to subsidise energy, if investment in renewable technologies further displaces the need to import diesel.

As a state-owned enterprise, TEC is able to pursue goals other than optimizing profit by maximising energy sales. It is therefore in a position to encourage greater energy efficiency amongst the population, a particularly important objective in such a high-cost energy environment. Efforts to encourage the use of more energy-efficient products and to reduce consumption of high-drain appliances such as air conditioners have been supported by an educational program managed by the New Zealand Aid Program and have had a modest impact. Such efforts could be better supported by government. Firstly, as the consumer of almost a third of TEC's output, government could reduce energy usage significantly through improved control of its own consumption. Secondly, given the common observation that discount rates in Pacific cultures are generally high and the lack of familiarity with total cost of ownership (TCO) calculations, there is a strong argument for using taxation (such as import or excise duties) to raise the cost of low-price, low-energy efficiency products so that their market price better reflects their total cost of ownership. In an environment in which consumers are unaware of the cost of running energy inefficient appliances, such a tax would actually improve price signals, plus it would help to control the trade imbalance and make consumers better off in the longer term. Any revenue raised could be invested in renewable sources or used to subsidise energy prices.

4.9 WASTE MANAGEMENT AND RECYCLING

With a total land area of only 26km^2 and high transport costs to its nearest trading partners, it is not surprising that waste management is a perennial concern in Tuvalu. The country first lost the use of substantial land areas during World War II when American forces excavated various borrow pits in order to construct the airstrip on Fongafale. These borrow pits remain today, often contaminated with various kinds of landfill material, yet are still located within occupied residential areas.

Encouragingly, there are currently private-sector recycling firms profitably exporting both aluminium and steel. There is potential for recycling of other materials. The use of composting toilet systems is a viable means to generate fertiliser, where few other options exist to safely dispose of human waste. Only modest equipment, which could be obtained for less than $15,000, is required to convert glass containers (such as jars and bottles) into a crushed material that can be used as a construction aggregate or as a partial replacement for silica sand in concrete. Considering the detrimental effects of historical excavation of beach sand for use in residential construction, which accelerates coastal erosion, this alternative could be particularly beneficial. Other regions with limited space available for landfill such as Japan and parts of Western Europe make greater use of incineration to reduce the volume of solid waste, including plastics. The solid ash output of incineration systems can often safely be used in construction applications. And as Grano (1997) points out, there are also circumstances in which responsible disposal at sea may be preferable to landfill, even for toxic substances that can be effectively contained.

There is a high social cost associated with the consumption of packaged products and therefore a strong rationale for government intervention. Such intervention could take various forms, ranging from adding a deposit to the price of recyclable packaging, to selective taxation of products that are over-packaged or contain materials that cannot be economically recycled, to direct subsidy of refuse collection, sorting and recycling operations. Previous efforts by government and NGOs have focused on encouraging responsible disposal voluntarily, but without accompanying economic incentives, the effects of these programmes tend to be short-lived.

4.10 WATER SUPPLY

There are no streams or rivers in Tuvalu. Freshwater is traditionally drawn from two main sources. The first is the freshwater lens that forms under a typical coral island due to the lower density of freshwater relative to saltwater, but this is no longer of potable quality due to saltwater intrusion and pollution. The second is rainwater, collected and stored primarily at the household level. In addition to these, the Japanese government built a desalination plant in response to a water crisis caused by an El Niño event at the turn of the century. There is a strong perception that the strain placed upon water supplies is growing due to increasing incidence of drought and growing population on Fongafale. Adaptation to frequent water shortages has been prioritised by the Department of Environment since 2007 as part of the National Adaptation Program of Action. This year, the EU committed €4.4m to improvement of water supply and sanitation in Tuvalu over the next six years, to extend a smaller scale project completed under the 9th EDF.

4.11 CONCLUSIONS

Policy on trade, human development and the environment is not yet integrated, and trade remains peripheral to development policy. Yet there are a number of links between the three.

- Fisheries and agriculture, specifically copra-cutting, are sources of trade-related cash income and a traditional social safety net. The replanting of coconut trees would help support the copra industry and provide food for subsistence.
- HIV/AIDS would have had virtually no effect on Tuvalu were it not for seafarers returning from overseas. This risk is being mitigated through targeted educational programmes, although there is no room for complacency.
- The tendency toward increased on imported food has worsened the domestic diet, increasing the incidence of non-communicable diseases. Education campaigns promoting good nutrition will remain vitally important, as will the support of traditional agriculture on the outer islands.
- Climate change—which threatens to submerge some parts of Tuvalu—will have an impact on agriculture and subsistence livelihoods and therefore on the balance between locally-grown and imported foods.

Although government is active in the international arena, and Tuvalu is well-known as one of the countries most likely to suffer the impact of rising sea levels, domestic policy as yet has little orientation toward climate change. It may be worth supporting environmental policy with tax incentives, ensuring that environmental policies designed to promote recycling, reduce the volume and toxic effects of land-fill and improve water quality are supported by appropriate economic incentives. The country is in a strong position to seek donor support in transitioning from diesel-generated electricity to greater use of renewable resources.

The slight fall in food poverty, or extreme poverty, between 1994 and 2004 masked an increase in poverty on the outer islands. Over the same period the proportion of 'total poor' people (the sum of poor and very poor people) remained constant. Inequality, however, has risen, and government policy should remain aware of these trends, particularly in order to protect the most vulnerable against the consequences of global economic fluctuations.

While school enrolment rates are high, training opportunities need to be improved, both to provide technical skills in areas of current shortage and to cater for any forthcoming transition to a more private-sector led economic model. It may be appropriate to identify new markets for labour overseas. Diversification in vocational training for selected overseas markets would reduce vulnerability to global economic trends and could help to combat the current gender disparity in quality of educational opportunity at the vocational level.

Section II—Sectoral Studies

CHAPTER FIVE

Tourism

5.1 INTRODUCTION

Tourism is perhaps one of the most promising of any areas discussed in the DTIS. The sector is very small and underdeveloped, and a relatively minimal effort could lead to much higher yields. Tourism has proven economic potential in the Pacific island region, and tourism to non-traditional regional destinations has grown in recent years. Tuvalu has an attractive natural environment. An additional reason for prioritizing the tourism sector is that some other conventional sources of income—such as remittances and income from the Trust Fund—have declined, putting pressure on government to look for new sources of economic growth.

This chapter reviews and analyses the potential of tourism of Tuvalu, starting with an overview of the sector's development and its characteristics. A comparative review of the tourism product is then presented—focusing on strengths, weaknesses, opportunities and threats. The strategic vision for tourism is outlined and an assessment of the capacity of local and global institutions to develop tourism is also presented.

The chapter then focuses on ways in which visitor yield can be enhanced. The focus on yield is central to the discussion as such an approach enables economic benefits to be maximized and sustained without having to focus purely on growing visitor numbers in a potentially unsustainable (and unrealistic) fashion. The focus is on increasing spend per visitor, ensuring that the economic benefits of tourism are better spread across the islands and other economic sectors of the nation, and minimizing the 'leakage' of tourist spend from the Tuvalu economy. The chapter emphasizes the following core areas for action in yield enhancement:

- business development and networking;
- marketing and information and communication technologies;
- economic linkage creation;
- human resource development;
- research and decision support;
- global warming and environmental sustainability; and
- enhanced institutional structures and strategies.

5.2 TOURISM CHARACTERISTICS AND POSITIONING

Tuvalu offers beautiful natural scenery, a unique island culture and remoteness. These characteristics provide the basis for the development of the sector and offer potential for the growth of small-scale ecotourism experiences. Tuvalu recognizes tourism as a viable means of accelerating the economic growth and development of the nation through its contribution to foreign exchange earnings and the balance of payments, as well as its potential to create income and employment opportunities. The ability of tourism to reach this potential is, however, limited by significant weaknesses in airline access, accommodation supply, the provision of visitor experiences and human resources.

Tourist activity in Tuvalu is centred on Fongafale islet, in the atoll of Funafuti. The greatest attraction is the Funafuti Lagoon which contains the local Marine Conservation Area and offers swimming, snorkelling and environmental experiences. The second most populated islet is Funafala, which can be visited on the Funafuti Island Council's vessel or by arrangement with locals that own private vessels. Limited tourism development exists on outer islands beyond Funafuti (especially Nanumea and Vaitapu) which are only accessible with one of two inter-island vessels.

Tourism plays a relatively limited role in the economic life of Tuvalu. Only a small number of tourists visit the country (Table 5.1). Total arrivals for 2009 were only 1,573.

TABLE 5.1 **Visitor arrivals by country and year**

Country	2003	2004	2005	2006	2007	2008	2009	2010*
Australia	200	184	186	136	138	205	195	64
Canada	18	11	18	7	11	12	13	8
China	2	–	2	11	14	20	75	14
Germany	11	25	14	25	18	18	30	20
Fiji	325	332	223	197	219	324	252	165
France	16	9	12	8	16	12	15	13
Great Britain	45	49	37	55	35	44	54	23
Japan	108	137	118	250	227	412	397	293
Kiribati	163	54	33	27	17	23	50	22
N. Zealand	151	147	117	147	105	140	187	77
Other Asia	54	89	73	70	68	124	52	125
Other Countries	52	60	22	45	101	24	59	64
Other Europe	23	25	41	32	18	62	41	18
Other Pacific	81	100	78	16	66	72	59	33
Tuvalu	7	–	29	55	29	90	25	9
United States	113	68	83	56	54	67	69	25
Total	**1,369**	**1,290**	**1,086**	**1,137**	**1,136**	**1,649**	**1,573**	**973**

Source: Tuvalu Statistics Office.

* 2010 figures cover six months to June.

Arrivals to the end of June 2010 (973) point to a similar or marginally higher number of visitors for the calendar year. Japan has been the biggest source market in recent years, with New Zealand, Australia and Fiji also providing significant visitor numbers. Numbers from the USA and Europe remain comparatively low.

The tourism industry has generally depended heavily on business/government related travel and also on overseas based Tuvaluans returning to visit friends and relatives (VFR) (Table 5.2). The actual number of *bone fide* vacation-focused visitors is extremely low but has shown some growth in recent years—rising to close to 400 in 2009, compared to figures of less than 200 earlier in the decade.

TABLE 5.2 **Visitor arrivals by purpose of visit**

Source: Tuvalu Statistics Office

Purpose of Visit	2003	2004	2005	2006	2007	2008	2009	2010
Holiday/Vacation	187	164	179	251	260	364	397	174
Visit Friends/Relatives	330	175	199	223	138	175	280	90
Business(Conference)	587	854	564	523	641	512	192	579
Transit	80	54	69	73	20	63	444	22
Other Purpose	185	43	73	67	75	402	29	
Private Business						128	85	59
Research/Study			2		2	5	146	49
Total	**1,369**	**1,290**	**1,086**	**1,137**	**1,136**	**1,649**	**1,573**	**973**

A review of aggregate visitor flows from 2003–10 reveals that the most significant market for holiday-focused tourism is Japan (over 700 visitors over the period) (Table 5.3).

TABLE 5.3 **Visitor arrivals by nationality and purpose of visit—2003–2010**

Source: Tuvalu Statistics Office

Country	Tourism	VFR	Business	Transit	Other	Private Business	Research
Australia	131	212	691	80	132	32	30
Canada	32	12	37	5	11		1
China	25	16	33	22	6	12	24
Germany	97	5	40	9	3	5	2
Fiji	99	442	1,068	115	152	113	48
France	23	6	47	7	5	4	9
Great Britain	85	28	165	27	24	6	7
Japan	701	45	686	240	211	33	26
Kiribati	30	194	70	32	55	3	5
New Zealand	123	207	528	125	57	20	11
Other Country	122	42	187	21	36	10	9
Other Europe	120	22	72	20	19	3	4
Other Pacific	35	125	284	19	27	5	10
Tuvalu	54	126	37	4	15	3	5
USA	195	75	121	82	46	10	6

Fiji is the base for many of the aid agencies and organisations that visit Tuvalu and it hosts the main campus for the University of the South Pacific, which has a small satellite campus on Funafuti. Other key business and VFR markets are Australia, New Zealand and Japan.

The focus on business and government-related travel is reflected in the age structure of visitors to Tuvalu (Table 5.4). The bulk of international arrivals are in the 25–54 age range. The small number of visitors aged 0–14 indicates that the destination is not tapping into family market segments.

TABLE 5.4 **Age breakdown of visitors**

Source: Tuvalu Statistics Office

Age Group	2003	2004	2005	2006	2007	2008	2009	2010	Total
0–14	100	59	66	67	54	91	88	20	545
15–24	129	131	97	180	110	241	243	181	1,312
25–34	268	236	203	222	240	341	310	199	2,019
35–44	290	283	274	246	295	394	343	210	2,335
45–54	339	320	237	238	240	329	285	168	2,156
55+	243	261	209	184	197	253	304	195	1,846
Total	**1,369**	**1,290**	**1,086**	**1,137**	**1,136**	**1,649**	**1,573**	**973**	**10,213**

It is difficult to discern any distinct seasonality in arrival figures (Table 5.5). With such a limited base of visitor numbers, even slight variations in monthly arrivals can have a significant impact on patterns. The recent high visitor flows in the month of March reflect growing visitor activity around annual events such as the king tides.

TABLE 5.5 **Yearly visitor arrivals by month**

Source: Tuvalu Statistics Office

Month	2003	2004	2005	2006	2007	2008	2009	2010
Jan	81	104	91	73	25	115	134	135
Feb	140	146	84	201	74	164	131	129
Mar	126	112	23	66	95	272	310	352
Apr	139	150	91	69	118	98	109	168
May	83	149	103	89	67	163	74	102
Jun	86	75	145	160	76	92	94	87
Jul	78	89	112	90	123	103	156	—
Aug	138	98	57	55	101	151	85	—
Sept	152	69	118	57	124	108	123	—
Oct	140	88	110	89	123	148	103	—
Nov	82	101	74	97	104	111	121	—
Dec	124	109	78	91	106	124	133	—
Total	**1,369**	**1,290**	**1,086**	**1,137**	**1,136**	**1,649**	**1,573**	**973**

The Tuvalu tourism industry relies almost exclusively on international air services to keep it alive. The acquisition by the Government in 2001 of a share of Air Fiji gave Tuvalu greater control of its airline access and therefore the potential to develop tourism.

There are occasional visits by yachts and cruise vessels to Tuvalu but these are very limited and irregular. Tuvalu lies off the most popular trans-Pacific cruising yacht route and can only offer very limited provisioning for such vessels. There are no facilities to cope with large cruise ship visits.

5.2.1 Accommodation

The range and quality of accommodation provided in Tuvalu is very limited compared to other Pacific Island destinations. This places the nation at a competitive disadvantage. None of the accommodation operators are linked into all-inclusive package arrangements that can reduce costs for the traveller. There are no accurate occupancy rate statistics collected by government.

The government-owned Vaiaku Lagi Hotel is the major source of accommodation and tends to cater to visiting business and government officials. The hotel has 12 rooms and is listed as a three-star property. The hotel is situated near the airport and adjacent to the government office building that dominates Funafuti. Major room renovations were completed in 2005. The current charge for the hotel is $94 for a double room, a similar rate to 10–15 years ago. Meals in the restaurant typically range from $5–10 with daily internet charges of $8 per day. Staff numbers have been reduced from a high of 35 in the mid-2000s to approximately 25 with further cuts anticipated. The occupancy rate for the year to date is 56%.

