

REPUBLIC OF KIRIBATI

DIAGNOSTIC TRADE INTEGRATION STUDY

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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 coordinated delivery of trade-related technical assistance (TRTA) by development partners in response to identified needs. Following lessons learnt from early IF experiences, the Enhanced Integrated Framework (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 Kiribati 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. 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: Tokintekai Bakineti (agriculture); Daniel Gay (macroeconomic environment, trade policy and trade facilitation);

Francis Hickey (fisheries and agriculture); Simon Milne (business environment and tourism); Iete Rouatu (institutions and human development); Kietau Tabwebweiti (labour, tourism and local handicrafts); Tianta Tarakia (energy); and Temakei Tebano (fisheries).

In November 2010 the draft DTIS report was circulated amongst government Ministries, IF partners and national stakeholders. The report was discussed at the national DTIS validation workshop in South Tarawa from 8-9 December 2010, at which all relevant Ministries and stakeholders were represented. Feedback from Ministries, national stakeholders and IF partners was incorporated in the final draft.

The team would like to express its sincere thanks to the Manager of the Kiribati Integrated Framework for Trade (KIFT), Martin Tofinga, as well as KIFT staff Boorau Koina and Mwarietua Tembwa.

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.

Acronyms

ADB	Asian Development Bank
ADF	Asian Development Fund
AKL	Air Kiribati Ltd
AMAK	Aia Maea Ainen Kiribati (National Womens Federation of Kiribati)
ANZ	ANZ Bank
APTC	Australia-Pacific Technical College
AusAID	Australian Agency for International Development
DoT	Department of Tourism
DTIS	Diagnostic Trade Integration Study
EPU	Energy Planning Unit
EU	European Union
FIB	Foreign Investment Board
GDP	Gross Domestic Product
GNP	Gross National Product
GOK	Government of Kiribati
HRD	Human Resources Development
IF	Integrated Framework
ITC	International Trade Centre
IVS	International Visitor Survey
KANGO	Kiribati Association of Non-Governmental Organizations
KAP	Kiribati Adaptation Project
KCCS	Kiribati Copra Cooperative Society
KCMCL	Kiribati Copra Mill Company Limited
KIT	Kiribati Institute of Technology
KIFT	Kiribati Integrated Framework for Trade
KNEP	Kiribati National Energy Policy
KOIL	Kiribati Oil Company
KPC	Kiribati Protestant Church
KSEC	Kiribati Solar Energy Company
KSSL	Kiribati Shipping Services Limited
MCIC	Ministry of Commerce, Industry and Cooperatives
MCTTD	Ministry of Communication, Transport and Tourism Development
ME	Ministry of Education
MELAD	Ministry of Environment, Lands and Agricultural Development
MFAI	Ministry of Foreign Affairs & Immigration
MFED	Ministry of Finance and Economic Development
MFMRD	Ministry of Fisheries & Marine Resources Development
MHMS	Ministry of Health & Medical Services
MISA	Ministry of Internal and Social Affairs
MLPID	Ministry of Line and Phoenix Islands Development
MPWU	Ministry of Public Works and Utilities
MTC	Marine Training Centre
NAPA	National Adaptation Programme of Action
NEPO	National Economic Planning Office
NGO	Non-Government Organisation
OB	Office of the President

PIPA	Phoenix Island Protected Area
PRC	Peoples Republic of China
PRTDP	Pacific Region Tourism Development program
PUB	Public Utility Board
PSDS	Private Sector Development Strategy
RERF	Revenue Equalisation Reserve Fund
ROC	Republic of China (Taiwan)
SIDS	Small Island Developing States
SME	Small and Medium Enterprise
SPC	Secretariat of the Pacific Community
SPFM	Small Project Fund Matrix
SPREP	South Pacific Regional Environment Programme
SPTO	South Pacific Tourism Organisation
TA	Technical Assistance
TCP	Technical Cooperation Programme
TCSP	Tourism Council of the South Pacific
TPAC	Trade Policy Advisory Committee
UNDP	United Nations Development Programme
VB	Village Bank

Executive Summary

Kiribati is a vulnerable economy struggling to establish its place in an increasingly interlinked international economic order. A lack of economies of scale, distance from major markets and vulnerability are, like in many other small island developing states, obstacles to economic growth. Fresh water supplies and land area are limited. The country is spread over a bigger area of ocean than any other Pacific island nation, compounding transportation difficulties.

In recent years the global economic slowdown has weakened economic growth via the impact on the Revenue Equalization Reserve Fund (RERF), a fall in employment among seafarers and a slowdown in exports. This has created a fiscal challenge as government revenues decline whilst expenditures rise. International development assistance continues to form a large part of government revenues and an important source of foreign exchange. But while the challenges are many, this is not cause for undue pessimism. Changes in the international economy can bring with them new trading opportunities, which in turn can help support development.

Policymakers are aware that a more long-term reason for economic underperformance is the weak role played by the private sector. Government expenditure is worth over half of GDP and the public sector accounts for the majority of employment. It is not that government always fails per se, but that government is involved in several inappropriate areas. Deregulation or the sale of a number of state-owned enterprises is on the agenda, and a more competitive business environment and better incentivised management would help make the economy more dynamic. Partly, private sector growth will occur as public enterprises are sold. But consultations for the DTIS showed that existing private enterprises would also prefer a less heavy-handed approach, with government providing complementary activities rather than attempting to compete with the private sector. Private enterprises do not need to be directed as to which areas to operate in; amongst other things they need better transport, infrastructure and credit. In a more private-sector friendly environment, a number of businesses could flourish, particularly services exports such as tourism and overseas labour.

Liberalisation should not follow the kind of rapid structural adjustment undergone by other developing countries in the last two decades or so. Wide-ranging privatisation is inappropriate, especially if it is conducted quickly. Kiribati has a strong tradition of collectivism and public cooperation, and experience elsewhere suggests that certain crucial public services should remain accountable to government. In tiny, vulnerable economies, government needs to perform the roles of insuring against risk and backstopping against the possibility of interruptions to transport or sudden supply shocks.

As part of this redefinition of government's role, policy coordination could be improved. The development plan, President's Policy Statement and Ministerial plans need to be better aligned and simplified. Donor funding should also be aligned more closely with trade-related policy objectives.

While the desire exists to develop a more private-sector orientated business environment, realising this ambition will be a challenge. The share of GDP accounted for by the private sector shrank in real terms from 40% in 2001 to 26% by 2006. It will take considerable political will to stabilise the decline of the private sector, let alone achieve sustained growth. There are promising opportunities, however, particularly in tourism. Christmas Island's private sector will be driven by tourism to a larger degree than in Tarawa, specifically ecotourism and higher-valued marine products. Foreign direct investment can play a significant role in generating

growth and employment, especially given the relative lack of capital, technical know-how, and technology. The current investment procedure involves considerable paperwork and regulations, and there is a need to simplify the process. Low levels of private investment and entrepreneurship are partly the result of the high cost of finance and lack of access to credit, particularly for low-income earners and those without formal salaries. Land ownership also presents problems to domestic and potential foreign investors.

The concept of human development has particular relevance in a partly subsistence society such as Kiribati, where people can have low incomes but are reasonably well nourished and lead relatively fulfilling lives. Absolute or extreme poverty is rare. Certain groups, however, experience significant hardship, particularly among the 84% of the population, according to the last census, who have no regular cash incomes. Many people live in crowded homes with no good source of water, sanitation, or electricity, while urban drift to South Tarawa is high. Subsistence fishing and agriculture remain a vital social safety net, yet a lower level of biodiversity and a decline in some traditional subsistence food sources mean that people in Kiribati find it harder to fulfil their basic needs than those in some other Pacific island countries. Climate change, which will mean rising sea levels and coastal erosion, is likely to impact on the lives of the poor as Kiribati's scarce land area becomes submerged, crops are spoiled by seawater and buildings and infrastructure damaged. Due to the increasing costs of climate change, the government has already started to divert resources away from development toward urgent needs such as building sea walls.

Despite the government's admirable efforts to lead the campaign against climate change at the global level, human development, trade and the environment are not yet central to policy, even though the three are linked. Fisheries and agriculture, specifically copra-cutting, are sources of trade-related cash income and a traditional social safety net. The protection and replanting of coconut trees would help support the copra industry and provide for subsistence lifestyles. Maintenance of inshore fisheries also helps secure subsistence food sources. Better environmental regulation similarly has an impact on poverty reduction as well as the prospects for sustainable fisheries trade. Kiribati could make much more use of renewable energy sources such as wind, solar and biofuel.

Kiribati has high primary school enrolment rates but education can be improved, particularly secondary attendance. The quality of education and training needs to be raised, 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. Rather than build new institutions it would be better to partner and use vocational centres available in the region.

With the prospect of regional trade integration, and against a backdrop of declining government revenues, tax reform is a priority. The potential tariff revenue losses from trade liberalisation have been estimated at up to 17% of total government revenue. However if, as appears likely, import duties are converted into excise taxes, the main challenge of trade reform will be the administrative costs related to implementing the new tax regime. This means that trade integration becomes a bureaucratic burden rather than an exercise in improving economic efficiency.

Kiribati currently has no official policy on the various trade agreements with which it is involved, including the Pacific Island Countries Trade Agreement (PICTA); the Pacific Agreement on Closer Economic Relations (PACER) Plus; and the Economic Partnership Agreement (EPA) with the European Union. It is suggested that the DTIS form the basis of an official policy on these various agreements. Benefits can be derived from trade integration, but only if the

government has a clear and unified position based on a careful analysis of its own interests. One such benefit may be greater access for Kiribati citizens to work overseas. In chapter three, suggestions are made as to how the government might better take advantage of existing opportunities for labour mobility based on the experience of other countries in the region.

Trade facilitation is often neglected because it is a somewhat diffuse and nebulous activity for which no single government agency is responsible. Yet in Kiribati trade facilitation is one of the cross-cutting areas with the most potential to improve the trading environment. The Kiribati Integrated Framework for Trade (KIFT), with a committed full-time staff will facilitate and coordinate the implementation of the EIF programme, trade mainstreaming and trade facilitation – and this should be the focus of Tier 1 activities under the IF. A number of trade facilitation activities were identified in the DTIS as immediate priorities and these will be reviewed as Tier 2 projects are being developed. Of all the sectors discussed in the DTIS, tourism has perhaps the most potential. Kiribati's comparative advantage is probably not commodities export, but its large and extremely attractive natural environment. The sector is very small and underdeveloped, and a relatively minimal effort could lead to much higher yields. The industry has proven economic potential in the Pacific island region. The emphasis should be on building yield rather than increasing numbers, in order to maximize the economic benefits without growing visitor numbers in a potentially unsustainable fashion. Benefits should be spread throughout the nation and linkages made with the broader economy. It is essential to focus on environmental and cultural dimensions of sustainability, including linkages to cultural events and handicrafts.

Whilst tourism is a relatively untapped area with significant promise, this is not to discount the importance of fisheries. With an exclusive economic zone of 3.5 million square kilometres, an area bigger than the Caribbean Sea, Kiribati has long depended on the sea as an important source of livelihood. Global demand for new fishing grounds is increasing, putting Kiribati in a powerful position during the negotiation of international agreements. In order to maximise the sector's prospects the government will have to negotiate the best access agreements possible and to manage joint ventures properly, as well as to improve surveillance, observer coverage and port sampling. Upgrading of the institutions responsible for marine resource management and development remains important, while near-shore environmental management needs to be enhanced, both through government and traditional means. Diversification of fisheries should not be neglected, and sport fishing has potential, especially on Christmas Island.

In Kiribati, agriculture is less productive than in many other Pacific Island states. Biodiversity is low, whilst soils are among the poorest in the world. Yet agriculture is critical to people's livelihoods, and most people live subsistence lifestyles, fishing and harvesting food. Coconuts are particularly important, forming the basis of clothing, building materials, foodstuffs and drinks. Copra has also been a dominant export product, although the industry has declined in recent years. A critical task is to revitalise the industry either through re-merging Kiribati Copra Mill Company Limited (KCMCL) and Kiribati Copra Society (KCCS), a copra purchase contract, or a subsidy to the shipping company. Copra oil production should be encouraged, given that the world price for oil is usually at least double that for raw copra. As well as a number of other activities in the agriculture arena it may also be appropriate to reassess the government's agriculture-related activities to reduce perceived fragmentation and improve coordination.

Recommendations

In some developing countries, services exports can be overlooked. The traditional view is that only 'solid', value-adding or commodity-based industries like manufacturing or agriculture can generate export growth. But this is an idea that does not always apply to 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, new sources of labour mobility have considerable promise. Tourism probably has the highest cash-related future economic potential of any industry in Kiribati. This is not to suggest that traditional exports such as copra and coconut oil should be neglected, but that a process of relative reprioritisation should occur. 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 Kiribati's comparative advantage is probably in tourism rather than commodities export. Kiribati has an enormous, attractive and unspoilt natural environment. The industry has proven economic potential in the Pacific region, and tourism 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 prioritizing the tourism sector is that some other conventional sources of income, such as remittances and fishing licenses, have declined, placing emphasis on finding new sources of economic growth.

As well as 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. Trying to second-guess the market by initiating a series of small projects is likely to fail. The recommendation for a shift in emphasis away from specific economic 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 various 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.

A number of cross-cutting issues can be tackled together under the auspices of KIFT, which has the potential to become a dynamic and proactive proponent of trade mainstreaming in Kiribati. In the list of recommendations below and in the chapter on trade facilitation it is recommended that KIFT initially direct its energies toward enacting a trade facilitation programme. Capacity-building for KIFT toward trade facilitation activities should form a core component of Tier 1 funding under the IF.

As part of the Business Promotion Centre of MCIC, KIFT will act as the coordination centre for trade mainstreaming in Kiribati. Capacity building activities proposed under Tier 1 Funding should ensure that KIFT is well positioned to coordinate a trade facilitation programme which addresses a number of cross-cutting issues identified through the DTIS.

Given the need to prioritise, the DTIS does not propose the creation of any 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; or 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 on-going 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 Whilst the Kiribati Development Plan (KDP) is well-conceived and has strong national ownership, policy coordination could be improved. Efforts need to be made to simplify policy and to align government activities with the strategies of the KDP, President's Policy Statement and Ministerial plans. Donor funding should also be aligned more closely with trade-related policy objectives. The DTIS should be used as a focus for the government's prioritisation of trade-related activities with donors (see 3.2 below).
- 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 lagged the region. Telecoms, the copra industry, ports and accommodation are strategic areas in which deregulation may deliver better development outcomes. Certain key services, however, should not be privatised, including health, education and possibly environmental services. It is unlikely that any rapid programme of wholesale liberalisation would win political approval or popular support. Wide-ranging consultation will be needed before further liberalisation takes place, while the 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 The government revenue base needs to be broadened and strengthened so as to reduce reliance on fishing licence fees, income tax and import duties as revenue sources, ensuring that the tax regime remains progressive. The IMF Pacific Training Technical Assistance Center (PFTAC) is collaborating closely with the government on tax reform. Any future taxes must factor in the limited local capacity to enforce compliance and the likelihood that tariffs will fall under regional trade integration. The revenue base could also be strengthened by providing audit training and support to Customs and other key revenue collection agencies. With the introduction of ASYCUDA (see 4.2 below), this would also require key government systems to exchange information and produce relevant reports.
- 1.4 Consider establishing a standardised policy on tax exemptions for enterprises in trade-related areas. The rules by which exemptions are delivered are currently ad hoc and do not systematically promote trade. Removing the discretionary ability to grant exemptions as part of the overall tariff reform would help stabilise government revenues.
- 1.5 Increase or remove the limit on inward cash transfers, with the aim of increasing incoming foreign currency transfers and encouraging small and informal foreign and diaspora investments. Money laundering is not a problem.
- 1.6 Support the forthcoming International Monetary Fund (IMF) work on debt policy and statistical improvement. There is currently no debt policy, and data collection and compilation is weak. Consider training other government officials, particularly within the Ministry of Commerce, in the use and interpretation of trade-related data.

2. BUSINESS AND INVESTMENT

- 2.1 Encourage establishment of micro-financing schemes, with a focus on key sectors that have a proven record of return on investment and also job and income creation. Revive work on banking sector reform and develop regulatory mechanisms
- 2.2 Review land zoning procedures and legislation to ensure that adequate land is made available for Private Sector Development. Streamline procedures for obtaining land for private sector development. Ensure that potentially conflicting land uses (i.e. tourism and light industry) are not co-located.
- 2.3 Organise business training programmes targeting those who have already started a business or who need additional assistance in developing an idea.
- 2.4 In the school curriculum, emphasise Technical, Vocational and Educational Training (TVET) and business related topics to include financial literacy and entrepreneurship programmes. TVET already exists, but not in all schools. Build on successful youth business awards and initiatives.
- 2.5 Review all business licensing processes, procedures and fees structures and investigate the potential of establishing a National Business Licensing System.
- 2.6 Develop a policy/guidelines to restrict the ability of SOEs to diversify into sectors in which the private sector already operates. Support the move by Government in divesting ownership of selected SOEs to the private sector.
- 2.7 Support on-going work on investment policy. Develop an effective suite of on-line resources and application tools that can be used by potential investors to make better informed decisions and timely applications. Conduct additional investment promotion activities, particularly in tourism (see 6.2).
- 2.8 Establish appropriate legislation recognizing the role of the KCCI as the National Private Sector Organisation (NPSO).

3. TRADE POLICY

- 3.1 Develop an official trade policy based on the DTIS, giving more priority to trade in services, particularly tourism (see 6) and new opportunities for labour mobility (see 3.4).
- 3.2 Establish an overall position on various trade agreements, including PICTA, PACER Plus and the EPA with the EU. Ensure that all relevant government Ministries are represented in negotiations and that the outcome of negotiations is shared fully across government.
- 3.3 Overall, there is a need to better coordinate development policy in trade-related areas. This should consist of at least the following activities:
 - Consider streamlining the list of projects on the KDP.

- Break down statements in the President's national policy statement into more concrete and achievable objectives, and make them more consistent with the KDP and sector plans and MOPs, which use a more consultative approach.
 - Monitor the KDP more frequently, and distinguish it from monitoring of the MOPs.
 - Set up a database that is comprehensive enough to record and capture all donor assistance. The existing aid database in the Planning Office was not comprehensive enough for macro planning and policy formulation, i.e. too much data was missing, and total aid flows were not properly recorded.
- 3.4 It may be more appropriate to review labour mobility models from other countries, whereby legislation was put in place ensuring that recruitment is conducted by private-sector agents.

4. TRADE FACILITATION

- 4.1 Develop an integrated plan for sea and air transport, with options for making the shipping industry more regular, predictable and affordable. Guidelines should be established for all transport subsidies, including the maritime sector. This involves making sure that subsidies to transport sector activities have clear objectives and are situated within a comprehensive and coherent transport sector policy. Subsidies should be transparent, with the fiscal commitment clearly defined and subject to periodic review in the context of other government spending requirements. Wherever practical, subsidies should be allocated to service providers on the basis of open and competitive tenders of limited duration.
- 4.2 The Kiribati Integrated Framework for Trade (KIFT) should conduct a trade facilitation programme as part a tier 1 and tier 2 IF project, involving:
- Revitalisation of the National Trade Policy Committee and introduction of trade facilitation work under the leadership of KIFT. The Trade Policy Advisory Committee TPAC should serve as a coordination mechanism for work involving institutions including customs/quarantine, fisheries and KPA.
 - A feasibility study for ASYCUDA, conducted in conjunction with Tuvalu, 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.
 - The adoption of better and more reliable Internet access with a view to improving the coordination of trade-related activities, particularly at Betio port.
 - Joining the World Animal Health Organisation (OIE) to facilitate the export of live fish to Australia.
 - Work on standards and conformance to international regulations, initially with a view to exporting noni and virgin coconut oil. An additional centralised standards body is probably not a good idea in view of the additional administrative costs.

- Securing competent authority status for fisheries exports to the EU.
 - The testing of fish products.
 - Improved Customs valuation.
- 4.3 Support plans to extend the Betio wharf into deeper water.
- 4.4 Improve the Ministry of Commerce website, particularly the investment website. Link the website with Tourism.
- 4.5 Address the imbalance of resources between South Tarawa and Kiritimati (Christmas Island) in the area of trade facilitation.
- Apart from roads, basic infrastructure on Christmas Island is very basic. Power, sanitation, water and telecoms are all below the level required for realistic economic development. If they are not addressed according to a planned schedule as part of a long-term integrated approach, Christmas Island risks the same problems of overcrowding and pollution that afflicted Tarawa. Trade-related capacity building will be far more effective if basic infrastructure is put in place.
 - Customs needs to be upgraded as a matter of priority. The office has a shortage of personnel, no vehicle, no IT system, no boat and insufficient office space.
 - At the port, a new crane would help shorten unloading times. There is no storage facility.
 - Shipping is particularly irregular and unreliable. A franchise programme along the lines suggested in 4.1 may be the best option.
 - There is a particular shortage of finance for small companies. A basic microfinance programme would help with the growth of the private sector and encourage entrepreneurship.

5. HUMAN DEVELOPMENT AND ENVIRONMENT

- 5.1 Mainstream trade, poverty and human development policy. At the national level, the broader development policy discourse lacks recognition of the importance of mainstreaming of trade and human development. KIFT should ensure that trade issues are mainstreamed to ensure that on-going national policy discussions take into account the inter-linkages between trade and human development issues.
- 5.2 It will be important to remain aware of the linkages between human development, trade, agriculture and fisheries. Coconut replanting (see 8.) would not only help improve the prospects for coconut oil exports, it would ensure the maintenance of a traditional food source. The protection of fisheries stocks through well-implemented fisheries plans is necessary to maintain subsistence fisheries. It will be necessary to study these linkages further and to incorporate the findings in trade policy.
- 5.3 Improve secondary education enrolment, and increase labour productivity through enhancing regional partnerships and use of regional vocational training centres. The quality of education and training should be improved, and it should be relevant to the na-

tional context. Vocational training is primarily driven by labour demands and the nature of economic growth. The government will find it difficult to second-guess the market by training students in the right areas. Before substantial growth in the industry has taken place, it should initially partner and use vocational centres available in the region. This will be much cheaper than building new facilities. The currently small tourism sector does not justify building dedicated tourism training facilities.

- 5.4 Link trade negotiations with human development, acknowledging the following:
- Encourage incoming Foreign Direct Investors to take human development into account. Prioritise investments which have the potential to reduce inequality and spread economic activity across a wider geographical area.
 - Ensure that revenue losses from tariff reduction can be compensated, enabling existing levels of social spending to be maintained or increased.
 - 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.
 - Ensure full involvement of women in trade policy decision-making.
- 5.5 The government should be applauded for its leadership on climate change issues and should continue to raise the profile of climate change in the international arena. Selected other activities should be undertaken in order to record the impact of climate change, including surveying and GIS mapping (eg. 8.4 below).
- 5.6 Promote the use of renewable energy sources including wind, solar and biofuel. If appropriate, feasibility studies should be conducted on the use of biomass and fuel cell technologies. Conduct training in renewable energy technologies and energy management and efficiency.

II. SECTORAL RECOMMENDATIONS

6. TOURISM

- 6.1 Review current micro-finance funds. Strengthen fund options for tourism-linked sectors. Develop new funding options for the tourism sector.
- 6.2 Marketing and information technology. Enhance performance of the existing national website – with a focus on developing local content and reliable ways to update key events and information. Develop use of social media as a marketing platform.
- 6.3 Develop improved access to handicrafts and cultural experiences. Build capacity and enhance raw material supply for handicraft producers. Develop cultural tours to highlight and link into traditional crafts and culture. Provide opportunities to have a half day program in Kiribati customs or language.
- 6.4 Support and nurture the development of an industry-driven tourism association. The general feeling is that there needs to be better coordination of the development and promotion of tourism – something that has been identified in a number of previous reports.

- 6.5 Focus on developing the hospitality training capacity of the MTC. Develop a scholarship program for tourism training.
- 6.6 Develop and enhance domestic air services, including the exploration of potential to develop air service to Fanning, Washington and Kanton. Build on potential in the Gilbert group by enhancing reliability of services.
- 6.7 Develop niche markets that build on unique natural resources. Examples include bird watching on Kiritimati, PIPA and also battle-related tours on Tarawa
- 6.8 Improve processes for granting land for tourism development on Kiritimati. Develop zoning legislation that can minimize conflicting land uses
- 6.9 Simplify processes and procedures for foreign investment.
- 6.10 Build capacity of KNTO on Kiritimati and Tarawa develop a new strategic plan for tourism. Build capacity of Wildlife and Conservation Unit on Kiritimati and strengthen its ability to enforce regulations.

7. FISHERIES

- 7.1 Support the current move to develop onshore tuna loining facilities in a joint venture (JV) in order to value add to this fishery specifically in the establishment of a competent authority and the training of local staff to run and manage it. Assuming that the current JV eventuates, support the introduction of a medium sized fishing vessel for longlining and longer fishing trips off South Tarawa to fish for high value tuna to sell to the export market under the JV. The vessel need be affordable enough to be purchased by CPP through a loan from the Development Bank and fished by rotating crews of commercial fishermen.
- 7.2 Develop and implement national management plans in a number of areas:
 - Support the completion of the Tuna Development and Management Plan to ensure the sustainability of offshore fisheries. Also support a public awareness programme on the new Tuna Management Plan (once passed and released). Include in the draft Plan a provision to divert a percentage of funds derived from tuna vessel licensing to support the development of coastal fisheries including FAD programmes. Include a management plan for sharks in line with the ecological approach to fisheries management and address the likelihood they are being overfished from shark finning activities. Harmonize fisheries, environmental and resource management related legislation to support the decentralization of some degree of resource management autonomy to Island Councils.
 - Consider developing a plan for bonefish, in order to sustainably manage these stocks for food security, livelihoods and the further development of the sport fishing.
 - Finalize national management plans for the aquarium trade aimed at sustainable management. Increase capacity for the Fisheries Division to monitor the aquarium trade to ensure sustainability and reduce conflicts with an emergent tourism sector.

- Develop national sustainable management plans for coastal fisheries aimed at national food security, livelihoods and socio-cultural wellbeing. Provide further financial capacity to the Fisheries Division to effectively implement the coastal management plan including monitoring activities. This could be done in cooperation with the Environment and Conservation Division.
- 7.3 Upgrade the current small scale 5-7-m skiff-based tuna trolling fleet based at Tarawa to convert to vertical longlining so that they will be able to effectively compete in the new market environment once the JV commences. This will require training in vertical longlining skills to target high value tunas as well as access to credit to convert vessels and acquire new gear. This adaptation to vertical longlining will also require the deployment of FADs. Donor assistance may be necessary but they (and other coastal fisheries developments) could become self-financing, particularly if based on a system of small loans. Enact a national programme for training of fishers in fish handling and quality to improve fish quality standards especially to enable nationals to market high value tuna to the loining facility for export markets in an upcoming JV.
 - 7.4 Provide information/awareness on international commodity prices to assist the public in obtaining fair prices for the sale of fisheries products e.g. aquarium trade products, béche-de-mer, etc. Implement the existing béche-de-mer management plan so as to ensure the sustainability of the resource and potential for this resource to assist with rural livelihoods.
 - 7.5 Support the aquaculture of seaweed particularly on the outer islands where livelihoods are limited and prolonged droughts may affect copra production.
 - 7.6 Improve the collection and collation of coastal commercial data in order to obtain more accurate estimates of commercial production and revenue as well as changes in production.
 - 7.7 Support the strengthening of use of traditional nearshore management practices and the strengthening of customary marine tenure (CMT) systems to decentralize management of the coastal resources where appropriate (namely on the outer islands where de facto CMT systems prevail).
 - 7.8 Concentrate more on financial yield and domestic management of the offshore tuna fisheries including moving to the Vessel Day Scheme for longliners and include license conditions that increase employment benefits to I-Kiribati seamen and fishers.
 - 7.9 Continue to increase the support (including for 'debriefers') for observers and port sampling to improve data collection and promote sustainability. Continued capacity building for Fisheries Division personnel to analyse and interpret tuna statistics in collaboration with SPC/FFA will also be important.

8. AGRICULTURE

- 8.1 Review the government's agriculture-related activities to reduce perceived fragmentation and increase coordination within the Agriculture Division's programmes and activities as well as with related sectors. It may be worth considering devoting more human and financial resources to the Division. There is a shortage of staff, with many positions in the official structure still vacant.

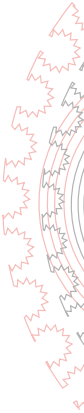
- 8.2 Conduct a coconut replanting programme.
- 8.3 Address the current shortage of copra to Kiribati Copra Mill Company Limited (KCM-CL) such that copra is available for the production of oil. A merging of the two management boards of KCMCL and Kiribati Copra Cooperative Society (KCCS), as in the past, is one option. Alternatively a copra purchase contract may be arranged with KCCS so that KCMCL is guaranteed a sufficient supply of copra. In order to regularize the supply of copra from outer islands, KCCS should consider establishing a contract with Kiribati Shipping Services Limited (KSSL), possibly including subsidies.
- 8.4 Consider providing support and assistance to the Environment Division in preserving the atoll environment and associated traditional knowledge as well as ecosystem integrity so as to promote food security and agro-biodiversity.
- 8.5 Survey traditional crop varieties on the Gilbert Islands. This would help assess the rate of loss of agro-biodiversity and establish an updated national baseline on extant varieties so as to gauge future losses including from impacts stemming from climate change and sea level rise. For the same reason it may be worth conducting Geographic Information Systems (GIS) mapping of the country so as to establish a baseline of babai pits, coconut groves, Ficus trees, breadfruit and pandanus, as well as coastlines.
- 8.6 Conduct further research and support on the home garden initiative to find other suitable crops and innovations to increase production. This could include trialling alley cropping techniques
- 8.7 Conduct a feasibility study on the use of windmills and solar powered pumps for use in the irrigation of home gardens and small commercial garden enterprises, particularly on Christmas Island.
- 8.8 Improve agricultural statistics. An agricultural census should be carried out every five years to coincide with the national population census, assessing the number of agricultural crops and livestock.
- 8.9 Conduct a feasibility study into the organic certification of selected agricultural products for export.
- 8.10 Direct specific attention to agriculture on Christmas Island. Recommendations that may also apply in other locations, particularly islands other than Tarawa, include:
 - Increased access to hand pumps for accessing ground water for use in home gardens
 - Assistance in selecting appropriate pandanus varieties for replanting for use in promoting food security, weaving and handicraft production
 - Small business management skills to assist women with fledgling agriculture enterprises (as well as handicrafts and tourism-related activities)
 - Access to micro-credit for agriculture and other livelihood enterprises
 - Help with project proposal development to access small grants
 - Many women's groups expressed interest in becoming trainers in the home garden initiative and becoming part of a 'train the trainers' programme run by the Agriculture Division.