The other major provider of accommodation is Filamona Lodge. Located next to the airfield and close to the terminal, this established enterprise provides accommodation primarily for government workers and also features a bar and restaurant attached to the premises. There are seven rooms in general use with additional rooms available when required.

Three other guest houses provide accommodation, with room numbers varying from one to five. Two are within easy reach of the airport and cater to business visitors and occasional tourists. Rooms are also leased out on a long-term basis. The quality of guest house accommodation varies and room rates range from $55-120. Each of the outer islands has basic accommodation available to cater for government/business visitors and a small number of tourists. The Funafuti Council also operate a very simple guesthouse on Funafala which is available for $45 per night.

There is no system of accommodation classification or quality control in Tuvalu. In most of the accommodation facilities, management skills and entrepreneurial expertise is limited. The low level of hotel management and supervisory skills available in the country means that little on-the-job training can take place.

5.2.2 Attractions and visitor experiences

Funafuti has few sandy beaches—with rocky coral formations being far more common. For white sand beaches, the visitor must visit Funafala or one of the other *motu* that dot the outskirts of the lagoon. Owing to strong tides and currents, swimming on the ocean-side of the lagoon is dangerous while the lagoon side is considered to be relatively safe.

A Marine Conservation Area (MCA) was created with the assistance of the South Pacific Regional Environment Program. This 32km^2 area is a protected marine park containing six uninhabited islets. The MCA features a wide variety of tropical fish and also provides nesting areas for sea birds and turtles. Visitors need to charter a boat to get to the area—at a cost of approximately A$200 per journey (shared among the number of people travelling). Charters are usually provided by the Funafuti island council. Tourists interested in water-sports need to bring their own equipment, as there is little for hire. At present there is no dive operation in Tuvalu and only one registered master diver.

One of the more fascinating aspects of the MCA, and Tuvalu in general, is that it is one of the best places in the world to view the consequences of sea level change. Some of the small *motu* are already disappearing—with many losing forest cover and reverting to sandy islets without vegetation. In recent years, this focus on climate change impacts has been developed from a tourism perspective with the creation of a King Tide Festival to coincide with the high tides that inundate much of the low-lying land in February.

Access to cultural events and the ability of the visitor to gain a better understanding of everyday life on Tuvalu is relatively limited. Dancing, singing and music play a big part in Tuvaluan culture, especially during the popular 'feasts of *fatele*'. Visitors that are invited to visit a village during a traditional celebration, are generally made welcome, and encouraged to join in the festivities.

5.2.3 Restaurants and retailing

The range of restaurants is very limited and does not extend beyond Funafuti. In addition to the meals provided at the Vaiaku Lagi Hotel and Filamona Lodge, there are two Chinese restaurants and one recently opened Indian operation. There are also a small number of other snack bars which are only open during the day. The standard of catering is basic, as is the décor of most eating establishments.

A limited array of shops, including food and clothing outlets, is available on Funafuti. The range of merchandise is basic and they are not operated with the visitor in mind. Recent years have seen an upsurge in small retail activity as the government-run co-operative has faced challenging financial times. There are no shops on Funafala, and the outer islands have simple 'general store' outlets that cater primarily to local needs. A recent addition to the retailing mix is a new tee-shirt/*sulu* printing business that does provide some merchandise for visitors to purchase.

For local crafts, including Tuvalu weaving, shell jewellery, some clothing, pillow cases and the traditional lidded wooden boxes (*tulumas*) used by fishermen, the Women's Handicraft Centre near the airport is the only regular retail outlet. Many artisans also sell their products from open air stalls situated close to the airport terminal. Another retail opportunity presented to visitors, though not widely advertised, is the Tuvalu Philatelic Bureau. There are no duty-free outlets in the country.

5.2.4 Key tourism stakeholders

The National Tourism Office is responsible for promoting and developing the tourism industry in Tuvalu. The NTO sits within the Ministry of Trade, Tourism and Commerce. Over the past decade the office has struggled with limited budgets and human resources. For a number of years, the head tourism officer was away studying in Taiwan and a Deputy Officer ran operations on their own. Currently there is a chief tourism officer, one assistant tourism officer, and sometimes a volunteer (most recently from Taiwan). During the DTIS mission, none of these staff were 'on island', being involved in the Shanghai Expo. The National Tourism Office is largely invisible to the visitor—it is based in the main government building with no internal or external signage to indicate its location. There is no visitor information booth at the airport, and as a result the ability of the NTO to play any significant role in providing information to arriving visitors is extremely limited. The NTO also has responsibility, in conjunction with the South Pacific Tourism Organisation, for the national tourism web presence at www.timelesstuvalu.com.

The recently established Tuvalu National Private Sector Organization (TNPSO) features a tourism sector grouping as one of its ten core sector/interest areas. This organization is designed to strengthen the voice of the private sector and to facilitate communication and collaboration between the private and public sectors. It remains to be seen whether this new grouping can succeed where others have failed and create a cohesive and sustained voice for the tourism industry.

A number of donor agencies and NGOs also play an important, but largely indirect, role in the development of tourism. The bulk of direct donor assistance to the Tuvalu tourism sector occurred in the period 1991–1998 when the EU allocated a range of funds through the Pacific Region Tourism Development Program (PRTDP). A number of projects were funded in Tuvalu, including training, statistics and product development work. In addition, considerable funding was provided to facilitate participation in tourism trade fairs primarily in Europe. The PRTDP, via the TCSP, was also responsible for the development of the 1991–2000 Tourism Development Plan.

More recently the EU has shifted its focus to its Proinvest model for developing links between local businesses and potential overseas investors. Unfortunately, despite involvement in previous Proinvest rounds, no businesses in Tuvalu have been successful in securing investment funds or the EU support funding that goes along with signed letters of intent.

As noted in the chapter on the macroeconomic environment, a number of donors and multilateral and regional institutions are involved in tourism and related areas, including AusAID, the New Zealand Aid Program, the Secretariat of the Pacific Community (SPC), The Asian Development Bank (ADB), the Global Environment Facility (GEF), the European Union (EU), the South Pacific Applied Geoscience Commission (SOPAC), the South Pacific Regional Environment Program (SPREP), the United Nations Environment Program (UNEP), the UNDP, JICA and Taiwan (ICDF).

Another significant stakeholder in the tourism arena is the local Funafuti Council (*Funafuti Falekaupule*). The Council administers the Marine Conservation Area and is also responsible for the collection and disposal of household rubbish. The Council also plays an important role in licensing local businesses such as restaurants and accommodation. Outer island councils also have a vital role in running and developing the limited tourism that occurs in the outer islands.

Two NGOs also have links to tourism. The Japan-based Tuvalu Overview (www.tuvalu-overview.tv) provides opportunities twice a year for small groups of visitors to undertake a tour to the country—with a focus on providing information on environmental and cultural dimensions of everyday life. Alofa Tuvalu (www.alofatuvalu.tv) is a French/local NGO that does not have direct tourism links but focuses on small-scale renewable energy, community development and waste reduction projects. Both NGO websites provide useful additional information to supplement the NTO web offering.

5.2.5 Economic performance

Unfortunately no accurate figures on the overall contribution of the tourism sector to the economy exist at the present time. There are no data on visitor expenditure, expectations or satisfaction levels. There is also no accurate information available on tourism-related employment or contribution to GDP. Despite the fact that the sector contributes to government coffers through a 10% room tax and the standard 30% business tax, it is not possible to get accurate indications of the role that the sector plays in bolstering government tax revenues.

In lieu of any such economic data it is necessary to rely on basic immigration statistics and also anecdotal input from key industry stakeholders. As noted earlier the arrival statistics reveal some growth (from a very low base) in bona fide tourist numbers and the continued significance of business and VFR traffic. The latter can only be drawn from interviews and discussions with operators and key government officials. A summary of responses from those interviewed during the DTIS mission show that a clear majority (over 80%) feel that while the tourism industry has undoubted potential, its performance has been stagnant in recent years. The improved reliability of air connections, the rise of global awareness about Tuvalu, and new developments such as the King Tide Festival provide some glimmers of hope. On the downside, there are fewer attractions and tourist experiences

TABLE 5.6 **SWOT analysis of Tuvalu's tourism sector**

Strengths

- Its small size and isolation, and the setting of tropical islets in the beautiful Funafuti lagoon are Tuvalu's main distinguishing features and are the main tourist attractions;
- The MCA offers excellent snorkelling and wildlife viewing;
- Visitors can enjoy the peaceful atmosphere and are truly 'off the beaten track' of international travel;
- The Tuvaluan people have an open, respectful relationship with visitors.
- It is a safe and non-threatening place for visitors; and
- There are opportunities to view the impacts of sea level rise at first hand.

Weaknesses

- The remote location and small population make access and service provision difficult;
- There is a lack of essential infrastructure;
- International air access to Tuvalu is not only difficult but also costly relative to other sectors in the region;
- A lack of adequate inter-island transportation constrains tourism development in the outer islands;
- Accommodation standards are generally poor in comparison to other regional destinations;
- Tuvalu has a critical shortage of trained personnel at all levels;
- There is a low level of international tourism trade awareness of Tuvalu;
- The small size of the private sector means that there is limited possibility for strong links between tourism and the rest of the economy;
- There are few organised local tours to Tuvalu's attractions or activities;
- Presently, there is no specific technical training facility or courses on offer in tourism or hospitality in the country;
- Indiscriminate dumping of rubbish mars the beauty of the island, and there is inadequate disposal and recycling of rubbish;
- There is limited capacity within government to plan, develop and market Tuvalu as a tourism destination;
- There are no facilities to use credit cards and no ATMs available;
- Internet content is limited and the key website is outdated; and
- There is little or no information provided to visitors once they arrive, including signage.

Opportunities

- There is potential to tap into both long and short-haul demand for niche travel to relatively unexplored destinations;
- Particular educational tourism niches may also be attracted by the ability to see first-hand the impacts associated with global sea level rise;
- Small-scale culturally-focused tourism also provides opportunities for future tourism development;
- The MCA represents a relatively an untapped resource;
- Small-scale packages—such as those run by NGO 'Tuvalu Overview' have the potential to grow and are best suited to reducing the potential negative cultural impacts of tourism; and
- Rising global awareness of climate change and sea level rise have created an growing global awareness of Tuvalu in the global marketplace.

Threats

- Airfare reductions in other parts of the Pacific are making the already high airfares to Tuvalu look increasingly expensive;
- The local environment is fragile. Growing population density is having a negative impact on the Funafuti ecosystem;
- The problem of global sea level rise is a very real threat—to the tourism industry specifically but also to the nation as a whole;
- There is limited awareness at senior government level and the wider community of the potential economic benefits of tourism;
- Tuvalu's culture is based on a complex set of social hierarchies and customs that regulate all aspects of public and private life. Cultural issues are particularly sensitive in the outer islands, which have had limited exposure to tourism. Future tourism development needs to take account of this; and
- Previous tourism plans have advocated the creation of a dedicated Department of Tourism to co-ordinate development in the country. The Government has not implemented this to date. The budget allocated for the marketing and development of tourism in recent years has been very small and is constantly under threat.

available to visitors today than there were five years ago, as one respondent noted "The industry has been going nowhere really, if anything the supply of services has declined in some ways. We have had some good things happen recently—but we always seem to be taking a couple of steps forward and then a big step back again."

5.2.6 Competitive positioning

Attempts to compare and benchmark Tuvalu with most other Pacific island tourism destinations are not of much value. The country has arguably the smallest and one of the most isolated tourist industries in the region. Perhaps the closest comparisons that can be drawn are with Tarawa (Kiribati) and Niue, but neither of these can be considered to be true 'competitors' to Tuvalu.

Niue currently relies on a weekly 737 service from Auckland and offers a considerably broader range of accommodation and visitor experiences than Tuvalu. Niue's tourism industry is far more reliant on holiday tourism and the range of experiences on offer reflect this. Accommodation and food prices on Niue are substantially higher than on Tuvalu and there is a far greater reliance on pre-packaged tourist experiences.

Tarawa shares with Tuvalu a focus on business/government visitation and to a lesser extent VFR traffic. Tarawa boasts considerably better air links to Fiji with three weekly flights offered by Air Pacific (2) and Air Kiribati/Our Airline (1), the latter also provides a link through Nauru to Brisbane. Costs of accommodation on the two islands vary—accommodation on Tarawa generally being priced at a higher level than Tuvalu and the cost of meals and visitor services are also higher on Tarawa.

With these comments in mind the chapter now highlights the strengths, weaknesses, opportunities and threats that characterize the Tuvalu tourist sector.

5.3 TOURISM STRATEGY AND POLICY

Tuvalu does not currently have a specific tourism development plan or strategy in place. The industry's development is, instead, guided by the nation's over-arching sustainable development strategy: Te Kakeega II 2005–2015. This strategy asserts that the following eight strategic outcomes are desired by 2015:

- Good governance;
- Macroeconomic growth and stability;
- Social development: health, welfare, youth, gender, housing, and poverty alleviation;
- Outer island and *Falekaupule* development;
- Employment and private sector development;
- Human resource development
- Natural resources development (agriculture, fisheries, tourism and environmental management); and
- Infrastructure and support services development.

While each of these areas has direct or indirect links to tourism development, the document has very little to say about specific strategic initiatives that may enable the sector to enhance sustainable development in the country.

There have, however, been a number of past tourism development plans that continue to inform current thinking on the sector. A Tuvalu Tourism Development Plan 1993–2002 was prepared with support from the EU PRTDP (via the TCSP) and a follow-up Tourism Marketing and Development Action Plan was prepared in 1997. A draft Tuvalu Tourism Policy was also completed by the SPTO in 2004.

Each of these strategies covers remarkably similar ground. There is a focus on raising standards and improving existing products, increasing per capita spending (yield) from existing tourists, and on the development of small scale activities- primarily focused on niche ecotourism-related activities and markets. Ongoing concerns over transportation and general infrastructure are also repeated on a frequent basis.

The 2004 SPTO Tourism Strategy draft includes the following objectives:

- Tourism development should integrate with, and contribute to, the achievement of overall national development goals;
- Tourism development should be based on the principles of sustainable development and incorporate the integration of economic, social and environmental benefits for Tuvalu;
- The inherent natural and sociocultural attractions of the country provide the basis for small scale, low-impact tourism development; and
- The need to identify measures that may be required in order to improve the effectiveness of the tourism sector in Tuvalu and to increase its overall contribution to the economic and social development of the country.

These objectives underlie a series of core initiatives:

Environment

- Forbid the dumping of waste into the lagoon, and ensure environmental protection by introducing strict regulations and laws;
- Introduce 'Operation Clean Up' actions like competitions, educational campaigns and additional funds for rubbish collection;
- Initiate a public education program on the need for resource conservation;
- Promote the MCA.

HR development and training

- Undertake tourism training for the Tourism Office;
- Improve 'whole of Government' understanding of tourism;
- Prepare a business and marketing plan for the Tourism Office;
- Develop a tourism awareness program;
- Provide courses to the private sector on business management and marketing;
- Encourage operator attachments overseas; and
- Provide hospitality training for accommodation and restaurant staff.

Industry organisation

- Prepare articles of association and establish a Tuvalu Tourism Association to represent private sector operators;
- Form a Tourism Development Committee (including high-level government officials and members of the private sector) to oversee the implementation of a Tourism Action Plan;
- Provide low-cost financing and/or grant aid and technical assistance to assist in the start-up of viable tourism businesses;
- Identify and quantify investment opportunities in Tuvalu, including potential privatization opportunities;

- Develop an accommodation classification scheme consistent with regional standards and Codes of Practice for industry operators;
- Create more sales opportunities for handicrafts and souvenirs;
- Encourage one or more local fisherman to offer weekly departures for sea angling, and upgrade standards of sea safety;
- Develop organized excursions to other islands; and
- Encourage the establishment of marine-based experiences including a small dive shop operation, sailing boats for hire and a kayaking enterprise.

Transport and infrastructure

- Implement an adequate program of signage;
- Seek funding to upgrade the airport in Funafuti;
- Provide a visitor information office in a prominent location.

Destination marketing

- Develop a destination marketing plan with a clear brand for Tuvalu in potential markets and select key target market segments;
- Identify potential wholesalers and distribute commissionable packages/ product through them and support this with marketing funds;
- Continue to work with the SPTO to develop and establish a dedicated website for tourism to Tuvalu. Allocate resources for site maintenance;
- Produce a small 'cruising guide' to increase yacht visits to Funafuti;
- Produce an accommodation guide;
- Develop a database of travel guide books and publications and send them regular product updates and press releases;
- Develop a series of posters for use by agents and at travel shows;
- Create a promotional brochure to give an overview of all product suppliers and a listing of local festivals, events and activities; and
- Develop a database of travel agents and wholesalers who express an interest in Tuvalu and send them information and maintain regular contact.

Many of the approaches outlined in the Draft Strategy remain relevant today—but clearly they are constrained by issues of resourcing and political and community will. Some areas like the focus on brochure development and commissionable packages, have been superseded to an extent by the growth of the internet as a source of traveller information and the growth of direct consumer to business interaction.

There have also been a series of informal pronouncements that build on the ideas and concepts provided in earlier documents. For example the theme of 'Tuvalu—Edge of the Horizon' has been put forward by the NTO as a marketing brand that can allude to the issue of climate change that has received a lot of global awareness. This would supersede the rather vague 'Timeless Tuvalu' brand that is currently adopted. The NTO is keen to develop 'green' tourism initiatives, reflecting the fact that "people who travel are conscious of their carbon footprints" (see PINA 2010). It must be remembered that such an approach needs to address the substantial carbon footprint involved in travellers actually making their way to Tuvalu.

5.4 ENHANCING YIELD AND SUSTAINABILITY

This section outlines some approaches that can enable yield to be enhanced across the tourism sector. The aim is to highlight key areas where the IF process can enable sustainable yield enhancement. Examples and cases are used throughout the discussion to highlight key opportunities and issues. Underlying the discussion are two core assumptions:

1. That Tuvalu should attempt to increase the yield of all tourist markets and tourism segments, including business travel and VFR; and
2. That yield can only be increased in a sustainable sense by enhancing both the visitor and host experience of tourism.

The discussion resists suggesting the adoption of unrealistic and outdated approaches to tourism development, some of which have appeared in recent documentation. For an example of this, one has only to look at the summary of the recent Tuvalu Integrated Framework Sensitization Workshop (2008). The document states that the nation's future tourism strategy "should be aimed at the upper end of the market and with a strong exclusive and eco-brand." It is then argued that "A fact-finding mission to the Maldives focusing on both the Maldives tourism model and associated services including inter-island transport" be conducted.

Unfortunately, the Maldives do not provide even a remotely comparable benchmark for Tuvalu to work with. The Maldives has a population of over 300,000 and 185 inhabited islands. There are currently 91 tourist resorts and the nation boasts over 20,000 tourist beds. Only 47 percent of the resorts are operated by local parties, with the rest being operated by foreign companies or foreign shareholding companies (MTCA 2007a). The Maldives are well known as a luxury tourism destination and are tied into global packaging and wholesaling networks. At last count, 14 charter and 15 scheduled international airlines were operating flights to the Maldives from different destinations in Europe, Asia and Africa. Even with the dramatic setback in 2005 follow the Indian Ocean tsunami, annual average growth in Maldives tourist numbers over the past ten years has averaged 9%, with hotel occupancy rates hovering above 75% (MMTCA website). Tourism accounts for 28% of Gross Domestic Product (GDP) and more than 60% of foreign exchange receipts (MTCA 2007a,b). In February 2010 alone, there were over 77,000 international air arrivals. It is a total fallacy to assume that Tuvalu can break into the same kind of high-end market that exists in the Maldives.

Tuvalu must be realistic about what it can achieve with its tourist sector. It needs to add value to the most reliable business and VFR markets and build on recent growth in the holiday segment by providing a greater range of opportunities for visitors to spend their money and by increasing information on these experiences both prior to and after arrival. Rather than developing new products and experiences and trying to cater to the demanding luxury segment, Tuvalu needs to focus on travellers that are willing to forego conveniences for the ability to visit a destination that is well off the global tourism circuit. The country also needs to enable and facilitate tourism SME development rather than aiming for larger scale projects.

5.4.1 Business development and networking

Throughout the Pacific Islands small and medium enterprises struggle to secure start-up and development funding. SMEs in Tuvalu face an even greater struggle because of the lack of any major commercial banking presence (ANZ, Westpac and other key regional players are all absent). The Development Bank of Tuvalu is the organization that is largely charged with filling this gap and has, to date, played an important role in assisting tourism enterprise development.

Interviews reveal that all local tourism enterprises have been able to access business start-up/development funding from the DBT, although the ability to repay loans has been mixed. The size of these loans is often very small and the ability of the Bank to provide ongoing financial support is relatively limited.

Discussions with the DBT and with tourism SMEs highlight that one critical impediment to accessing funds is the ability of borrowers to develop compelling business plans and cases, a problem that has been highlighted in recent EU funded Proinvest programs (Milne 2004). The Ministry of Finance provides limited assistance through two staff members involved in business development and training. These staff members are focused on providing advice and training across all sectors and are responsible for the outer islands as well as Funafuti. They lack the time, and to some extent expertise, to assist SMEs in putting forward proposals for DBT funds. DBT staff themselves can also provide assistance but are constrained by other commitments.

A tourism grants scheme aimed at locally-owned SMEs and products is one potential solution to the lack of funds. A competitive, merit based program, with a focus on influencing the distribution of tourism benefits and increasing yield could potentially be developed. Proposals would need to demonstrate that the project adheres to best practice sustainable tourism practices, is environmentally and culturally sustainable and economically viable.

Future success of the industry will depend not only on the ability of small business to access funds but also on enhanced networking and co-operation between enterprises. Networking and co-operation is vital to enable the creation of a multi-faceted industry that can entice visitors to spend more money while they are in the country. The ability to add value to marine-based experiences, and add value to work/VFR-focused travel is important—and yet there is still very little co-ordinated product available to the visitor. The development of a tourism sector grouping within the recently established TNPSO is a move in the right direction, but there is still further work to be done in co-ordinating business activities.

Tasks

1. **Assist local tourism enterprises to design appropriate packaged services and products for target clients;**
2. **Assist tourism enterprises to directly and collaboratively market their products; and**
3. **Review current success in the tourism sector in gaining access to microfinance funds and provide approaches for an optimal way forward.**

5.4.2 Marketing and information

Miniscule marketing budgets mean that the Tuvalu tourism industry needs to focus its attention on where it can make the most targeted impact with the least cost. The internet is clearly the tool that offers the greatest opportunity to tap into high-yield markets and should be the major focus for future marketing. In this respect, traditional approaches to marketing, such as the following examples from the 2004 draft tourism strategy, need to be evaluated very carefully for their ability to deliver 'bang for the buck'.

Tasks

1. **Develop a series of posters for use by agents and at travel shows;**
2. **Create a promotional brochure to give an overview of all product**

suppliers and a listing of local festivals, events and activities; and

3 **Develop a database of travel agents and wholesalers who are interested in Tuvalu and send them information and maintain regular contact.**

Rather than focusing on hard copy marketing collateral, it is vital that the main Tuvalu tourism website be upgraded in terms of functionality, design and content. It is important that up-to-date information be provided on forthcoming events and the range of experiences that await visitors. The internet offers unprecedented opportunities for businesses and communities to develop their own content and information for visitors—this can enhance visitor sense of place and culture, maximise opportunities to increase tourist spend and also potentially ensure a reduction in negative impacts associated with the industry.

Even if only small numbers of niche experiences are purchased their combined total represents a very significant market—especially for communities that have received relatively little direct benefit from tourism in the past.

Unless a visitor is provided with sufficient information prior, during and post visit, they cannot be aware of the experience that awaits them or feel confident to make recommendations when they return home. A lack of budgeting information can make it impossible to take advantage of opportunities such as a visit to the MCA and will inevitably lead to lost sales. While guide books such as Lonely Planet can provide some useful information, they date quickly and often contain inaccurate information.

It is vital that Tuvalu begin to provide a richer array of content about available experiences—by telling the stories and providing the 'sense of place' that encourages a visitor to spend more money. Perhaps the most discouraging aspect of current content on the government site is a lack of any 'local voice'. People and their everyday life are described in a static, third-person manner that does not engage the visitor. Sites such as that provided by Tuvalu Overview provide a dramatic contrast—especially the recent 10,000 Tuvaluan initiative with its focus on local stories of climate change and adaptation (see www.10000.tv).

The internet also represents a major potential source of information on visitor experiences and satisfaction. User-generated content uploaded to sites like Trip Advisor (www.tripadvisor.com) or on personal blogs can be a useful source of information to planners and industry alike and can be used to improve product offerings.

The emphasis on the internet also brings into focus the relationship between the tourism industry and the telecommunications sector. A number of critical issues emerged from the interviews in this respect with many operators in outlying islands relying on internet cafés for computer access. Reliability of telecommunications is an issue—especially in terms of the speed and consistency of internet access. The monopoly status of telecommunications provision on Tuvalu leads to costs that are considerably higher than most Pacific SIDS.

Tasks

1 **Conduct a 'web-audit' of current online resources for the industry, with a focus on basic content and usability but also on network and linkage formation;**

2 **Strengthen understanding between the telecommunications and the tourism sector and explore key bottlenecks—perhaps through the organization of a knowledge-sharing workshop;**

3 **Develop an effective strategy for internet-focused marketing of the sector. Review and benchmark current online marketing activities; and**

4 **Develop the capability of local tourism operators and destinations to present their own information to the outside world via the internet.**

5.4.3 Linkage development

While it is important to increase visitor spend and its direct impact on income, employment and government revenue, it is also critical to address the indirect and induced benefits that stem from the industry. Only if downstream linkages are maximized will the true potential for tourism-based yield generation be maximized. There are numerous areas to enhance linkages. This section of the chapter highlights some of the most significant of these.

Local food

One area of tourism linkage that has perhaps the greatest opportunity to create broader spin-offs is with the agriculture sector. Evidence from SIDS elsewhere shows that enhanced linkage to fruit and vegetable production will, for example: *(i)* encourage import substitution; *(ii)* potentially diversify exports and *(iii)* encourage smallholder involvement in the formal economy. Improved linkages to local food can also provide the visitor with a 'sense of place' that cannot be gained through the consumption of imported canned fruit or vegetables. Tourism can also provide an incentive for growers to produce a greater amount and range of products, thereby strengthening food security.

The supply of local produce has always been a critical problem for the Tuvalu tourism industry but in recent years there has been a considerable step forward courtesy of the Taiwanese-funded Home Garden Project (HGP). The project is designed to teach the local staff of 12 and the broader local population about the growing of produce in their own gardens. The main project farm produces 26 types of vegetables and fruits.

To date, 600 local people have taken free seeds and seedlings to start their own gardens around the island. Local schools are also beginning to cultivate their own gardens in an attempt to raise awareness and knowledge among the younger generation. Some 50 people are now also taking part in annual competitions to see who can grow the biggest and best produce. Some tourism accommodation providers have benefitted directly by being able to grow some of the produce their guests consume. Of more significance, though, is the fact the main project farm produces a surplus which is then sold to the broader community including accommodation and restaurants. Produce is generally sold on Friday mornings but the surplus is often sufficient to allow sales on other days as well. The amount that can be purchased is rationed per person to enable everyone to have a chance to benefit from the local produce.

The manager of the Vaiaku Lagi noted that the HGP had made a big difference to the hotel's ability to provide local produce for visitors. Local food now accounts for one third of the food bill for the hotel—an increase from past years. The manager noted "guests like to have fresh fruit in the mornings and to be able to have local greens with their other meals. Sometimes the cost maybe quite high for local produce, but it is worth it because we end up with more satisfied guests."

The project also teaches people how to prepare and cook with the produce that is grown locally. They also run intensive training courses for people from the outer islands. The project is run in partnership with local the Agriculture and Natural Resource Ministries and within 3–4 years the expectation is that the project will be passed entirely to local hands.

Tasks

1 **Continue to build on the excellent progress made by the Home Garden Project;**
2 **Develop opportunities for visitors to view and participate in local food preparation;**
3 **Develop improved links to the local fishing sector; and**
4 **Use online resources to highlight local food opportunities for visitors.**

Handicrafts

Another key sector for tourism linkage creation is handicrafts. The major retailer of handicrafts to tourists is the Tuvalu National Council of Women. The TNCW have an outlet located next to the airport terminal and also sell products in open air stalls when aircraft are departing. It is estimated that 70% of their sales revenue is derived from traditional handicrafts, 20% from pillowcases and 10% from clothing. Sales of handicrafts are split relatively evenly between locals and tourists. Producers are paid approximately 10% of the final retail price of products if their handicrafts are judged to be of a sufficient quality to sell through TNCW. This prepayment is only made to those who make crafts that use traditional materials—a result of recent attempts to try and discourage producers from using non-traditional materials such as raffia. It is estimated that more than 250 women make some money through TNCW sales. The money generated is a useful supplement to other formal and informal sources of income.

Tasks

A number of key issues need to be addressed if the full potential of handicraft linkages to tourism is to be met:

1 **While raw material supplies are facing little pressure, prices have been increasing and the availability of some materials is limited. There is a need to increase opportunities for raw materials to be sent to Funafuti from the outer islands;**
2 **The products that are sold at the moment lack any 'added value' in terms of interpretation. There is a need to provide more information to visitors about the history and meaning of traditional crafts and there is also an opportunity for more information to be provided on the producers themselves and the role that handicrafts play in their lives. Information like this can be attached to small cards of perhaps information sheets that the visitor can have access to. Studies have shown that this type of information is likely to encourage visitors to be willing to pay more;**
3 **There is a need for workshops and technical assistance to facilitate the sharing of traditional ideas and also the development of new products that will be of interest to visitors. In particular, there is a need to stimulate interest in handicrafts among younger women. Such workshops could also focus on negotiation and selling skills and highlight the importance of setting quality standards;**
4 **There is a desire to develop more opportunities for tourists to actually be able to watch and participate in handicraft production. Simple handicraft classes would be of real interest to some visitors and would add an**

important new dimension to the tourist experiences available on Tuvalu;

5 **To facilitate the development of classes and to improve retailing opportunities, there is a need to develop a cultural/handicraft centre. While the current TNCW building is well-located and provides a useful retailing space, it would be good if a more traditional 'open air' space could also be developed for the value-added dimensions experiences outlined above;**

6 **Handicrafts need to be highlighted more effectively for visitors on the internet (pre-arrival) and there needs to be more information on availability once in the country;**

7 **The TNCW would also like to expand opportunities for the export of handicrafts. The example of the Auckland Pasifika festival was raised—with small amounts of exported handicrafts selling well at the stalls and also providing a useful marketing tool for the country. Recent research with tourists to Niue visitors has shown, for example, that the Pasifika festival can play an important role in raising awareness of smaller Pacific tourism destinations in the New Zealand marketplace. The challenges lie in the high compliance costs—with a number of permits and other documentation being required. Producers require more information on these areas; and**

8 **There is also a need to identify and target overseas markets for export, provide training for exporters to understand overseas market needs in terms of quality and assist with training in areas like negotiation and sales skills. It is important also to try and build on extended family and community links with Tuvaluan migrants in countries like new Zealand and Australia.**

Packaging Everyday Life

For most visitors to Tuvalu, the everyday life of residents remains something of a mystery, and yet it is the 'packaging' of everyday life that represents one of the best opportunities to create sustained economic linkages between tourism and local communities.