Action no.	Action recommended	Requirements			Agencies involved	Time frame
		Implement existing policy	Change policy/legislation/Reform Institutions	Technical assistance/investments		
SECTION I. CROSS-CUTTING ISSUES						
1. Macroeconomic environment						
1.1	Policy coordination has proven somewhat lacking. Efforts need to be made to simplify policy and to align government activities.	X		X	MCIC Other ministries	Medium term
1.2	Support the strategic review of the various possibilities for the sale of state-owned enterprises.		X	X	MFED MCIC	Medium to Long term
1.3	Strengthen and broaden the government revenue base, taking into account work by PFTAC.	X		X	MFED, MCIC	Medium term
1.4	Consider establishing a standardised policy on tax exemptions for enterprises in trade-related areas.		X	X	MFED	Medium term
1.5	Increase or remove the limit on inward currency transfers of A\$5000.		X	X	MFED, MFAI, MCIC	Medium term
1.6	Support the International Monetary Fund (IMF) work on debt policy and statistical improvement.	X	X	X	MFED, MCIC	Short to medium term
2. Business environment and investment policy						
2.1	Encourage establishment of micro-financing schemes. Revive work on banking sector reform and develop regulatory mechanisms	X	X	X	MFED, DBK, KPF ANZ-BoK , MCIC	short-long
2.2	Review land zoning procedures and legislation to ensure that there will be adequate land made available for Private Sector Development.		X		MCIC, MELAD, MLPID	short-long
2.3	Organise business training programmes targeting those who have already started a business.	X		X	MCIC, KIT	short-long
2.4	Introduce into the school curriculum Technical, Vocational and Educational Training (TVET) and business-related topics.		X		MCIC ME MLHRD	short-medium

Action no.	Action recommended	Requirements			Agencies involved	Time frame
		Implement existing policy	Change policy/legislation/Reform Institutions	Technical assistance/investments		
2.5	Review all business licensing processes, procedures and fees structures, and investigate the potential of establishing a National Business Licensing System.	X	X	X	MISA, MCIC, MFED	short
2.6	Develop a policy/guidelines to restrict the ability of SOEs to diversify into sectors already covered by the private sector.		X	X	MCIC MFED OAG	short-medium
2.7	Support ongoing work on investment policy.	X		X	MCIC MFED OAG	short-medium
	Establish appropriate legislation recognizing the role of the KCCI as the National Private Sector Organisation (NPSO).	X			MCIC, KCCI, OAG	short
3. Trade policy						
3.1	Establish an overall position on various trade agreements.		X		MCIC, MFED	Medium
3.2	Develop an overall trade policy based on the DTIS, giving more priority to trade in services, particularly tourism and new opportunities for labour mobility (see 3.5).		X		MCIC, MFED, MLHRD	Short-medium
3.3	Overall, there is a need to better coordinate development policy in trade-related areas.	X			MCIC, MFED	Long
3.4	Consider reviewing models on labour mobility from other countries, whereby legislation was put in place ensuring that recruitment is conducted by private-sector agents.		X	X	MLHRD, MCIC	Short-medium
4. Trade facilitation						
4.1	Develop an integrated plan for sea and air transport, including options for making the shipping industry more regular, predictable and affordable.		X		MCTTD, MCIC	Medium
4.2	KIFT should coordinate a trade facilitation programme.		X	X	MCIC	Long
4.3	Support plans to extend the Betio wharf into deeper water.	X		X	MCTTD	Ongoing

Action no.	Action recommended	Requirements			Agencies involved	Time frame
		Implement existing policy	Change policy/legislation/Reform Institutions	Technical assistance/investments		
4.4	Improve the Ministry of Commerce website, particularly the investment website.		X	X	MCIC	Short
4.5	Address the imbalance of resources between South Tarawa and Christmas Island in the area of trade facilitation.		X	X	MCIC, MLPID, MFMRD, MELAD	Short-long
5. Human development and environment						
5.1	Mainstream trade, poverty and human development policy.		X	X	MCIC, MLHRD, MHMS, ME	Medium
5.2	Conduct analysis on the linkages between human development, trade and agriculture/fisheries.		X		MCIC, MLHRD, MFMRD, ME-LAD	Medium
5.3	Improve secondary education enrolment, and increase labour productivity through enhancing regional partnerships and use of regional vocational training centres.		X	X	ME, MLHRD	Medium-long
5.4	Link trade negotiations with human development.		X		MCIC, MLHRD	Long
5.5	Continue to raise the profile of climate change in the international arena.	X			MELAD, OB	Long
5.6	Promote the use of renewable energy sources including wind, solar and biofuel.	X	X	X	MW/PU	Short-long
SECTION II: SECTORAL RECOMMENDATIONS						
6. Tourism						
6.1	Review current micro-finance funds and provide suggestions for the optimal route forward. Strengthen fund options for tourism-linked sectors. Develop new funding options for the tourism sector.		X	X	MCIC, DBK	Short – Medium
6.2	Marketing and information technology – enhancing performance of the existing national website – with a focus on developing local content and reliable ways to update key events and information. Develop use of social media as a marketing platform.	X	X	X	KNTO	Short – Medium

Action no.	Action recommended	Requirements			Agencies involved	Time frame
		Implement existing policy	Change policy/legislation/Reform Institutions	Technical assistance/investments		
6.3	Develop improved access to handicrafts and cultural experiences. Build capacity and enhance raw material supply for handicraft producers. Develop cultural tours to highlight and link into traditional crafts and culture. Provide opportunities to have a half day program in Kiribati customs or language.	X	X	X	MISA, MELAD, MCTT	Medium – Long
6.4	Support and nurture the development of an industry driven tourism association		X		KNTO, MCIC	Short
6.5	Focus on developing the hospitality training capacity of the MTC. Develop a scholarship programme for tourism training.	X	X	X	MLHRD, MTC, KNTO	Short – Long
6.6	Develop and enhance domestic air services, explore potential to develop air service to Fanning, Washington and Kanton. Build on potential in the Gilbert group by enhancing reliability of services.			X	MPWD, MCTTD	Medium – Long
6.7	Develop niche markets that build on unique natural resources – bird watching on Kiritimati, PIPA and also battle related tours on Tarawa			X	MCTT, MELAD	Medium – Long
6.8	Improve processes for granting land for tourism development on Kiritimati. Develop zoning legislation that can minimize conflicting land uses	X	X		MELAD	Short - Medium
6.9	Enhance opportunities for foreign investment – there is a need to simplify processes and procedures.		X	X	MCIC	Short - Medium
6.10	Build capacity of KNTO on Kiritimati and Tarawa develop a new strategic plan for tourism. Build capacity of Wildlife and Conservation Unit on Kiritimati and strengthen its ability to enforce regulations.		X	X	MCTTD, MELAD, MLPID	Medium
7. Fisheries						
7.1	Support the current move to develop onshore tuna loining facilities in a joint venture	X		X	MFMRD, MFED, MELAD, MCTC, MFA, MHMS, MISA	Medium-long term



Action no.	Action recommended	Requirements			Agencies involved	Time frame
		Implement existing policy	Change policy/legislation/Reform Institutions	Technical assistance/investments		
7.2	Develop and implement national management plans in a number of areas		X	X	MFMRD, MELAD, MFED, MCTC, MISA	Short term
7.3	Upgrade the current small scale skiff-based tuna trolling fleet based at Tarawa		X	X	MFMRD, MFED, MCTTD	Medium-long term
7.4	Provide information/awareness on international commodity prices	X	X	X	MFMRD, MFED, MCTC, MFA	Short term
7.5	Support the aquaculture of seaweed	X	X		MFMRD, MFED, MISA, MCTC	Medium-long term
7.6	Improve the collection and collation of coastal commercial data	X			MFMRD, MFED, MCTTD, MFA, MHM	Medium-long term
7.7	Support the strengthening of use of traditional nearshore management practices	X	X		MFMRD, MFED, MCTTD, MISA, MHM	Medium-long term
7.8	Concentrate more on financial yield and domestic management of the offshore tuna fisheries	X	X		MFMRD, MFED, MISA	Medium-long term
7.9	Continue to increase the support (including for 'debriefers') for observers and port sampling	X			MCTTD, MFMRD, MFED, MFA	Medium-long term
8. Agriculture						
8.1	Review the government's agriculture-related activities to reduce perceived fragmentation and increase coordination.		X		MELAD	Short

Action no.	Action recommended	Requirements			Agencies involved	Time frame
		Implement existing policy	Change policy/legislation/Reform Institutions	Technical assistance/investments		
8.2	Conduct a coconut replanting programme.	X			MELAD	Medium
8.3	Address the current shortage of copra to Kiribati Copra Mill Company Limited (KCMCL)		X		MCIC, MCTTD	Medium
8.4	Consider support and assistance to the Environment Division in preserving the atoll environment and associated traditional knowledge	X		X	MELAD, MISA	Short-medium
8.5	Survey traditional crop varieties on the Gilbert Islands.		X		MELAD	Medium
8.6	Conduct further research and support on the home garden initiative		X	X	MELAD	Short
8.7	Conduct a feasibility study on the use of windmills and solar powered pumps		X	X	MWPU	Short
8.8	Improve agricultural statistics.		X		MELAD	Medium
8.9	Conduct a feasibility study into the organic certification of selected agricultural products for export		X	X	MELAD	Medium
8.10	Direct specific attention to the development of agriculture on Christmas Island.		X	X	MELAD, MLPID	Medium

Section I. Cross-Cutting Issues

1. Macroeconomic Environment

1.1 Introduction

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

1.2 Background

The Republic of Kiribati (pronounced Kiribass), with a population of 92,533 according to the last census in 2005, is one of the most isolated countries in the world. Situated on either side of the International Date Line, as well as north and south of the equator, it comprises 32 coral atolls spread across 3.5 million square kilometres of ocean, an area bigger than the Caribbean Sea. Almost half of the population is concentrated in the Gilbert Islands, which includes South Tarawa, the capital. The country's total land area is only 811 square km. About 1,480 km east of the Gilbert Islands lie the Phoenix Islands, a group of eight largely uninhabited low-lying atolls and reef islands. Further east are the Line Islands including Kiritimati (Christmas Island), some 3,330 km from Tarawa. Christmas Island is the world's largest atoll in terms of contiguous landmass (388 square km), accounting for almost half of Kiribati's land area but only about 5% of the population. Kiribati is among the countries expected to suffer the greatest impact of climate change.

Although there is no extreme poverty, on the most recent UNDP Human Development Index on which it featured, Kiribati ranked 12th of 14 Pacific island countries and 129th in the world. Illnesses associated with malnutrition exist, particularly on the outer islands. HIV/AIDS is a growing problem in South Tarawa.¹ School enrolment is close to 100%, but reporting of attendance is unreliable and the figure masks other shortcomings in the education system. Kiribati has ranked very low on the UN economic vulnerability index since 1991, with a score of 50 or below for most of these years². Kiribati was ranked joint 91st out of 178 countries on the 2010 Transparency International Corruption Index³.

Kiribati's economic potential is limited by: (i) natural resources, especially land and fresh water, which are under substantial pressure from environmental change and a growing population; (ii) a small domestic market with little potential for economies of scale; (iii) widely scattered and sparsely populated islands (where the outer islands basically have a subsistence economy, with

¹ At the time of writing there were 56 known cases.

² A level of 100 is considered sufficient to consider a country for graduation from Least Developed Country status (alongside criteria on human capital and income).

³ Its score of 3.2 put it alongside Bosnia Herzegovina, Djibouti, Guatemala, Gambia, Sri Lanka and Swaziland.

limited cash employment opportunities outside the public sector); (iv) difficult and expensive access to major international markets; (v) a small private sector and long-standing tradition of government domination of mainstream commercial activities; and (vi) few options for the diversification of the economy from its current dependence on coconut oil, fish and remittances from I-Kiribati people overseas.

Kiribati nevertheless enjoys several advantages, including an unspoilt and attractive natural environment, with significant under-exploited potential in tourism; relatively large foreign reserves in the Revenue Equalization Reserve Fund (RERF) initially established by the UK colonial administration prior to independence; a strong traditional culture among the I-Kiribati, which promotes social stability and family welfare (although gender equity remains a concern)⁴; high literacy rates; and potential in fisheries and low-skilled services exports.

1.3 Composition of the economy

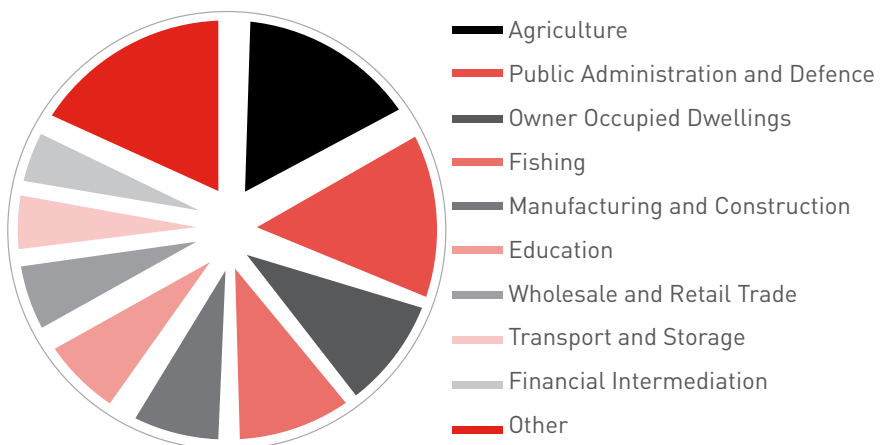
Agriculture (including subsistence) has comprised the biggest single economic activity over the last 20 years, accounting for around 16% of GDP according to official GDP data. Public administration is the next biggest part of the economy, reflecting (along with education) the significant role of government in the economy⁵. Fishing accounts for a tenth of GDP according to official government statistics, slightly larger than manufacturing and construction. Wholesale and retail trade, transport and storage and financial intermediation make up the next largest activities, with a number of other smaller activities comprising the remainder of GDP.

It is worth noting that the figures in GDP data should only be considered approximate. Subsistence income continues to be estimated on the basis of the 2005 Household and Income Expenditure Survey. As noted in section 1.6 below, as with other data, trade and balance of payments data may be inaccurate. Independent estimates suggest that the fishing sector is considerably bigger than official GDP statistics suggest. For example Gillett (2009) estimates annual income from fisheries in 2007 at A\$45 million, approximately 16 times higher than official data for that year.

⁴The World Bank gave Kiribati a rating of 2.5 on a scale of 1 to 6, with 6 being the highest. <http://www.tradingeconomics.com/kiribati/cpia-gender-equality-rating-1-low-to-6-high-wb-data.html>

⁵Breaking down GDP differently, government expenditure is worth over half of GDP. In 2004, it was estimated that the public sector provided two out of every three formal jobs and four out of every five dollars of pay (Watergall 2007).

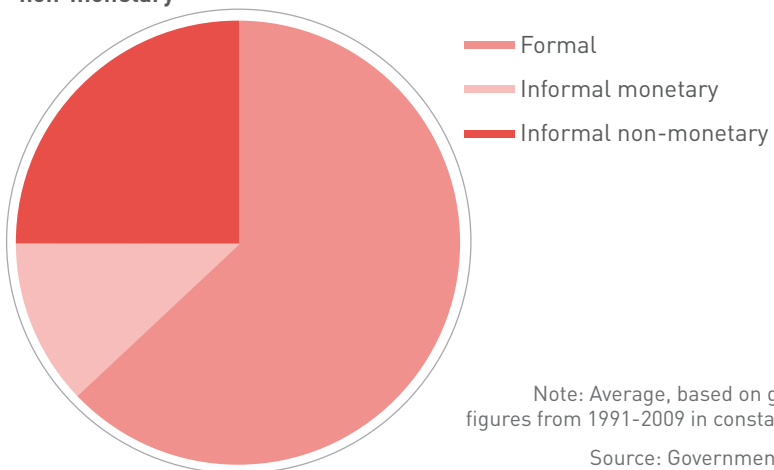
Figure 1.1: Composition of GDP by major activity



Note: Average, based on government figures from 1991-2009 in constant 2006 A\$.

Of total GDP, the official statistics show that the formal economy currently accounts for 63%, having grown from just over half of GDP in 1991. The informal economy accounts for the remainder of economic activity. Within the informal economy, a third of economic activity is monetary and the remainder non-monetary.

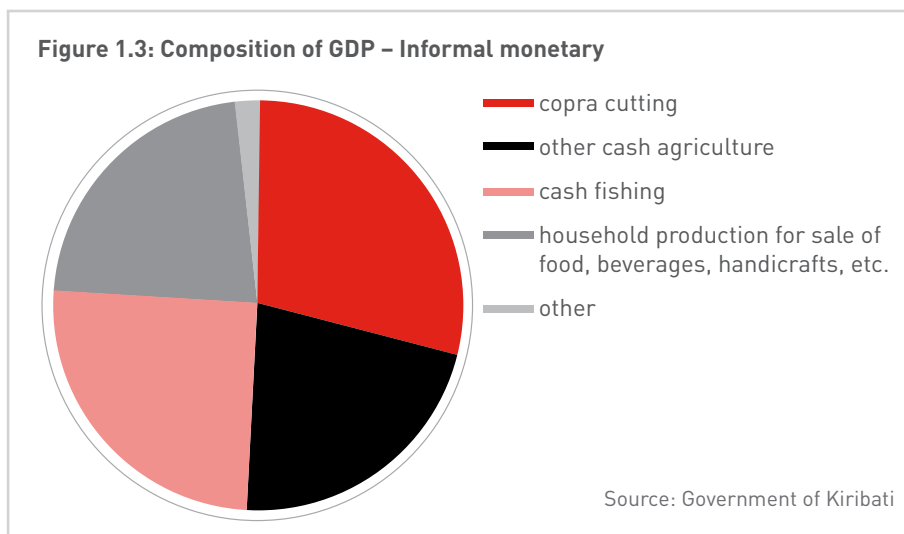
Figure 1.2 : Composition of GDP – formal, informal monetary and informal non-monetary



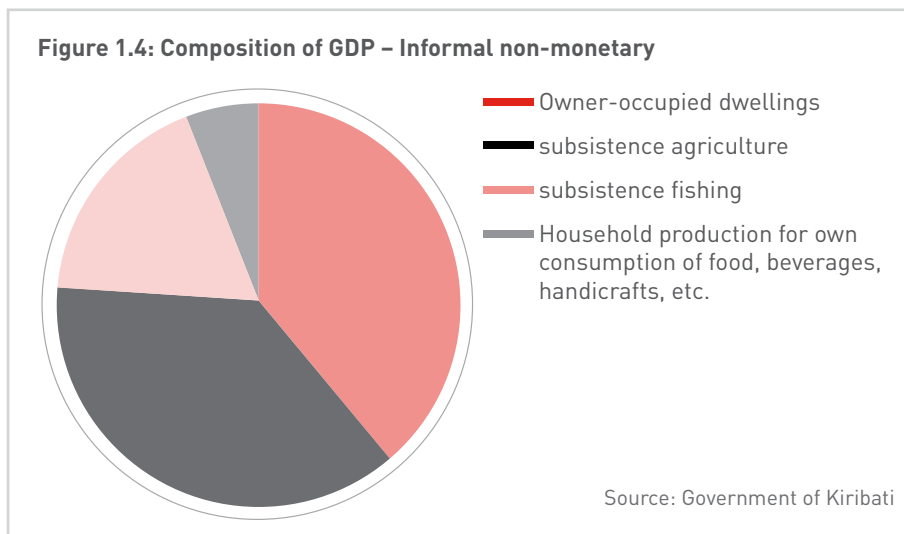
Note: Average, based on government figures from 1991-2009 in constant 2006 A\$.

Source: Government of Kiribati

Copra cutting is estimated to account for almost a third of informal monetary activity, with fishing and other cash agriculture comprising about a quarter of activity each. Household production for sale of food, beverages, handicrafts and other items accounts for the remainder of informal monetary activity.



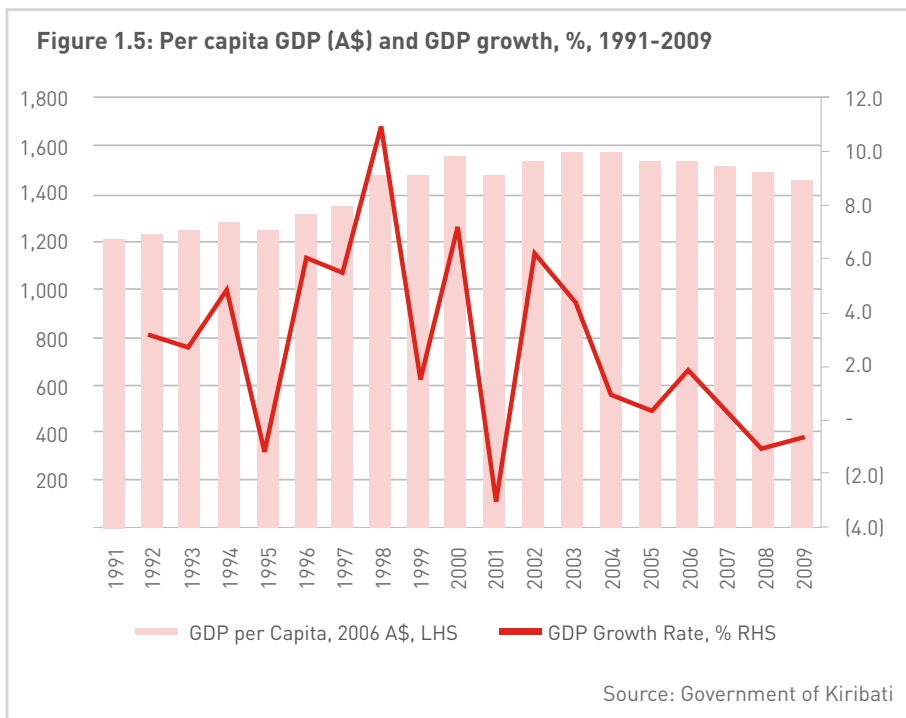
Within the non-monetary sector of the informal economy, owner-occupied dwellings are estimated to account for 39%, followed by subsistence agriculture at 37%. Subsistence fishing accounts for 18% of activity in this area, with household consumption of food, beverages, handicrafts and other items comprising the remainder.



1.4 Economic growth and inflation

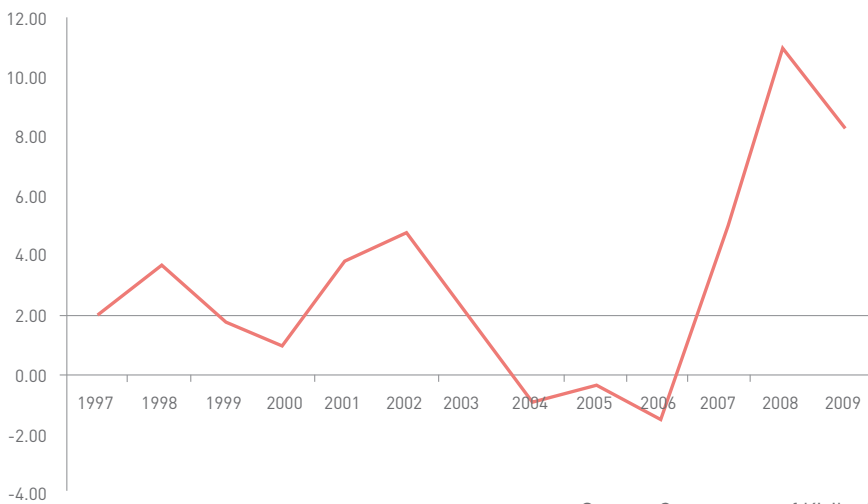
Economic growth has been volatile over the past two decades, reaching a peak of 11% in 1998 before dropping to -3% in 2001. In recent years growth rates have declined, registering negative figures in 2008 and 2009. Reflecting this recent downturn, per capita GDP fell steadily from 2003 to 2009 following a decade of almost uninterrupted growth. As the following graph shows, per capita GDP had by 2009 fallen to pre-1998 levels in real terms. The social impact of the downturn has been marked, with unemployment, particularly of youth, very high. As a small, isolated and open economy dependent on worldwide economic conditions, Kiribati suffered particularly from the downturn in the global economy from 2008 onwards. Remittances from seafarers working abroad, which account for 15% of foreign exchange earnings, declined as a result of slowing growth in developed countries. In 2009 income from the Kiribati Revenue Equalisation and Reserve Fund (RERF) halved from the year before, when it funded 40% of government expenditure (World Bank 2010: 64).

At the time of writing the Asian Development Bank had lowered its forecast for economic growth in 2010 to 0.5% from 0.8%, citing the decline in remittances and a fall in demand for copra from major consumers including China and India.



Inflation has historically been moderate, as might be expected of a country which uses the Australian dollar. A period of retail price deflation from 2004 to 2006 was followed by a spike in inflation to nearly 11% in 2008, a result of the rise in international food and commodity prices. The latest figures show that retail prices rose 8.4% in 2009. Food, drinks, alcohol and tobacco all increased in price by more than the yearly average, with a disproportionate impact on the poor, although there is price control of basic necessities including flour, sugar, rice and tinned meat. The Asian Development Bank forecasts consumer price inflation of 5.4% in 2010.

Figure 1.6: Annual retail price index, percentage change, 1997-2009

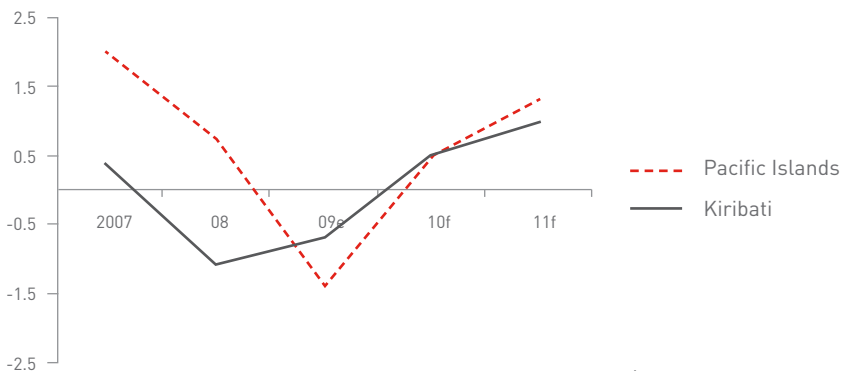


Source: Government of Kiribati

1.5 Comparative economic performance

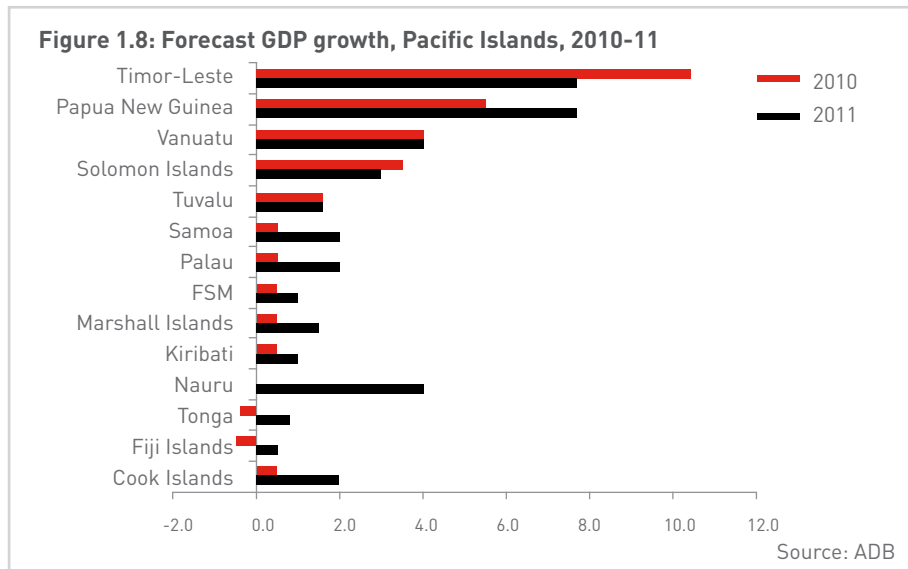
Kiribati’s economy grew more slowly than the Pacific islands as a whole in 2007 and shrank in 2008, although it contracted slightly less than the regional average in 2009 and is forecast to grow as quickly in 2010 and almost as fast in 2011.

Figure 1.7 : GDP growth, Kiribati versus Pacific island states, 2007-2011



Sources: ADB/ Government of Kiribati
 NB. 2009 estimate for Pacific islands; 2010 and 2011 forecasts for Pacific islands and Kiribati.

Of the 14 Asian and Pacific island economies included in the following graph of GDP growth forecasts for 2010 and 2011, Kiribati ranks fifth from bottom. Only the economies of Tonga, Fiji and the Federated States of Micronesia are expected to grow less quickly in 2011. Several of the more dynamic regional economies, such as Vanuatu, have benefited significantly from increased tourism inflows. Fiji has suffered a prolonged recession following the latest coup and tourism is now recovering. Similarly the Cook Islands, which experienced a period of slow growth from 2008 to 2009, is expected to benefit from an expected upturn in tourism. The current highest economic performers, Timor-Leste, Papua New Guinea and Solomon Islands, have significant mineral and resource wealth and have benefited from an upturn in international commodities prices in recent years. Tourism forms a only small part of Kiribati's overall economy and there are few other major prospective drivers of private sector activity.



1.6 Balance of payments

Kiribati has historically run a large trade deficit, financed chiefly by external grants but also by tourism, fishing license fees, investment income (mainly from the RERF) and the remittances of seafarers. The current account deficit hit a peak of A\$59.6 million in 2005 before moderating in subsequent years. Aid payments dominate the capital account. The latest figures show that the current account deficit is A\$48.9 million, approximately 40% of GDP.

Table 1.1: Balance of payments, 2003-9, AUD million

	2003	2004	2005	2006	2007	2008	2009
Goods credit	5.5	4.2	6.8	4.3	13.3	10.3	8.1
Goods debit	79.6	80.8	100.1	82.5	83.7	87.9	85.4
Goods balance	-74.1	-76.6	-93.3	-78.2	-70.3	-77.6	-77.3
Services credit	14.3	6.9	7.3	4.9	7.3	6.1	6.1
Services debit	48.3	42.7	56.7	43.0	56.5	69.5	64.1
Services balance	-34.1	-35.8	-49.4	-38.0	-49.2	-63.4	-57.9
Goods and services balance	-108.1	-112.4	-142.8	-116.2	-119.6	-140.9	-135.2
Primary income credit	62.2	63.7	64.4	70.6	71.3	76.1	67.7
Primary income debit	2.6	4.6	7.9	10.5	10.9	6.4	5.6
Primary income balance	59.6	59.1	56.5	60.2	60.3	69.7	62.1
Secondary income credit	34.2	28.9	31.9	26.4	20.1	22.4	30.1
Secondary income debit	5.7	5.0	5.3	5.5	5.8	5.9	5.9
Secondary income balance	28.5	23.9	26.7	20.9	14.3	16.5	24.2
Current Account Balance	-20.0	-29.5	-59.6	-35.2	-45.0	-54.7	-48.9
Capital account							
Capital transactions credit	34.2	28.9	31.9	26.4	20.1	22.4	30.1
Capital transactions debit	-	-	-	-	-	-	-
Capital Account Balance	34.2	28.9	31.9	26.4	20.1	22.4	30.1
Net lending/borrowing (Current+Capital Accounts balances)	14.2	-0.6	-27.7	-8.8	-24.9	-32.3	-18.7
Financial Account							
Net incurrence of assets	11.0	-13.3	-16.1	-17.5	13.8	-5.0	6.5
Net incurrence of liabilities	1.6	-3.8	2.5	1.1	1.3	2.7	7.7
Net lending/borrowing (Financial account)	9.4	-9.5	-18.6	-18.6	12.6	-7.7	-1.2
Net errors and omissions	4.7	9.0	-9.1	9.8	-37.4	-24.6	-17.6

Source: Government of Kiribati

1.6.1 Reliability of data

Official trade data appears somewhat unreliable. It conflicts in several areas, notably the balance of payments and the official trade data issued by the Department of Statistics. This is surprising, since the data sources are the same. During interviews for the DTIS, statistics staff confirmed that they are aware of the problems and are working to resolve them. An IMF programme is in place aimed at improving collection and reporting of Balance of Payments, National Accounts and Government finance statistics. It is acknowledged that trade data are particularly unreliable before 2005 when the PC Trade Customs entry system was launched. Exports from Christmas Island are also believed to be misclassified owing to inaccurate reporting at the border. No trade statistics have been published since 2008. This particularly affects statistics on copra and aquarium fish, the island's major exports.

The following table, drawing on separate information from the balance of payments (BoP) data and trade statistics, shows major discrepancies since 2003 when BoP data became available. The figures in the two columns should be the same but they differ by an average of A\$1.2 million a year over the seven years shown.

Table 1.2: Balance of Payments (BoP) versus trade balance, 2003-9

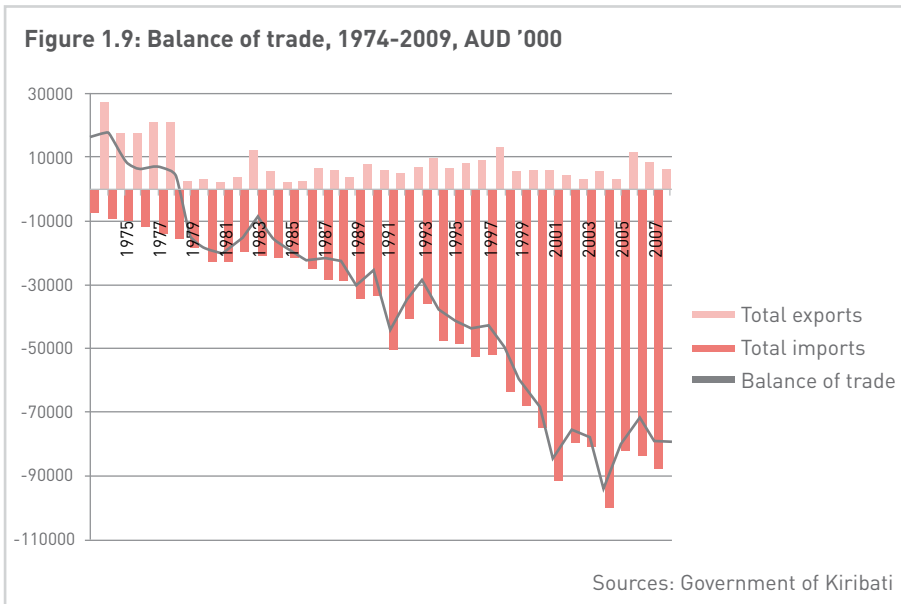
Year	Goods balance according to BoP	Trade balance according to trade statistics
2003	-74.1	-75.03
2004	-76.6	-77.4
2005	-93.3	-94.44
2006	-78.2	-79.05
2007	-70.3	-71.54

Anecdotal evidence further confirms the unreliability of trade data. Consultations for the DTIS revealed that revenues at the copra oil mill, the biggest single source of exports and the sole source of crude copra oil in the country, were A\$4 million in 2007. Data from the Department of Statistics shows crude copra oil exports of A\$5.9 million during 2007. A difference of A\$1.9 million is worth 16% of exports or 1.3% of GDP. Whatever the reason for this major discrepancy it is clear that trade statistics need to be improved, whether through a better Customs entry system, especially in Christmas Island (see the chapter on trade facilitation), enhanced liaisons between the Departments of Statistics and Customs, or improved auditing of the oil mill's accounts.

Although general trends can be discerned from the existing data, and they give a rough picture of trade trends, without improvements trade policy will lack the precision required and will not be based on solid foundations. Inaccuracies in trade data affect the national accounts, the accuracy of which is, itself, open to question. The IMF programme is extremely worthwhile and should be supported, as should other statistical improvement programmes. In addition to training of staff from the Departments of Statistics, it may be worth considering training Trade officials and those from other government departments in the compilation and interpretation of statistical evidence.

1.7 Trade performance

Following the end of phosphate exports from Banaba after independence in 1979, exports remained volatile and low. The latest data shows that total goods exports comprised 5% of GDP in 2009, very small even by the standards of Pacific island countries. This sum is all the more meagre considering that it includes re-exports in the form of scrap metal, personal effects and the occasional re-selling of capital equipment. After independence, total imports (expressed as a negative in the graph below) rose steadily along with the expansion of the formal economy. The trade balance deteriorated as a result. According to official government figures (which, as already noted, conflict with the data in the balance of payments above) the trade deficit reached an all-time high of A\$94.5 million in 2005 before moderating in recent years with the recent pick-up in exports and fall in imports, itself a result of faltering GDP growth.



1.7.1 Direction of trade

By country, the two biggest single sources of imports are Australia and Fiji, at around a third of the total each. Other major sources of imports have included France, New Zealand, the United States, China, Switzerland and Japan, although some on an ad hoc basis. The proximity of Christmas Island to Hawaii, and resumption of regular flights, explains the relatively large proportion of imports coming from the United States.

Domestic exports, principally coconut oil, sea cucumber and copra, go to Taiwan and Hong Kong, with Australia a distant third, followed by Vietnam and the Philippines. As noted above, re-exports form a considerable proportion of total exports. Re-exports to Australia are 1.7 times the size of domestic exports to Australia. The majority of exports are to Asia, and none go to other Pacific island states, a fact that has implications for Kiribati's membership of regional trade agreements.

Table 1.3: Imports and exports by country, 2009, A\$'000

Imports	
Country	Value
Australia	25,254
Fiji	22,198
France	5,871
New Zealand	5,694
USA	4,860
China	4,189
Switzerland	3,593
Japan	3,508
Singapore	1,545
Phillipines	1,151
Indonesia	1,041
Malaysia	995
Virgin USA	914
Hong Kong	842
Taiwan	841
Thailand	728
Viet Nam	725
United Kingdom	529
India	359
Netherlands	345
Samoa	221
Korea	168
Other	340

Domestic exports	
Country	Value
Taiwan	1,696
Hongkong	1,587
Australia	635
Vietnam	518
Phillipines	413
China	34
Japan	3

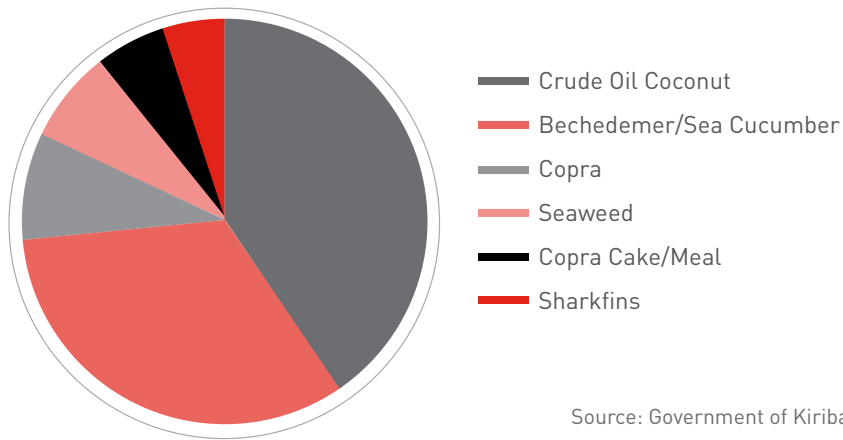
Re-exports	
Country	Value
Australia	1078
Fiji	665
Taiwan	23
Japan	20
New Zealand	20
Hong Kong	10
Tuvalu	1

Source: Government of Kiribati

1.7.2 Composition of trade

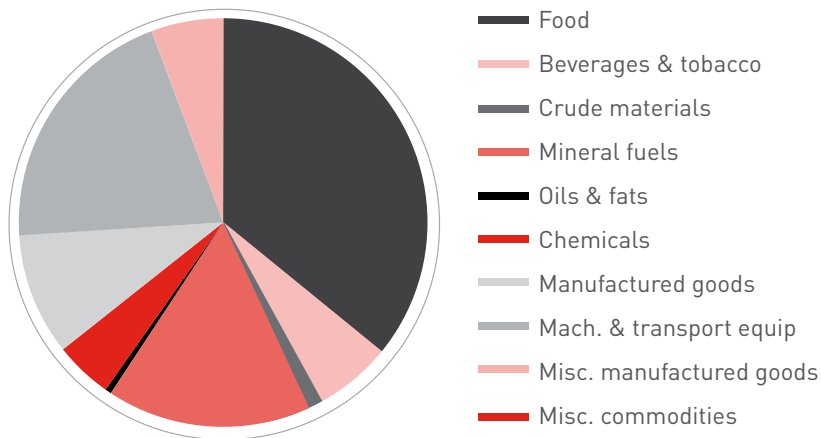
Major exports are copra and copra meal, coconut oil, sea cucumber, seaweed, aquarium fish and shark fins. In some years Kiribati has exported small volumes of handicrafts. Notably for a country with such a large Exclusive Economic Zone, commercial offshore fish do not feature significantly in export statistics because there is a limited domestic fishing fleet and landing and processing takes place overseas. Most fisheries-related income is in the form of fishing licenses to foreign vessels, small amounts of aquarium fish and sea cucumber exports, and remittances from I-Kiribati employees on fishing vessels. Plans for a joint tuna loining venture in Tarawa between Central Pacific Producers Limited (CPPL) and two foreign companies, the Fiji-based Golden Ocean and China's Shanghai Fisheries are likely to boost fisheries exports in coming years.

Figure 1.10: Exports, 2009



Imports by major classification are shown in the following figure. Food imports are the biggest single item, totalling A\$30.8 million in 2009. Machinery and transport equipment is the next biggest import, at A\$17.5 million, followed by fuel at A\$13.9 million.

Figure 1.11: Imports by major SITC* item, 2009



Source: Government of Kiribati
 * Standard International Trade Classification

1.8 Macroeconomic policy

1.8.1 Fiscal policy

In the short term Kiribati faces a testing financial situation owing to stagnant economic growth and declining revenues, alongside substantial expenditure. Fiscal policy faces additional pressure as a tool of economic management since the country uses the Australian dollar and therefore has no monetary policy. The tax base needs to be widened, a reality acknowledged by the Ministry of Finance and the Department of Customs, but this should not be at the expense

⁷ Fishing license revenues are discussed in more detail in chapter 7.

of private sector growth. Moving certain state-owned enterprises out of government ownership would help ease the budgetary position – but equally using revenue generation as a motivation for privatisation should not unduly influence the course of any liberalisation programme. The objective of liberalisation should be to improve long-term economic growth and human development rather than simply to raise government revenues in the short term.

For 2010 the recurrent expenditure budget stands at A\$87.52 million, a reduction of about 1% from the original 2009 budget. Expected revenue is A\$68.60 million, leading to an expected budget deficit of around A\$18.92 million, approximately 12% of GDP. Major revenue items for the government include import duties (A\$17.79 million or 16% of total revenue), fishing licenses (A\$30.50 million, 44%)⁷ and income tax (A\$12.45 million, 18%). The total Development Fund budget for 2010 is A\$48.86 million. Of this the government contributes A\$7.11 million.

As well as the three sources above, fiscal revenues rely considerably on the RERF, which has been well-managed until now compared with some other regional trust funds. However the government cannot continue to rely to the same extent on the RERF, which has performed badly in recent years owing to the global economic crisis. Reforms on both the revenue and expenditure sides of the budget are necessary in order to prevent further financial difficulties. In addition to revenue reforms, modernisation of the tax collections department is needed, along with greater collaboration between relevant government departments. Improvements to statistics collection would help target policy decisions, as would widespread consultations on the KDP and simplification of development-related objectives. As noted in the chapter on trade policy, copra subsidies should be reviewed and possibly replaced with a subsidy band related to the world price rather than an absolute nominal value set under the government's policy statement.

1.8.2 Kiribati Development Plan (KDP)

One of the main advantages of the KDP 2008-11 is that for the first time since independence the development plan was drafted by local government officials and consultants, as a result closely reflecting domestic interests. The importance of national ownership should not be underestimated. Even with the best intentions, an externally-driven plan that does not reflect popular concerns is unlikely to be fully effective. In some other countries, weak ownership of the national development plan has weakened support for its objectives within government and amongst the population at large.

Given that Government expenditure accounts for over half of economic output, the KDP shows awareness that the private sector must take a greater role in the economy.⁸ The 27 key state-owned enterprises include two hotels, the broadcasting company, the television company, the port authority, the copra mill, the insurance corporation, the airline and the development bank (see annex 1 for a full list). At the time of writing one public company was being tendered for sale – the hardware supplier Kiribati Supplies Company Limited. Betio Shipyard Limited was said to be in line for tender. The Atoll Seaweed, the Tarawa Biscuit company, and the Supply Division have closed, and others are in a difficult financial situation. In a number of other areas it would be advisable to enlist private management if not to conduct further liberalisation. The poor management of public enterprises is one reason why economic growth has lagged the region.

⁸ Trade-related policies are examined in more detail in the chapter on trade policy.

According to an on-going study by the ADB on public finance management, including the performance of public or state-owned enterprises (SOEs): *“...it is clear that several SOEs are in a perilous financial condition, that government provides subsidies to SOEs through a variety of means, most of which are not transparent, and that ministers are accustomed to make appointments to SOEs boards, and to give directions to the boards, in ways that are not always in the best interest of the SOEs.”*⁹

Private sector representatives consistently complain about the inefficiency of public monopolies and unfair competition from SOEs. As a result of government monopolies, prices are higher than they should be in several areas – such as at the ports and in telecommunications. Liberalisation should help lower prices, with benefits for the rest of the economy. It is also possible that private management would be more efficient and capable of running enterprises at a level which comes closer to international standards.

Some private sector representatives even complain of government restrictions on their activities – for example one retailer was prevented from chartering a plane to fly in goods, with little economic or legislative reason. Government should be encouraged to avoid the unwarranted limitation of proactive private sector initiatives, especially in areas of public benefit.

Telecommunications is an area where liberalisation could prove particularly successful. Other Pacific island countries, such as Tonga, Vanuatu, Samoa and Fiji, provide examples of the benefits of telecoms liberalisation (see the chapter on the business environment). In the two and half years after telecoms reform in Vanuatu mobile telephone coverage rose from about 20% of the population to nearly 90%. Mobile penetration increased from about 11 to 52 per 100 people over the same period. In Kiribati, the service is poor, intermittent and over-priced, while several outer islands have no telecommunications service at all.

It is also likely that more private sector involvement would assist the copra industry, particularly if the copra mill were merged with the copra society and moved out of government control. Competition in an increased number of port services would also help lower prices. The government should offer its two hotels – the Otintaai and the Captain Cook – for sale. A number of other companies should be either privatised, corporatised or the sector opened up to competition.

In a difficult global economic environment, government is concerned that privatisation would mean losing vital revenues from state-owned enterprises. But in several instances, taxing a larger, privately-run company would prove more lucrative to government than to attempt to retain dwindling dividends from an inefficient public monopoly.

There is a pervasive wariness about liberalisation among civil servants and politicians, even though most appear to acknowledge that liberalisation is necessary. The nation’s economic vulnerability means that government must be larger than normal in order to insure against risk, whilst the small size of the economy will always limit the number of market participants and therefore competition. Experience from elsewhere in the world, and particularly from structural adjustment in the Pacific (Gay 2004) suggests that civil servants and politicians are right to be wary. Liberalisation should be undertaken carefully and slowly, according to a sequenced programme. Shock therapy does not work. It is also apparent from a number of other regional experiences that certain services should not be privatised, including health,

⁹The formal project name is “TA No 7166-Kir: Economic Management and Public Sector Reform”.

education and possibly environmental services. Ultimately, the egalitarian and public-spirited culture of Kiribati (ADB 2009) is to be valued, and it is unlikely that any programme of major liberalisation conducted over a short timescale would win political approval, let alone achieve popular support.

1.8.3 Development assistance

Major donors include Australia, New Zealand, Japan, Taiwan, the ADB, European Union and the World Bank. Other active donors include the World Health Organisation, Canada, SPREP, SPC, IMF, FFA, the UNDP and UNFPA. In Kiribati as in a number of other Pacific Island Countries, development aid forms an important source of foreign exchange. Total aid was A\$53.4 million in 2009 according to the following table (from the Department of statistics), an amount worth a third of GDP and the equivalent of at least A\$400 per person. According to officials in the Department of Statistics these figures are more accurate than the National Planning Office (NPO) figures, the most recent of which show that total development assistance was A\$90.6 million in 2008. The large difference between the NPO and the table below showing development funds by source is explained by the fact that the government accounts show only pledged aid rather than actual expenditure. Annually, considerable funds remain unspent and are rolled forward to the following year. Kiribati suffers both from low absorptive capacity and difficulties in obtaining accurate levels of official development assistance from donors themselves.

Table 1.4: Development funds by source, 2001-2010, A\$'000

Country	2001	2002	2003*	2004	2005	2006	2007	2008	2009	2010*
Australia**	7975	9181	9650	11231	11000	8952	9203	10815	10962	15009
Taiwan	0	0	0	12384	13223	10148	10399	11000	10614	11000
NZ	3320	298	3804	3971	3099	3244	3240	3618	5447	6024
World Bank	0	37	0	550	208	1058	2531	4379	3627	4000
EU	4136		7807	7250	8450	3615	1994	8449	8954	2740
UNDP	393	853	693	1568	682	300	360	666	3748	1299
SPC	122	45	23	26	0	0	43	595	694	993
WHO	327		832	1312	272	0	108	0	9	365
UNICEF	78		225	132	0	0	27	40	3478	204
Others	0	0			0	3	12	7	2749	1
Canada	364	500	285	115	0	0	0	0	0	0
United States	401	0	2500	2500	2500	2500	2500	0	0	0
Forum secretariat	179	200	1	24	0	0	416	249	0	0

Forum Fisheries Agency	435	582	200	115	272	0	0	0	308	0
SPREP	244	0	132	107	5	100	11	10	10	0
Japan	4238	0	0	0	9576	9000	9000	1200	1985	0
South Korea	94	4093	61	0	0	0	0	0	0	0
China	3233	6858	14635	7600	0	0	0	0	0	0
Asian Development Bank	6250	0	11983	6300	13853	12000	12000	0	0	0
Germany	70	375	10	10			0	0	0	0
France	17	7257	392	157	109		0	0	6	0
Italy	0	144							0	0
UK	165	99	163	184	15	0	14	10	10	0
UNIFEM	0	176							0	0
UN Economic Social & Cultural Org.	25	100			0			0	0	0
UNFPA	100	0		47	68	0	0	0	668	0
UNEP	0	0	297	195	100	0	0	0	165	0
India	0		0	0	0	0	0	136	0	0
Total aid	32166	30798	53693	55778	63432	50920	51858	41174	53434	41635

Source: Government of Kiribati

* Estimate

** Estimate 2005-2010

In some areas there is a misalignment of donor spending with the KDP. According to Rouatu (2010), aid coordination could be improved, while the recording of aid should also be enhanced. There is also an absence of trade-related donor activities, and the DTIS is expected to contribute in this area.

Taiwan donates around A\$11 million every year. Taiwan's priorities are physical infrastructure and medical and transport services. Taiwan has assisted many farmers on South Tarawa through its agriculture research facility in Temaiuku. Taiwan is also assisting people to set up their own 'mini' markets along the roads on South Tarawa where they sell local vegetables and handicrafts.

AusAID assistance focuses on human resource development and public sector improvement. Its 2009 aid programme includes assistance to the Tax, Customs and the Tourism office, as well as scholarships and training.

The focus of aid assistance from New Zealand is similar to that of Australia, which is on human resource development, including relevant infrastructures. In recent years New Zealand has provided funds for the construction of new classrooms and marine facilities at the marine training school.

The Japanese government provides assistance mainly for marine or fisheries infrastructure such as fish cold centres and fish aggregating devices. Some of the larger projects recently funded by Japan are the ship port on Betio and the road on South Tarawa.

In the 10th EDF, The European Union (EU) focused on renewable energy, water, and sanitation. In the previous EDF the focus was on construction of health clinics on the outer islands, and aggregate mining on South Tarawa¹⁰. In the past the EU assisted the copra industry through the STABEX fund.

1.9 Conclusions

Kiribati has a vulnerable economy beset by many of the problems of small island states. The country is struggling to establish a niche in a globalising world, and economic growth has fallen in recent years. Apart from the normal disadvantages encountered by small island states such as lack of economies of scale, distance from major markets, fragmentation and vulnerability, Kiribati faces some particular challenges. Domestic and international flights and shipping are even more infrequent than in many other comparable countries. The country is spread over a bigger area of ocean than any other Pacific island nation, while there is, as yet, no major exportable natural resource other than fish. Fresh water supplies and land area are limited.

The government is aware that the private sector should take a greater role in the economy, and it is making plans to privatise a number of companies. Undoubtedly the economy would benefit from liberalisation through a more competitive business environment and better incentivised management. Yet a number of options for liberalisation are available above and beyond the kind of rapid structural adjustment scenario experienced by other countries in the last two decades or more. Wide-ranging privatisation is inappropriate, especially if it is conducted quickly. Kiribati has a strong tradition of public cooperation, and the experience of other countries suggests that certain crucial public services should remain accountable to government. In tiny, vulnerable economies, government needs to perform the roles of insuring against risk and backstopping against the possibility of interruptions to transport or sudden supply shocks.

Partly because government is so large and contains a number of powerful institutions, policy coordination has proven somewhat lacking in recent years, and efforts need to be made to align government activities with the strategies of the KDP, President's Policy Statement and Ministerial plans. Considerable simplification could occur in this area. Donor funding should also be aligned more closely with trade-related policy objectives.

Kiribati's strong traditional culture has significant human development advantages precisely because it is separate from the cash macro-economy. The large size of the subsistence and informal economy can in some ways be a benefit, as it can provide food security in times of downturn or during natural disasters and it gives some economic stability. The consumption of home-grown food is a form of import substitution, in effect making the import bill smaller than it otherwise would be. Formalising the significant informal cash economy could, in theory, be one way of expanding government revenues, but it is probably sensitive to taxation. Any attempt to enforce taxation could prove administratively difficult and may further increase depopulation of the outer islands.

¹⁰ This project is still in its preparation stage.

The trade deficit has risen steadily since independence. The slight moderation in the trade balance from 2007 onwards is unlikely to be sustained since it has mainly been driven by a downturn in the economy rather than export growth. Some value-adding to exports exists in that copra is processed into coconut oil. But diversification away from traditional exports is desirable if further expansion of the trade deficit is to be avoided over the long term. Several products that have been exported in small numbers in recent years, such as shark fins and aquarium fish, have a viable future but can be environmentally unsustainable, are not monitored well, and cannot be relied upon as a major future source of export growth. Opportunities exist in fisheries and low-skilled services exports. The joint venture in fish loining is a positive development and is expected to result in significant employment generation and foreign exchange earnings. However given Kiribati's particular difficulties with geographic dispersion, land area and remoteness; it is unlikely that goods exports other than fisheries will become a dominant source of income in the years ahead. Services exports, particularly activities related to tourism may prove one of the most promising areas of future economic growth. Tourism is examined in detail in the chapters on business environment and tourism.

2. Business and Investment

2.1 Introduction

This section focuses on the current business environment, with a particular emphasis on enabling private sector development and growth and, if possible, encouraging inward investment and trade. The discussion covers the following core areas:

- Investment policy regime
- Banking and finance sector – access to credit
- Institutional framework for enterprise support
- Main business entities (SME, micro, large etc)
- Feasibility of donor IF funding for small scale manufacture
- Training and HRD
- Possible legislation for enterprise support
- Other enterprise support/development issues

A review of each of the areas is presented along with a discussion of some key approaches that can be taken to enhance performance. Where appropriate, cases are drawn from consultations to highlight key issues and how they play out within the private sector.

The section concludes with an Action Matrix of key 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

Kiribati is characterised by public enterprises operating in a number of economic sectors: marine services, fuel supply, insurance services, hardware retailing, boat-building and chandlery, interisland fish transport, biscuit-making, hotels, copra crushing, and general stores. Public enterprises also control public utilities, telecommunications, the domestic airline, port operations, the Betio–Bairiki causeway, and development banking and home finance (ADB 2008)

Current government policy is to shift less strategic state owned enterprises (hotels, trading, and manufacturing activities) to private ownership and to encourage private sector development as a key tool for creating economic opportunity and improved quality of life (MCIC 2009; PITIC 2008).

The private sector is largely engaged in public transport, motor vehicle importing, building, construction and light engineering, garage businesses, wholesale and retail stores, bakeries, restaurants, furniture making; boatbuilding, guest houses and rental accommodations, computer services, Internet cafés, music and entertainment, tailoring and dress-making, domestic fisheries, export of bêche-de-mer and aquarium fish, and licensed money-lending (ADB 2008). Much recent growth has been in the general stores, public buses, and money lending areas. In terms of professional services there are few private accountants and lawyers and an absence of private medical practitioners, dentists, and pharmacists (ADB 2008).

Private sector economic activity outside urban areas is largely limited to copra production, handicrafts and fishing (most of which are carried out at the informal household or artisanal level). Tourism is beginning to grow in significance outside the traditional hubs of South Tarawa and Kiritimati but development is relatively slow and is low scale. The cruise ship sector that used to dominate the economy of Fanning and to a lesser extent Christmas Island has now all but disappeared.

There is a desire expressed by government in the Kiribati Development Plan (KDP) to expand the private sector and to strengthen and encourage small informal businesses and self-employment. There is also a strong will to present a more welcoming attitude toward foreign direct investment that can create employment and broaden the base of the economy.

The recent Private Sector Development Strategy (MCIC 2009) highlights a number of key variables that show Kiribati's overall performance in private sector development and the creation of a supportive business environment. The World Bank's annual Cost of Doing Business survey is presented to show Kiribati's global ranking in a range of key business environment areas (Table 2.1). Kiribati ranks very poorly in a number of key areas – particularly in starting a business and getting credit. In both of these important categories Kiribati slipped backwards in its ranking. Kiribati only improved in 3 of the 10 categories listed.

Table 2.1. Kiribati ranking: World Bank's annual Cost of Doing Business survey

Indicator	2010 Ranking	Change from 2009
Starting a business	119	-8
Dealing with construction permits	71	+3
Employing workers	29	+1
Registering property	66	+3
Getting credit	135	-4
Protecting investors	41	-3
Paying taxes	10	0
Trading across borders	77	-5
Enforcing contracts	80	-2
Closing a business	183	0

The domestic economy is dominated by government which contributed about 60% to 75% of total outputs for the period 2001 - 2006. The private sector share has continued to shrink and was down to 26% in 2006 (Table 2.2). Efforts are under way to reform the cooperatives movement. The legal and administrative framework for cooperatives still exists, but consumer cooperatives have proven unable to compete with private shops.