Tuvalu Overview provides a useful model of how such development can occur on a small and manageable scale. The NGO usually organizes two packaged tourist trips a year from Japan (September and February). There are typically around 10 people in each group and they stay in Tuvalu for five days. The September visit usually includes a visit to the MCA and some of the small motu outside the MCA. The group visit Funafala where they participate in planting mangroves and have a chance to meet community members and have a local meal. The tour also includes an initial lecture on local culture and way of life and a local youth group also provides dancing and cultural performances. The February visit is similar but also includes a visit to the Nui Community Hall and involvement with the King Tide festival. It is not only communities and the local council that benefit from these tours, as the visitors are accommodated in the government-run hotel.

Tuvalu Overview promotes Tuvalu through lectures and photo exhibits in Japan and elsewhere, but most awareness is generated through its website. The NGO has also been able to focus on other projects that can raise Tuvalu's profile overseas and focus on community development and environmental issues. A key example of this is the website www.10000.tv which captures the stories of all Tuvaluans as they face the impacts of climate change. The project is a mix of oral history, photography and international awareness-raising and is a good example of how local content can be placed on a website to create a unique sense of place.

Tasks

1 **There is potential to develop more in the way of small-scale cultural/educational experiences for tourists on Funafala and elsewhere. Such a development on Funafala would require the construction of a small number of simple traditional accommodation units for short stays (to add to the existing council run facility);**

2 **Greater co-ordination with local communities is needed to enable the more regular provision of experiences based around creating a greater understanding of Tuvaluan culture, food and everyday way of life; and**

3 **The Tuvalu Overview experience shows the value community focused visitor activities taking place in a 'controlled' package setting—where guests can be educated about cultural norms and appropriate behaviour before they experience everyday Tuvaluan life. More work is needed to enhance understanding of simple package creation opportunities among industry stakeholders.**

5.4.4 Human resource development

If the Tuvalu tourism sector is to fulfill its potential, there is a real need for suitably trained and qualified staff. Yield-driven tourism strategies have to be underpinned by improvements in quality of services, and labour has a vital role to play in this. The need for training covers the entire spectrum of tourism staff from back-office labour through to front-of-house staff and also managers of larger enterprises and SME owners. Ongoing training is also required for those holding key positions in the NTO.

Current opportunities for tourism training are limited in the country. The local University of the South Pacific campus offers foundation courses and some degree-level study in tourism, but has no facilities (e.g. training kitchens) for hospitality training. The main source of staff training at the moment comes from the Australia Pacific Technical College in Fiji—with six staff members of the Vaiaku Lagi hotel recently undergoing training there.

Other potential opportunities lie with the Tuvalu Maritime Training Institute (TMTI), which has some in-house facilities for hospitality training. There is also the opportunity to make use of the Vaiaku Lagi kitchen during periods when hotel meal preparation is not being undertaken. Should plans move ahead to reduce the range of meals provided at the hotel and reduce kitchen staffing, then this could be an effective way to make use of the space and equipment in the kitchens.

Recent years have seen an increase in the number of Tuvaluans working as seasonal labour in New Zealand through the NZ government's RSE scheme. While the focus of this program to date has been on seasonal agricultural work, there is perhaps an opportunity to lobby for tourism to become part of this program. There is a target to increase the number of Tuvaluans on the scheme by 20% per year, and tourism could represent an effective sector to place workers. Some areas of New Zealand face shortages of tourism staff and this could be one way to fill that gap. Workers would need some in-country training before they could walk into jobs in New Zealand, but this approach is worth considering as hospitality and tourism work represents an area of potential for workers that may, in the future, be forced to leave the islands due to climate change.

One of the most successful elements of the past EU funded PRTDP was its provision of block in-country training courses. The program also included 'train the trainer' components that were well received. It is worthwhile looking carefully at whether donor funds may be available to support the further development of this approach in the future.

Tasks

1 **Conduct labour market needs assessments;**
2 **Identify critical skilled labour weaknesses in the industry;**
3 **Ensure effective partnerships between public and private sector in training provision; and**
4 **Look 'outside the square' in terms of training opportunities—both inside and outside the country.**

5.4.5 Research and decision support

Good data on visitor characteristics, visitor expenditure and industry linkage structures must lie at the heart of any future yield-focused development of the tourism industry. Given the close link between yield enhancement and visitor experience, it is imperative that visitor data does not just contain basic demographic information, but also focuses on satisfaction and expenditure patterns.

A lack of visitor data constrains lobbying for more marketing spend and reduces the ability to gain a true sense of the economic value of the sector.

More importantly, the limited availability of information makes it hard for existing and potential operators to make well-informed business decisions and for the DBT to make strong choices on its tourism lending portfolio.

Unfortunately, the situation with tourism statistics appears to have worsened recently. In 2009, a new approach was introduced for the gathering and processing of statistical data. Rather than immigration forms coming directly to the Statistics Office for data entry, they are now reviewed and entered by the Immigration Department and a database is sent through to Statistics every month. According to Statistics officers, there are currently considerable problems with data entry inaccuracies, including double entries. At the same time, it appears that the NTO officers do not come to gather information from the Statistics office or the Immigration department on a regular basis. There are also several concerns about the current survey design and a lack of clarity around some of the questions posed to visitors.

It is vital that a regular visitor departure survey be run and that this data be used to plan and evaluate future tourism development and related strategies. Given the limited human resources available to conduct traditional departure surveys, it is worth while considering whether a web-based approach could be adopted—such approaches have worked well in the Cook Islands and Niue in the past.

Tasks

1 **Develop a clear understanding and definition of research needs;**
2 **Develop a cost-effective tool to gather data and create, if possible, an ongoing barometer of visitor satisfaction, spend and industry performance. This should be web-based to reduce costs of data collection and entry. A barometer is necessary if progress towards meeting yield targets is to be measured effectively.**
3 **Evaluate how statistical information can be more effectively disseminated to those that need it—and how this can be improved.**

5.4.6 Climate change, environment and sustainability

There is no question that the Marine Conservation Area and related Activities represent the jewel in the crown of Funafuti tourism experiences. They provide the visitor with an array of maritime and wildlife experiences—and also present an important glimpse into the impacts of global climate change. The real challenge at the present lies in trying to maximize the potential for this attraction to generate income and jobs for the local economy.

For visitors to Tuvalu, the first challenge is to find out about the MCA and how to access it. The online information available is very limited and provides no clear information prior to arrival about how to access the MCA or how much it will cost. At present there is no dedicated website for the MCA.

Once in the country, the visitor must rely on word of mouth or good luck to be able to access the MCA. There are no brochures or posters in hotels or elsewhere to explain how to access the MCA—which leads to a range of misinformation being provided. Unless the visitor is lucky enough to meet someone who is already taking a trip out to the lagoon, they must make their way to the council office and then arrange a tour. Unfortunately, the office itself has no signage or other information to let the visitor know who to contact or how much the visit will cost. It is, in fact, the Council cashier who takes bookings and handles the cash, but for most visitors this is not be clear.

The cost of a trip to the MCA with the Council vessel is $200, which can be shared among the group travelling. Visitors can go directly with the Council on one of their two vessels (one five-seater, one ten-seater) or they may travel with a local boat owner—who must pay a $50 entry fee. Local boat owners tend to charge $180 or more for the trip so there is little cost difference with the council offering. There is also a $50 shooting fee for any professional photography.

Another challenge for the visitor, once they have found how to book a MCA trip, is to be able to actually make the journey. At present there is only one conservation officer who can accompany visitors to the MCA (a requirement) and the council is still looking for a suitably qualified boat operator. This means that there are many occasions when visitors simply struggle to get to the MCA.

If the visitor is somehow lucky enough to arrange a booking and to take the trip, there are a number of other challenges that await them. Of most concern at the moment is that there are no lifejackets provided on the vessels and there no radio equipment in case of emergency. There is instead a reliance on cellphone coverage being sufficient to get a message to the mainland. An issue that must be rectified as soon as possible is the fact that visitors are not required to sign any form of liability waiver form before embarking on a trip to the waters of the lagoon. This places the council and any private operators at severe financial risk. An accident or death could lead to legal proceedings and potentially crippling lawsuits.

The options for water-based experiences in the lagoon are rather limited. There used to be a small kayak business that offered trips on the lagoon, but this is no longer in operation. There was also a small private operator running a tour using a 25–foot boat around the lagoon and to the MCA, but that operation also ceased a few years ago. As mentioned previously, there are also no options for diving or for renting snorkelling equipment.

There are opportunities to build on the environmental dimensions of the Tuvalu tourism experience beyond Funafuti lagoon and the MCA. The recent visit of the environmental research yacht *Seacology* to Nanumea is an example of the fact that outer islands can also begin to tap into this niche market. The annual King

Tide Festival, a week-long program that is designed to showcase Tuvalu and its culture and to focus on environmental clean-up, is an event that has already begun to attract interest from visitors who have an interest in seeing the impacts of sea level change at first hand. It has been hailed as a success and is something that certainly shows great potential for future development.

There is an important opportunity for Tuvalu to begin to make more of its 'green' credentials for the visitor. Huebner (2010) in her recent interviews with industry players has shown that there is awareness of this potential, but that businesses are themselves not making great efforts to either adapt to the prospect of climate change or to actively market or promote their green credentials. The country boasts several important green initiatives—including the 20/20 vision energy strategy—that could be highlighted to those travellers looking for environmentally responsible travel destinations. Likewise some of the accommodation operators could do more to promote their environmental awareness by politely suggesting the tourist re-use towels etc to reduce water use (as is common practice around much of the Pacific).

Tasks

1. **Develop improved awareness of environmental issues by the tourism sector;**
2. **Better integrate global change issues into tourism planning , development legislation, branding and policy frameworks;**
3. **Develop and strengthen the range of offerings on and around the MCA and the whole Funafuti lagoon.**

5.4.7 Institutional strengthening and strategy

A number of the interview respondents were critical of the NTO, arguing that the its tourism officers were not often enough on-island, were slow to respond to concerns and inquiries and that not enough effort is focused lack on the dissemination of tourist data to the industry. While similar concerns are often echoed about NTOs elsewhere in the Pacific, they do stem, in part, from the unique situation that the Tuvalu NTO finds itself in. For much of the past decade the tourism office has had only a single employee on-island. Training of NTO staff and promotional travel is important, but clearly it hampers the ability of the office to have a continuous presence. While occasional volunteers can provide support from time to time, this is not ideal.

It is worth considering the development of another position, or the restructuring of an existing position, to focus on information provision to both visitors and the industry. A staff member dedicated to information dissemination and the updating of online resources and information is a necessity. One model to look at would be the production of a simple 'tourism newsletter' that could be placed online and emailed, or presented in hard copy to industry stakeholders. This approach has proven to be very successful in Niue and Kiribati and is an important way to build profile and confidence with the private sector. It is also critical that the NTO have a more visible physical presence for the visitor. A simple information booth situated at the airport would assist visitors immeasurably when they first arrive.

Most importantly there is a need for a tourism strategy to be developed. This should clearly link with the broader national sustainable development strategy and should also provide detailed recommendations on the future development and direction for the industry. Given the undoubted potential of the sector, but also the range of challenges it faces, it is vital that a well-constructed and realistic strategy be implemented as soon as possible—covering a five-year time frame. This strategy should focus on yield maximisation and should be developed, underpinned and evaluated with robust visitor data.

5.5 CONCLUSIONS

The IF calls for innovative approaches and perspectives rather than repetition of the 'tried and true' approaches. The array of issues facing the sector in its attempts to improve performance and create sustainable livelihoods for the people of Tuvalu is great—and for that reason no one area can be focused on in great depth at the expense of others.

The recommendations above offer opportunities for sustained improvements in tourism industry performance—with a focus on yield rather than simply growing visitor numbers. It is recommended that priority be given to the support of the projects in the Action Matrix. As befitting the nascent state of Tuvalu's tourism industry and the kind of tourist volumes that are realistically achievable in Tuvalu, the focus of the matrix is on information provision, human resources, product and business development, instead of a focus on the Maldives luxury/high spend model.

CHAPTER SIX

Fisheries

6.1 INTRODUCTION

Fisheries constitute a significant source of revenue for Tuvalu, primarily from tuna licensing fees from Distant Water Fishing Nations (DWFN). As global fisheries stocks dwindle, the relative value of the Tuvalu offshore fisheries will represent an increasingly significant bargaining position when negotiating access rights from DWFN. Growing global population growth and increased demand for food, coupled with overfishing of tuna in other regions, makes the Pacific increasingly attractive to global-roaming tuna fleets.

Inshore fisheries, including coastal and nearshore (reef and lagoon) fisheries, play a significant role in providing food security, welfare, livelihood diversification and revenue generation. This is especially true for Tuvalu whose land mass is only 26km², thereby limiting agricultural production and land-based livelihood options. Fishing activities and links with the ocean are a dominant component of Tuvalu's culture.

Tuvalu also has some commercial inshore fisheries including bêche-de-mer and a shell-harvesting trade important traditionally for handicraft production and for women's livelihoods. The coastal fishing sector is predominantly artisanal and subsistence-based and uses outboard-powered small craft and traditional canoes. The aquaculture of milkfish has recently been introduced (it was not traditionally practiced) and is included in inshore fisheries.

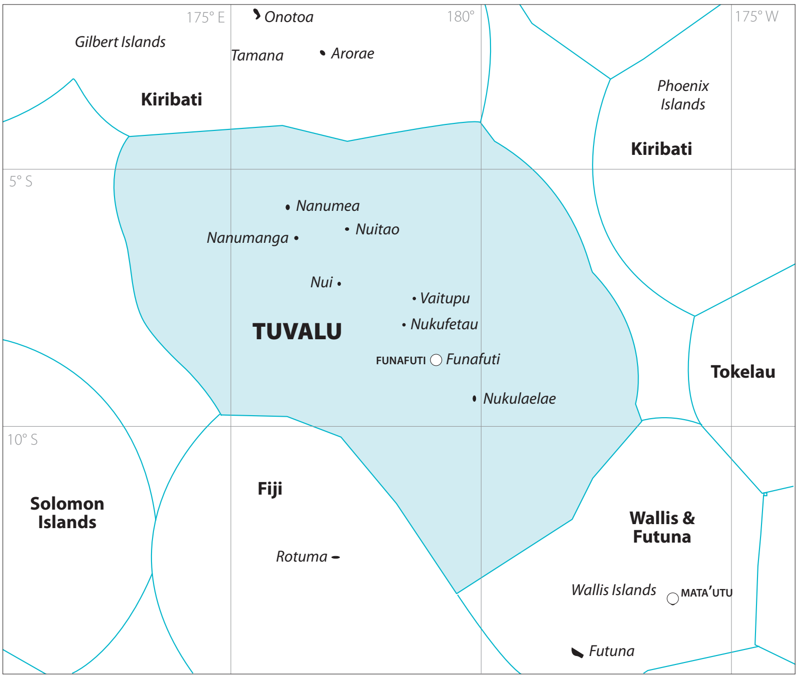
This chapter first presents some background to developments in the fisheries industry, including a brief history of modern commercial fishing in Tuvalu. Next is an examination of the economic contribution of the tuna industry. The chapter also discusses institutional arrangements for management of offshore, coastal and inshore fisheries, before offering some conclusions on fisheries development and conservation.