Table 2.2 Relative role of private and Government sectors, 2001-06

	2001	2002	2003	2004	2005	2006
Private Sector	40.0%	36.2%	34.7%	29.0%	26.2%	25.7%
Government Sector	60.0%	63.8%	65.3%	71.0%	73.8%	74.3%
GDP at 1991 prices	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

MCIC, 2009

Table 2.3 shows the average annual growth rate of each industry sector for 2001-2006. Only manufacturing, hotels/bars and agriculture were able to increase average annual outputs over the period, while sectors like wholesale/retail saw significant declines

Table 2.3 Annual growth rate of industries, 2001-06

	2001	2002	2003	2004	2005	2006	Ave
Private Sector							
Informal							
Copra cutters	9.9%	-9.5%	72.1%	17.5%	-49.8%	8.2%	8.1%
Transport - Private	-7.6%	2.3%	0.3%	1.0%	2.8%	-2.9%	-0.7%
Owner occupied	-9.0%	26.2%	-10.2%	9.2%	3.7%	0.4%	3.4%
Formal							
Copra Society	-23.3%	50.2%	10.6%	-1.2%	-9.7%	0.0%	4.4%
Other crops	8.3%	0.0%	0.0%	7.7%	14.3%	0.0%	5.1%
Fishing	-16.8%	-0.8%	1.3%	1.0%	-3.4%	0.4%	-3.1%
Seaweed	57.2%	-76.9%	-7.7%	-20.0%	37.3%	-6.9%	-2.8%
Manufacturing	19.2%	-15.1%	23.4%	-3.8%	-0.7%	0.7%	4.0%
Construction	31.5%	-36.6%	-26.9%	-5.3%	20.2%	-0.6%	-3.0%
Wholesale /Retail	3.9%	-0.4%	-9.1%	-34.6%	-4.1%	-1.9%	-7.7%
Hotel/Bars	1.4%	9.2%	17.4%	10.6%	0.1%	1.0%	6.6%
Transport - Public	-26.0%	12.7%	-21.4%	-31.8%	-2.4%	-6.7%	-12.6%

Source: MCIC 2009, MFED

It is clear from these figures that while the government is expressing a desire to develop a business environment that will nurture the private sector there are real challenges in actually doing so. It will take political will and considerable economic change to reverse or stabilise the decline of the private sector, let alone bring it back to a period of sustained growth.

Consultations generally revealed a slightly positive outlook towards the future of the private sector. While problems and issues were highlighted by the representatives from both the public and private sectors, and many were facing difficult times, there was a feeling that opportunities were beginning to emerge as the government began to implement new ideas and policies. There was particular attention given to the Private Sector Development Strategy as being a major factor in improving opportunities. Those from larger companies and particularly those operating in the tourism sector, were generally more positive than smaller/non-tourism companies, and those operating in the retail sector.

There was a much less positive view expressed about the ability to attract foreign investment to the country, with major concerns expressed about the inability to attract any foreign investment interest in Christmas Island.

Consultations highlighted a number of conditions that local businesses and policy makers felt were needed to enable development of private enterprise in Kiribati, whether it be driven by domestic or foreign investors. In both Christmas Island and Tarawa 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 and longer term loans. There was also some desire expressed for assistance in reaching overseas markets (both for export markets and tourists).

Tax rates are felt to be too high and in need of some simplification. 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 too complex and need to be streamlined and made more transparent. Access to land is an issue throughout the nation – in Tarawa it is about a lack of availability whereas on Christmas Island it is about having the available resource freed up by government.

Reliability in public utilities was also highlighted as a problem – with a focus on telecommunications and electricity raised most commonly. From an infrastructural perspective there was a feeling that domestic shipping services require investment and improvement and that while domestic flights have improved in the Gilbert group there is still some way to go in terms of reliability of service. 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.

The ADB (2007) points out that Christmas Island’s private sector will be driven by tourism to a larger degree than in Tarawa, specifically ecotourism and higher-valued marine products; and the land and housing sector. The ADB argues that Christmas Island has a more vibrant private sector than Tarawa – partly because of fewer family ties and obligations existing on the island given the relatively recent migrant status of many there. The ADB (2007) highlight a number of key constraints that are particularly significant for Kiritimati: access to State Lands; unreliability of transport services both air and shipping; and a lack of autonomy from Tarawa.

2.3 Investment policy regime

Foreign direct investment can play a significant role in generating growth and employment especially in Kiribati where there is an obvious lack of capital, technical know-how, and technology. Unfortunately the prospective foreign investor experiences considerable paperwork and regulations. The existing investment process is summarized in step-by-step form below and is drawn from the current Foreign Investment Application Procedures (MCIC 2008):

1. Completed and signed foreign investment application form is submitted to the Foreign Investment Commission (FIC). A bank reference and police clearance record of all concerned applicants accompanies this.
2. Upon receipt of the proposal and supporting documents, copies are disseminated to all relevant Government Ministries/Organisations, including the Ministry/Authority directly related with the proposed venture, for appropriate comments. This normally takes 2-3 weeks.
3. The proposal is then referred to the FIC for consideration. Referral could be delayed if clarification or additional information is required from the concerned applicant. If the total

initial investment envisaged is less than A\$250,000 the FIC can make a final decision (either to approve or reject), but if the total investment is above this amount the FIC must put a recommendation to Cabinet for the final decision. FIC meetings are usually convened at least once every month.

4. Once the proposal is approved, the prescribed FIC registration fees are paid to the Ministry of Commerce, Industry and Cooperatives. Delay in issuance of FIC certificates can then be expected given that all draft certificates should be referred to the Attorney General's Office for perusal and clearance, before being issued to concerned investors.
5. After the proposal has been approved and the FIC registration certificate has been issued, the proposed venture must also comply with all conditions of the license. The conditions always include a requirement for the approved venture to comply with all laws of Kiribati. All foreign investment projects involved with the purchase, process and export of marine products should comply with the requirements set out under the Fisheries Act.
6. Every foreign investment project that wishes to operate as a company must be incorporated with the Registrar of Companies (Attorney General's Office). The relevant incorporation documents can be obtained from the Registrar of Companies.
7. The documentation states that land is one of the major constraints on Tarawa and this has been one of the contributing factors that could delay implementation of approved foreign investments. It goes on to note *"However, you could count on our assistance to try and liaise with the concerned authorities to identify and facilitate the required formalities. Furthermore, the land tenure system in Kiribati and relevant legislation prohibit foreigners/non- citizens to purchase land. Instead, foreigners could only lease or sub-lease land from either the Government or individual local landowners. Please feel free to contact the Director of Lands should you need further information relating to land"*.
8. A further prerequisite requirement is the need to apply for work permits for all expatriate personnel who will be employed in the project. The application for work permits should be in a prescribed form and to be submitted to the Ministry of Foreign Affairs and Immigration (MFAI). A fee of A\$120.00 per person per annum is also charged by MFAI.
9. A further important statutory requirement, which applies to all local and foreign investors, is the need to seek clearance from the Minister of Environment, Lands and Agricultural Development prior to implementation of commercial development in Kiribati.

The document concludes with the statement that: *"After all, we are obliged to render every assistance possible (if required) to all interested and genuine foreign investors who are willing to contribute to the sustainable development of our small island nation"*.

The tenor of this last passage sums up the document as a whole – it is not welcoming, it makes it feel that the country is doing the investor 'a favour' by dealing with the application and it is not particularly encouraging or helpful.

This issue is heightened by a number of other problems with the document. The reader is invited to *"visit our web site for more information pertinent to foreign investment climate in Kiribati: <http://www.mic.gov.ki/test1>"*. Unfortunately this link does not work. At the same time while there are many different individuals that are recommended to be contacted from a range of Ministries but rarely are email addresses provided – simply telephone and mailing addresses.

At the moment the main information provided for investors can be found on the Kiribati National Tourism Office website and main tourism site (<http://www.kirbatitourism.gov.ki>). But this also leads to confusion as to who is meant to be handling foreign investment – is it MCIC and the Senior Foreign Investment officer or is it the KNTO? As the site mentions:

“Foreign investment or joint venture partnership with local investors is strongly encouraged. The Kiribati National Tourism Office can provide more information on foreign investment procedures when required.”

It is not easy for a potential foreign investor to get the range of information they need to make informed decisions. A simple audit using the search phrase ‘Invest in Kiribati’ reveals a rather limited and outdated array of information on the first page of search results (see Table 2.4): none of which points to the MCIC Application Procedures document or the KNTO site. The most highly ranked site is the South Pacific Tourism Organization which provides only basic and dated investment information, and a range of other sites either contained no relevant information (Proinvest) or are not working (PITIC).

Table 2.4: Top five Google responses to query: Invest in Kiribati

1.	South Pacific Tourism Organisation - Kiribati - Guide To Tourism...A range of incentives is offered to those wishing to invest in Kiribati . These incentives are not automatic but available on a case-by case basis. ... www.south-pacific.travel/spto/export/sites/.../investment/kiribati.shtml
2.	Invest Igator - Kiribati LinkedIn View Invest Igator’s (Kiribati) professional profile on LinkedIn. LinkedIn is the world’s largest business network, helping professionals like Invest Igator ... www.linkedin.com/pub/invest-igator/20/333/aa7
3.	Kiribati PRO€INVEST Name: Kiribati Surface: 811.0kmÂ... ... Kiribati . Surface: 811.0km². ISO 3166 alpha3: KIR. Capital: South Tarawa. Population: ... Pro€Invest Interactive ... www.proinvest-eu.org/country/kiribati
4.	TBR.cc: Hot Topic author embarrasses himself in public 14 Nov 2010 ... A range of incentives is available to those wishing to invest in Kiribati . These incentives are not automatic but are available on a ... briefingroom.typepad.com/.../hot-topic-author-embarrasses-himself-in-.html
5.	The Republic of Kiribati A range of incentives is available to those wishing to invest in Kiribati . These incentives are not automatic but are available on a case-by-case basis. ... www.atollinstitute.org/.../Asian%20Development%20Bank%20-%20Kiribati%20Profile.pdf

The Government of Kiribati imposes restrictions on Foreign Investment only where local expertise or local industry already exists or where the local, natural or social environment could be adversely affected. Examples of areas which are closed for foreign investment include:

1. Local industries: piggery farming, poultry farming, handicrafts
2. Scarce endangered species: coconut crab harvesting, turtle hunting, giant clam harvesting bone fish etc.

Investment in a 'pioneer status' business enables a reduction in corporate tax to 10% for up to 5 years. Tax rates are currently also reduced for investment in the islands other than Tarawa and Christmas Island – in this case there is no tax charged for five years. Current business tax rates are 25% <\$25,000, \$25-50,000 30%, >\$50,000 35%

Clearly there are issues to be addressed beyond access to information, as the PSDS (MCIC 2009) notes: *"Some of the current laws and regulations are outdated and lack transparency and are too discretionary. These need to be reformed if they are to stimulate the flow of foreign direct investment."* The strategy goes on to state: *"There is also a need to streamline procedures and processes so that applications and communications connected to FDI are speeded up prospective flow easily, and projects. Where there are loopholes in the laws and regulations, it is important to rectify and straighten them up"*.

There is a critical need to simplify the FDI process. In particular the information on land related issues needs to be given more clarity. Land is probably the hardest thing for investors to understand and grapple with and yet it receives very limited attention in the document and the investor is given only a vague reassurance that someone will 'try' to assist them in these matters. There is a general lack of transparency about processes, fees and who to approach. The role of local councils is also given very limited attention.

It should be noted that at the time of writing the FIC Act was being reviewed and new policies were being drafted.

2.4 Banking and finance – access to credit

Low levels of private investment and entrepreneurship are partly responsible for the country's poor economic growth performance in recent years. An important reason for the low investment and levels of entrepreneurship is the high cost of finance and lack of access to credit, particularly for low-income earners and those without formal sector salaries. Problems in accessing finance have a particularly negative impact on business start-ups.

There are two major sources of finance in Kiribati for the private sector – the ANZ Bank (Kiribati) Ltd and the Development Bank of Kiribati. The ANZ Bank (Kiribati) Ltd is incorporated in Kiribati and owned by the ANZ Banking Corporation (75%) and the Government of Kiribati (25%). ANZ Bank (Kiribati) Ltd is presently the only commercial bank in Kiribati, providing comprehensive banking services from its head office at Bairiki and branches at Betio and Bikenibeu (closed June 2012) in Tarawa and London, Christmas Island.

Most enterprises and households in Kiribati with financial assets or liabilities are likely to have had some dealings with ANZ Bank (Kiribati) Ltd, its business policies and interest rate structure are of great importance to private sector performance (ADB 2008). The bank lends at commercial rates for a wide range of business and individual purposes, but the difficulty of using land and moveable assets as security means that most lending for business is done

against cash flow performance. For individuals, lending is usually against deductions from salary, with upfront equity provided by partial withdrawal of Kiribati Provident Fund balances (ADB 2008).

The DBK is an important source of small loans, and in 2008 had approximately 3,000 loans outstanding with an average balance of \$3,200 (ADB 2008). DBK is relatively well positioned to help with private sector growth, provided bank management remains sound. In collaboration with MCIC and the Ministry of Environment, Land and Agricultural Development (MELAD), DBK is encouraging development of investment projects for fruit (pandanus and banana) growing, processing, and preserving using small-scale equipment for the domestic market. It also has a role to play in the tourism sector and has been working with the KNTO on projects relating to conference/meetings facilities at the Otintai Hotel.

The critical challenge facing the DBK is how to assist in the development of solid business plans that can present a compelling case for loans. There is only one Business Development Officer in the bank itself. There are five staff in the Business Promotion Centre of MCIC that play some role in helping to develop business plans – although they are not always busy. However the business development officer in the DBK did not mention the MCIC input and was generally critical of the quality of most proposals that reach the bank.

The MCIC office on Christmas Island struggles to provide support for business planning and potential investment. Staff numbers have been reduced over time, largely through attrition. There is a particular need for a trained Business Development Officer, someone that can perhaps work alongside the KNTO office in tourism related projects. It is also important to remember that limited staffing makes it very difficult for employees to take training-related leave.

A further option for funding of private enterprise activity is the Village Bank system. The ADB (2008) states that there is a network of 177 village banks on 23 islands with a revolving fund averaging \$11,500 per bank, held by their managing committees as trustees for village communities. Twenty-one banks have revolving funds of over \$20,000. About 4,600 loans are currently outstanding, averaging 26 per bank, with an average loan size of \$445.

During consultations, no mention was made of Village Banks as a source of business funding, although there is undoubtedly some link to the handicraft sector on the outer islands. No business on South Tarawa or Christmas Island indicated receiving loans from the Village Bank Network.

The PSDS (MCIC 2009) argues that while Banks place great emphasis on the risk associated with projects and the ability of the project proponent to repay the loan, they need to be encouraged to take more well considered risks. There is a feeling that some viable projects are turned down because the proponent lacks adequate collateral. Viable projects that lack proper capital should be encouraged, especially if they are in sectors that have good prospects for future development. The PSDS suggests that banks exempt viable projects from their normal collateral cover requirements, while government, with the assistance of its developing partners, should revive the already enacted loan guarantee corporation whose purpose is to guarantee such viable projects.

Box 2.1 | Case study – a small retailer on Christmas Island

Teouria and Eritabeta represent the Kiribati Business Association (KBA), which has up to 100 members, mostly small businesses in retail, fishing, buses, accommodation, workshops, bakeries and car rental. Teouria until recently ran a small cooperative store in the village of Tabwakea, explaining that she found it increasingly difficult to turn a profit owing to the increasingly small margins chargeable above wholesale prices coupled with an increase in government rental rates (government owns almost all land on the island). Rent recently rose to A\$75 per month, from A\$50.

Another problem is that ships are irregular and unreliable, so that Teouria could not always stock her shop. Sometimes a ship's entire cargo is sold before the ship leaves the island. When on occasion supplies run out entirely, some customers revert to their traditional diet of fish and coconuts. It is difficult to obtain capital, and cash flow can be a problem. The bank won't lend to small businesses. Christmas Island has no microfinance organisations. The initiation of a microfinance programme should be one of the recommendations for IF support.

Teouria used to buy from wholesalers, of which there are four: Punjas, Fairprice, TTT and government-owned BKL. However these shops also sell retail, reducing the incentive for people to shop at her establishment, which is within half an hour's drive away. In the village of Poland, on the other side of the island, shops tend to be more profitable because it is approximately five hours' drive from the wholesalers and owners can charge a bigger mark-up.

Teouria suggested better enforcement of legislation enforcing the distinction between wholesale and retail, or rules preventing wholesalers from selling small amounts. These rules, however, would be difficult to enforce and would ultimately only force consumers to pay higher prices. The economy is already heavily government influenced, and the popular tendency is to try to suggest government solutions. In reality the private sector should be given a bigger role rather than being further restricted.

Communication between wholesalers and retailers could be improved, possibly within the remit of an overarching business association which represented all businesses, big and small. The KIFT has suggested using the Chamber of Commerce on Christmas Island as its implementation arm, so that it became a forum within which private sector representatives could resolve difficulties and pressure government to improve policy.

2.5 Institutional framework for enterprise support

The Ministry of Commerce, Industry and Cooperatives has a critical role to play in stimulating and developing the business environment. It is the location of the Business Promotion Centre and the Business Regulation Centre. The latter handles consumer protection, intellectual property, price control, company and business registration, licensing and also the regulation of cooperatives. The Promotion Centre focuses on promoting trade and industry, providing business advisory services, and also coordinates foreign investment.

Many of the needs of business cannot be met by MCIC alone. The concerted effort of several ministries, public enterprises, local government, and financial institutions is required if forward momentum in private sector development is to be achieved. The MCIC will need to engage with MCTTD, MFED, MELAD, MISA, MPWU and in Kiritimati the MLPID

A further critical component of the Institutional framework is the Kiribati Chamber of Commerce and Industry (KCCI) which has its membership focused on South Tarawa, and also has an informal affiliation with the Christmas Island Business Association. The Chamber

assists its members and business through regular and ad hoc discussions with the Government, particularly MCIC. Relations with the latter are reported by the ADB (2008) to have improved in recent years. Certainly there is a feeling among those consulted that there is a growing role for, and value in, the Chamber.

There appears to be a growing understanding that future success of the private sector will depend not only on the ability of small business to access funds, but also on enhanced networking and cooperation between organizations. The networking and information sharing value of Chamber membership is augmented by (i) access to the Australian Business Volunteers scheme that helps local firms upgrade their operations, (ii) organized courses and practical training in basic business methods, and (iii) workshops on critical issues of interest to the business community.

The PSDS (MCIC 2009) argues that the Kiribati Chamber of Commerce and Industry requires assistance and support from the MCIC so that they can better serve the evolving needs of their members. The Chamber has joined the Pacific Islands Private Sector Organisation, which aims to draw Kiribati business people closer to those in other Pacific islands.

There needs to be greater effort to integrate the planning and management of Christmas Island into the broader business environment context. Strong and effective arrangements for island development planning and coordination including devolution of power are paramount to sustainable economic, social and environmental outcomes (ADB 2007; 2008). Investment in setting the right platform for ecotourism which offers potential for improved livelihoods and household income, for example, should be a priority. Resourcing of key government agencies is the critical issue facing the provision of Institutional support on Christmas Island. Unfortunately qualified staff leave and are often not replaced while at the same time pent up demand for new business development in areas like tourism is increasing.

2.6 Feasibility of donor funding for small scale manufacture

The limited amount of manufacturing in Kiribati is undertaken largely by public enterprises. The Kiribati Copra Mill Company produces coconut oil that is heavily subsidized through an artificially low price for its purchase of copra (a price significantly below the export price) (ADB 2008). Some small-scale manufacturing activities take place in the private sector processing food, preserving local fruits, building boats, the building of furniture (primarily for local purchase) and producing garments. Most of these enterprises are borrowers from the Development Bank of Kiribati.

On a scale from 1-10 (with one being the lowest level of feasibility) opportunities for the support of small scale manufacturing should be given a rank of 3. It is instructional in this case to note that all business development officers and especially those business people based on Christmas Island felt that tourism not manufacturing is the sector most likely to create strong economic returns and local employment.

2.7 Training and HRD

Business people consulted for the DTIS had no concerns about the general availability of workers – but the challenge is finding skilled and workers with the right work ethic. It is interesting to note that when questions were asked about training mechanisms and approaches many of those consulted focused on two key themes: the need for specific business education in

a class room setting and secondly the need for a broader awareness program and strengthening of business acumen.

The former is very much about making use of the resources currently available after youth complete high school. KIT is seen to have potential to provide business education and the strong link with the Australia Pacific Technical College in terms of staff training and curriculum development is positive. However there is a general perception that the business components available at KIT are limited in scope and relevance. The University of the South Pacific Campus also provides opportunities for engagement with business programs – but has only limited capacity and a focus on distance learning.

The Marine Training Centre has a strong reputation in the training of I-Kiribati for careers on the open seas. It also has considerable potential to train in areas such as hospitality and possibly tourism. MTC has recently formed a link with the Auckland Institute of Studies in New Zealand and hopes to offer pre-degree hospitality training in the near future.

There have also been other significant initiatives in recent years. The 2010 Youth in Business Awards were, by all accounts, a good initiative that generated plenty of positive reaction at the community level. The Department of Labour, Ministry of Commerce, Industry and Cooperatives and the KCCI are also running training programs for youth that provide some basic business skills.

There is also clearly a need for up-skilling of management level staff and SME owners. Running a business in the rapidly changing economy 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. One option that was pointed to was for the KCCI to further develop information evenings and seminars.

Capacity building in the public service is also critical, with several businesses stressing the frustration they feel in dealing with government departments. To build the base of the local economy it is vital to reduce frustration, and resultant non-compliance on the part of the private sector. A series of experts have worked on HRD in the public sector – funded largely by AusAID. The focus of this program is currently to improve the performance of clerical staff through to middle management. As the current TA mentioned:

“The critical thing has to be improvement in customer service. It’s absolutely vital that we make the life of business people as easy as possible when it comes to paying bills and seeking advice”

The challenge for this type of reform is that GoK Ministries do not have specific units for HRD/training. This task generally falls under the remit of each Permanent Secretary and therefore often receives limited attention.

The private sector is also clearly aware of much broader issues on the human resource development front. As one respondent noted: *“Business culture is kind of foreign to us here in Kiribati”* Those consulted for the DTIS felt that it is vital to encourage business behaviour and thinking from a young age, focusing on concepts such as saving. Education about the advantages of saving and entrepreneurship needs to be introduced in the curriculum, and saving accounts for children should be encouraged. Other modes of promoting business culture will have to be developed as well.

There is also considerable awareness of the challenges that exist with the melding of western business ideas with traditional cultural traits. Some parts of the culture such as the “bubuti” system (the request from a relative or friend that normally cannot be refused without damaging the relationship) are difficult to reconcile with the establishment and successful running of a small business (see also ADB 2008).

2.8 Legislation for enterprise support

This is a period of considerable change in the legislative landscape in Kiribati. There is a need to review business related laws so they can be updated and/or amended to enhance their applicability to the current business environment. As noted above, there are changes afoot with the legislation affecting foreign investment and a desperate need to create a ‘one-stop-shop’ where information can be gathered and contacts reached with ease. There are also currently plans to move the stepped corporate tax system to a flat rate of 30%.

It is vital that the cost of starting new businesses, as well as operating existing ones, be reduced and that the paper work and inconvenience involved be minimized. It is important that legislation or regulation be used bring together key players to work for private business in a more effective and coordinated manner.

The PSDS (MCIC 2009) stresses the need for a review on the operations of SOEs as well as local councils – with a focus on finding ways to increase efficiency and to encourage fair competition with the private sector. All of the private business people spoken to felt that SOEs had too often diverted from the business line they were established for and moved into direct competition with the private sector. In effect this crowds out the private sector. As one manager of a private enterprise, that competes with an SOE, noted: “my taxes are helping the government to put me out of business – they use my taxes to subsidise these guys with grants and loan guarantees”. The most commonly cited examples of encroachment into the activities provided by the private sector were the Broadcasting and Publications Authority entering the electronics and home appliances sector and Betio Ship Yard Ltd. entering the hardware and electrical market.

Even if SOEs have remained in the line of business they were set up for the private sector still feels, justifiably, that they face unfair competition. It is essential to reduce inappropriate public sector competition and the negative impact it has on the private sector. If not, private companies will not take the required risks to set up new areas of business because government will appropriate the gains.

Box 2.2 | Case Study - Competition from Government

An example of how unfair competition from government enterprise can affect businesses is amply provided by Christopher Columbus Pilot Service – based on the outskirts of Betio. The manager of the company, a Captain, used to be the chief pilot with the Kiribati Port Authority. Due to a dispute over payment of fees he left the Authority to set up his own pilot business.

The owner faced considerable difficulties in establishing the business and has had to rely heavily on legal advice to be able to progress his application to establish the business. As the captain noted “if I didn’t have the lawyer I would never been able to get through all the things they tried to stop me with”.

He applied to MCIC for a license in November 2009. Three months later this was granted - he required the lawyer to follow up on the application several times and considers the time taken to have been a deliberate ploy to discourage him. Following his success in gaining a license the Captain was then told that he had to carry a crippling level of liability insurance in case one of the vessels being piloted was damaged. His lawyer was successful in arguing the case that such insurance is the responsibility of any registered vessel, not the pilot.

The Port Authority struggled to find a suitable replacement and, by all accounts, are losing much of the piloting business to the new private company. While this private sector operator appears to have got over several major hurdles placed in his way he has only done so because of relatively deep pockets and access to a good lawyer. The company now employs four office staff and three pilots.

A further area of legislative reform that was highlighted during consultations was Intellectual Property. Intellectual property laws have not been changed since the colonial period – with the current legislation entirely based on UK laws. This has led to difficulties in protecting local IP.

Legislation is also critical for particular sectors of the economy. For example environmental regulations designed to ban net fishing of bone fish are required to keep the lucrative fly fishing sector alive while legislation on bird poaching can help to protect the nascent bird watching sector. It is also essential to examine whether legislation is also required in the area of tourism industry liability in the face of potential visitor law suits.

The PSDS (MCIC2009) also argues that government needs to create a more attractive targeted incentives environment. Business licenses or regulatory institutions should be lenient in the case of all newly created SMEs for a period of say 5 years and it may also be warranted to extend tax holidays from 5 years to 10 years for all new SMEs that are generating good income and employment. Certainly there is room to argue that sectors with high potential to create jobs should receive targeted incentives. For example ecotourism operations in Christmas Island would be a relatively good area for targeted incentives – assuming that international air transport links are maintained.

2.9 Other enterprise support/development issues

A number of other issues related to the business environment are discussed in more detail throughout the DTIS, particularly in the chapters on trade facilitation, human development and tourism. Some of these key constraints on the business environment include:

- The quality of infrastructure is generally very poor. Although electricity supply has improved in reliability on Tarawa it remains a problem on Christmas Island. In both places water supplies are also vulnerable.
- Telecommunications have improved but many smaller businesses in outlying islands have no telephone or computer access. On Christmas Island operators were generally frustrated by the cost and speed of internet connections. The monopoly status of telecommunications provision leads to high costs. The availability of ATMs is critical to tourism growth as is the ability to use Visa or Mastercard in banks.
- The road condition on Tarawa in its present state is very poor although a donor project has been initiated in this area. The regularity and reliability of inter-island shipping as well as domestic air services between islands is also poor. In addition, port charges are high.
- Consultations revealed a desire to improve international air connections and the need to maintain and develop international airport facilities on both Tarawa and Christmas Island. There was also considerable discussion about the potential to develop improved cruise ship infrastructure on Christmas Island and Fanning, and to a lesser extent Tarawa. The proposals are relatively expensive and would require donor assistance. Given the fickle nature of the cruise industry (discussed further in the Tourism chapter) and the importance of air travel in bringing high yield travellers that interact with the local economy over an extended period of time, it would not be surprising to see donor focus being placed on the air sector rather than the hope that building infrastructure will bring back the cruise industry.

2.9.1 Land

Land was the one theme that raised more comments than any other. It has also been a constant issue of concern in previous documents on economic development and the business environment in Kiribati and is certainly a key element in the PSDS (MCIC 2009; ADB 2007, 2008; KDP 2008, KNTAP 2009).

The shortage of land on Tarawa has led for calls for improved zoning of land uses and also for the possible development of Business Parks. In the case of Tarawa it may be necessary for such parks to be non-contiguous with several parcels of land being acquired and developed and placed under a single management and services arrangement. The PSDS (MCIC 2009) envisages the involvement of a government agency (or a private developer) to develop and lease suitable premises for use by SME as offices, workshops and perhaps factories.

The land lease and sublease procedures are lengthy and the Minister responsible for lands has the final approval making the procedure discretionary. This makes lease applications frustrating especially as land in South Tarawa is becoming a scarce commodity.

In the case of Christmas Island applications go first through the local land planning board and then on to the Ministry in Tarawa. There are estimated to be more than 200 applications pending approval since 2007. The existence of one or more business parks on Christmas Island would significantly increase the likelihood of attracting private direct investment. In the case of Christmas Island however it is probably wiser to think of tourist development zones in addition to business parks. The former could then be situated well away from the type of workshop and small industrial activity that currently disturbs tourists on the island.

One message that came through very strongly from the private operators is that decisions on the allocation of sites should be made by officials applying transparent rules, not open to political influence and corruption and nepotism. Those selected to scrutinize land planning and usage should be qualified people/officials and these Boards should be empowered to enforce the plans drawn.

2.9.2 The environment

The relation of the environment to business covers two dimensions: the impact of climate change and sea level rise and the management of the local environment by business, community and government. Interestingly the issue of sea level change was not often discussed during consultations with the private sector. The focus was far more on short term issues (i.e. within the next 1-2 years) than on longer term scenarios. It is also notable that the PSDS (MCIC 2009) does not mention climate change or sea level rise either.

Activities ranging from zoning through to awareness building will assist business to think about the impact of longer term climate trends on their businesses. In real terms, however, it is likely that SMEs will remain focused on near term issues and objectives.

From an environmental perspective far more attention was paid in consultations to the importance of maintaining or even enhancing local environmental quality. There is a clear awareness that the state of the general environment affects the state of the business environment. This is probably most dramatically shown in the case of the tourism industry where visitors see warnings in the literature about pollution in Tarawa lagoon and yet they are visiting a nation that is being marketed as a destination that is off the beaten track and designed for 'travellers not tourists'.