6.2 BACKGROUND

Tuvalu's EEZ, located in the Western Central Pacific Ocean (WCPO), was declared in 1979 and has an area of 900,000km². Tuvalu's EEZ is shown in Figure 6.1.

Tuvalu has a strong tradition of pole-and-line-style tuna fishing from finely-made outrigger canoes using pear shell lures and other traditional techniques. The introduction of outboard powered small craft (skiffs <7m) over the last few decades has shifted the main tuna fishing technique to trolling. Fishing skiffs have made sig-

FIGURE 6.1 **Tuvalu's EEZ showing bordering countries**



nificant inroads in displacing canoes but these may still be found, particularly in outer islands. Modern materials (e.g. roofing iron) have also been adapted to producing small Kiribati-style fishing canoes.

An early policy objective of the Fisheries Department was to develop a locally-based industrial tuna sector utilizing Tuvalu's tuna resources. The National Fisheries Corporation of Tuvalu (NaFICOT) was established under statute in 1982 with the operation of a Japanese pole-and-line vessel, *FV Te Tautai*. However, these efforts were not successful in part due to limited baitfish supplies and the high fuel consumption of this vessel. NaFICOT later received two Korean longliners in 2004 but they soon experienced mechanical difficulties. Without a sufficient operational budget to support these vessels, fishing was discontinued but one of the vessels is now in use for training purposes at the Tuvalu Maritime Training Institute (TMTI).

NaFICOT continued to operate as the government's commercial fisheries arm, establishing cold room and ice making facilities at Teone in Funafuti and running a retail fish market with a jetty and small vessel boat ramp. A small artisanal fleet of skiffs based at Funafuti provided the catch along with an outer island supply from Community Fisheries Centres (CFCs). A chronological record of fisheries development initiatives with their development partners is given in Annex 1.

CFCs were established in the 1990s on the outer islands to provide rural fishers with alternative income earning opportunities. Being avid fishers, rural people quickly took to fishing as one of the few options to generate revenue. These efforts resulted in an increased supply of fish products, mostly tuna, to Funafuti, most of which was marketed through NaFICOT. However, the transport of fish to Funafuti was not always regular and marketing was sometimes difficult. Currently, most

CFCs are run down and rely primarily on subsidies by government, a reoccurring theme in the Pacific. However, rural communities now see them as a valuable service and the government intends to rehabilitate them and transfer management responsibility to the *Kaupule* (local council) of each atoll in 2010 (GoT 2008). This is currently in process with the CFCs of Niutao, Vaitupu, Nukufetau and Nanumea islands already transferred.

By the early to mid-2000s, it became obvious that the NaFICOT role needed to change as it was seen to be trying to fulfill the role of an emergent private sector in Funafuti that hadn't existed when NaFICOT was initiated in 1982 (Gillett and Reid 2005). This is a pattern that has repeated itself across the Pacific. For example, a FFA study of the Pacific Islands tuna industry (Pollard 1995) concluded that: "with very few exceptions, government tuna ventures that have operated for more than two years have been unprofitable and have required additional heavy injections of public funds to maintain operations."

It was the governments' intention to turn NaFICOT over to the private sector (Chapman 2000). However, with the deterioration of the facilities, this did not eventuate. By 2009, the government decided not to extend further financial support to them resulting in NaFICOT's operations ceasing due to bankruptcy in May 2009. Some of the employees were found positions in the Fisheries Department so their expertise was not lost from the Department.

Since the closure of the NaFICOT fish retail outlet, local fishermen now sell their catch in coolers by the roadside or in small market areas. This is similar to what can be seen in Kiribati and many in other PICs.

One positive outcome of these events is that with the closure of fish marketing activities and responsibilities that will be largely picked up by the emergent private sector in terms of fish handling and marketing, the Fisheries Department may now turn its resources towards supporting other important activities including offshore and inshore fisheries management.

Another study of Tuvalu's attempts to develop a domestic offshore tuna fishery and shore facilities (Chapman 2000) concluded:

> There are major infrastructure needs including a safe anchorage for vessels, a longer runway so that larger aircraft with greater freight carrying capacity can land in Tuvalu, and the ready availability of electricity and fresh water in reasonable quantities. Land availability is necessary to establish shore facilities. Most important is the establishment of export markets for fish in a whole or processed form. Markets have to pay a price that will make it viable for NaFICOT, the outer island Community Fishing Centres (CFCs), and the fishermen themselves and this will be very difficult, as the freight costs from Tuvalu to potential markets are very high—hence the need for airport expansion. An alternative is value-adding to the tuna catch, especially in the outer island CFCs—e.g. include salting and drying and the production of tuna jerky.

Unfortunately, not much has changed regarding infrastructure in the last ten years and all of the above constraints persist yet today for Tuvalu in terms of developing a domestic offshore tuna fishery and shore facilities.

A number of studies have been undertaken regarding the opportunities and constraints in the development of domestic offshore tuna fisheries and onshore processing facilities in PICs (Chapman 2000, 2003) (Barclay and Cartwright 2007) (Gillett 2003, 2010). For atoll nations these have highlighted the often large, rich

EEZs with seafaring nationals with good fishing skills but poor macroeconomic environment, fragile land environment and small economy as significant barriers to competitive shore-based tuna development. Other factors compounding these include lack of land and water availability and their distance from major trade routes, such that shore-based processing developments would be so costly as to be uncompetitive. A lack of trading and marketing expertise and unstable policy environment that is liable to change with successive governments was also cited.

Awira (2004) concluded for neighbouring Kiribati that the major factors that contributed to the demise of previous domestication efforts there included the lack of skilled mariners to operate fishing vessels, the lack of knowledge transfer and technology by donor countries who are at the same time DWFNs and therefore undermining the localization of expertise to safeguard their own interests. Other factors included the geographical nature and isolation of the Kiribati Islands that made it more difficult to develop their land-based support facilities for the tuna industry. These included poorly-developed handling and shipping infrastructure, seasonal fluctuations in fish availability and the cost and difficulty of enforcing fishing regulations and licensing compliance in such a large EEZ. Most of these factors also affect Tuvalu.

Other issues highlighted relate to governance and political stability. Common features apparent across the Pacific are that many national fisheries agencies have low capacity, a lack of qualified personnel at all levels, low levels of funding and few staff incentives for performance in support of good governance yet are faced with increasingly complex issues to contend with (Gillett 2010).

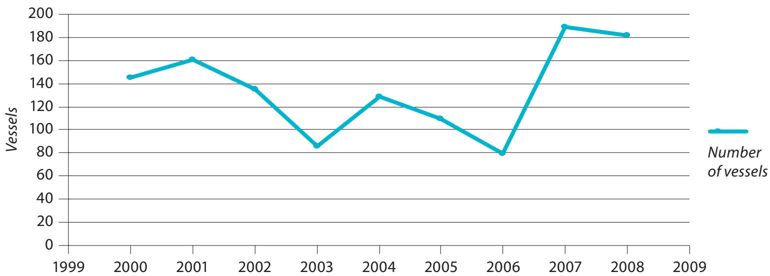
The number of failed government-driven, donor supported tuna domestication operations has not deterred ongoing interest by some government officials in continuing involvement in this development path. For some nations, this is due to political expectations or a lack of knowledge of the history of development efforts over the last 30 years by politicians and even fisheries personnel (Barclay and Cartwright 2007). However, most regional fisheries organizations and donors now support alternative options to avoid repeating the same development model. Significant upgrades to supporting infrastructure, human resources and capacity, improvements to the investment climate, stable political environments and trade routes will ensure sustainability of domestication efforts (ADB 2007).

Improved tuna resource management capacity, domestically and through co-operation with regional fisheries management organizations (RFMO), building human resource capacity and optimizing revenue from licensing fees and joint ventures including through employment on fishing vessels or transshipment revenues are some immediate alternatives for many countries designed to increase yields and ensure the sustainability of their most valuable resource.

6.3 REVENUE FROM TUNA INDUSTRY AND LICENSING

The main commercial benefit from fisheries is via government revenues from tuna fishing licences issued to foreign vessels. Prior to independence, the foreign fleets consisted mainly of longliners and surface trollers. Following Tuvalu's declaration of its EEZ, bilateral fishing agreements with Korea, Taiwan and Japan were made. In the following years, increasing numbers of purse seiners were licensed to fish in Tuvalu waters. In addition to the above countries, Tuvalu now has bilateral agreements with Spain and New Zealand and a multilateral agreement under the US treaty. Tuvalu has also recently joined the FSM arrangement that works similarly to the US treaty where fees are distributed according to which member countries the fish are caught.

FIGURE 6.2 **Number of vessels licensed to fish in Tuvalu's waters, 2000–08**



In 2007, there were 155 purse seiners, 96 longliners and six pole-and-line vessels. The purse seine fleet alone accounted for 98% of the reported catch (Tupulaga 2008). The usual markets for fish caught in Tuvalu's waters include Thailand, Japan and canneries in Fiji and American Samoa (Pago Pago). The number of vessels licensed per year varies considerably depending on the natural variability of tuna migrations following areas of high oceanic productivity. This, in turn varies with variations in climatic and oceanographic conditions.

The number of vessels licensed to fish in Tuvalu's waters from 2000 to 2008 is shown below in Figure 6.2.

The average catch composition by species from 1990 to 2007 was: skipjack 83%, yellowfin 13%, bigeye 4% and albacore <1% for a total catch of 358,000 tonnes. The average annual catch was 21,000 tonnes during this period. All fishing methods show high variability due to oceanographic and climatic variations. These variations also lead to variations in revenue fees as the fishing fleets follow these highly migratory tuna. Revenue variations can lead to difficulties in fiscal planning.

Estimates of the contribution from offshore fishing license revenue to total government revenue from 2000 to 2009 are given below in Table 6.1.

TABLE 6.1 **Contribution of licensing revenue to total GoT revenue, 2000–09, $A**

Source: Government Accounts (GoT 2010)

Year	Total license payments	Total government revenue	License payments as % of revenue
2000	9,480,076	42,467,676	22.32%
2002	11,795,440	22,365,212	52.74%
2003	8,694,953	41,931,352	20.74%
2004	1,474,300	21,384,693	6.89%
2005	3,144,672	19,580,402	16.06%
2006	5,232,030	21,240,548	24.63%
2007	3,321,552	20,957,595	15.85%
2008	8,400,035	25,801,229	32.56%
2009	9,005,663	31,143,499	28.92%

These figures indicate an average annual revenue from fishing licenses of A$6.7 million per year from 2000 to 2009. This equates to an average of 25% contribution by fishery licenses provided to total government revenue in that period. The tuna fisheries sector through fisheries license payments is currently the second biggest earner of foreign exchange in Tuvalu after remittances (GoT 2010).

Tuvalu is also a member of a multilateral treaty with the United States since 1988 that allows US purse seiners to fish in Tuvalu's EEZ. This includes an annual fee payment, comprised of a cash payment and a project development fund component. The amount paid varies with the amount of fishing activity. This treaty provides Tuvalu with substantial revenues, which greatly increased Tuvalu's total revenues from foreign fishing licensing. Table 6.2 shows revenues to Tuvalu received under the US Treaty.

From 1988–2000, Tuvalu received a total payment of US$21.6 million, an average of US$1.8 million per year.

TABLE 6.2 **Revenue from US multilateral treaty**

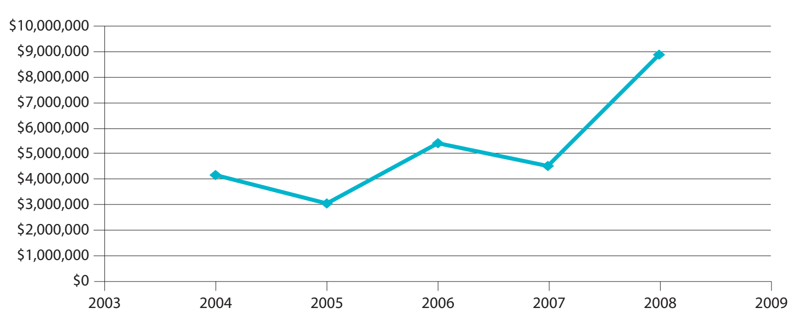
Year	Total (US$)
1988–1989	79,697
1989–1990	210,293
1990–1991	444,387
1991–1992	1,855,356
1992–1993	353,742
1993–1994	667,115
1994–1995	1,560,554
1995–1996	775,284
1996–1997	2,495,823
1997–1998	3,828,343
1998–1999	5,085,477
2007–2008	5,492,798

During the period 2001–2005, licensed longline vessels in Tuvalu EEZ made an average catch of 1,070 tonnes per year worth US$5 million landed value, and purse seiners an average annual catch of 17,500 tonnes valued at nearly US$15 million.

During the period 2000 to 2009, most of the licensed vessels in Tuvalu waters were purse seiners. In 2008, there were 135 purse seiners, 43 longliners, five pole-and-line vessels and two bulk carriers licensed. Increasing numbers of vessels were fishing in Tuvalu waters under the FSM Arrangement, contributing more revenues for Tuvalu (over A$300,000 in 2008). Accordingly, total revenue during the period 2004 to 2008 exceeded A$26 million, with an average of A$5.2 million during the period, as indicated in Figure 6.3.

FIGURE 6.3 **Estimated trend in offshore fisheries license revenue 2004 to 2008**

Source: Fisheries Department Surveillance Report, 2008



Despite increased licensing fees, the return is estimated to be only 6% of the total value of Tuvalu's total commercial offshore fishery, which has been estimated to range from US$3 million to US$43 million during the period 2003 to 2007 (FFA 2008) as indicated in Table 6.3. For the first time, the total gross value of skipjack tuna catches in 2007 came close to US$40 million and for yellowfin tuna about US$4 million.

TABLE 6.3 **Estimated market values of tuna resources exploited from Tuvalu fishery waters**

Source: FFA 2009

Tuna Species	2003 (US$)	2004 (US$)	2005 (US$)	2006 (US$)	2007 (US$)
Skipjack	1,945,622	12,966,620	11,442,114	11,040,608	38,399.939
Yellowfin	772,365	3,853,661	4,082,412	1,553,757	3,573,896
Bigeye	350,389	1,584,782	4,517,110	859,351	985,295
Albacore	64,183	211,173	802,765	14,260	223,802
Total	**3,132,560**	**18,616,236**	**20,844,401**	**13,467,976**	**43,182,932**

The value of the caches in Tuvalu's fisheries waters was estimated to be US$27 million in 2002 and US$64 million in 2008 (FFA 2009). The recent decline in value of the US dollar (used for access fees) against the Australian dollar has had some impact on national revenues.

According to analysis in the National Master Plan for Fisheries Development 2008–2011, there are reasons to be optimistic about opportunities to increase access fee revenues for the following reasons:

- The most recent SPC total allowable catch (TAC) for the purse seine fishery is 36,900 tonnes for skipjack and 6,800 tonnes for yellowfin; the TAC for the longline fishery is 3,700 tonnes. Both seiner and longliner figures are more than double current average annual catches, but recent regional management concerns over yellowfin and bigeye conservation need be considered.
- Purse seine-caught tuna prices are now at record levels, and since most agreements link access fees to value of the catch, it may be possible to negotiate higher fees.
- Tuvalu's allocation of fishing effort under the VDS is more than actual fishing effort recorded by purse seiners in recent years. Therefore 'spare' days can either be sold to other PICs or to foreign vessels displaced from other zones by their VDS limits.
- Tuvalu has recently joined the FSM arrangement, where fees are paid according to where the fish is caught. As FSM arrangement vessels act on the opportunity to fish in Tuvalu waters, new income from this source can be expected.
- There are known to be longline vessels based in Fiji that would purchase fishing licenses, however the cost of access negotiations with the GoT is a deterrent. If the mechanism for issuing licenses can be streamlined, it is most likely that more licenses could be sold.

The GoT has signed a JV agreement between NaFICOT and Taiwan to Ching Fu Shipbuilding Company to operate a 1,700GT purse seiner. The vessel was built at the cost of US$19.7 million, with NaFICOT's share amounting to US$3.5 million. The vessel will be registered in Tuvalu, and operated under the management arrangements to be agreed with Ching Fu, who guarantee the servicing and repayment of the Tuvalu Government loan. The new JV company became the Tuvalu

Tuna FH Co. Ltd. Tuvalu's main contribution to the venture is to provide the vessel with assured access to the fishing grounds of the Parties to the Nauru Agreement (PNA) countries, through membership of the FSM arrangement.

Only limited information on the financial arrangements for the JV is available and there seems to have been little consideration of the merits of this proposed joint venture from Tuvalu's viewpoint. Experience from similar joint ventures in the region indicates that it can be very difficult for the government partner to extract reasonable return when the JV partner controls the management and financial aspects of the arrangement. There is also uncertainty as to how Tuvalu would be able to withdraw from the arrangement if not satisfied. While tuna purse seining in the WCPO can be highly profitable, there may be periods when low fish prices cause many vessels to operate at a loss.

The joint venture agreement is now in effect and the new seiner, the *FV Taumoana*, after making its maiden voyage to Tuvalu in June 2009 has been fishing in the waters of members to the FSM Arrangements from the middle of 2009. The JV agreement has apparently given the Tuvalu Government a 50% stake in the operation for considerably less than half of the vessel construction costs. A number of relevant subsidiary agreements remain to be negotiated between the Government and Ching Fu, especially the vessel crewing arrangements (that will determine the employment opportunities for Tuvaluans on the vessel) and the vessel management agreement (which will determine the success or failure of operations). It will also be important that the Government is represented effectively on the Board of the JV by someone who can analyze financial and operational data on the company's performance. Careful consideration also needs to be given to the vessel's licensing arrangements, as eligibility for the FSM arrangement will be crucial to the commercial success of the venture (GoT 2008).

With the commencement of fishing operations, two local staff have been appointed to co-ordinate the activities under this JV who are based at the Fisheries Station at Teone, Funafuti. To date, Tuvalu has been advised it will receive $200,000 as its share of the sales of the fish caught under the JV.

6.3.2 Other source of revenue from offshore fisheries

In addition to access fees, Tuvalu also needs to actively pursue other benefits from access agreements. Employment of crew is one such opportunity and good communication between the vessel owners and recruitment agencies in Tuvalu is necessary. Adequate training in seamanship, fishing technology and safety at sea is also necessary. The TMTI located near Funafuti is looking towards broadening services by also offering industrial level fisheries training and this would be a good opportunity to train not only seamen but industrial fishers capable of manning vessels registered in Tuvalu's waters. Employment opportunities can be negotiated as part of fishing licenses.

There are also opportunities to use fisheries access as leverage for other economic benefits, such as aid support towards addressing development issues. The considerable support that Japan and Taiwan continues to provide to Tuvalu for various sectors is an example of this approach.

Tuvalu will no doubt continue to venture into various partnership arrangements such as direct licensing, charters and joint ventures with an aim to boost domestic development, increase participation in tuna fisheries as well increase economic gains. Tuvalu has over the years received several interests and proposals for partnership arrangements. It will be important to properly screen such fisheries proposals against strict investment criteria and ensure the expected outcomes are in the national interest. In particular, valuable lessons can be drawn from other FFA countries who have engaged in such partnership arrangements.

6.4 Institutional Arrangements: Tuna Development and Management

Chapman (2000) recommended that "Tuvalu needs a tuna management plan but with stakeholders' input so it will be owned by them." The development of a tuna management plan began in that year, and numerous subsequent drafts have been prepared. As of October 2010 a final draft TMDP had been prepared but was not yet in circulation. It will be important to support the completion of the TMDP to ensure the offshore fisheries sustainability and revenue streams. One way of assisting this would be to include in the TMDP a provision to divert a percentage of funds derived from tuna vessel licensing to support the development of coastal fisheries including FAD programs, community conservation and efforts and other priority coastal development initiatives such as coastal resource assessments and monitoring. This would help the Department of Fisheries to invest in developing coastal fisheries. Currently, most such activities are beyond the capacity of the recurrent budget and donors are relied upon heavily, a situation which may not be sustainable.

It will be equally important to build the capacity of the Fisheries Department to implement the TMDP. It should be noted that the Tuvalu Government through the Ministry of Natural Resources and Environment (Department of Fisheries) and FFA have launched a four year program for institutional strengthening of the Fisheries Department. An Institutional Strengthening Scoping Study Report (FFA 2010) has recently been drafted and released.

The project includes providing financial and technical resources to help the Fisheries Department respond to institutional challenges through management and conservation that meets regional and international obligations and moves towards more effective and efficient fisheries that return greater revenue. It also includes key social issues such as cultural impact, gender, poverty reduction and environmental impact. Factors in the design to promote sustainability include continuous community input and measures taken to reduce staff turnover.

The Tuvalu Government is now seeking funding support (A$3.5 million) for the implementation of its four-year Institutional Strengthening Program. Some of the activities under the program will be provided by FFA while others will be funded from other sources, including bilateral funding.

Fisheries compliance, monitoring and surveillance (CMS) activities are one of the major responsibilities of the Fisheries Department. The Marine Zone Act 1984 (Cap 24A) establishes the marine zones: a 12–nautical-mile territorial sea; a 24–nautical-mile Contiguous Zone, and a 200–nautical-mile EEZ. Under the Act, the licensed DWFNs vessels are prohibited from fishing within the 12–nautical-mile territorial sea. They must also comply with licensing conditions.

Support for the surveillance of Tuvalu's fishing zone is provided by the FFA through the regional surveillance program, under which a Vessel Monitoring System (VMS) was established in all Forum countries, including Tuvalu, to monitor the movements via satellite of all fishing vessels in the region. The VMS receiver is housed at the Police Headquarters, and is monitored by Fisheries Surveillance staff. Assistance is also being provided by the New Zealand and Australian Governments through their surveillance flights covering the region. Tuvalu's patrol boat *Mataili*, provides patrols of the EEZ and responds to potential infractions.

During the past few years, a number of illegal fishing vessels were apprehended and fined. These included a Korean longline vessel and a purse seiner flagged in the Marshall Islands. Both vessels were caught fishing inside territorial waters. Regarding the Marshall Islands flagged vessel, negotiations were required between the two governments in view of the Marshall Islands being a member of the FSM Arrangement. It is understood however that a discounted fine was finally agreed and paid by the company.

Tuvalu has yet to develop an observer program. This should become a priority over the coming year and start by placing an observer the JV seine vessel. Given that US seiners also require 100% observer coverage under the Western Central Pacific Fisheries Commission (WCPFC), there are employment benefits for young Tuvalu nationals in addition to the management value of placing as many observers as possible to improve tuna catch records and information on by-catch.

6.4.1 Relation to development plans

Tuvalu's past development plans have all highlighted the need to develop the nation's marine resources as a means to promoting the social and economic welfare of the people of Tuvalu. Under the Te Kakeega I strategy, the development of the fisheries sector was to be pursued as part of a program of "[r]estructuring the economy towards export oriented business programmes". Under the Mid Term Economic Framework Program, the long-term goals for the development of the fisheries sector were again reinforced: "to make the fishing industry a major contributor to the national economy, double its contribution to the recurrent revenue, and commence exports". Other short-term goals included the provision of basic protein needs on a sustainable basis; to improve the returns from foreign fishing activities; development of a nucleus of professional fishermen; activation of an outer island development program; enhancing technical expertise, management skills and planning capabilities. The unfinished 2001 National Tuna Development and Management Plan (NTDMP) also highlighted the importance of fisheries, especially the tuna fisheries for the economic development of Tuvalu in the long-term.

Te Kakeega II highlights the fisheries policy objectives and strategies, and included the improvement of the management of the inshore and offshore (EEZ) resources; the review of CFCs including their privatization or closure; the conduct of longlining operations under NaFICOT; improving the management of foreign fishing licensing; and formulation of an integrated fisheries sector development plan.

A National Master Plan for Fisheries Development 2008–2011 by the MNREAL was launched in line with the Te Kakeega II with the support of FFA and SPC. Six key principles were outlined:

- Realism—aiming for what can actually be achieved over the next 3–4 years;
- Learning from mistakes, both here in Tuvalu and neighbouring countries, so that we do not repeat them;
- Sustainable management of fisheries resources, since there can be no lasting development without conservation of the resource;
- Facilitating a stronger role for the private sector—our local fishermen as well as potential foreign investors;
- Reducing, over time, the reliance of the Fisheries Department on overseas aid to carry out their functions; and
- Responding to needs and priorities identified by island communities/leaders.

6.5 INSHORE FISHERIES

The inshore is comprised of six major ecosystem types including oceanic, outer reef, lagoon, back reef, lagoon floor, patch reefs and natural channels between the ocean and lagoon. These ecosystems maintain and support communities of corals, other invertebrates, algae, plankton, fish, numerous species of marine mammals and two species of marine turtles. Tuvalu's biodiversity is limited relative to PICs to the west due to its geographical remoteness and distance from the centre of biodiversity near Indonesia and Papua New Guinea. Approximately 350 species of fish have been recorded in date (TNBSAP 2010).

The people of Tuvalu are renowned for their fishing abilities, with an intimate knowledge of their environment (Johannes 2000). They use their extensive traditional ecological knowledge of the marine environment including where, when and how to catch various types of fish and invertebrates. A wide variety of techniques are used throughout the group to collect fish, crabs and shellfish which are consumed, shared or informally bartered. Traditionally, women were involved extensively in providing food security by harvesting from the nearshore through reef gleaning activities, while today they are the main processors and marketers of fish and fish products (Lambeth 2000). Men's fishing roles were more concentrated more on catching finfish, including in coastal waters outside of the lagoons, and it remains so today.

Some specialized men's fisheries include traditional pole-and-line fisheries for tuna and for flying fish. Traditional pole-and-line fishing is done from outrigger canoes with a four-man crew and master-fisherman. A long wooden pole with a pearl shell lure (*tepaa*) attached using coconut fibre rope. The lures are made from mother-of-pearl shells cut into strips, with a hook carved from sea shell, turtle shell or bone bound to the lure. The shells reflect many colours when immersed in the water. Over the years, nylon monofilament has replaced the coconut fibre and metal hooks are being used. It is this traditional fishing technique found in this area of the Pacific that the commercial pole-and-line fishing technique stems from.

Other traditional fishing techniques included the use of a scoop net for flying fish fishing on moonless nights while burning coconut fronds to attract the fish; use of a traditional fishing net (*kupega*) for net fishing; shepherding fishes (*alai maiava*) in particular for catching siganids (*maiava*); and the *taa* or fish drive, carried out in shallow waters by many fishers.

Trolling for surface tuna from motorized small craft has now largely displaced the traditional pole-and-line fisheries. Surface trolling for tuna is now an important means of generating revenue on Funafuti as well as the outer islands. On Funafuti, artisanal fishing is conducted by a small fleet of 5–7 m outboard-powered skiffs which mostly fish by trolling for tuna, but also drop-line fishing for reef fish. There are about 30 commercial/artisanal fishers based at Funafuti (TNBSAP 2010).

Census data from the 2002 Population and Housing Census (SPC 2005 cited in Gillett 2009) reported the following:

- 67% of all households in Tuvalu were involved in fishing activities, mainly for their own consumption;
- The highest percentage of households participating in fishing was on Nanumea (95%) and the lowest was on Funafuti (52%);
- Commercial fishing was slightly more common in the outer islands than in Funafuti (10% and 8%, respectively);
- Of those households engaged in fishing, most fished only on the reef, especially in Funafuti; however, a large minority (42.5%) of all households

fished both inside and outside the reef, while 6% of all households fished only outside the reef; and
- Of the 528 people whose main economic activity was fishing, 68 (12.9%) were female.

6.5.1 Subsistence production estimates
There have been various estimates of subsistence catch in Tuvalu. In the early 1990s subsistence was estimated to be 807 tonnes worth A$657,781 (Dalzell *et al.* 1996) and in 1999 it was estimated at 880 tonnes worth A$1,443,200 (Gillett and Lightfoot 2001). In 2004/2005 the Tuvalu Household and Income Expenditure Survey (HIES) estimated the subsistence catch at 776 tonnes worth A$1,841,375 (HIES 2005). From the above estimates, annual coastal subsistence fisheries production in the mid-2000s was 989 tonnes worth A$2,656,896 (Gillett 2009).

This would indicate that nearly 1,000 tonnes of fresh fisheries products are consumed annually throughout Tuvalu. This makes a significant contribution to nutrition (on islands that face serious constraints to livestock production and meat availability). It also makes a significant contribution to import substitution and reducing the trade imbalance.

Commercial production from the inshore fisheries in 2007 was estimated to be 226 tonnes with a value of A$733,666 (Gillett). This would mostly be fish traded on the islands and in Funafuti.

6.5.2 Aquaculture
There is interest in aquaculture despite the relative abundance of wild fish. The Fisheries Department has undertaken a number of projects and culture trials including for giant clam hatchery, trials of *Eucheuma* seaweed and cultured pearl oysters. None of these trials has led to any production. Pearl culture is probably not a viable option as it requires significant technical and financial inputs to be successful.

From 2008, a new milkfish culture operation was trialled on Vaitupu supported by the Taiwanese Technical Mission. The initiative consists of two small ponds that have recently produced modest harvests for Vaitupu with a small amount sent to Funafuti.

The aquarium trade has never been introduced although proposals to initiate it were made during DTIS consultations. Some suggest it is not an important trade option for development due to the limited aquarium species found in Tuvalu waters. If the aquarium trade is developed, it will be important to introduce management measures at the outset in close consultation with the communities involved (collection areas). This is important to reduce potential impacts as it would most likely be developed close to Funafuti (where there is access to services that it would need, including air freight) where there is already considerable stress on the marine environment. This includes fishing pressure and land-based pollution.