The rare fauna of the nation requires special care as it is a rich resource for future tourism development. Several of those consulted on Christmas Island felt that while regulations were in place to protect bone fish and bird sanctuaries they are rarely enforced due to a lack of wildlife staff and also a lenient approach on the part of the ministry, police and the judiciary. There was a clear feeling that any future development of the Phoenix Islands Protected Area must be managed carefully. The neglect of built heritage, especially war relics, was also of particular concern to some in the tourism industry on Tarawa.

In a more general sense local waste management, energy efficiency and water use are all areas of concern for the private sector. These are areas where a difference can be made by establishments themselves. During consultations, examples emerged of sustained approaches to reducing energy and water use but in most cases these dimensions were not of interest to managers and owners. Perhaps most surprising is to see the main government hotel on Tarawa (the Otintaai) not providing any reminder to visitors to switch off their air conditioner or re-use towels. Not only can this reduce costs for the operator it also makes visitors feel that they are in a country that is environmentally aware. Likewise several people consulted for the DTIS were keen to pursue alternative energy sources on a larger (island) scale and to use this as a mechanism to build a 'green' brand for Kiritimati.

Overall there was a very clear feeling that to resolve these issues there is a need for greater national and island leadership on building awareness of the value of the environment. The consequences of current actions, and need to work collectively to conserve and protect the natural resource that the local economy and quality of life depend on, are key areas to be

stressed in educational campaigns. This awareness building can exist at several scales – from industry focused workshops through to school curricula. One suggestion also was that a green business award should be introduced to encourage better environmental practice on the part of the private sector.

2.10 Conclusions

The business environment for private SMEs and for SOEs in Kiribati is very challenging. The traditional difficulties associated with small size and isolation – such as costly transport links and limited domestic markets – are only amplified by the competitive tension that exists in many areas of the economy between the private sector and government owned enterprises.

Despite a clear message from government that it wants to create an enabling environment for SME development and growth, and attract FDI, performance in these areas has been quite poor. Government data, international business rankings and anecdotal evidence reinforce this view. However there is a detectable undercurrent of optimism that stems from a belief that several critical reforms – especially many of those alluded to in the PSDS, will be enacted soon.

In conclusion it is perhaps worth looking at the example of one of the largest and most successful private enterprises in Kiribati, Triple Tee Enterprises, a case which reinforces many of the issues influencing the business environment raised during the chapter. The degree of diversification undertaken also highlights the importance of general improvements to the business environment rather than specific sectoral activities or reforms.

Box 2.3 | Case Study – Triple Tee Enterprises

Triple Tee Enterprises started in 2003 as a small grocery store. It then began to make a small amount of furniture as a way to employ some family members. MCIC provided the company with a small space to do some of the work as work became noisier and they needed to move their business out of their residence. In 2005 they moved out of groceries and into second hand clothing, forestry and the importing and retailing of hardware. At this time they also began to build wooden and fibre-glass boats. From 4 employees they have now grown to more than 70 – with a branch on Christmas Island in addition to their operations on South Tarawa. The company also operates a used car agency selling imported Japanese vehicles.

A new focus for Triple Tee is on the development of tourist accommodation on the Island of Marakei in the Northern Gilbert islands – there is a focus in the plans for village based accommodation and the opportunity to tap into increasingly frequent and reliable domestic flights. The project will involve local community and church. The tourism product would include accommodation, local food and also opportunities for cultural interaction – including the use of village guides. There is no question in the mind of the General Manager that tourism holds the economic future for Kiribati.

The challenges facing the company are wide-ranging. Most important are land issues. There is simply not enough land on Tarawa and it is becoming very difficult to reach agreement with local councils. The General Manager recounted the fact that he has an application for land on Christmas Island that was lodged in 2003, it was then lost and still had not been finalised by late 2010. There was also considerable concern about the encroachment of state owned enterprises into areas that should really be reserved for the private sector – in particular areas like hardware. Telecommunications are also a major point of concern, with high cost being more of an issue on Tarawa than unreliability. For their Christmas Island business a major issue relates to unreliable sea transport – with basic commodities often in short supply. Electricity costs are still a concern and solar is not really seen to be an option.

Most worrying of all for the GM though was the: “confusing array of organisations to deal with – for example with my Hardware business we need an import license from customs, then I need a business license from the council and finally I need to deal with the Finance office over taxes and import duties – things need to be simplified”.

3. Trade Policy

3.1 Introduction

In Kiribati, as in a number of regional countries and LDCs, trade has been somewhat peripheral to development policy. This is partly because goods exports are so small, but also because Kiribati has relied on development assistance for foreign exchange, together with a select few other sources such as fisheries, remittances and income from the RERF. Yet in a more integrated world, where trade has risen up the agenda, Kiribati has little choice but to mainstream trade policy into its overall development strategy. This means not only making trade policy more prominent, but improving the coordination of trade-related and other development initiatives.

This chapter first examines the trade policy architecture, reform, rules of origin, quantitative controls and trade-related legislation. Labour mobility opportunities have critical implications for Kiribati, and the following section examines new regional opportunities in this area. Next, the chapter looks at the various regional and multilateral trade agreements with which Kiribati is involved, suggesting basic positions on each agreement, before concluding with some overall comments on trade policy.

3.2 Trade policy architecture

Trade policy falls under the mandate of the Ministry of Commerce but is also conducted and formulated by other government agencies including the Ministry of Finance and Economic Planning and the National Planning Office. The following list of trade-related institutions shows that very few private organisations are involved:

Table 3.1: Trade-related institutions and their functions

Institution	Location	Role or responsibility
National Economic Planning Office, Ministry of Finance and Economic Development	Bairiki, Tarawa	Formulation of the National Development Plan or KDP
Ministry of Commerce, Industry and Cooperatives	Betio, Tarawa	Formulation of trade sector policies and strategies, and promoting commerce, business, and private sector development
Office of the Attorney-General	Bairiki, Tarawa	Provides legal advice to government, including trade or trade-related legislation
Kiribati Customs Services	Betio, Tarawa	Monitors exports and imports Collects customs duty from imports
Agriculture Department, Ministry of Environment, Lands and Agricultural Development	Tanaea, Tarawa	Provides quarantine services, including certification of exports
Ministry of Labour and Human Resource Development (MLHRD)	Bairiki, Tarawa	Looks after employment issues including seasonal workers sent to New Zealand and Australia
Public Service Office (PSO)	Bairiki, Tarawa	Manages human resource and is responsible for in-service training

Ministry of Education	Bikenibeu, Tarawa	Looks after education in the country and provides scholarships to students undertaking tertiary education abroad.
Kiribati Nursing School (KNS), Ministry of Health and Medical Services	Bikenibeu, Tarawa	Trains and prepares students earmarked for Australia under the KANI ¹¹ project.
Marine Training Centre (MTC), (MLHRD)	Betio, Tarawa	Trains seamen ¹² for overseas employment, especially on German shipping lines.
Fisheries Training Centre (FTC), (MLHRD)	Bikenibeu, Tarawa	Trains young men seamanship and fishing skills—for overseas employment on Japanese fishing vessels.
South Pacific Marine Service (SPMS)—owned by a German firm.	Betio	Recruiting agency for seamen to work on German ships—most recruits are from MTC.
Kiribati Institute of Technology (KIT), (MLHRD)	Betio	Provides vocational and apprenticeship trainings: mechanical and electrical engineering, carpentry, and basic office skills.
Kiribati Chamber of Commerce and Industry (KCCI)	Betio	Body representing private businesses—staffed by a president and two clerical staff. Assist and promotes the private businesses and serve as the link between the businesses and the government.
University of the South Pacific Extension Centre	Teaoraereke, Tarawa	Provides tertiary education in Kiribati through extension facilities. Local tutors assist students as well as satellite tutorials.
Central Pacific Producers Limited (CPPL)	Betio, and subsidiary branch on Christmas island.	A government fishing company. Has no fishing boats but receives undersize fish from foreign fishing vessels offloading in Tarawa. Also collects fish from fish centres established on nearby islands.
Kiribati Copra Cooperative Society	Betio, with buying agents on the outer islands	Responsible for the collection and shipping of copra from the outer islands. The copra can be exported or sold to the Copra Mill for oil processing.
Kiribati Copra Mill Company Limited	Betio	The government copra mill responsible for producing copra oil from copra. It produces also animal feed, and soaps.

¹¹ Kiribati Australia Nursing Initiative

¹² Young women were admitted recently—but their number is quite small.

Kiribati Seaweed Company	Betio,	Responsible for the collection of seaweed from the outer islands and exporting them overseas. The head office was closed down in 2008 and the CPPL company has been assigned to look after the seaweed business.
Kiribati Tourism Office, Ministry of Communications, Transport and Tourism Development	Betio	Responsible for tourism promotion and coordination.
Kiribati Handicrafts and Local Produce	Bairiki	Buys or receives handicrafts and local produce from the outer islands and resells these on Tarawa, or exports them overseas.
Kiribati Trade Unions	Bairiki	Looks after the conditions and welfare of employees.
Island Cooperatives	Stores on the outer islands owned by members.	Buy goods or supplies from Tarawa and resell them on the islands. Sometimes they act as copra agents on the outer islands—buying copra and shipping it to Tarawa.

At the time of writing this had not yet been approved by Cabinet.

The Ministry of Commerce conducts a range of trade-related activities derived from the Kiribati Development Plan (KDP) and the Presidential Policy Statement, as well as the Ministry's MOP. In addition, the private sector development policy¹³ (PSDP) aims to: "Create an enabling environment" and "Generate business opportunities for small, micro and medium sized enterprises". The PSDP is aligned to the KDP and to the President's Policy Statement. Within the KDP, strategies related to trade include:

- 1) developing and commercializing fisheries, marine, mineral resources
- 2) developing and enhancing tourism, in particular in the Lines and Phoenix Group
- 3) stimulate and expand the private sector
- 4) replanting of staple food crops on all the islands
- 5) encourage human resource development for both domestic and foreign labour markets
- 6) expand and enhance production and export from Kiritimati (Christmas island)
- 7) enhance business environment to make it conducive and attractive to foreign investors

After the present government was elected for the second time in 2007, President Anote Tong delivered the government policy statement in December 2007. This statement covers a wide range of topics including trade issues such as government assistance to the copra industry and to the outer islands. The following priorities relate to trade or trade-related activities:

¹³ At the time of writing this had not yet been approved by Cabinet.

22. The price of copra will be maintained at 60 cents a kilogram. The subsidy required to maintain this price will continue to be budgeted for. Improvements will be instituted to ensure that payments are not delayed.
23. The coconut industry will be reviewed with a view to improving its efficiency and ensuring its sustainability for the benefit of the outer island community
24. Most of our coconut trees are over mature and senile. They either no longer produce nuts or produce less and need replacement. Government will consider options for the commercial utilization of these senile coconut trees and replanting that are cost effective and will lead to increased productivity.
25. There is need to identify new markets for our coconut-based and other local foods' products, including the identification of new products that could cater to niche markets. Innovation in this area is essential and will be encouraged and promoted.
26. Government will work closely with people in the outer islands and other interested parties to improve current income earning activities and identify new income earning opportunities. Existing arrangements for the sale of outer island products on Tarawa will be reviewed with the object of ensuring that producers in the outer islands are benefiting from the arrangements particularly in terms of timeliness of payments.
27. Marine products from the outer islands such as bech-de-mer and shark fins are export items. Opportunities exist for more people to participate and thus benefit from this trade. This is also an area in which the private sector is currently active in. We will support and encourage stronger involvement by the private sector. Government will however maintain a monitoring role to ensure that optimum returns are received by the people.
28. Access to capital through micro-financing mechanisms for small scale community-based development will be promoted as a means of assisting outer island communities with small scale and relevant development projects.
29. Efforts will continue to improve the livelihoods of residents in the outer islands. An expansion of the rural electrification program through solar energy will be launched.

Copra subsidisation features prominently, with a specific target set irrespective of world prices. Copra subsidy is a sensitive political issue which costs the government a considerable amount and which appears difficult to change. It is a means of income redistribution, which in egalitarian Kiribati is central to livelihoods and social cohesion. A non-nominal target, however, perhaps within a range related to world prices, would be more efficient and may cost the government less.

The Policy Statement is a combination of specific directives as well as general intentions. Some are easy to implement – for instance maintaining the price of copra paid to copra cutters at sixty cents¹⁴-- while others are more thematic in nature. Statement 26: *“Government will work closely with people on the outer islands and other interested parties to improve current income earning activities and identify new income earning opportunities.....”* or statement 29: *“Efforts will continue to improve the livelihoods of residents in the outer islands. An expansion of the rural electrification program through solar energy will be launched”* are broad and more general. These statements need to be defined and broken down into more specific strategies or components before they can be implemented.

¹⁴At the time of writing, the government had raised the copra purchasing price further to 70 cents a kilo—despite the low world copra price.

In principle the KDP and the sector or Ministry plans should closely follow the President's Policy Statement; however disconnections exist because while the President's policy statement comes from his own Cabinet and his political party, the national development plan and the sector plans are formulated by government officials. The National Planning Office held several workshops and visited some islands in order to get the views, the priorities, and the aspirations of the people, which are reflected in the KDP.

The sector plans, moreover, are drawn up by the ministries themselves with very little involvement of the National Planning Office or other ministries. Sometimes a steering committee is set up to assist in the formulation of the sector plans. In many instances technical assistance is provided by development partners including regional and international agencies to the ministries. The education sector plan was formulated with the assistance of AusAID, while ILO assisted in drafting the Youth Employment sector plan. UNICEF funded the local consultant working on the Youth Policy and the WHO provided funding assistance in the formulation of the health sector plan. The Pacific Islands Forum Secretariat assisted the Ministry of Commerce in drafting the private sector development strategy. While technical assistance and inputs from development partners and regional agencies are very useful it is critically important that the plan or the strategy is locally driven and owned in order to ensure tailoring to the local environment and to gain widespread national support.

New trade-related policies, formed in response to on-going developments, are sometimes hastily conceived. An outrigger boat sank between the islands of Maiana and Tarawa, resulting in a number of deaths. In response the government marine division banned similar type of boats from ferrying people between Tarawa and Maiana island, suggesting that boats with an outrigger are more prone to damage by bigger ocean waves than ordinary single hull boats. There is also a renewed effort to routinely check ocean going vessels to make sure that the safety precautions have been taken by the captain and the owners of the vessel. Whilst such efforts are well-received, there has been a subsequent increase in costs. A more proactive approach – for instance suggesting better safety measures as part of a broad-ranging policy initiative – may have helped prevent such a disaster whilst keeping costs lower and allowing the use of traditional forms of transport.

All ministries and statutory bodies are required to produce annual operation plans (MOPs)¹⁵. These plans list out and describe what the ministry will undertake or carry out in one year. The budget to undertake or carry out the MOPs is provided and approved by Parliament just before the start of the next fiscal year. In the case of the strategies and activities in the KDP the relevant ministries are required to write and submit project proposals to the National Planning Office for onward submission to donors or development partners. In other words, the government does not provide a budget for the KDP, rather the idea is that development partners will provide funding for projects in the KDP¹⁶. The donors are naturally constrained by their mandate, their focal area of interest and their resources. Many projects in the KDP are never implemented. Some have argued that the list of unfunded project is too long, and because most will never be

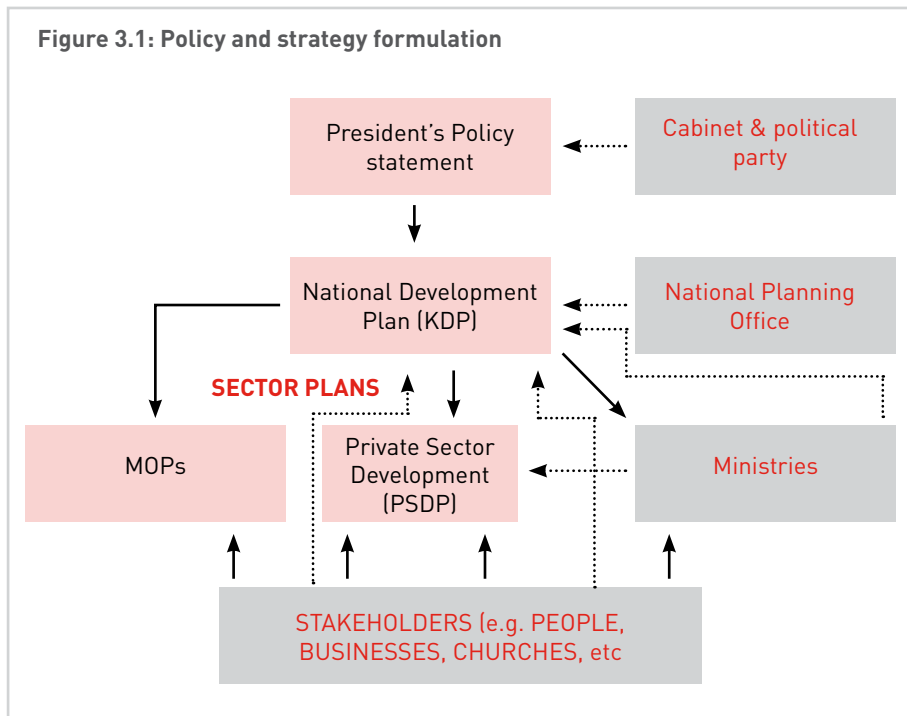
¹⁵ The MOPs are fairly recent innovations (around 2003 as part of the 2004–2007 NDP) introduced to support budget submissions from ministries. The government budget is supposed to facilitate the strategies and activities stated in the MOPs.

¹⁶ In the past the government usually set aside some monies for development projects from its recurrent budget but this has stopped in recent years (starting from 2006)—principally because of falling government revenue.

implemented it is more of a wish-list than a useful agenda for development. The government should consider streamlining the list, retaining only the priority development issues that have a realistic chance of being financed and implemented by the government and its development partners.

Although systems exist to evaluate and monitor the status and progress of the KDP, this is very difficult in practice. One reason, apart from the lack of funds, is that the strategies in the KDP are generally very broad and often the responsibility of several ministries and it is difficult to identify ministerial responsibilities. Monitoring the MOPs is more straightforward because the ministries are required to submit their progress report every six months to the National Planning Office and MOPs are specific to each ministry. The National Planning Office summarizes the progress reports on the MOPs before submitting a report to Cabinet, which in turn assesses progress. Although the MOPs are supposed to be derived from the KDP, suggesting that monitoring of the MOPs is in effect also a monitoring of the KDP, this is not strictly true, as the strategies and activities in the KDP are generally developmental or capital-intensive in nature (i.e. one-off) whereas the strategies and activities in the MOPs are mostly routine. The KDP needs to be monitored and assessed once or twice a year. This should be differentiated from the monitoring on the MOPs which are basically routine or recurrent activities of the ministries and government statutory bodies.

The following diagram shows the linkages between the President’s Policy Statement, the national development plan (KDP), the MOPs, and the sector plans.



In reality the linkages and the connections are not very strong nor systematic—and sometimes do not exist. As pointed out in PFTAC (2007): “However, the MOPs do not appear to be anchored in any discernible way... [they] are effectively free-standing documents”. The report goes on to say “The MOPs are to guide the operations during a fiscal year. For the plans to be realistic, however, they would have to be directly linked to the budget, which they are not”. Some sector plans have a timeframe of only two years while some have four years or longer and some were finalized well before the production of the KDP.¹⁷

3.3 Trade policy reform

The Department of Customs is aware of the need for duty reform owing to regional integration, but against a backdrop of declining government revenues, reform will prove challenging. As noted in chapter 1, import duties account for 16% of 2010 recurrent government revenue, behind only income tax and fishing licences as a proportion of total revenue. The Department of Customs aims to convert a number of import duties into excise and reduce the number of bands.

There are currently 15 tariff bands:

1	Duty Free	6	30%	11	60%
2	10%	7	35%	12	65%
3	15%	8	40%	13	70%
4	20%	9	50%	14	75%
5	25%	10	55%	15	80%

A report for the PIFS showed that revenue losses under of PICTA, the EPA and any similar potential trade deal under PACER would be significant (Watergall 2007). The study found that the adjustment required would be in the range of 14-24% of total recurrent revenue. This assumes no substitution or other trade flow effects, no economic effects and a generous interpretation of Rules of Origin (RoO).

The report provides scenarios under which substantially all trade (SAT) means either 100% of all tariff lines or 80% and 67% by volume. Scaling the PIFS figures down by the difference between expected 2010 recurrent revenue collection, A\$68.6 million, and the figure used in the report, A\$73 million, gives the following possibilities:

¹⁷It is understood that the Peer Review of the Republic of Kiribati: Cairns Compact for Strengthening Development in the Pacific, undertaken earlier this year, discusses coordination in the Kiribati Development Plan, although the report was not available at the time of writing.

Table 3.2: Potential revenue losses under trade agreements with PACP, EU, ANZ and US

Value of lost revenue	PACP	EU	ANZ	US	Total
Lose 100%	2,116,761	14,930	8,945,063	253,214	11,329,968
Lose bottom 80%	1,921,835	14,906	8,430,251	232,482	10,599,473
Lose bottom 67%	1,416,389	14,860	6,015,425	207,176	7,653,850
% of total revenue					
Lose 100%	3%	0%	13%	0%	17%
Lose bottom 80%	3%	0%	12%	0%	15%
Lose bottom 67%	2%	0%	9%	0%	11%

Source: Watergall (2007), updated to reflect current revenue figures.

Note that the table assumes no change in trade flows via trade creation or diversion, no externalities, and an oligopolistic business environment.

The most likely scenario for SAT, based on discussions with the EC under the EPA, is 80% by volume. This would suggest that if trade negotiations were undertaken with all regions shown, the sum lost could amount to around A\$10.6 million, or 15% of total recurrent government revenues. If, as is more likely, an agreement were reached only with ANZ under PACER Plus, around 12% of revenues would be affected, or A\$8.4 million.

Contrary to the assumptions of the study, revenue losses would not occur at once as tariff cuts would be phased in gradually over a long time – possibly up to 20 years. The lower tariff rates would probably still remain in place for longer. The main reductions would be expected among the higher rates, with simplification of the tariff schedule into a smaller number of bands. Imports might also be expected to increase somewhat as a result of the reduction in tariffs, slightly compensating for revenue losses. If import duties are 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.

3.3.1 Rules of origin

Until now, trade relations between the Pacific Island States, Australia and New Zealand (ANZ) have been governed largely by the non-reciprocal South Pacific Regional Trade and Economic Cooperation Agreement (SPARTECA), which came into effect in 1981. SPARTECA allows Kiribati to export to ANZ duty free subject to meeting the Rules of Origin (RoO), which stipulate that the product must contain 50% of local value addition. Studies of SPARTECA have criticised the stringent RoO, as they have generally restricted the scope of exports and value addition. A study by the Pacific Islands Forum looked at the SPARTECA RoO and concluded that “SPARTECA did not promote significant export growth from FICs, both in terms of volume and composition (diversification)” (Pacific Islands Forum Secretariat (2007): 4).

New SPARTECA RoO could improve FICs’ access to Australia and New Zealand. There are two options: improving the Value Added rule or shifting to a Change in Tariff Classification (CTC) rule but departing from the model used in recent FTAs by Australia and New Zealand. The study finds that a CTC (at 4- and 6- digit level) could significantly ease access of FICs’ exports to

the Australian and New Zealand markets but that it is not likely to be very effective in improving FICs' levels of market access if it is supplemented by restrictive Value Added requirements. Even with improvements to RoO, it is questionable whether this will benefit Kiribati exports, given that ANZ are not traditional export destinations.

Under the comprehensive EPA, several of the PICs hope to obtain global sourcing of fish. Under global sourcing Pacific states would be able to acquire fish from outside the circle of EPA signatories, "adequately" process it and export it to the EU without having to pay the 24% tariff other nations pay. It is in the interests of Kiribati to obtain global sourcing in areas other than canned fish, which takes place only in Fiji and Papua New Guinea. This means for HS0304 and 0305 (fresh & chilled fish).

3.3.2 Quantitative controls

There are no export restrictions (except for items which are illegal under Kiribati law). Import restrictions and prohibitions are only on grounds of safety or security. The Customs Act restricts the import of:

- Absolute or ethyl alcohol
- Earth, soil, loam, sand, mud, dust, clay, ashes, and similar substances from any other source other than soil unless they are imported from Hawaii, Fiji, Solomon Islands or Australia.

The following items are prohibited from import:

- Counterfeit coins
- Food unfit for human consumption
- Indecent or obscene goods
- Prohibited animals
- Matches containing white or yellow phosphorous
- Goods manufactured outside of Kiribati bearing the name or trademark of anyone in Kiribati, unless the goods indicate the country of origin
- Prepared opium or opium pipes
- Goods bearing the emblem of Kiribati
- Fictitious postage stamps
- Dangerous knives
- Imitation firearms
- Gambling machines
- Any goods illegal under Kiribati law

3.4 Legislation

Apart from the changes suggested in chapter 2 and possible changes to labour laws with a view to taking advantage of new regional opportunities in labour mobility (see section 3.5), it is not recommended that significant new legislation is introduced in order to avoid adding to the administrative burden. Yet a small number of pieces of legislation may be considered over the long term if the administrative ability becomes available to implement them.

A Fair Trading Act

In addition to, or as a replacement to the existing Consumer Protection Act, consideration could be given to the drafting of a Fair Trading Act, based on that of Fiji, covering competition policy (restrictive trade practices), consumer protection, conditions of warranties, and information and safety. Some amendment to the draft may be necessary with a view to reducing the level of discretion given to the minister in dealing with competition issues.

A Trade and Commerce Act

Despite its critical portfolio on international trade policy and negotiations, the Ministry of Commerce has restricted legislative power and thus limited control over trade policy in the areas on which it devises policy and negotiates. A Trade and Commerce Act would give the Ministry the legal framework to co-ordinate the different policy aspects relevant to international trade, inter alia tariffs and safeguards. This would be particularly useful in coordinating development policy in trade-related areas. A similar recommendation was made in the Solomon Islands and Vanuatu DTISs.

The following is an outline of existing trade-related legislation, with an explanation and brief observations and comments.

Table 3.3 Existing trade related legislation

Legislation	Brief explanation	Observations/comments
1. Foreign Investment Act	Establishes the Foreign Investment Commission (FIC) whose function is to assess foreign investment applications, approving those under their mandate and submitting the rest to Cabinet. Members of the commission are mostly permanent secretaries.	Despite the efforts to encourage incoming foreign investment, it is still very low. Amongst the reasons are the relatively high cost of doing business in Kiribati, small market size and limited private sector opportunities.
2. Protected Industries Act	This legislation is meant to protect industries in Kiribati which the government feels are critical for the country and therefore requires protection. The Cabinet and the President are empowered to declare any business including foreign investment by any foreign enterprise or company to be a protected industry—the Commission is not allowed to do this.	There is little evidence that this Act has been successful, and few of the standard prescriptions needed to make such legislation work have been followed, such the imposition of credible timelines for the ending of protection, or the gradual reduction of tariffs. Most of the literature on strategic trade focuses on the importance of achieving economies of scale, something which is an obvious challenge in Kiribati.
3. Native Lands Act	This provides for the legal basis on land ownership, lessees, subleases, neighbours, land purchasers.	One of the main problems regarding investment in Kiribati is the complex land ownership system. A lot of land is owned by clans or families and the way these land plots can be bought or leased is always a frustrating exercise—most ended up in court to settle.
4. Employment Act	This provides the legal basis for employment in Kiribati— employers' obligations and employees' working conditions.	At this stage there is no official minimum wage.
5. Consumer Protection Act	Provides for consumer rights in purchasing goods and services.	
6. Insurance Act	Provides for the setting up an Insurance company in Kiribati.	The monopoly role of the Kiribati Insurance company has been recently revoked, allowing other insurance firms to start up, and in theory introducing choice and competition.
7. Import Levy (Special Fund)	A scheme for collecting levies or charges on all imports in order to pay for the freight to the outer islands. This is to ensure that imported goods on the outer islands have the same price as the imported goods sold on South Tarawa.	In recent years there have been problems with the fund as payments are more than the collected levy revenue. The scope of items covered under this scheme has been enlarged to include local produce sent to South Tarawa from the outer islands.

7. Fisheries Act	Provides for the management and development of fisheries in Kiribati, including the control of foreign fishing vessels. The Minister of Fisheries is responsible for making appointments under this Act, which requires the formulation of management plans for each species of fisheries resource.	This Act was approved in early 2010.
8. Shipping Act	Amongst other things provides for the appointment of a licensing officer for vessels.	
10. Customs Act	Provides for the management and control of goods entering the country. It includes the provision for setting customs duties.	
11. Co-operative Societies Act	Specifies the membership criteria, the management of the funds, and the auditing of the societies. The Registrar of Cooperatives is in charge of the societies and is appointed by the Minister of Commerce and Cooperatives.	Cooperative societies were very active in the past, but now many societies are no longer operating. Support provided by the government to island cooperatives these days is minimal. There are no more copra agents on the outer islands.
12. Copyright Act	Provides for the protection of property and patent rights. Fines for infringing copyrights are also detailed.	Not strongly enforced and many people or businesses infringe copyrights, particularly illegally copying and selling videos or movies.

3.5 Labour mobility

Historically a large number of I-Kiribati have been employed as seafarers, with remittances contributing substantially to household incomes. The number of seafarers has declined in the last few years as well as the number employed on cruise liners¹⁸. Seafarers on German ships in the early 2000s numbered over a thousand, falling to about 900 in 2008 and just over 700 in 2009. While the downturn in the world economy is a part cause of this decline there are also reports of misbehaviour and indiscipline. The health of seafarers is another factor, especially hepatitis, which is quite prevalent in Kiribati. According to the 1995 census 1,428 households (466 on South Tarawa and 962 on the outer islands) received remittances from seafarers abroad. In 2005 the number was 1,931. Remittances have declined with the fall in the number of seafarers in recent years, with an impact on the lives and wellbeing of the poorer communities which depend on money from seafarers abroad.