6.5.3 Bêche-de-mer (dried sea cucumber)
The production of bêche-de-mer dates back to the 1800s from the Pacific Islands. While some 300 species of shallow water sea cucumbers are known in the Western Central Pacific Region, only 35 species are utilized for the production of bêche-de-mer. This fishery typically follows a boom and bust cycle as the resource is overfished and left to recover for some years. Prices vary considerably by species and quality. As higher value species are fished out, effort is increasingly diverted to lower valued species. The sustainability of these fisheries is of widespread concern

throughout the region (Kinch *et al.* 2008). Reasons given for poor management of bêche-de-mer throughout the region include lack of capacity amongst Fisheries departments to enforce size limits and quotas of valuable species.

Sea cucumbers were apparently never used for subsistence purposes in Tuvalu. The harvesting and processing of bêche-de-mer began in 1978 through a UNDP initiative with the Fisheries Department. The fishery went through an on-and-off cycle with booms in 1993 when Fijian-based Asian companies took interest in the fishery and again more recently in 2007, This time under a partnership arrangement between some *Kaupule* (namely Nukufetau, Nukulaelae and Funafuti) and a Hong Kong-based businessman. Several containers of processed bêche-de-mer have been shipped to Hong Kong over the last three years. The value of these exports was not available. This private sector initiative has provided employment and revenue benefits to the producers on the three islands. However, there are concerns regarding the sustainability of bêche-de-mer harvests due to the perceived limited standing stock in Tuvalu. Bêche-de-mer processing for export may not be sustainable domestic activity in view of the limited resources for the high value species, which is not found in all islands. Only Funafuti and Nukufetau have the highly valued teatfish (*Holuthuria fuscogilva*) species. Others species exported in the past include *T. ananas, H. fuscopuntata* and *H. whitmai*.

There are reports of diving accidents in the past with bêche-de-mer collectors using compressed air. This is sometimes due to minimal training and lack of SCUBA certification.

According to the Customs Department, bêche-de-mer has been the only fisheries export for many years from Tuvalu. The export value provided for 2007 was A$5,000 (Gillett 2009).

The lack of data regarding bêche-de-mer exports and value stems from the fact that no data from the *Kaupule* or private operator is submitted to the Fisheries Department. It is recommended a bêche-de-mer management plan be formulated to better manage the limited resource and ensure the safety of divers. Part of the plan should include licensing conditions with the Fisheries Department so that bêche-de-mer export data is submitted to them by the exporters and/or *Kaupule*.

6.5.4 Dried fish trials

Locally fresh fish is generally preferred, but salted or dried fish is also consumed. Dried fish is most often the product of excess subsistence catches taken in the outer atolls and is a traditional preservation technique.

The two CFCs in Nanumea and Nukufetau produced dried jerky products for export in the 1990s. Tuna jerky was solar dried and packed in cartons, properly labelled and marketing trials were conducted in Funafuti, New Zealand and Australia. However, the quality of the products was found to be inferior for export, and the production of the products at the two CFCs was discontinued. This is a product that could be used for preserving excess catches in the outer islands and for sale to local markets. The Fisheries Department could provide some technical assistance in improving the quality of the product.

6.5.5 Deep sea snapper

The SPC conducted deepwater snapper fishing trials and introduced training in deepwater fishing techniques in 1982–1983. In the 1990s, USAID initiated another deepwater survey and found that resources exist in the area around the seamounts, and in the outer reefs of the islands. These studies determined a maximum sustainable yield (MSY) of 67 tonnes per year from the deep slope of the outer reefs, while the seamounts could support an additional MSY of 250 to 450 tonnes. It was concluded they could support a medium-sized commercial enterprise (RDA International 1995).

Export marketing trials of bottom fish to Hawaii and Europe during the period 1993–1994 were conducted with some success. These trials indicated that if direct flights to good markets were available in the future, there could be a modest export fishery of these high-value fish. These fish could also be marketed in Funafuti, however, the additional labour and gear involved in this fishery often mean the price is higher, making it hard to compete with the cheaper availability of a range of tuna and other pelagic species.

6.5.3 Inshore management and conservation

The introduction of modern and efficient fishing gear (monofilament nets, free-diving gear and spearguns), coupled with the commercialization of marine resources and significant population growth has meant that the coastal resources of many of islands are showing signs of resource depletion. These changes have been accompanied by a loss of traditional tenure systems that in the pre-colonial past regulated access and controlled fishing activities. The British colonial system introduced common property laws, effectively wiping out the traditional tenure system.

To address these management issues, Tuvalu has initiated a community-based fisheries management program primarily to create community fishing reserves or conservation areas. There are now ten conservation areas on eight of its nine islands. Only one has been established under formal legislation; the rest have been established by local communities and are managed by traditional systems in co-operation with the *Kaupule*.

The Funafuti Marine Conservation Area was the first to be established back in the mid-1990s with the assistance of the South Pacific Biodiversity Conservation Program, AusAID and the South Pacific Regional Environment Program. The conservation area is managed by the *Kaupule* to safeguard the marine resources that have been subjected to the most intensive pressure in the country due to the high population growth of Funafuti. Funafuti has been the main centre of commercial development with the NaFICOT fish retail facility based there.

Relevant authority to create conservation areas is granted to the Minister of Fisheries and Island Councils in the following legislation: *(i)* the Conservation Act; *(ii)* the Marine Resource Act and *(iii)* the newly-established Environment Act.

Despite the widespread support for conservation measures around Funafuti, compliance at the FMCA faces challenges. All resource use within the FMCA is banned completely for people of Fongafale (the atoll where Funafuti is located) and migrants. With the increasing demands being placed on marine resources from residents of Funafuti, there are many issues and conflicts to resolve. This results in some poaching occurring, especially at night. Surveillance is difficult as the reserves are not easily visible. Boat patrols must be undertaken, adding to the cost of the initiative. Funding for surveillance has primarily been project-supported so have a limited lifetime, although the *Kaupule* also supports the reserve with a budget of A$10,000 annually (*pers. comm.* Semese Alefaio Oct. 2010).

One issue is that there are some clauses in the Marine Resource Act which allow the Minister of Environment to overrule the Island Council regarding the management of the conservation areas (V. Lese 2010). This is similar to other parts of the Pacific where national environmental legislation may not always be harmonized and the Island Councils and communities may not have as much autonomy as they had under traditional law. These issues should be looked at with a view towards harmonizing the environmental and fisheries-related legislation and devolving more responsibility to the lowest possible level in line with the Convention on Biological Diversity. One way to strengthen the sense of ownership and responsibility over community-based conservation area is to decentralize authority and strengthen traditional marine tenure systems to strengthen ownership of these initiatives by communities (Johannes 2002, Johannes and Hickey 2004). In this way, communities themselves will provide most of the surveillance and even monitoring of the conservation area, reducing these financial burdens from government and donors.

An additional point is that conservation areas are not the only option to promote to enhance coastal conservation but co-operative management and data-less management strategies have also been shown to be cost-effective options in the Pacific where the cost of rigorous scientific surveys may be prohibitive (Johannes 2002, Johannes and Hickey 2004). This includes providing awareness on growth rates, life cycles, ecological principles and impacts from destructive fishing practices as well as drawing upon traditional knowledge of spatial-temporal resources occurrences like spawning migrations to temporarily close these areas. Communities sometimes respond better to more flexible options rather outright complete closures of their fishing grounds (Ruddle and Hickey 2008).

Other biodiversity conservation initiatives include an Island Care project monitoring marine turtles on the atolls, planting mangroves to protect coastal areas and enhance fisheries production, the establishment of a plant genetic collection by the Department of Agriculture and work on a Whale and Dolphin Action Plan and the Regional Action Plan on Turtles in collaboration with SPREP.

The local umbrella organization of Tuvalu NGOs, TANGO has been facilitating the planting of trees and mangroves and has been working with *Kaupules* to establish conservation areas and assist with the development of management plans for them. It would be useful to strengthen the collaboration between the Environment Department, the Fisheries Department and the TANGO network (all NGOs operating in Tuvalu) to strengthen these conservation initiatives. This could be facilitated by the creation of a Technical Working Group of representatives of these organizations to meet regularly and promote co-ordination and co-operation to optimize the use of funding available for conservation work.

6.6 CONCLUSIONS

Marine resource use and exploitation has long been one of the mainstays of the economy. While the government has succeeded admirably in maximising revenues from the offshore sector, there is potential to increase revenue still further, particularly through improving the efficiency of institutions responsible for marine resource management and development. For the coastal nearshore fishery, many species have reached commercial production limits, so in light of population increase, likely climate change impacts and limited livestock production potential, development should be monitored closely and focus turned to improved management. In some of the outer islands where population pressure where remains low, there may be some scope for increased commercial production, but a precautionary approach should be applied.

The involvement of communities in the management process is fundamental to the sustainable management of coastal resources. It is also in line with the CBD, which promotes management to the most local level possible. Government Ministries and other agencies are beginning to realise the need to revive traditional management practices and devolve more responsibility to the communities in managing resources. Aside from strengthening and supporting custom marine tenure, traditional knowledge and the use of traditional management strategies, increased co-operative management of resources may help cost-effectively decentralize coastal resource management. This involves government partnership with communities in order to help them become more responsible for the management of coastal areas, including implementing traditional strategies and the monitoring of compliance of Island Council by-laws. The establishment of protected areas will help sustain subsistence production and provide a range of livelihood options. Environment-related legislation, however, must be harmonized with the capacity of Island Councils to regulate at the local level through by-laws. There are also alternatives to merely closing off certain areas, including temporary closures to protect spawning migrations and aggregations, restricting over-efficient equipment such as small-gauge monofilament nets and spearfishing at night during parts of the year or in certain areas. Using more flexible regimes many also help raise compliance and promote more moderate-yielding traditional methods.

For the offshore tuna industry, a number of improvements can be made in order to increase the benefits to the domestic economy, including ensuring long-term and sustainable revenue flows through DWFN access agreements and properly managed JVs; more employment through Tuvalu crewing opportunities as part of offshore fishing licenses; improving surveillance, observer and transshipment coverage; moving to the VDS scheme for seiners initially, followed by longliners to enhance management and increase revenue; and promoting further diversification in the industry. Aquaculture of milkfish may be one way to increase food security from the nearshore.

With the past high levels of public investment in the offshore fisheries sector having fallen short of their objectives, future government and donor activities should focus on improving the investment climate and supporting the private sector; providing some basic infrastructure; and promoting entrepreneurship through the provision of credit and training programmes, especially in trading and marketing skills. Any JVs should be carefully negotiated with support from FFA and draw upon the experiences of other countries in the region. They should also be closely monitored for compliance, and to record their benefits.

CHAPTER SEVEN

Agriculture

7.1 INTRODUCTION

Agricultural production mainly revolves around subsistence, with some cash production mostly for the domestic market. Tuvalu's small land area and unproductive soils limit the opportunities for export diversification. The country's low-lying atolls face occasional cyclones, increasing the prospect of marine inundation in the event of rising sea levels. The underground water lens also remains under threat. Subsistence agriculture involves the main traditional food crops: *pulaka* (a large tuber) and taro are grown in fabricated composite pits and are planted according to traditional practices. Other food crops include banana, papaya and pandanus. Coconut trees grow widely, fulfilling a variety of needs. Some export of copra occurred in the 1990s, but this ceased in 2000 as the industry became uncompetitive.

This chapter first gives some background to agricultural production, before identifying and evaluating the existing constraints to agricultural development as well as opportunities for further development. Throughout, the emphasis is on fulfilling subsistence needs and building production for the domestic market, with an emphasis on food security.

7.2 BACKGROUND

Agricultural development in Tuvalu is limited and faces numerous challenges. The nine islands making up the chain rise no more than 4m above sea level. Rainfall is generally sufficient for agricultural purposes, ranging from 2,800–3,000mm a year, although the soil is very poor quality—mostly sand and rock fragments, which are porous and volcanic in nature and provide unsuitable growing conditions for crops and trees. The saltwater table is only metres below the surface, making the freshwater lens only several metres deep. Many islands have a saline freshwater lens in places, and groundwater can be unsafe for human consumption, with rainfall accounting for most people's needs. Water in the lens of Funafuti is now contaminated with sewerage and is no longer potable. Water is therefore insufficient to meet the competing demands between domestic and agricultural uses.

Tuvalu's atolls are ecologically fragile and their natural systems are susceptible to disruption from disasters, including coastal erosion. The impacts of salination due to environmental changes such as seawater inundation during sea level rise have the potential to change the conditions of the *pulaka* pits where the local food crops are grown. The small size of atolls precludes the development of large commercial ventures such as cash crop and livestock production.

Despite these challenges, agriculture has traditionally been the main preoccupation of Tuvaluan people, involving the cultivation of trees and crops (swamp taro—*pulaka*), taro, banana, and livestock (pigs and chickens were introduced by Europeans). More than 38% of all households in Tuvalu are involved or engaged in agricultural activities almost exclusively for their own subsistence needs (Tuvalu 2002: 50). Crop production has primarily been carried out for subsistence, and comprised coconut, *pulaka*, breadfruit, pandanus, banana and more recently, taro, sweet potatoes and pawpaw (also introduced by Europeans).

In addition, coconut trees are also managed traditionally to ensure continued production. This involves controlled harvesting where the fruits from each bunch are never all picked; some are left to become brown coconuts. The entire top of the coconuts are also properly cleaned, and the coconut trunk is covered with pandanus leaves to protect the young coconuts from rats. These trees are regularly attended, and the plots of land are rarely left unattended for long periods. The few varieties of pandanus, which produce sweet fruits, are often planted in between the coconut trees to provide alternative supplements to the local diet. This applies also to breadfruit trees, which are normally planted near houses for ease of management and to prevent them from being harvested by non-family members. Breadfruit also serves as one of the main foods in the Tuvaluan diet.

Urban drift, coupled with a declining interest on the part of young people in traditional agricultural farming practices, has reduced the production of traditional crops. The following table shows that urban drift has been moderate, with a 2.6% reduction in the population of the outer islands from 1991 to 2002. Just over half of the total population lived in the outer islands in 2002, although this proportion may now be lower.

TABLE 7.1 **Population change, 1991–2002**

Island	1991 population	2002 population	Change (no. of people)	% change	Pop. distribution (%)	Persons per km^2
Funafuti	3,839	4,492	653	17	47	1,610
Outer islands	5,204	5,069	−135	−2.6	53	222
Tuvalu	9,043	9,561	518	5.7	100	

Source: Tuvalu 2002 Population and Housing Census, Vol. 1 Analytical Report, Table 1, p15

As Tuvalu no longer exports copra, the coconut trees on most plots of land are left unmanaged and unattended, resulting in many of the trees becoming unproductive. Despite this situation, the replanting of a type of coconut which bears fruit after only two years may be considered.

Copra production was Tuvalu's major export commodity in the 1990s, with yields of 2,000 tons in 1999, according to the Department of Agriculture. However, in the ensuing years even government subsidies, about A$120,000 a year, failed to arrest the decline in the production of copra, which finally ceased in 2000. It was also too costly for government to continue its subsidy due to the declining price of copra on the global market. From the years 1997 to 2000, a total of $575,000 was paid out in subsidies to copra cutters, with $367,000 paid during 2000 alone. Subsequent efforts to revive the industry have failed.

During the 1980s, trials of oil extraction and soap manufacturing were tried under the Vaimoana Co-operative in Vaitupu, Tuvalu's largest island, but the venture failed due to lack of financial subsidies from government to lower the cost of production in order to keep the local product competive with imported soap.

The growing of sweet potatoes was also attempted during the 1980s in Vaitupu, and the produce was sold in Funafuti. At the time, supply exceeded demand. Attempts to locate a market outside Tuvalu were unsuccessful, and the activity was thus discontinued. People on some islands have begun to grow potatoes outside their homes for subsistence needs.