3.5.1 New Zealand Recognized Seasonal Employers (RSE) scheme

A number of new labour mobility opportunities have arisen in recent years. 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

¹⁸ Norwegian Cruise Lines (NCL) operated around the US and the north-west Pacific, including Tabueran island in the Line Group.

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 first 70 Kiribati workers went to New Zealand in 2007 and returned for the 2008 season. In 2009 only 20 Kiribati workers took part.

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) (Fiji is currently excluded).
- 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 also are also 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 so as 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 are over, and investigate potential opportunities to develop exports and/or invest in the PICs.

The Kiribati Ministry of Labour (MLHRD) has established a database of 800 potential seasonal workers (including people on the outer islands) who have passed a pre-selection and screening process. The government has announced the appointment of a liaison officer who would oversee the employment of its citizens and provide feedback to the government. The first workers attended a seminar by MLHRD before their departure covering matters such as climate, clothing, footwear requirements, taxation, insurance (particularly health insurance),

health and wellbeing, accident compensation, banking and remitting, budget advice and travel arrangements. The workers also receive a pre-departure booklet.

It may be more appropriate to review models from other countries, whereby legislation was put in place ensuring that recruitment is conducted by private-sector agents.

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. Chief among them was that 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 overseas. 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 covering all aspects of the licensing, regulation, and disciplinary procedures of approved seasonal worker recruitment agencies. In this respect, 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 RSE workers were employed in New Zealand – largely as a result of a pro-active 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 as well as a nomination submitted by, for example, a 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;
- Doing this at competitive and minimal cost and without charge to workers, if the scheme is to be successful.

3.5.2 Australia - Pacific Seasonal Worker Pilot Scheme

In November 2008 the Australian Government signed Memoranda of Understanding with the Governments of four pilot countries: Kiribati, Tonga, Vanuatu and Papua New Guinea. Under this scheme up to 2,500 temporary workers from the four pilot countries will be recruited to work in Australian farms for a period of up to seven months over a three year period.

Upon arrival in Australia, seasonal workers attend an orientation briefing which include assistance in establishment of Australian bank accounts, tax file numbers, Workplace Ombudsman and Australian Workers Union. While the first workers from Tonga and Vanuatu arrived in Australia in early 2009; Kiribati has not yet been able to take advantage of the scheme.

3.5.3 Lessons

Countries that have taken a pro-active stance on labour mobility have been the most successful in reaping the benefits on offer. 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 I-Kiribati.

In the run-up to the start of the NZ scheme, the World Bank supported Vanuatu's Department of Labour, starting with convening 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 than spend them while abroad. Similarly existing social structures may be used to mitigate the risks of overstaying if others in the community¹⁹ – 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 systems²⁰. However, this appears to be primarily a problem of a lack of awareness amongst remitters 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 beginning to fall 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. ²¹In January 2009 a website was launched, <http://www.sendmoneypacific.org>, funded by Australia and New Zealand, enabling the costs and services of different money transfer operators to be compared.

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,

Another question raised by some is whether forced remittances are advisable. 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 claiming tax back in the past was often complicated and left to the responsibility of workers. 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 will reduce to 10.5% from 1 April 2011 to better reflect the income levels earned by RSE workers.

3.6 Trade agreements and negotiations

Progress in the range of trade agreements with which Kiribati is involved has slowed since around 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 willingness to compromise. In addition, questions have recently arisen over the ability 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 is likely to have an impact on multilateralism. As a result Europe, the US, Australia and New Zealand may be less ready to make concessions in negotiations with smaller trading partners.

A number of Pacific Island States, Kiribati included, 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 remains Kiribati's second-biggest import partner, no domestic exports go to other Pacific Island States. Re-exports to Fiji are negligible. In the meantime Asian countries, with which Kiribati has no trade agreements, have become increasingly important trading partners. A number of island states have found it administratively difficult to enact proposed tariff reductions, and there is a growing realisation that tariff reform will likely simply mean an administrative cost as countries shift tariffs and duties into excise tax.

Kiribati has limited productive capacity, reducing its ability to produce enough for export to new markets, although a number of trade facilitation activities could help raise the export of certain products, such as noni or virgin coconut oil, and fisheries remain a significant source of government revenue and foreign exchange. Whilst 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 Kiribati is considering the deployment of considerable human resources toward negotiating a series of agreements. 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 Kiribati, 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. If PACER Plus leads to improvements in these areas, it is to be welcomed.

The 'Plus' of the PACER Plus needs to be explored and defined through national stakeholder consultations and through discussions with other FICs. The implications of participating in a PACER Plus Agreement for Kiribati depend on how well the country can articulate its interests, understand the interests of the other parties, and prepare strategies and tactics to achieve its objectives.

PACER Plus is often said to hold general advantages in a number of areas, but specifics are, as yet, 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 of Kiribati 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 Programme (RTFP) was very small, at US\$2.7m for all 14 countries over five years, and Kiribati benefited very little at a 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 benefits

- 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. Kiribati 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.

- An opportunity to improve labour policy. It may be possible to request assistance with training. As part of negotiations, the Kiribati 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.
- Enhancing the establishment of regional organisations and cooperation between existing ones. A number of functions currently performed at the national level can be shared regionally, including in customs, labour and immigration.
- 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, in general, particularly interested in protecting their SPS environments, and may be willing to offer assistance with quarantine, testing and standards.
- Australia and New Zealand are potentially lucrative new tourism markets. Kiribati 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:

- Kiribati would have little to gain from goods trade under PACER Plus. The country has long run a visible trade deficit, while exports contribute very little 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. Exports to ANZ and other FICs are negligible. 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 Rules of Origin (RoO) has few direct implications for Kiribati, although the PICs position may be supported in order to support regional cohesion.
- Negotiating a complex agreement like PACER Plus would weigh heavily on Kiribati's capacity-constrained government. Most PICs have found their trade departments too small to negotiate a number of trade agreements simultaneously. Kiribati would be no different. It is difficult to source technical expertise in such a small population. Trade officials' commitments and follow up actions after regional trade meetings has stretched the Department's commitments on domestic issues given the limited capacity of the Department in terms of human resources. Political consensus is often difficult to achieve, reducing the ability of PICs to establish a balanced final position on trade agreements.
- 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. Tariffs are low by regional standards and a very small proportion of tariff revenues come from ANZ imports.

Table 3.4: Summary of key challenges, benefits and opportunities of PACER Plus

Challenges	Benefits and opportunities
1. Little to gain from goods trade.	1. Opportunity to benefit more from labour mobility.
2. High negotiation costs.	2. Possibility of better labour policy.
3. Significant adjustment costs.	3. Enhanced regional cooperation.
	4. More development assistance.
	5. Potential for more tourism.

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 2000²², 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.

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. Owing to the economic importance of fisheries to Kiribati, the importance of fisheries to the EU, and the significant amount of government revenues received from the industry, the Ministry of Fisheries originally wanted to negotiate the EPA. The Ministry of Finance was somewhat side-lined during negotiations, a situation which appears to be gradually improving. It is essential that Kiribati establishes a government-wide position on the EPAs and allows all relevant personnel to travel to negotiations, so as to avoid a particular faction dominating the negotiated outcome.

Depending on what happens in the negotiations, it is possible that Kiribati 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, Pacific Islands 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 Kiribati to be aware of the possible precedent that an EPA trade in goods agreement may have for PACER. 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 new taxation system
- Supports for existing regional integration efforts, by providing sufficient time for any positive effects of PICTA to occur.

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

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 coordination 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 5 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 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 sufficiently larger new funds (EU estimates it will need about an additional €50 million for the whole region) to meet these needs.

3.6.3 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, Kiribati included, failing to embark on the required tariff reduction programme. Given that intra-regional trade is very low, the agreement is unlikely to make a considerable difference to Kiribati. The country's economic inflexibility and lack of productive capacity, together with lack of compliance of exports to international standards due to limited capacity in terms of food standards, packaging and labelling, 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. Whilst 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. Nor is it true to say that the experience of negotiating PICTA TIS has 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.

3.6.4 World Trade Organisation

Kiribati 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. These countries have few 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.

Whilst the accessions of Tonga and Cape Verde were more straightforward, much more has been written about Vanuatu's WTO accession, including Grynberg and Joy (2001), Hayashi (2003) and Gay (2005). The Kiribati DTIS team also worked extensively in Vanuatu, including 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 Kiribati 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 audio-visual 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 unpaid fees, which accumulated to 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, whilst 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.

3.7 Conclusions

Trade-related policy and activities need to be simplified, with the KDP, President's Policy Statement and Ministerial plans aligned so as to produce clear and non-conflicting outcomes. Inter-Ministerial coordination should also be enhanced, not only technically, but at the senior civil service level. Partly these objectives can be achieved through the coordinating role played by KIFT in conjunction with the Trade Policy Advisory Committee (see chapter 4 on trade facilitation), but they also require strong political leadership, and possibly a rethinking of the national planning process. Monitoring and evaluation (M&E) could also be improved. Current M&E activities appear appropriate in principle but are not carried out in practice.

Fiscal reform is pressing, particularly with the recent decline in revenues and the prospect of regional trade integration. The potential tariff revenue losses from liberalisation are significant. 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.

Apart from the legislative changes discussed in chapter 2, 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 laws. New trade laws may be considered in future if the capacity becomes available to introduce and enforce them.

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

The trade agreement with the biggest immediate implications is PACER Plus. Kiribati is unlikely to gain much from PACER Plus in the area of goods trade, given the negligible amount of trade with ANZ or the FICs. 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 is probably 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 Kiribati.

The provision of additional development assistance under the EPAs and PACER Plus is touted as a potential benefit; yet Kiribati 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.

The negotiation and adjustment costs of trade negotiations should not be underestimated, 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. 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. It may be necessary to engage short term technical assistance to train local staff and increase the number of local technical staff in the Trade department.

4. Trade Facilitation

4.1 Introduction

Kiribati currently has a basic trade facilitation architecture and exports are small. Yet starting from a low base means that substantial progress should be possible. In fact, trade facilitation is one of the cross-cutting areas with the most potential to improve the trading environment. This said, the challenge of improving the trade facilitation environment should not be underestimated. Geographic fragmentation presents a particular concern, and almost all government officials and stakeholders consulted for the DTIS mentioned domestic transport as a major obstacle to trade. Infrastructure is weak, particularly on Christmas Island, where power, sanitation and water facilities are so limited that they will take many years to get to even a basic standard. In particular, without a better nationwide telecommunications network it will be difficult to take advantages of the opportunities for services trade offered by the Internet, and generally to enhance the flow of internal and external trade. Moreover, emerging areas of business will present new trade facilitation challenges. Overall it will pay to be modest in ambition. Better trade facilitation can create significant gains in a number of areas, but it is not a panacea.

This chapter examines the potential of trade facilitation – in its broadest sense – to help Kiribati benefit from trade, as well as existing constraints, opportunities and potential future challenges. The chapter covers roles and responsibilities in trade facilitation, customs, quarantine, SPS, freight, wharfage, transport and technical standards and conformance.

4.2 Background

Trade facilitation is playing an increasing role in international discussion of trade policy. In the Pacific it has special relevance because of a growing realisation that reducing tariffs will be difficult and will not by itself lead to a significant expansion of trade. Broadly speaking, trade facilitation can potentially cover any activity that makes it easier or less costly to send goods from the place of production to the final destination market. Increasingly, trade facilitation issues also include things that make production possible in the first place, such as maintaining a disease- and pest-free environment to enable agricultural production. Trade facilitation initiatives can consist of a number of measures across otherwise unrelated sectors of the economy, including:

- the simplification of customs border procedures and duty drawback systems;
- more efficient sanitary and phyto-sanitary regimes;
- the development of agricultural product standards;
- more reliable and frequent shipping services;
- improved trade support services such as customs agents and stevedoring;
- adequate storage and wharf infrastructure;
- better internal transport networks;
- stronger certification of technical standards; and
- improved coordination of government agencies to deliver services more efficiently to exporters and importers.

Each of these elements plays a crucial part in making trade possible. If one link in the chain is weak, it has the potential to severely disrupt the whole supply chain, and with it overall production. By contrast, strong trade facilitation policies and more efficient levels of service have the potential to reduce delays and bring down costs for importers and exporters, with benefits across the whole economy, and sometimes entirely new market opportunities.

Fostering a favourable environment for trade is also especially important in the context of an increasingly global economy in which countries – even small island states – compete against each other for inward investment and business. Competitive pressures between developing countries are growing as a result of increased liberalisation and falling tariff preferences. As more traditional influences on trade such as tariffs and tariff preferences decline, other factors – customs systems, quarantine measures, quality standards, and domestic infrastructure – will grow in relative importance both for overseas buyers and for potential investors. Donors are also paying more attention to developing countries' trade facilitation needs in the context of multilateral Aid for Trade discussions, at the regional level and in bilateral trade negotiations.

4.3 Trade facilitation environment

Domestic production is concentrated in a narrow range of activities – copra, fisheries and the production of a limited range of root crops. Much of this activity is smallholding, with a small number of larger foreign-owned enterprises. The spread of the country across a vast area of ocean makes internal transport important and raises issues over the ability to access shipping and other essential services – for example bridging finance or capital to invest, or advice on export market standards.

Both the recent economic climate and changes to the trading environment create implications for efforts to strengthen trade facilitation:

- At the international level, capacity-building features prominently in technical areas concerning customs and quarantine, and this remains an important issue for Kiribati. Donors and the government will now need to focus on a longer-term approach to building capacity in infrastructure and within departments.
- Links between the islands, particularly South Tarawa and Christmas Island, remain of great importance, especially for smallholders, with implications for transport and infrastructure. A long-term objective should be to open up linkages between certain provincial centres and international destinations, to enable a greater range of goods to flow more quickly and cheaply to the outer islands. Over time this will require investment in new facilities but also greater decentralisation of services such as customs and quarantine.
- Diversification into fisheries processing, particularly the new joint venture in loining, will require new quarantine measures and the strengthening of existing measures. An expansion in tourism could bring with it new threats.

In coming years the government may wish to devote more resources to trade facilitation. The economy needs to diversify into new areas if it is to sustain current levels of growth, and agencies such as quarantine play a crucial, though generally underappreciated role in this transition. Many donors themselves have now acknowledged the central role that trade plays in poverty alleviation in developing countries, and have made commitments to provide funding to build their capacity to trade. A number of donors are currently in the process of determining how they can fulfil their Aid for Trade commitments in WTO negotiations and elsewhere. Much of this Aid for Trade assistance is intended for trade facilitation activities.

Table 4.1: SWOT analysis of trade facilitation in Kiribati

Strengths	Weaknesses
<ul style="list-style-type: none"> ▪ Small size means fewer sectors to deal with ▪ Collaborative culture ▪ Culture of minimal interference from government in key areas or technical border functions ▪ Strong performance in some areas, indicated by World Bank rankings 	<ul style="list-style-type: none"> ▪ Export base limited ▪ Lack of prioritisation and vision for trade facilitation ▪ Weak capacity in most areas (infrastructure, financial and human resources, administration) ▪ Outdated legislation in some key areas ▪ Change tends to be slow and reactive
Opportunities	Threats
<ul style="list-style-type: none"> ▪ Integrated Framework (IF) and Aid for Trade funds to prioritise new activities ▪ Revitalised National Trade Policy Advisory Committee, dedicated programme under IF ▪ Potential for regional cooperation and support in a number of areas ▪ Current trade negotiations 	<ul style="list-style-type: none"> ▪ Lack of political will to prioritise trade facilitation problems ▪ Diversion of resources to other areas ▪ Failure to reform entrenches poor practices ▪ Loss of momentum under IF.

In general terms, the main weaknesses continue to relate to gaps in capacity. While most of the organisations involved in trade facilitation have clear ideas about what needs to be done in their specific areas, many departments lack infrastructure and equipment, staff, investment in new systems, and training.

Administration also needs to be highlighted. Apart from being the agencies responsible for facilitating trade, departments such as customs and quarantine need to ensure that staff at all levels are monitored effectively and also given adequate opportunities to develop over time. Management training for senior officers is important along with solid vision for the organisation concerned; realistic targets and goals (e.g. time taken to clear containers) can also help focus and improve the performance of departments and make them more accountable. There is need for attention in the fields of human resources, general recruitment and advancement, salary levels and rewards, and long term skills and human development planning to ensure continual staff improvement. Organisations that fail to pay attention to these basics may find that their staff lose motivation and bad habits set in – flexibility to adapt is then lost and essential reforms become difficult. All of this is important, because the business of trade facilitation and border operations in today’s world requires administrations to be able to adapt rapidly to changing situations and emerging concerns.

4.3.1 Comparative performance in trading across borders

According to the World Bank Doing Business Indicators, Kiribati scores reasonably well compared with other Pacific Island states on trading across borders. Column one in the table below shows that the total number of documents per shipment required for export in Kiribati is six, slightly lower than the average for East Asia and the Pacific. Time to export is 21 days, lower than the regional average of 23.1. On the import side, Kiribati is reasonably competitive, with seven documents required to import, almost the same as the East Asia and Pacific average. The time to import is 21 days, the equal third-lowest in the region. The cost to import a container

is US\$1,070, the sixth-highest of the countries shown. It should be noted that the data does not measure of trade facilitation, but it does give a partial indication of Kiribati's performance in some areas.

The one area in which Kiribati performs relatively badly is in the cost of exporting a container, at US\$1,070, the fourth-highest of the countries in the table. This sum includes the costs for documents, administrative fees for customs clearance and technical control, customs broker fees, terminal handling charges and inland transport. Whilst the data is not given in purchasing power, the country's low national income would suggest that this sum is particularly burdensome.

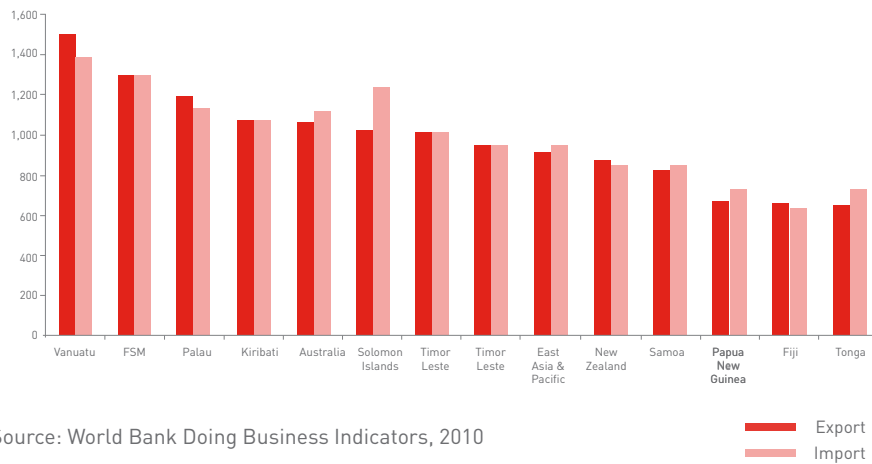
Table 4.2: Trading across borders, selected countries

	Documents to export	Time to export, US\$	Cost to export	Documents to import	Time to import	Cost to import, US\$
Australia	6	9	1,060	5	8	1,119
East Asia & Pacific	6.7	23.1	909.3	7.1	24.3	952.8
Fiji	13	24	654	13	24	630
FSM	3	30	1,295	6	30	1,295
Kiribati	6	21	1,070	7	21	1,070
Marshall Islands	5	21	945	5	33	945
New Zealand	7	10	868	5	9	850
Palau	6	29	1,190	10	33	1,132
Papua New Guinea	7	26	664	9	29	722
Samoa	7	27	820	7	31	848
Solomon Islands	7	24	1,023	4	21	1,237
Timor Leste	6	25	1,010	7	26	1,015
Tonga	7	19	650	6	24	725
Vanuatu	7	26	1,497	9	30	1,392

Source: World Bank Doing Business Indicators, 2010

The following figure, featuring import and export costs, shows that Kiribati is the fourth most expensive of the countries shown. A similar exercise conducted for an earlier DTIS in 2008 showed that Kiribati used to have the third-highest import and export prices of the countries shown, having since lowered its costs below those of Palau. There are a number of ways in which Kiribati could reduce its import and export costs still further, as shown in the remainder of this chapter.

Figure 4.1: Cost of import and export, selected countries, US\$



4.4 Roles and responsibilities in trade facilitation

With the establishment of the Kiribati Integrated Framework for Trade (KIFT) under the IF in early 2010 Kiribati has the potential to play a strong coordination role in trade facilitation. The office is currently housed within the Ministry of Commerce, Industry and Cooperatives.

Earlier trade facilitation efforts have been mixed. With the support of the Pacific Islands Forum Secretariat, a National Trade Facilitation Committee (NTFC) was formed in 2003. Key government personnel tended not to attend meetings as the agenda was considered too technical and hence seen as too junior for departmental heads. In 2006 the NTFC was renamed the Trade Policy Advisory Committee (TPAC) and given the more general objective of coordinating trade-related policy making. It meets infrequently and on an ad hoc basis depending on the issues at hand. The Department of Trade acts as secretary. Members include the Ministries of Foreign affairs, Labour, Fisheries, Finance, Communications and Transport, and the Attorney General’s office. These are the same institutions as the KIFT steering committee except for Environment, Lands and Agriculture, NGOs, the Chamber of Commerce and women’s groups, all of which should be involved in trade facilitation. It would be a good idea to combine KIFT and TPAC, with KIFT taking a proactive and official role as secretary.

There is a strong sense that officials lack a full appreciation of the role and importance of trade facilitation as a single activity. The separate trade facilitation challenges are well understood, including domestic and international shipping, ports and standards, but there is insufficient cognisance of the need to look at the connections between these issues and of the need for inter-Ministerial collaboration. Quarantine is based within the Ministry of Environment, Lands and Agriculture while the Fair Trading Regulatory Division deals with metrology and standards. In reality standards and quarantine issues are often linked and can be dealt with under the same body, even if separate institutions should perform implementation. Similarly policy on fisheries, Kiribati’s most important formal industry, tends to be conducted separately by the Ministry of Fisheries, with less involvement of other agencies than is perhaps appropriate.

The TPAC deals mostly with policy rather than facilitation. During interviews officials could not recall a discussion of sanitary and phytosanitary issues, institutional coordination, transport or technical barriers to trade. Training of trade officials has mostly involved international trade

policy rather than facilitation or productive capacity, and their work corresponds strongly with the regional agenda, with its emphasis on tariff and investment liberalisation, neither of which are immediate priorities for economic development in Kiribati. Most of TPAC's work involves trying to establish a position on multilateral and regional trade agreements including the WTO, PICTA, PACER Plus and the EPA, on which it makes recommendations to cabinet. According to the Ministerial Secretary, however, Kiribati still has no official position on any trade agreement,²³ with the exception of PICTA, which was signed and ratified in 2003. However, Kiribati is yet to implement its obligations under PICTA.

The reactive nature of the TPAC tends to mean that it concentrates on developing short-term positions for forthcoming regional meetings rather than an underlying position on the country's wider interests in trade policy. In such a small administration, with limited resources, and in the interests of reducing bureaucracy, it makes sense for trade facilitation activities to be combined with trade policy, including the development of positions on international trade agreements. It would be of considerable benefit for the Ministry to develop a basic, overarching picture of the country's ethos in trade policy and for KIFT to adopt this as its official position. The DTIS may provide a basis for this position, but it should be nationally owned and therefore should be finalised by national officials. A more proactive work programme, rather than the simple existence of a committee, would help with consistency in trade policy and trade facilitation and lead to more positive overall results.

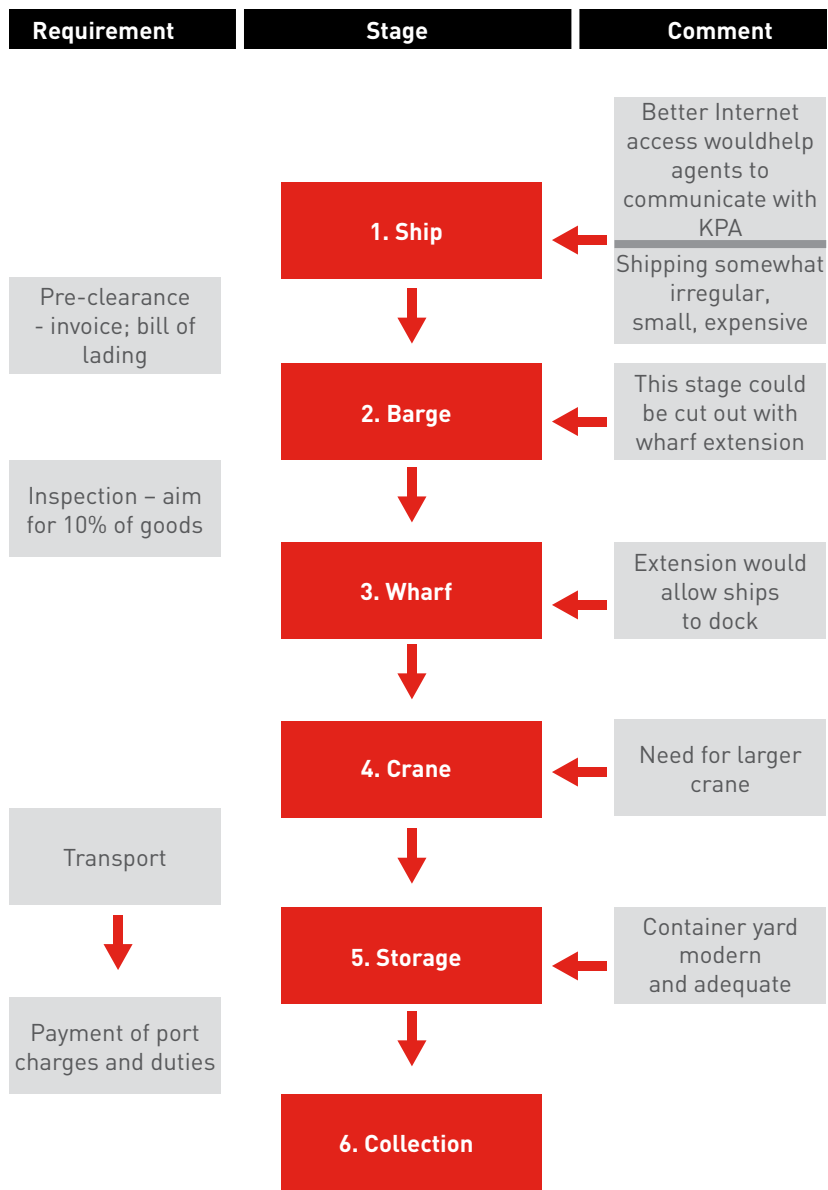
4.4.1 Customs

The Department of Customs is based within the Ministry of Finance and Economic Development. The main office in South Tarawa is based near the wharf, and officials have easy access to incoming vessels. Customs clearance is relatively straightforward. The only documents required for import are invoices for documentation and bills of lading. A pre-clearance system exists, with shipping agents submitting documents in advance through domestic or overseas representatives. The aim is to give clearance within an hour of arrival at the wharf, although it was not possible to verify this in practice. It was reported, however, that agents do not always inform the KPA that shipments are arriving in advance, which means that goods remain on board and accumulate a charge. Often this is a result of the poor quality of communications, and it could be overcome through a more reliable internet service.

Shipments are generally in relatively small quantities, and given the lack of automation officials examine 10% of goods using a basic risk assessment system. The resources do not exist to inspect a larger proportion of imports, and officials acknowledge that mis-classification and duty avoidance could occur, as well as the import of banned items. For instance any one individual is allowed to bring in a maximum of A\$5000 in cash, although officials believe that this rule is routinely flouted. Full automation of customs would improve risk assessment, and the Department of Customs is looking at installing ASYCUDA. Customs data after 1995 is more reliable following the introduction of PC Trade. Officials acknowledge that prior to this date statistics may have been inaccurate, particularly on Christmas Island. Trade data, however, remains open to question in many areas, as noted in Chapter 1.

²³ Chapter 4 gives some basic ideas as to Kiribati's position on the main trade agreements with which it is involved.

Figure 4.2: Import procedure in Betio port



The diagram shows that the main improvement to the import procedure would be the extension of the wharf, which would cut out stage 2, reducing import time and costs. Overall, the import procedure compares reasonably favourably with other similar countries, although prices are high, the result of limited competition in a number of port services. Clearance is relatively straightforward, while storage is good. A larger crane would allow the Port Authority to handle bigger items, reducing time and costs, but it is probably a lesser priority than the wharf extension.

As with trade facilitation in general, progress in customs reform is somewhat ad hoc rather than driven by a clear plan and set of objectives. FICs that have successfully reformed Customs have paid close attention to sequencing issues and ultimate goals. There are clear questions of both sequencing and long term commitment involved in customs reform. The Customs Act says that Kiribati has adopted WTO valuation techniques (even though Kiribati is not a member of the WTO), although valuation is not as good as it could be. It might be improved, along with trade data, through a move to an improved automated system such as ASYCUDA. Schedules or a consolidated programme for enacting different pieces of legislation and conducting officer training would assist in budgeting and resource prioritisation. Making private companies aware of future changes would enable them to better plan ahead.

The introduction of ASYCUDA is a particular priority, and one with which the IF is well-placed to assist. Work in this area 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 Tuvalu. A move to ASYCUDA should be seen as an advance on the existing system, PC Trade. Amongst other things automation would help improve risk assessment and better coordinate data across government.

One of the striking characteristics of Customs administration in Kiribati is the divergence in resources and capacity between the central administration in South Tarawa and the sub-office in Christmas Island. Whilst the central Department of Customs in South Tarawa is reasonably resourced and operates somewhat effectively compared with other regional administrations, the office in Christmas Island is almost entirely bereft of the basic resources required. This is of particular concern given that Christmas Island represents the country's largest land mass and potentially the area with the most potential for economic development. As a remote island to the east of the Pacific island region it is also potentially open to smuggling and other threats. Officials in the government and elsewhere admitted that they simply do not have the resources to monitor the activities of many incoming vessels, and yachts in particular often come and go without clearing customs. Officials reported that they had never found any contraband, suggesting not that smuggling does not exist but that inspection is weak.

Two Customs officers are employed in Christmas Island under the Ministry of the Line and Phoenix Islands Development (MLPID) in the town of London. The office has no vehicle, no IT system (at the time of writing computers had been delivered by central government but with no internet connection or training), no boat and insufficient office space. Although there is a Customs office at the airport, there is, as yet, no presence at the wharf. Imports and exports are logged manually (if at all) rather than on computer. The department has no equipment, such as an X-ray at the airport (which is more of a quarantine issue). Customs officials on Christmas Island are also responsible for Tabuaeran and Canton, yet they rarely communicate with either island. A single police officer on Fanning island is responsible for customs, immigration, meteorology, postal services and government finances. Communications occur by Citizens Band radio and irregular visits by ships.

It is reported that Customs officials on Christmas Island do not check incoming cargoes, simply reading the manifest. Exports, which consist mostly of aquarium fish, appear not to have been logged at all in recent years. Customs valuation appears particularly poor on Christmas Island. Customs officials expressed a desire for increased staffing levels, IT facilities, communications, transport, as well as training in a variety of areas. Training in the use of ASYCUDA will be a priority if it is adopted under the IF.

4.4.2 Sanitary and phytosanitary standards

By virtue of long-standing preferential trade agreements and its status as a LDC, Kiribati faces negligible tariffs and quotas in developed countries such as Australia, New Zealand and the European Union. Collectively, however, these three markets apply the most stringent SPS requirements in the world, with compliance becoming more difficult with each new regulation that is passed. (The particular interest in ANZ in protecting their SPS environments means that they are generally very willing to offer assistance with quarantine, testing and standards). Beyond pure SPS compliance, private importers are also applying new standards of their own when selecting where to buy produce. On the import side, Kiribati faces the same biosecurity challenges as other countries – perhaps more so, given that it would wish to maintain its reputation as a relatively pest- and disease-free environment. 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. The results of the tool should be used to formulate follow-up projects. Priorities include building capacity to deal with import and export of plant products; revision of the list of regulated quarantine pests; public awareness campaigns on invasive species and plant pests; as well as the development and proper implementation of biosecurity legislation.

However there are only a few recorded pests and diseases, including:

1. Mango fruit fly – usually found in ripe breadfruit and on a leaf of a native flowering tree – te uri (*Guettarda speciosa*). Mango fruit fly can cause wastage because it reproduces inside the breadfruit, making it unsuitable for consumption. As breadfruit is harvested when ripe but still firm, making the pest insignificant.
2. Breadfruit rot diseases - these cause devastating damage. Islands in the north such as Makin, Butaritari, Abaiang and Tarawa are infested with the disease.
3. Scale insects - found on coconut and breadfruit. This insect produces honey dew which attracts fungus.
4. Mealy bugs - normally found on pawpaw leaves
5. Taro beetle – found on Babai corns.

Considering the lack of pests and plant diseases and the vulnerability of the atoll environment and ecosystem, the use of pesticides can be minimized. They may also contaminate the underground water lens, a critically important source of water. It is therefore preferable to use integrated pest management approaches. For example, the use of trap crops such as mint herbs to repel ants, aphids, cucumber beetles, flea beetles, imported cabbage worms, rodents, squash bugs and white flies or the use of organic pesticide for example, using the Neem tree leaves as a pesticide against whiteflies.

The fisheries industry will need investment if it wishes to successfully export loined fish to Asia and the European market. Loined fish products have a high value-added quotient, and they are also among the most 'SPS-sensitive', i.e. for which SPS export standards are most strict. Worldwide, value addition in agriculture is increasingly associated with meeting standards, and comparative advantage lies in having systems being able to meet them.

4.4.3 Quarantine requirements

Products marketed for export have to meet the standard, quality and certain quarantine requirement of the receiving countries. For example, products such as breadfruit, papaya and other fruits which are exported from Fiji, Tonga and Samoa to New Zealand and Australia undergo higher temperature forced air treatment before they are exported. Such requirements vary from country to country and failure to comply with such requirement results in the product being rejected. The Agriculture Division, who is responsible for the treatment of all products prior to exportation, lacks the premises for treating export commodities.

Copra is treated prior to export by the exporter, Kiribati Copra Mill, with BV2 fumigator with the following active ingredients; pemethrin, piperonyl butoxide and methylin chloride. The Agriculture Division ensures the treatment takes place and issues a phytosanitary certificate.

4.4.4 Biosecurity and food safety

The Kiribati constitution clearly stipulates ordinances pertinent to animal and plant importation and export. These ordinances will soon be overridden by the Biosecurity Bill, which at the time of writing had yet to be endorsed by Parliament as a law. This Bill was developed with the assistance of SPC and is harmonized with the Bill developed for other countries of the region. There is also a Consumer Protection Act (2001), amended in 2009, which amongst other things gives legal powers to act against the supply of goods that are deemed below appropriate standards.

While food safety is primarily focused on domestic health, there are clear linkages with the export sector, especially if improvements allow the country to develop national export standards or encourage and make it easier for producers to become certified to Hazard Analysis Critical Control Point (HACCP) standards. The most significant actions are those that help to increase the general level of sanitation (such as access to water, toilets and improvements in food hygiene)²⁶, as these provide a sine qua non basis for all other types of SPS activities to prosper. However, investment in this area will in the long run also help agricultural and fisheries exports: for example there is no point putting in traceability systems or seeking organic certification if simple food hygiene standards cannot first be met.

Kiribati has been a member of codex since 1990 and also has a national codex committee. This committee has been revitalized and termed the National Food Safety and Codex Committee. The draft TOR include, *inter alia*, to serve as a national multi-sectoral forum of exchange on matters related to Codex and National Food standards; to advise the government on the best possible decisions as regards Codex and food standards and their implementation; to recommend priority areas for national food standards development; and to provide a forum for discussion of food safety issues of concern to Kiribati. In this sense the committee also works on national food standards pertaining to trade. Imported food items present a concern to authorities, including issues such as labeling, date marking and adulteration. National food standards are under the auspices of the Ministry of Health, which at this stage does not conduct border inspections.

²⁶ See the chapter on human development and environment.

4.5 Ports, stevedoring and storage

4.5.1 Ports

Kiribati has two international ports, the main port in Betio and the secondary port in Christmas Island. Both wharfs are in need of development, although Christmas Island port is of a lower standard. The Japanese International Cooperation Agency (JICA) is currently examining the prospect of extending Betio wharf by another 100m into deep water. Currently, larger ships must anchor offshore and ferry their goods ashore via barge, a process which is relatively costly and inefficient and which adds to the cost of goods as well as doing business in general. A longer wharf would speed up import and export, and should in theory allow the Kiribati Port Authority (KPA) to lower prices (see figure above and table below).

The KPA, a government-owned entity, operates as a monopoly in a number of areas and therefore faces few pressures to lower prices. The KPA board is appointed directly by the Minister, who signs fees into law under the KPA act. Port charges were raised in 2009 specifically with the intention of investing in new facilities. Charges are the same in Betio and Christmas Island despite the lower cost of living and less developed state of Christmas Island. The latest Pacific Economic Survey (AusAID 2009: 37) shows that port charges in Kiribati are high compared with other Pacific Island Countries, and remained the same from 2008 to 2010, whilst clearance times remain the second-slowest in the Pacific, at 14 days. The following table shows some of the main charges.

Table 4.3 : Sample port charges

Service	Fee
Pilotage	A\$100 + A\$0.10 per GRT
Docking	A\$3 per metre or per 100 GRT (whichever is greater)
Port dues	A\$10 per 100 GRT per day
Wharfage dues	A\$10 per m ³ /tonne (whichever is greater)
Discharging/ loading	A\$200 per max. 25 tons container weight (A\$100 per extra ton)
Agent charges	A\$3 administration fee per release; A\$6.60 m ³ /tonne (whichever is greater) lighterage on imports or exports if ship at anchor; A\$18.60 m ³ /tonne (whichever is greater) wharfage on imports and exports.
Storage charges	From A\$8-150 per m ³ per day.
Hire charges	Eg. A\$1,440 per day for pilot boat. Large tug boat A\$150 per hour.
Jetty charges	Heavy commercial vehicles A\$5 per trip.

NB. This is a small number of the broad range of charges applied and does not reflect a number of sub-categories.

GRT: Gross registered tonne

There are no wharfs in the outer islands. Ships anchor outside the reef, unloading their cargo on to small frontloading barges which land cargo directly on to the beach and collect copra in return.

The international wharf near London on Christmas Island, built by Japan for a rocket programme in the early 2000s, is too high for most ships to unload. Plans exist to build a pontoon extending from the wharf so that it can more easily accommodate smaller ships. At the time of writing US army volunteers were upgrading the mooring system to make it easier for ships to dock. As in Betio, most ships must anchor offshore and ferry their goods ashore, a process which can take several days, if not weeks. This has a clear impact on the cost of goods and services.

Several international donor partners have indicated a willingness to fund the dredging of a new channel directly in to the CPPL wharf in London. Currently the water is too shallow for large vessels to dock. At the time of writing a US bathometric study had been passed to New Zealand for possible support. A Chinese entity was also believed to be looking at dredging a channel, presumably in connection with the loining joint venture between Golden Ocean and Shanghai Fisheries. Given that it is in their commercial interests, it would probably be better to leave this activity to the private sector, with government and donors conducting an environmental impact assessment and close environmental monitoring. The channel would also need regular maintenance owing to the likelihood of it silting up, an area in which the private sector would be better incentivised.

4.5.2 Stevedoring and storage

Betio port has a sufficiently large storage facility, although charges are high, as noted above. There is competition in stevedoring in Betio, with one private company operating in competition with the KPA. The former operations manager and pilot for KPA has also set up a private pilotage company, a situation which has helped reduce costs. The KPA aims to replace its existing 50-tonne movable crane with a larger model so that it can deal with a larger range of freight. Currently the lifting capacity of the crane is insufficient to be able to fill some containers for export, meaning that they leave half-full.

In Christmas Island shipping agents perform stevedoring using a 10-tonne capacity crane to lift heavy goods directly on to the wharf. Loose cargo must be transferred on to the beach by small boat over several days. The port has no storage facilities, meaning that cargo either has to be collected immediately or is left in the open. The only item left long-term on the wharf is salt imported for Spanish fishing vessels, which is charged at 25 cents per kilo.

The manager of the KPA in Christmas Island plans to buy a larger, 50-tonne crane. However when the suggestion was made that he make use of the old crane in Betio when it was replaced, he expressed reluctance to “accept donations”. This statement typifies the way in which many people see the relationship with the capital. Many appear to see Christmas Island as somewhat autonomous, receiving little assistance from Tarawa. As a result they are reluctant to accept what they see as handouts.

4.6 Transport

4.6.1 International

The cost and irregularity of international transport represents a significant challenge to doing business throughout Kiribati. During consultations, almost all government officials and private sector representatives, particularly in Christmas Island, expressed frustrations with international transport.

The country is currently served by Our Airline and Air Pacific. The current air services to Kiribati are presented in the following table. Total inbound weekly seat capacity is approximately 730.

Table 4.4: Current International Flights To/from Kiribati September 2010¹

	Days	Carrier	Weekly capacity
TARAWA - NADI			
Air Pacific	Tues/Thur Nadi <> Tar	117	234
Air Kiribati	Mon > Nad, Wed > Tar	130	130
TARAWA – NAURU			
Our Airline	Wed > Nau Brisbane Mon > Tar	130	130
NADI – CHRISTMAS ISLAND- HNL			
Air Pacific	Tues >Nadi/Kir/HNL, Wed > HNL/ Kir/Nadi	117	117

¹ As at 31st July 2012 the Air Kiribati Tarawa-Nadi Flights and the Air Pacific Nadi-Christmas Is-Honolulu Services are no longer operating

Withdrawal of the Air Pacific Flight to Christmas Island in August 2008 caused a major problem for the local tourism industry, as well as for residents, with numbers of fishermen dropping and service being provided by a small charter operator from Hawaii. The Air Pacific service commenced again in 2010 under a special relationship with the Government of Kiribati and is scheduled to continue for four years – with a review being undertaken every six months. Unfortunately it has now been discontinued.

Domestic and international ships do not all operate according to a predictable schedule, making it difficult for businesses or consumers, particularly on locations other than Tarawa, to predict when to prepare goods for market or when goods will arrive. The Swire-operated Kiribati Chief travels from Australia via Vanuatu to Tarawa on a 33-day basis, returning via the same route. The ship can easily be tracked online. In May 2009 Kiribati Shipping Services Limited (KSSL) signed an agreement with the governments of Nauru, Tuvalu, Kiribati and Wallis and Futuna to provide regular feeder shipping services to these countries.

However on Christmas Island the only regular vessel is the Kwai, a 120-foot sailing vessel that leaves Hawaii every two to three months on its way to the Cook Islands. It is only viable because it can operate without fuel for the majority of the journey, lowering costs. The vessel visits other locations in the Line and Phoenix islands on an ad hoc basis.²⁸ Other cargo ships dock in Christmas Island, but irregularly.

²⁸ Freight rates are A\$91 per cubic metre to Fanning island and A\$130 to Washington. Per person, the rate is A\$200 to Fanning and A\$125 to Washington.

Wholesalers on Christmas Island complain that government shipping is poorly run and infrequent. For example the manager of a wholesale company complained that in late 2010 a ship's engines failed, causing it to drift toward the Marshall Islands with 10 containers of perishable goods on board. Compensation appears unlikely. Retailers and wholesalers on Christmas Island are particularly restricted by the irregularity of international transport. For two years until 2010 there were no flights at all. One retailer said that during this time he was prevented by government from chartering a flight from Hawaii.

Air transport is currently via a twice weekly flight from Nadi to South Tarawa and a Monday flight with Our Airline from Nauru, returning on Wednesday. Prices are reasonably high, even by Pacific standards, a result of limited competition on the route. Air travel between Christmas Island and Tarawa involves transiting through Hawaii.

Despite the infrequency and cost of international transport, Kiribati is fortunate in at least having air and sea access to the United States. The existence of a regular shipping route was one of the key reasons behind the (unpredicted) success of Fiji Water in the American market. Similarly, the existence of good air connections was the only reason that Fiji has a value added fresh tuna loin industry. This gives one example of how transport can direct or limit trade opportunities for Pacific Island states, and the importance of integrating transport policy more closely with trade policy. A viable transport plan needs to be developed, including options for making the shipping industry more regular, predictable and affordable.

4.6.2 Domestic

Scheduled domestic air travel is restricted to the Gilbert group. The entry of a new domestic carrier (Coral Sun) has opened opportunities for increased tourism to the Outer Islands of the Gilbert group. Domestic air services are also provided by Air Kiribati. Annex 3 shows the current schedule of domestic flights for Air Kiribati. At present the services are constrained by a lack of reliability in aircraft schedules and limited infrastructure in terms of outer island airstrips. There is also a lack of night landing facilities on Tarawa – with flying hours restricted to daylight. Eight of the local airfields need immediate runway upgrades and the poor condition of the runways takes a significant toll on maintenance and tyre repairs (Taumoepeau, 2008). Reliability of domestic air services is felt to have improved in recent times but is still a factor that worries many of those consulted for the DTIS and causes visitors to be very cautious with their travel planning.

The government owns a number of boats which each serve an individual island. Kiribati Shipping Services Limited (KSSL), a public enterprise, provides the backbone of domestic shipping services in Kiribati. KSSL currently has one ship serving the Gilbert Islands. It runs four routes, each covering four islands at a frequency per route of roughly once every 2 months. The Kiribati Protestant Church operates three ships through Kiribati Inter-Island Shipping Services that concentrate on the Southern Gilbert islands. Included is a landing craft that is in high demand for movement of machinery and construction materials. In addition, there is a significant and growing number of private shipping operations using a range of smaller vessels (ADB 2008). A second KSSL ship has been serving the Line Islands since 2006 and generates considerable annual losses. The vessel undertakes trips between Tarawa and Kiritimati from time to time depending on the volume of cargo and passengers and the availability of the vessel.

Co-ordination remains poor. Information problems mean that boats supplying small regional shops do not co-ordinate their activities in order to bring back agricultural produce, primarily copra, while many of the outer islands are inadequately served. This difficulty is compounded by the problem that government subsidies make the copra trade uneconomical for private buyers (see the agriculture chapter). Commercial enterprises and government officials on Christmas Island complain that the irregularity and poor quality of domestic transport heightens their feeling of separation from the capital.

Better telecommunications would help in this regard, as might deregulation of the industry. It is important to emphasise that the ‘light regulatory touch’ employed by some other successful models is one to follow. In the Solomon Islands, a country with particular problems of geographical dispersal, a joint ABD/EU- project has been established to create a framework for the granting of licenses to run subsidised services to around six remote locations that currently receive inadequate shipping.

Whilst subsidies are probably unavoidable in Kiribati, it would be undesirable to continue with the current government-operated system under which subsidies are effectively hidden. One solution may be to offer explicit subsidies for routes, and for private companies, foreign or local, to bid for contracts under a franchising scheme. Under this system the cost of the subsidy often ends up being smaller than expected. One advantage of Kiribati’s situation is that the challenges facing domestic and international shipping are similar – the islands are so far apart that Fiji or the US are often nearer than other islands within the same country. This means that solutions for domestic shipping should be similar to those for international routes. Moreover Kiribati is unlikely to experience the problem of a shortage of seafarers experienced in other countries. Kiribati has a long and successful history in this area, and the current downturn in the global shipping industry means that the domestic labour supply should be sufficient.

A range of lessons can be learnt from other experiences of contracting out elsewhere in the region, as illustrated in the regional ADB report *Oceanic Voyages: Shipping in the Pacific*. In particular, there have been problems of:

- “
- A shortage of private sector operators willing to bid for and operate the services;
 - Unsuitability of vessels deployed to deliver franchised services;
 - Erratic performance of obligations by contracted service providers;
 - Unwillingness or inability of governments to enforce sanctions for non-performance;
 - Unwillingness of governments to commit the funds required to make subsidy payments for the full period of the franchise contract;
 - Communities not meeting the original criteria for inclusion in the scheme applying pressure on governments for later inclusion; and
 - Lack of implementation of contract bidding requirements by the responsible governments.
- ”

(ADB 2007: 58)

Nonetheless, system whereby franchises are contracted out can be made to work as long as these lessons are taken into account. Guidelines should be established for all transport subsidies, including the maritime sector. This involves making sure that subsidies to transport sector activities have clear objectives and are situated within a comprehensive and coherent transport

sector policy. Subsidies should be transparent, with the fiscal commitment clearly defined and subject to periodic review in the context of other government spending requirements. Wherever practical, subsidies should be allocated to service providers on the basis of open and competitive tenders of limited duration (ibid.: 46).

4.7 Technical standards and conformance

Many small island developing states tend to fail to meet technical standards, and Kiribati is no exception. Kiribati is not a member of the International Animal Health Organisation (OIE), restricting the ability of exporters to send live fish to Australia. Membership of the OIE would also open up potential trading opportunities in other areas, although sustainability issues should remain paramount. Similarly the country has not been able to meet international standards for the export of virgin coconut oil, a product which can command a price premium. Whilst suggestions have been made to set up a national standards organisation, the preferred model would probably be for KIFT to adopt standards as part of its work programme, and to make full use of regional opportunities for collaboration (discussed below).

Another area in which Kiribati must achieve international standards is in the area of food safety for export to the European Union (EU). This is particularly relevant in the case of fisheries, if the joining joint venture proceeds according to plan. The exporter government is required to have an agency certified by the EU as a Competent Authority for monitoring the safety of food products. If the exporter government is unable to do this, then all food from that country is banned for import to the EU.²⁹

4.7.1 Draft weights and measures regulation

Metrology is covered by the Fair Trading Regulatory Division within the Ministry of Commerce. One officer is in charge of metrology in South Tarawa, and one in Christmas Island. Legislation is under the Weights and Measures Act (1984), which provides for the appointment of inspectors, outlines their powers, defines what weights and measures are to be used and outlines penalties in the case of violation of these rules. Consultations suggested that both officers struggle to carry out their duties to the fullest extent possible because of their high workload elsewhere and the shortage of equipment. This is particularly the case in Christmas Island, where an extremely capable officer is in charge of almost the entire range of trade-related tasks. It is possible that weights and measures are incorrectly applied, domestically and at the border, in both Christmas Island and Tarawa.

4.8 Regional cooperation

In Kiribati as in all the Pacific Island States, a number of trade facilitation functions currently performed at the national level can 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

²⁹ The International Trade Centre has published a short guide for exporting seafood to EU markets, including information about health certificates, the Food and Veterinary Office, official controls and guarantees, and labelling (see <http://www.intracen.org/eqm>).

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 chapter on trade policy, could enhance the establishment of regional organisations and cooperation between existing ones.

Regional organisations led by the Pacific Islands Forum Secretariat (PIFS) have also been implementing the Regional Trade Facilitation Programme (RTFP), which has now ended but which focused on Customs, Quarantine and Standards. Kiribati did not benefit much from the programme. 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 programme.

Table 4.5: Summary of activities in regional trade facilitation (including RTFP)

Customs	Quarantine	Product Standards and Conformance
<p><i>Funding for:</i></p> <ul style="list-style-type: none"> - Strengthening the Oceania Customs Organisation - A rules of origin committee for PICTA <p><i>Assistance in:</i></p> <ul style="list-style-type: none"> - Adopting the HS - Adopting WTO customs valuation agreement - Updating laws and regulations - Adopting revised Kyoto convention - Risk Management - Customs Integrity 	<p><i>Funding for:</i></p> <ul style="list-style-type: none"> - Technical advisory unit for import-export biosecurity - Dedicated Pacific quarantine officers in Australia and NZ <p><i>Assistance in:</i></p> <ul style="list-style-type: none"> - Improving capacity to conduct Import Risk Assessments - Developing market access proposals for exports 	<p><i>Funding for:</i></p> <ul style="list-style-type: none"> - Studies on: legislative and regulatory frameworks; metrology; regional and national standards bodies; accreditation bodies; testing and inspection centres and systems <p><i>Assistance in:</i></p> <ul style="list-style-type: none"> - Integrated Food Standards Project to update legislation, provide training

Source: PIFS

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.

- Support for strengthening Customs regionally and nationally (discussed above)
- Support for a regional Quarantine centre and training
- 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 Oceania Customs Organisation (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;
8. Annual training to improve procedures on customs integrity.

One big 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. In a majority of these areas, Kiribati is behind some of its Pacific neighbours – especially when considered in comparison with some of the bigger Pacific Island Countries which trade more. It is therefore in the interests of both the success of the programme and Kiribati that it takes full advantage of future opportunities available, which can be achieved through seeking support under the program at annual regional Trade Ministers’ Meetings and in correspondence with those who administer the programs. Those countries that are proactive in seeking such support, through a national trade facilitation committee, are more likely to get funding and assistance.

Beyond the RTFP a number of other opportunities exist for pooling of resources at the regional or sub-regional level. Bilateral cooperation agreements with other neighbouring developing countries could be of great benefit for Kiribati in some areas where its knowledge base is currently undeveloped, such as standards and conformance.

Some potential areas for greater regional integration are considered below. In terms however 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
- Connect with large, developed countries

4.9 Conclusions

Trade facilitation represents one of the most promising areas for IF support. Whilst Kiribati scores reasonably well on the World Bank's trading across borders indicators, this presents an incomplete picture. Trade facilitation in some areas is so basic that even small improvements can make a big difference. As in a number of other countries, there needs to be a better understanding of the overall importance of trade facilitation, and how the various trade facilitation-related challenges together fit into government policy. There is a certain paradox in the fact that the economy in general experiences a high level of government intervention, yet the presence of the government at the border is weak. It is probably fair to say that trade at the border in Christmas Island is (unintentionally) among the least regulated of any Pacific island with an international port.

A proactive trade facilitation programme should be formulated under Tier 1 of the IF, coordinated by KIFT and administered by MCIC, with a series of costed activities set out over the medium term. At least, the initial programme should consist of funding for ASYCUDA; membership of the OIE; work on attaining EU Competent Authority status; lobbying of government departments and donors for the upgrading of facilities on Christmas Island; as well as a general move toward bringing standards and conformance closer to international regulations for agricultural export. This would be of immediate benefit for fisheries exports as well as noni and virgin coconut oil, each of which has failed to achieve the required overseas standards. It would also set in place a more trade-orientated economic environment for future years.

Transportation difficulties are a particular obstacle to trade. There may be no easy answer other than to deregulate the industry and to offer subsidies based on a competitive basis, a model which has proved somewhat successful elsewhere. It will remain important to learn lessons from other experiences. Government is not in a position to offer significant new subsidies, and funding would probably have to come from donors. This is an issue which may be discussed as part of the on-going donor/ government relationship.

Customs activities on Christmas Island are particularly weak, and government and donors may wish to consider reprioritising their budgets in this area. The degree of investment required is partly conditional on the government's overall development objectives. If the island is to be developed further, and if relocation is to proceed apace, it will first need basic infrastructure, much of which is currently absent. A long-term, forward-looking approach is essential in order to avoid the kind of sanitation and crowding problems currently experienced in South Tarawa.

For all Pacific Island countries regionalisation of trade facilitation architecture makes considerable sense, but particularly for the smaller island nations such as Kiribati. If Kiribati is to take part in PACER Plus, it makes sense to negotiate for enhanced regional trade facilitation architecture, with collaboration in at least customs, quarantine, labour, standards and immigration. Even if the country does not take part in PACER Plus, it will be important to collaborate regionally. In addition to funding for regional initiatives, there must be national funding to build capacity so as to be able to take advantage of the opportunities at the regional level.

5. Human Development and Environment

5.1 Introduction

The concept of human development has particular relevance in a partly subsistence society such as Kiribati, where people can have low incomes but lead reasonably well nourished and relatively fulfilling lives. Absolute or extreme poverty is rare, and even the word ‘poverty’ generally carries negative connotations in Kiribati’s egalitarian society³⁰.

Although under-nutrition is unusual, malnutrition does exist. Certain groups experience significant hardship, particularly those with no regular work or low incomes. Only 13,133, or 14% of people were employed in the cash economy according to the last census in 2005, meaning that 86% of the population are either engaged in subsistence activities or too young, or too old, to work. This high dependency ratio³¹ constitutes a significant constraint on economic growth.

Many people live in crowded homes with no good source of water, sanitation, or electricity. Urban drift to South Tarawa is high. According to a recent UNDP study,³² many households on South Tarawa cannot afford a basic standard of living. Subsistence fishing and agriculture remain a vital social safety net. Even employed people with a regular source of income undertake some form of subsistence activity such as fishing, collecting shell-fish, and collecting coconuts after working hours or during weekends. A lower level of biodiversity, however, coupled with the decline in some traditional subsistence food sources, means that people in Kiribati find it harder to fulfil their basic needs than those in some other Pacific island countries.

This chapter first outlines Kiribati’s overall human development situation before examining poverty in terms of absolute income and according to national basic needs and food poverty lines. After this is an discussion of health, access to water, sanitation, climate change and energy. Finally, the chapter discusses education and training. Some of the links between trade and human development feature throughout.

5.2 Human Development Index

The idea of human development is influenced by the literature on inequality and poverty (Desai, 1991) as well as Nobel Laureate Amartya Sen’s understanding of development. These authors suggest that other dimensions of development must complement income. As such human development has been variously defined as ‘human flourishing in its fullest sense – in matters public and private, economic and social, and political and spiritual’ (Alkire, 2002), and as ‘a process of enlarging people’s choices and freedom’ (Sen, 2000). Joseph Stiglitz (1998), former World Bank Chief Economist and economics Nobel laureate, argues that development should aim at the transformation of society. This approach is compatible with Sen’s vision of development as freedom: developing countries should consider expansion of freedom as an end

³⁰ People generally do not want to be considered dependent or lower in status than others—this attitude is very strong on the outer islands.

³¹ In Kiribati the extended family system means that people employed or people who have access to cash income are obliged to support family members.

³² Kiribati National Statistics Office & UNDP (2010) “Kiribati—Analysis of the 2006 Household Income and Expenditure Survey”.

in itself rather than simple GDP growth. But despite its conservationist credentials and desire to protect indigenous ways of live, the concept of human development is not conservative. It is about changing people's lives for the better rather than maintenance of the status quo.

The United Nations Development Program (UNDP) has translated the concept into a composite measure known as the Human Development Index (HDI), published annually since 1990. The three primary indicators that form the HDI -- education, longevity and income -- are used as proxies for knowledge, a long and healthy life and standard of living. The processes of improving these proxies are viewed as 'enlarging people's choices' (UNDP, 1990: 10).

Mounting evidence suggests that economic growth by itself is not enough. Inequality can persist despite the existence of high economic growth. Riches do not inevitably lead to improved social indicators. Indeed health and education may be prerequisites for wealth-creation. Sen (2000) argues that while economic growth is essential, social arrangements such as facilities for education and health care should remain paramount. The HDI has been widely acclaimed as a welcome addition to a debate under which conventional understandings and measurements placed economic growth as the sole manifestation of development.

On the most recent UNDP Human Development Index on which it featured, Kiribati ranked 12th of 14 Pacific island countries and 129th in the world. The report of the 2006 analysis on the household survey states that:

"The human development status is relatively weak and has showed little improvement; between 1998 and 2008 the Pacific Human Development Index (HDI) improved only slightly from 0.515 to 0.606, pushing the country down one position to 12th behind Vanuatu, with only Solomon Islands and PNG having a worse HDI. On the Pacific Human Poverty Index (HPI) Kiribati fared worse, with its position falling three places behind FSM, Marshall Islands, and Vanuatu, again with only Solomon islands and PNG below it in the rankings. Thus over recent years Kiribati has fallen behind in both the human development and human poverty indices."