From 2007, government provided all the *Kaupule* (local island councils) in the outer islands with small machines to extract oil from coconuts. The oil produced at the new facilities on the islands was sold locally and used for cooking; some was sent for sale on Funafuti. To date, no external markets had been identified for the locally manufactured coconut oil and no statistics are available on the production of coconut oil on each of the islands.

One private sector operator undertook the extraction of *nonu* (noni) juice for local consumption, aimed at accessing the external market. A single shipment, consisting of a container with 10,000 litres of *nonu* juice, was sent to Taiwan. The operation was discontinued due to competition from other *nonu* juice suppliers including Samoa and the Marshall Islands, the latter which received preferential treatment resulting in a 20% reduction in import duties for its product in the Taiwanese market, compared with the rate of 40% faced by Tuvalu.

Livestock production is still at a subsistence level, with families keeping pigs and chicken. Some commercial poultry farms operated during the nineties, but these enterprises had to close due to the high cost of feed, and the absence at the time of proper facilities for the storage of poultry products. A few poultry farms are still operating on Funafuti. Some households have upgraded their pig farms to provide animals for both their subsistence needs and for sale to Chinese restaurants on Funafuti.

7.3 INSTITUTIONAL AND POLICY FRAMEWORK

The main focus of the Department of Agriculture is the outer islands. Agricultural foremen are posted to work as extension agents on each of the outer islands to work closely with local people. The foremen disseminate information on the advantages of improved varieties of crops tested at the Elisefou agricultural research station.

At the research station, the department has conducted work on varieties of dwarf and hybrid coconut trees, which begin to produce coconuts after only two years, and which can be distributed to landowners to grow on their land. The lifespan for these varieties is unknown at this stage. This program should improve copra production if the old coconut trees are replaced with the new varieties. The Department also undertakes trials of vegetable farming techniques and has a pig breeding program, producing piglets for sale to people on the respective islands, with the intention of improving the quality of livestock and to lessen the islands' dependency on imports of meat, chicken and other frozen goods.

The Agriculture Department also oversees the quarantine aspects relating to imports of fruits and root crops imported by air or by sea, to ensure the quarantine requirements are complied with and to safeguard Tuvalu from introduced foreign pests.

The Department has also implemented a number of agriculture projects over the years, funded by donor countries with technical assistance provided by the SPC and other regional organizations including the USP Alafua Campus in Samoa. The Department also enacted a number of projects funded by Republic of China (ROC) and the Food and Agriculture Organisation of the United Nations (FAO), including a rat eradication project, the establishment of nurseries for local trees and vegetable gardens on the outer islands. Yet the following table shows that overall government and donor financial support for agriculture is high, at an anticipated A$1.2 million in 2010, equating to around A$100 per person. Donor expenditure jumped to A$840,000 in 2010. However, in the implementation of donor-funded projects, the Department faces constraints including a lack of dedicated local counterparts, frequent staff turnover and the absence of key staff on overseas training. These constraints make it difficult to achieve the intended impacts and outcomes of projects.

TABLE 7.2 **Government and donor financial support for agriculture, 2004–2010 , A$**

Budget items	2004	2005	2006	2007	2008	2009	2010
Recurrent	374,688	287,355	238,929	230,581	284,796	367,702	347,415
Donor	640,000	155,000	155,000	215,000	77,000	195,000	840,000
Total	1,014,688	442,355	393,929	445,581	361,796	562,762	1,187,415

For the agriculture sector, the policy objectives under Te Kakeega II are to reverse the decline in subsistence agriculture production; to increase the availability of land for agricultural production; to increase the production and consumption of local produce and to mitigate and minimize the climate-change related agricultural impacts.

The framework for implementing Te Kakeega II, provided in the GoT Kakeega Matrix Returns, was published in 2008. For agriculture, two major strategies were included in the implementing document: to increase food production through diversified crop production and income generating opportunities, and to improve biosecurity. To date, no biosecurity legislation has been enacted.

Other strategies identified for the period 2005 to 2015 included improving and expanding agricultural extension services; creating more opportunities for the training of agriculturalists; expanding the availability of agriculture tools and equipment and assisting entrepreneurs to grow and market local produce. These objectives are appropriate, since they concentrate on production for domestic consumption rather than export and they leverage existing strengths, including subsistence production as a means of reducing reliance on expensive imported foodstuffs. Results, however, have been mixed, with the import bill continuing to rise and biosecurity objectives remaining unfulfilled.

Overall, agriculture development has made some progress in the production of locally-farmed vegetable produce and livestock production, but they have not been integrated with traditional farming practices. Most of the agriculture programmes were directed at farming of new varieties of food crops and vegetables, with minimal emphasis on traditional root crops and trees. This has contributed to the lack of interest in traditional farming practices discussed earlier. This trend has resulted in an increase in dependence on imports in place of local food crops. The education system also does not emphasize the importance of maintaining the genetic diversity of traditional crops and knowledge systems. Food security through subsistence means and enhanced crop resilience will become increasingly important in the face of climate change.

Attempts made by the Agriculture Department to obtain quarantine clearance from the New Zealand Agriculture Department to export coconuts and germinating nuts to New Zealand have been successful. However, technical issues remain relating to the export of germinating coconuts in processed form.

7.4 DONOR SUPPORT

The focus of much donor assistance has been the improvement and expansion of the extension services through agriculture foremen on the outer islands and the training of households on Funafuti in vegetable farming practices. The UN Food and Agriculture Organisation (FAO) has also provided assistance for the agriculture sector, focusing on increased food crop production to enhance food security and to provide better nutrition. Under the FAO Technical Cooperation Programme (TCP), support was provided for the management of the rat population in coconut plantations and for growing disease-resistant banana crops. Assistance from the FAO Food Security and Sustainable Livestock Projects (FSSLP) provided funding for the establishment of nurseries in the outer islands to supply planting materials, upgrade pig breeding stocks and upgrade the skills of farmers in pig feeding and other husbandry techniques.

The Secretariat of the Pacific Community (SPC) provides ongoing technical assistance in many fresh produce trade negotiations between Fiji and Tuvalu, import protocols, pest control and safeguarding against the importation of foreign pests. TAs also provide on-the-job training for local staff in these areas.

In the past, vegetable home gardening was practiced mainly on Funafuti, but this was constrained by damage caused by roaming animals (pigs, chicken, and dogs), lack of finance to provide farming materials and equipment and the lack of water. With the implementation of the Taiwanese Mission commercial vegetable garden on Funafuti, and the establishment of household vegetable gardens, the production of vegetables has greatly improved, providing a more balanced diet for local residents. The volume of production is however not sufficient to meet local demand in the capital. Some household home gardens have provided incomes for the households, mainly from the sale of pawpaw, cabbages and other vegetables. Vegetable gardens and home gardening have also been extended to the outer islands under government assistance through the Agriculture Department's extension unit, plus support from the Taiwanese Mission.

Production of local meat from pigs has increased under the Department of Agriculture's pig breeding program at the research station at Elisefou, Vaitupu. However, the volume of production is still too low to meet local demand. To date, the volume of production of livestock and food crops are only sufficient to meet subsistence needs, and no local markets have been established for the sale of crops or livestock produce.

7.5 FUTURE DIRECTIONS

Given the past failures of production for export, any revision to policy should aim primarily at improving crop productivity and sustainability rather than at export. Tuvalu suffers from an inability to achieve significant economies of scale, coupled with high transport costs, making it extremely difficult to compete even with other Pacific island nations let alone more efficient producers in East Asia or elsewhere. The objectives should be to enhance food security and improve livelihoods rather than to reach international export standards. This is not to discourage members of the private sector from exporting, but a recognition by government that Tuvalu is not well-suited to agricultural export would free up scarce resources for use in other potentially more lucrative activities such as tourism.

A number of government activities remain appropriate. Increased production, productivity and resilience of crop and livestock systems can be achieved through increasing the level of self-sufficiency in food production. In turn, this objective can be met through strengthening traditional food production practices, improving agriculture opportunities to improve livelihoods in outer islands and mitigating the impacts of Tuvalu's vulnerability to climate change and sea level rise.

Given the potential impact of climate change, it will be important to document the current status of Tuvalu's traditional crop diversity (and knowledge associated with it) to provide a baseline to measure further loss due to climate change and/or continued loss of interest by youth. The documentation of crop diversity and the knowledge associated with the planting, nurturing, preserving and preparing the associated foodstuffs will also be useful in reviving these crops in the future. Continued national awareness, targeting youth and community leaders, will be necessary in order to emphasise the importance of traditional crop diversity and associated knowledge and environmental management systems to promote resilience in the face of climate change and other shocks such as cyclones. Nationally, traditional barter/exchange networks should not be discounted as a way of ensuring an equitable distribution of agriculture resources.

A considerable proportion of the existing coconut trees now growing in the islands are old and unproductive. A replanting scheme should be funded and implemented aimed at planting the coconut hybrid varieties being produced at the research station in Vaitupu. These varieties start producing after only two years and should therefore increase coconut production in the future. The increased availability of coconut trees may also help revive copra production, if appropriate. The existing coconut oil extraction plants on the outer islands will need to be assessed to determine appropriate options to take concerning increasing oil production, and to locate potential markets for the value-added products.

A more integrated system of farming trees, crops and livestock would offer opportunities for sustainable intensification of food production, while creating a resilient ecosystem at the same time. Landowners on all islands should be encouraged to use their abandoned and unproductive land for integrated farming. Local and introduced fruit trees, banana, breadfruit, pandanus, *nonu*, *felo*, and pawpaw could be planted, along with vegetable crops, cabbages, tomatoes, spring onions, cucumbers and pumpkins in the same area. Farmers would need to receive information and guidelines as to the choice of crop varieties, soil and water management, thus avoiding the use of fertilizers in vegetable production. Livestock (pigs and chicken) could also be farmed in the same plot of land. The pig waste can be collected and mixed with rotten shredded plant matter to produce manure for vegetable production. Further research, however, will be necessary in order to assess water shortage problems and the impact of any bush clearance on droughts, soil erosion and sea level rise.

Subject to government priorities in other areas, the Agriculture Department may need to be strengthened. In addition to academic training for agriculture staff as per the department's human resources training plan, training attachments provide opportunities for staff to learn on the job. The transfer of technology is best achieved via foreign investors or commercial industry associations using expert staff and on-the-job training of local personnel, although incoming investment in Tuvalu is extremely low. Technology transfer via government ministries, often encouraged by aid donors, has proven ineffectual. It may be worth considering attachments via the private sector for a relevant period of time, with possible funding being sought from regional private sector associations.

Considering the importance of protecting Tuvalu from pests from plants, plant materials, animals, and frozen livestock products that are imported into the country, capacity-building for local staff involved in quarantine measures and inspection is a necessary and a priority undertaking.

Skilled and well-trained staff are needed to reinforce the extension program. The capacity of the current Agriculture Department foremen on the outer islands also needs upgrading to enhance their performance. Foremen need to be integrated more into the local community to improve co-operation with *Falekaupule* or members of the island communities.

Regular workshops should be held during each year on Funafuti, involving extension workers from headquarters and Agriculture Department foremen, to provide briefings on new agriculture projects and the roles they should perform to assist farmers with their crops and livestock enterprises.

7.6 CONCLUSIONS

The long list of failed government initiatives, often with donor support, shows that commercial agricultural production faces severe challenges. Productive capacity is limited due to the poor soils of many of the atolls and limited land area. Transport between islands raises costs, while agricultural export has had even less success due to the difficulties of meeting international standards and required quantities, together with the cost of international shipping. The government is rightly focused on domestic commercial and subsistence production with a view to improving food security. The export of copra has proven viable in the past and should remain on the agenda—although without subsidies. Agricultural export diversification is unlikely, and government and donor support for value-adding export-orientated activities should not be promoted. Funds would be better used elsewhere, such as in tourism.

Traditional farming techniques are in decline, yet, particularly on the outer islands, they contribute to agricultural diversity and food security and better diets. The use of home-grown food crops constitutes a form of import substitution, which is particularly important owing to Tuvalu's significant and long-term trade deficit. It will remain important to raise awareness amongst youth and community leaders on the value of traditional agricultural and land management systems and knowledge.

Government priorities are not spelt out as clearly as they might be, while institutional responsibilities sometimes overlap or are confused. It would be worth reviewing the government's agriculture-related activities to reduce fragmentation and increase co-ordination within the Department of Agriculture's programmes and activities, and with related sectors. Depending on the government's overall priorities and relative spending commitments, more human and financial resources may be required, although again any review of spending should be taken in the context of the relative importance of other, potentially more appropriate sectoral activities such as tourism.

Annex

ANNEX 1 **Summary of fisheries-related development activities, 1978–2005**

Year	Program	Donor/org.	Purpose	Output
1978	Tuvalu's First Development Plan	GoT	Prepared the Fisheries Development Plan	National Development Plan 1 formulated
1980	First Fisheries Development Plan formulated	Fisheries Division	Development of the small-scale fisheries	Fishing activities initiated on Funafuti
	Bêche-de-mer project	UNDP/FAO	Trials in harvesting and processing of BDM and training of local fishermen on Funafuti/ Nukufetau	BDM small processors operated in Funafuti/ Nukufetau and some export to Fiji
1981–1983	Deep water snapper fishing techniques training/ fishing trials	SPC	Training of local fishermen in VTP, Funafuti and Nukufetau	High catch rate achieved in Nukulaelae-15kg/reel-hour; 4.8kg/reel-hour in Nukufetau
1983–1984	Boat building project	Save the Children/ Canada	Constructed diesel launches and catamarans	Catamarans sold for Fuanfuti, Nanumea, Nukulaelae and Nukufetau, 3 launches for FD
1984–1985	Fisheries Jetty	New Zealand	Improve loading of fish	Fisheries Jetty
1984–1986	Fishing Trials around FADS	SPC	Training of local fishermen and FD personnel	Vertical longlining method trialled and introduced; low catch rates, but high rates for trolling activities
1987	Construction of the Teone Fish Market	UK/Australia	Improve the marketing of fish; improve the recording of catches	Fish Market operational, initially under the FD, and later under NaFICOT
1989–1992	Community fishing project	Japan	Provide equipment and training vessels for the small-scale artisanal fisheries sector	6 training vessels; 1 extension vessel and 2CFCs at Vaitupu and Funafuti, and equipment
1991–1992	Community Fishing Centres	Australia	Two CFCs built in Nanumea and Nukufetau	Dried fish products: salted fish and tuna jerky, produced and marketed locally and overseas

Year	Program	Donor/org.	Purpose	Output
1991–1993	Rehabilitation Project	Japan	Rebuild engines, repair equipment provided in earlier grants	Fishing vessels and equipment repaired
1991–1994	USAID Bottomfish Fishing Project	United States	Explore and test fishing techniques in seamounts; test marketing to Hawaii and Europe; provided FADs for some islands	Successfully tested new techniques and also identified new seamounts. Found high potential for a modest snapper fishery to assist Tuvalu's economy
1990–1993	Rehabilitation Project: fish market And equipment repair	Japan	Rebuild and repair freezers and equipment; market management	Market fully operational, one 5m inboard-outboard diesel-powered vessel, fishing gear received
1998–2000	New CFCs	Tuvalu Government (SDEs)	4 new CFCs, Nukulaelae, Nui, Niutao, Nanumaga	New CFCs operational in four islands

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