5.3 Poverty and inequality

5.3.1 GDP per capita

In Kiribati the main challenge in measuring GDP is in valuing subsistence activities, as well as in obtaining good data on informal commercial activities such as selling fish or food by the roadside. A valuable Household and Income Expenditure Survey (HIES) has been conducted, which gives some estimate of subsistence, but improvements can still be made. Despite measurement problems GDP is still useful in gauging economic growth living standards over time and in comparison with other countries.

Table 5.1: Real GDP per capita, 1991 prices

	1991	1995	2000	2005	2009
Total GDP per capita	1208	1326	1789	1948	1958
Informal monetary per capita	193	210	184	189	217
Informal nonmonetary per capita	418	440	424	467	504
Formal per capita	598	676	1181	1292	1237

Source: Kiribati National Statistics Office (2010) "Kiribati National Accounts: The Production Account and GDP".

The table shows a steady increase from 1991 in real terms up to 2000, but after this growth in GDP per capita slowed. Formal GDP per capita in 2009 was lower than in 2005, reflecting slow economic growth.

Gross National Income (GNI) reflects GDP plus the income flow from seafarers, fishing licenses, the interest earned on overseas investment, other property income accrued from the rest of the world, and aid assistance from development partners. Income flowing out of the country is deducted from this figure. In 2007 estimated GNI was about \$200 million³³ and per capita income \$2,010, considerably higher than GDP per capita.

As average measures, GDP and GNI per capita say little about inequality. The Gini Coefficient shows that inequality in Kiribati is relatively high by Pacific standards, with a figure of 0.39³⁴. For South Tarawa the figure is 0.35, and for the outer islands it is 0.41—this larger coefficient reflects again the difference in the levels of expenditure between the southern islands and the northern islands. The following table shows that Kiribati is the third most unequal of the countries shown, behind Papua New Guinea and Vanuatu. It should be noted, however, that data sources are different and that the coefficients for other countries are from two years earlier.

Table 5.2: Gini coefficient for selected Pacific Island Countries

Country	Gini coefficient
Samoa	0.19
Tonga	0.26
FSM	0.34
Solomon Islands	0.36
Fiji	0.38
Kiribati	0.39
Marshall Islands	0.42
Papua New Guinea	0.51
Vanuatu	0.58

Source: World Bank 2004; Kiribati HIES survey 2006

5.3.2 Household surveys

Two household surveys have been undertaken, the first in 1996 with the assistance of the PIFS, and the second in 2006 with the assistance of SPC. The first was to determine the household consumption expenditure pattern in order to rebase the retail price index or RPI. The scope and coverage was fairly limited but some of the findings are interesting – one of which is that ‘most households on South Tarawa spend more than they earn’. This means that many people balanced their household budget with borrowings from relatives or friends or by purchasing on credit or ‘te tarau’³⁵.

³³ See the “Analysis of the 2006 Household Income and Expenditure Survey”.

³⁴ As reported in the 2006 analysis of the household income and expenditure survey.

³⁵ Although no formal study has been undertaken to examine the extent of people borrowings or purchasing on credit there is clear anecdotal evidence that many employees, including government employees, often use ‘te tarau’ or credit system, to meet their expenses. This is evident on paydays when lots of food vendors and businessmen ‘chase up’ employees for their debts.

The average expenditure of households on Tarawa, according to this survey, is \$273 per fortnight and the average income is \$268, leaving a deficit of \$5. This means that people on South Tarawa generally do not save, apart from their contributions to the national provident fund (KPF) which they can only withdraw when they reach 50 years.

Another finding of the survey is that people in the northern islands spend more than people in the south. There are more opportunities in the northern islands to obtain cash income because of the wetter and more fertile conditions. The proximity of the northern islands to urban Tarawa is another contributing factor, owing to the opportunities for inter-island trade. For the two islands nearest to Tarawa (Abaiang and Maiana) there are several boats regularly ferrying passengers and goods between the islands (it takes 3 to 5 hours to travel between these islands). Some employees on Tarawa in fact make the habit of spending the weekends on Abaiang or Maiana.

According to the Kiribati 2007 Millennium Development Goals (MDG) report, “Kiribati has the highest proportion of households (50%) with per capita income below the National Basic Needs Poverty Line (NBNPL) among its Pacific island neighbours whose HIES were covered before, during, and after 1996”. The report went on to say that the finding “is consistent with the 2001 SAPHE³⁶ community survey which reported that 52% of all households interviewed experienced regular shortage of cash with which to meet daily basic needs”. The report also quotes 49% of households on the outer islands are below the NBNPL and 51% on South Tarawa. This figure does not incorporate consumption from own-production or from subsistence activities. If this is factored in, the report says, the proportion of households under the NBBPL would be less than 50%.

Box 5.1 | Trade, environment and poverty

While copra is often seen as a cash-based activity with implications for trade, coconuts provide a vital source of subsistence nutrition. Much of the existing coconut stock is old. Coconut replanting is imperative both in order to maintain a source of exports and as a food source, particularly on the outer islands. Breadfruit trees provide a traditional source of carbohydrate but they do not grow well in some areas, especially the more dry islands in the south. Sea level rise (see the agriculture chapter and section 5.5 below) will contribute to coastal erosion, increasing saltwater intrusion and making it harder for coconuts, breadfruit and other species to grow.

The disappearance of certain fish and shell-fish species from the lagoons of some islands has reduced the availability and diversity of important food sources. In Tarawa, for instance, the small bait fish known as ‘te tarabuuti’ is hardly seen now, and tebung, a shell-fish once very abundant near the lagoon shores of Tarawa, is now very difficult to find. Better fisheries management will be needed to avoid the further depletion of more lagoon species.

Environmental management in South Tarawa has historically been weak, with problems of overcrowding and pollution. The experience of urban poverty, as a result, is worse than poverty on the outer islands. Better environmental management would help improve the availability of subsistence agricultural products as well as improve the subjective experience of poverty in the capital.

³⁶ The government project on the development of water system on South Tarawa—this is a \$10 million dollar project which is financed by a loan from ADB.

A more recent UNDP study on poverty³⁷ defines the poverty line as “the monetary cost of achieving a standard of living above which one is not deemed to be poor”. The study explains the Basic Needs Poverty Line (BNPL). This has two components: the food poverty line (FPL) and non-food basic needs (NFBN) such as housing, clothing, utilities, school fees, and other education related costs, health and transport. The FPL refers to the “minimum expenditure to provide a basic, low cost, minimally nutritious diet (measured in terms of the minimum daily calorie intake required for basic human survival, which is internationally benchmarked at an average of around 2100/2200 calories per day per adult per capita”. The NFBN is the amount needed to meet the costs of purchasing essential non-food basic needs, as described above. Most people provide a high proportion of their daily food needs from their own-production or subsistence activities.

The following table shows the calculated food poverty lines on a daily and weekly basis for different regions. The FPL for South Tarawa and Christmas islands, both urban centres, are the same (\$1.57), and higher than that of the outer islands with the figure of A\$1.11. This reflects the higher price of goods on South Tarawa compared to the outer islands, especially the price local produce such as fish, breadfruits, coconuts, etc. The last column shows that households on South Tarawa spent \$104.42 per week on food while similar households on the outer islands would spend only \$48.32. Again this is a reflection of the relatively higher price of goods on South Tarawa compared to the outer islands as well as the fact that the cash flow in the urban areas is generally higher than in the rural areas.

Table 5.3: Weekly per capita adult equivalent Food Poverty Line

	Per capita ae per day	Per capita ae per week	Per HH per week Average for HH in lowest three deciles
National average	\$1.30	\$9.07	\$63.54
South Tarawa	\$1.57	\$10.97	\$104.42
Rest of Gilberts	\$1.11	\$7.74	\$48.32
Line and Phoenix	\$1.57	\$10.99	\$84.39

Source: “Analysis of the 2006 Household Income and Expenditure Survey” p.29.

Incorporating the non-food basic needs the figures are as shown below. This shows the combined Basic Needs Poverty Line.

Table 5.4: Weekly per capita Basic Needs Poverty Line

	Food Poverty Line (A)	Estimated non-food expenditure (B)	Basic Needs Poverty Line: C=A+B	Weekly cost per HH in lowest three deciles (D)
National average	\$9.07	\$7.03	\$16.09	112.80
South Tarawa	\$10.97	\$13.25	\$24.22	230.57
Rest of Gilberts	\$7.74	\$5.60	\$13.34	83.31
Line and Phoenix	\$10.99	\$9.39	\$20.38	156.53

Source: “Analysis of the 2006 Household Income and Expenditure Survey” p.29.

³⁷ Kiribati National Statistics & UNDP (2010) “Analysis of the 2006 Household Income and Expenditure Survey”.

The table above shows that South Tarawa has the highest Basic Needs Poverty Line followed by the Line and Phoenix and finally by the outer islands. Again these figures show that it is more costly to provide food and non-food services in the urban areas than in the rural areas. People on South Tarawa tend to spend more than those on the outer islands, who have a limited variety of consumption opportunities.

The incidence of poverty is shown in the following table. Only 4.1% of households in Kiribati, or just 4.9% of the total population are under the Food Poverty Line.

Table 5.5: Incidence of Food Poverty*

	Households	Population
National average	4.1%	4.9%
South Tarawa	2.2.%	2.6%
Rest of Gilberts	6.0%	8.2%
Line and Phoenix	0.5%	0.5%

Source: "Analysis of the 2006 Household Income and Expenditure Survey" p.31.

* [proportion of households or population with weekly PCAE expenditure less than the Food Poverty Line]

The figures for the incidence of basic needs poverty are shown in the following table. The table shows that 17.0% of the total households in Kiribati or 21.8% of the total population are under the poverty line. On South Tarawa the proportion is higher by some percentage points. A high proportion of people below the basic needs poverty line live on South Tarawa. As the report points out: "The figures of basic needs poverty incidence suggests that although South Tarawa is the national capital, therefore the general centre of employment, there are, nevertheless, many households whose expenditure cannot cover the basic needs costs of a reasonable, minimum standard of living." The report suggests that those working for small private businesses and micro enterprises receive very low hourly rates, which are insufficient to meet all the needs of their families. Another explanation is the overcrowding in some homes on South Tarawa – especially homes that include extended family members and friends.

Table 5.6: Incidence of Basic Needs Poverty *

	Households	Population
National average	17.0%	21.8%
South Tarawa	18.3%	24.2%
Rest of Gilberts	17.9%	22.0%
Line and Phoenix	6.8%	8.9%

Source: "Analysis of the 2006 Household Income and Expenditure Survey" p.31.

* [proportion of households or population with weekly PCAE expenditure less than the Food Poverty Line]

5.4 Health, water and sanitation

A number of specific health issues stand out, particularly HIV/AIDS, which is a growing problem in South Tarawa. At the time of writing there were 56 known cases of HIV/AIDS, partly related to the number of sex workers operating on South Tarawa among visiting fisherman, as well as transmission from returning seafarers. Health among seafarers is already known to be a challenge (see chapter 3 on trade policy). Kiribati's continuing reliance on labour mobility as a source of income is likely to continue to render it vulnerable to sexually-transmitted diseases.

Diabetes is also said to be growing, although accurate data is difficult to obtain. According to the WHO/Government of Kiribati NCD Risk Factor STEPS Report (2009) 28.1% of the population of Kiribati have diabetes. As in a number of other Pacific island countries, diabetes is partly the result of a decline in traditional lifestyles and the increased intake of poor quality imported foodstuffs. It is now accepted that diabetes is a significant risk factor for tuberculosis; with tuberculosis infection rates in diabetics two to ten times higher than in non-diabetics.³⁸

Life expectancy, at 61 years, is relatively low in Kiribati compared to some other Pacific Island countries. In Solomon Islands the figure is 62.6 years; Vanuatu 68.9 and Fiji 68. Life expectancy in Papua New Guinea is 55.7.

Table 5.7: Mortality rates

	Total	Males	Females
Number of deaths, 2005	806		
Crude Death Rate, 2005	8.7		
Life expectancy at birth, 2003	61.0	58.9	63.1
Infant Mortality Rate, 2003	52	53	51
Child mortality Rate, 2003	18	18	17
Under 5 mortality, 2003	69	71	67
Maternal mortality rate, 2001-2004			158

Source: Kiribati 2005 Census Volume 2. Analytical report.

Kiribati's under-five mortality rate is currently the worst in the Pacific (66 per 1,000), although it improved from 1973 to 1995. By 2005 the rate had increased to 52 deaths, as shown in table 5.8 below.

Table 5.8: Infant mortality rate, 1973-2010

1973/78	1978/85	1985/90	1990/95	1995/2000	2000/05	Current
87	82	65	67	43	52	66

Measles is both preventable, and one of the leading causes of child mortality. According to the Ministry of Health the immunization coverage is over 80%, but according to the Supplementary Immunization Activity conducted in March 2006 the coverage is 95%. The government should be encouraged to maintain this good coverage in order to reduce child mortality.

Maternal mortality is defined as the number of women who die as a result of childbearing in a given year per 100,000 births in a given year, usually caused by complications in pregnancy and childbirth. According to the Kiribati 2007 MDG report, the reported cases of maternal death are inaccurate, although the suggested average, based on the available figures, is 100. It will prove difficult to meet the MDG target of 25 in five years.

³⁸ <https://www.spc.int/tb/en/component/content/article/68-news/68-assessing-the-association-between-tb-and-diabetes-in-the-pacific>

5.4.1 Water

Kiribati's relatively low human development indicators are in part due to the lack of availability of water, and to poor sanitation. The availability of fresh water and of decent sanitation are significant challenges. The terrain is all low-lying, and hence there are no reservoirs. Many of the southern islands tend to experience low rainfall, restricting the availability of water supplies.

According to the most recently available reports, 70%, or 9,763 households use ground wells for drinking. On South Tarawa the proportion using wells is 54% while on the outer islands the proportion is 79%. The second most popular source of drinking water is rain, which tends to be cleaner and healthier. A quarter of households have access to rainwater. On South Tarawa the proportion with access to rainwater is 43% and on the outer islands it is 14%. More households on South Tarawa have access to rainwater because the Kiribati Housing Corporation provide water tanks and because many private homes can afford tanks.

On South Tarawa 67% of households are connected to the water pipe system³⁹ and on Christmas Island the figure is 84%. The system uses water from the ground, but rather than a well, water comes from a reservoir located some distance from settlements. The water is usually treated, which makes it safer to drink and use than other sources, although it tastes strongly of chlorine.

Considerable storable rainwater is lost through inadequate guttering and storage facilities. A programme to support additional water storage could have significant benefits for the many families who do not have access to safe water supplies through the piping system. However good quality rain water tanks are expensive, and can cost thousands of dollars⁴⁰.

5.4.2 Sanitation

Kiribati has only one sewerage system, installed on South Tarawa by the Australian government towards the end of the 1970s after the outbreak of cholera. This system is still functioning but it requires upgrading and maintenance. Many toilets connected to the system do not have water for flushing. Some people resort to the beach or to the bush, which is unhygienic and a danger to health. The census shows that half of households in the country use the beach (or 7,050 households out of a total of 13,999), a proportion which has not changed since the 1995 census. Use of the sea is 30%, (although this is not mutually exclusive). Latrine usage is 33%. The remainder of people use the bush. Generally more households in the larger islands use the bush for sanitation purposes while households on the smaller islands tend to use the beach or the sea.

The usage of latrines⁴¹ shows a steady increase over the years, from 733 households in 1995, to 1,222 in 2000, and in 2005, the number stood at 1,781, a sign of improvement in hygiene practices. Overall, usage of the beach has not changed much over the last 15 years. On the

³⁹On South Tarawa, the Public Utilities Board (PUB) is responsible for the piped water system with its reservoirs in Bonriki and Buota—some ten miles away from Betio, the main shipping port and where there is a heavy concentration of people. On Christmas island, the government ministry is responsible for the water piping system.

⁴⁰Two local companies on South Tarawa manufacture plastic water tanks, which are cheaper than imported ones. In the past private institutions have helped people to build their own water tanks from cement, although this activity no longer occurs.

⁴¹Refers to the type that is not connected to any sewer system, such as those used in camps or isolated or remote places, e.g. on small islands or islets.

outer islands the proportion using the beach is twice as much, at around 60%. Sanitation will remain a key issue for government if it wishes to maintain a healthy workforce and to improve its human development situation.

5.5 Climate change

Kiribati is one of the most vulnerable countries to increases in sea level, with land rising only a few metres above sea level at most. Global sea levels have risen 1.8 mm/year (± 0.5 mm/year) between 1961 and 2003, and are projected to rise at a greater rate during the coming century. The government's Climate Change Adaptation Plan can be found at http://www.climate.gov.ki/Kiribati_climate_change_strategies.html.

The potential impact of sea level rise is likely to include acceleration of coastal erosion and increasing saltwater intrusion, impacting on agriculture (see chapter 8) and the foundations of buildings. 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 little in common with Kiribati's low-lying atolls, and they may even prove counterproductive. Conventional sea defences may even 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.

Box 5.2 | 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). 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 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:

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 (Patel, 2006)

As the box suggests, datasets are too small to be used as a basis for meaningful scientific predictions of future sea levels around Kiribati, and random fluctuations are so large compared to the magnitude of long-term trends that there is not yet enough data to be certain that the trend of sea level change is positive, or to make predictions of its magnitude.

This uncertainty, however, 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. To this end the government in November 2010 hosted an international climate change conference, “recognizing that climate change is one of the greatest challenges of our time and that there is an urgent need for more and immediate action to be undertaken to address the causes and adverse impacts of climate change”.⁴² Amongst other things the Ambo declaration expressed alarm about the impact of climate change on small island states; acknowledged that human-made climate change can be reduced through better international cooperation; and recognized the connection between low cost, sustainable adaptation and mitigation options and maintaining a healthy biodiversity (see annex 4). Adopted by 12 countries, the Ambo declaration makes a number of sensible recommendations regarding the COP 16, the UN Climate Change Conference held in Cancun, Mexico as the DTIS was being drafted.⁴³ The government should be applauded for its leadership on climate change issues and should continue to raise the profile of climate change in the international arena.

5.6 Energy

The SPC’s Framework for Action on Energy Security in the Pacific (2010), states that energy security is fundamental to achieving the socio-economic development aspirations in the Pacific Plan. “Energy underpins all aspects of socio-economic development ranging from production, storage and transport to health, education and the sustenance of livelihoods. Without energy, there can be no sustainable Pacific communities”. In Kiribati, the aim is to enhance energy security so that energy can contribute significantly to trade and the country’s socio-economic development. The import of petroleum fuels has been increasing steadily over recent decades. With a high population growth rate, this trend is likely to continue unless action is taken to improve the use of alternative sources of energy. At a time of financial difficulty for government, higher petroleum usage adds to government expenditures.

⁴²The government has its own climate-change website, where the Ambo declaration can be found: <http://www.climate.gov.ki/>.

⁴³<http://cc2010.mx/en/>.

As a small island state Kiribati is very vulnerable to high oil prices due to its remoteness and transportation difficulties. SPC has recognised and begun to address these issues. Solutions considered by the region, with the assistance of SPC, are to import fuels in bulk to increase economies of scale through regional or sub-regional pooling of fuel requirements; to harmonise regional fuel standards and supply contracts and to improve supply arrangements and efficiency of fuel use.

The need for an affordable and reliable energy source such as for lighting, cooking, refrigeration, etc, is a critical issue on all the islands including South Tarawa. The electricity tariff is high on South Tarawa and many people face difficulties in finding firewood⁴⁴ as gas and kerosene is not always affordable to low-income people. Finding fuel for stand-alone generators is a critical issue on outer islands.

The world energy crisis in 2008 affected Kiribati seriously. On South Tarawa and the outer islands, the price of petroleum fuels especially petrol and diesel rose beyond \$1.20/l. The local price of fish, which was often cheap by international standards, rose dramatically. Imported foods -- especially rice, a staple item -- also rose dramatically as a result of the increase in the cost of aviation and ships' fuels.

The KDP recognises the contribution of energy to socio-economic development and encourages the development of alternative sources of energy. In 2009, the Kiribati National Energy Policy (KNEP) was completed and endorsed by Cabinet, although the national implementation plan is still in draft form, requiring further consultations and review. The KNEP recognises the importance of energy security and has a vision to have "available, accessible, reliable, affordable, clean and sustainable energy options for the enhancement of economic growth and improvement of livelihoods in Kiribati". "The heavy reliance on fossil fuel coupled with increasing demand, limited storage capacity and high oil prices are impeding factors to the availability and affordability of much needed energy services for sustainable development. The need for strategic planning, development of appropriate policies and legislations, efficient end-use, and the development of locally available energy resources to ensure a sustainable supply of energy is of utmost importance".

The important stakeholders in the energy sector are:

- The Ministry of Public Works and Utilities (MPWU), responsible for the planning, management and coordination of the energy sector. Through its Energy Planning Unit (EPU), the MPWU is responsible for coordinating the implementation of energy policies and providing necessary advice and assistance on all energy activities and energy-related matters.
- The Public Utilities Board (PUB), a statutory authority responsible for provision of power, water supply and sewerage services for South Tarawa and the provision, operation and maintenance of all assets associated with service delivery.
- The Kiribati Solar Energy Company (KSEC), a state owned company or enterprise responsible for renewable energy development, particularly the government rural electrification programme and sale or lease of solar PV systems and relevant components.
- The Kiribati Oil Company (KOIL), an incorporated company, is involved in the distribution of petroleum products and is majority-owned by Government.

⁴⁴Firewood is abundant on the outer islands but very limited on South Tarawa

- Ministry of Line and Phoenix Islands – responsible for all government services including the development of power, electrification and transmission on Kiritimati Island.

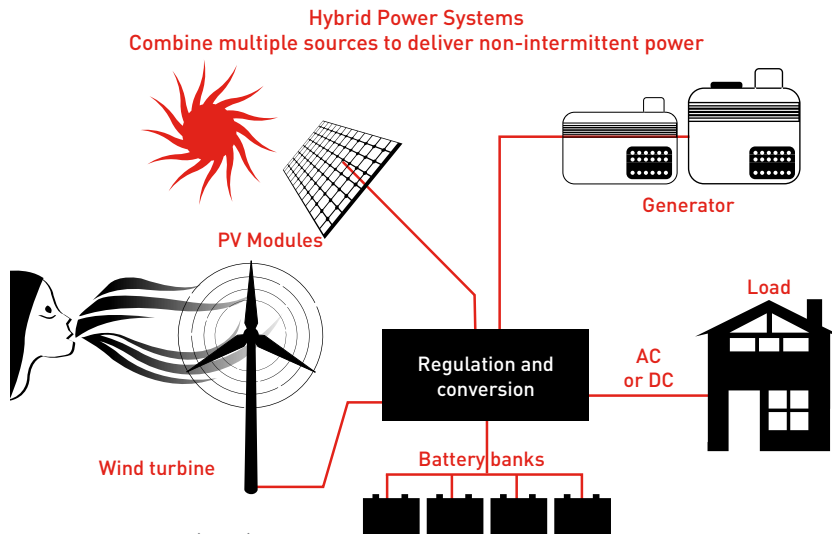
The Kiribati Copra Mill Company, another SOE, is increasingly becoming a significant energy stakeholder as it is currently involved in the development of coconut biofuel as an alternative and clean source of fuel.

Renewable energy and energy efficiency development

Renewable Energy (RE) and Energy Efficiency (EE) are cost-effective & sustainable ways of enhancing energy security. Both are critical to Climate Change mitigation and sustainable economic development. RE and EE are said to be the twin pillars of a sustainable energy policy, hence a sustainable energy economy requires major commitments to both RE and EE. Because of their importance, the KNEP also considers them as priorities. However, due to funding and technical capacity constraints, RE and EE developments are slow and limited. RE development is basically being implemented by the Kiribati government by KSEC and the MPWU but subject to availability of external grants. Energy efficiency is much more limited and has not been implemented to a significant level especially by Government bodies on South Tarawa. Many opportunities exist for Government to reduce costs and so achieve energy savings through the implementation of EE programmes.

Kiribati is fortunate to be endowed with good renewable energy resources. Of notable significance are the following:

- **Solar energy:** this is excellent on all the islands. Average solar radiation stands at 6 kWh/m²/day with a very high or good insolation clearness index, according to NASA data. The use of solar energy is very promising, both for a standalone power system or grid-connected system. Use for rural communities and households power source and power source for communities' water supplies is already apparent and has been proven.
- **Wind energy:** good wind speeds, though infrequent, are very practical for wind pumping systems for communities' water supplies. Although standalone wind power systems may not be feasible, there are indeed opportunities for wind power in a hybrid energy system or grid-connected system. Wind speeds of at least 4 m/s are practical or feasible in hybrid power systems where a diesel generator is integrated with potential renewable sources such as solar and wind (see the figure below). On many islands, there is a potential wind resource along the coast in a North-East direction, and the wind can reach 6 m/s at these sites. On South Tarawa, wind power can be connected to a grid to contribute to power efficiency and reduction in diesel fuels usage, and to clean energy. Small wind turbines are promising to use for community power use such as for water pumping, or hybrid power systems.
- **Coconut Biofuel:** although development of a reliable or quality coconut biofuel is still underway by Kiribati (being currently undertaken by the Kiribati Copra Mill Company Ltd), the use of biofuel as an alternative fuel is promising and one that the Kiribati government should support and invest in. There are adequate coconut resources on the islands to supplement the biofuel demand. However, continuous supply in future, transport and handling processes need to be ensured and improved. If milling capacity is increased, more than 30% of the diesel supply could be replaced.



Source: NREL, US DoE (2005)

- Biomass:** There are abundant biomass resources on outer islands especially from coconut and copra residues. These can be used to provide a sustainable power source for communities through gasification technology which is currently and commercially available in the market. On South Tarawa, biomass wastes in landfills can also be used to provide power for some small communities using gasification or direct-combustion technologies. Like other new technologies, it is always crucial first to undertake a feasibility study to determine whether it is worthwhile or feasible to introduce such a technology.

Despite the existence of these potential technologies, Kiribati faces a number of constraints to its energy development, outlined in the table below.

Table 5.9: Barriers to energy development

Type	Barriers
1. Technical	1.1 Poor technical designs of some RE projects have resulted in poor quality of service and the confidence level of stakeholders for new RE projects is therefore low 1.2 Absence of guidelines on RE technical specifications suitable for the country
2. Market	2.1 High cost of RE systems and that of services delivered 2.2 High custom duties on RE goods or products
3. Institutional	3.1 Inadequate capacity to address the challenges of RE including the design and implementation of RE projects 3.2 Ineffective coordination among stakeholders
4. Fiscal & Financial	4.1 Absence of sustainable capital fund for RE development 4.2 Local investors are not confident on RE projects 4.3 Biased fiscal policies
5. Legislative, regulatory & policy	5.1 Energy legislations and policies are either not in place or ineffective 5.2 RE or Energy is not a top priority in the KDP 2008-2011
6. Knowledge, awareness & information	6.1 Lack of qualified nationals in the area of RE applications 6.2 Inadequate national public awareness campaigns 6.3 Inadequate dissemination of information on best practices & success stories 6.4 Lack of knowledge about the RE resources potentials in the country 6.5 People lack knowledge about RE and its link to climate change

One key constraint is the lack of suitably qualified personnel in the fields of renewable energy technologies and energy management and efficiency. Training in these fields would contribute significantly to the country's energy security, human and economic development.

Power generation

Due to the remoteness and scattered nature of the islands, the installation of a main grid on islands other than South Tarawa and Christmas Island is infeasible. The most appropriate systems for the outer islands are therefore stand-alone systems for homes and hybrid energy systems or mini-grid systems for large institutions such as schools and island councils. Small communities can also be powered by micro hybrid systems using an inverter. Even a stand-alone solar PV system with an inverter is adequate for a community hall or maneaba. The inverter is useful when AC appliances are to be used. For large institutions such as schools, their complex power systems will use a more sophisticated or large inverter.

Apart from the common renewable energy technologies such as solar PV and wind turbines, certain technologies have a high potential to contribute to energy security. For instance, a number of fuel cell technologies are currently available in the commercial market and can provide power to communities and institutions on South Tarawa either grid-connected or stand-alone. The potentially high costs of electricity mean that before this technology is used a feasibility study must be conducted.

Late in 2009 the government allowed people on South Tarawa to install their solar power systems. The efficiency of the power generation improved and costs were saved as a result of a reduction in the consumption of diesel (which costs the Public Utility Board over \$100,000 a week). Other critical areas that may need proper analysis through external assistance are the tariff rate and the appropriateness of introducing an Independent Power Producer.

5.7 Education

Educational enrolment in Kiribati is very high up to the primary school level, although enrolment figures are likely to be inaccurate, probably a result of class repeaters and overage students attending primary schools. The following table shows that the enrolment rate is very high for children of 6-15 years old.

Table 5.10: School enrolment, %

	Total	Male	Female
School enrolment rates of 6-15 year olds	91.0	89.1	93.0
Proportion of population 15 years and older with secondary or higher education	50.5	51.6	49.5
Proportion of total population with secondary or tertiary qualification	19.4	18.2	20.5

Source: Kiribati 2005 Census Volume 2. Analytical report

All students go to junior secondary schools (JSS), without sitting any entrance examination⁴⁵. After JSS the proportion leaving school starts to increase. This is shown in the table above, with a smaller proportion (50.5%) of people of 15 years and over having secondary or higher education. There is thus a relatively low progression rate between primary, junior, and senior secondary.

School attendance has increased from 76% in 1990 to 91% in 2005. Likewise the proportion of teens (15-19 years) attending school increased from 32% in 1990 to 60% over the same period.

The literacy rate is almost 100%, although there may be similar questions over the accuracy of the figures⁴⁶. Whilst school enrolment is high, the quality of teaching appears to have declined. Kiribati students going overseas do poorly, especially in English. As a result the Pre-service Scholarship Board raised the English eligibility standard to a B+.

Most schools do not promote speaking English in classrooms. It has been noted that schools that promote spoken English during classes, such as Terurubao primary school in Bairiki on South Tarawa, produce children who can speak English fluently. Some parents also send their children to Fiji and other regional countries in order to raise their education standard in particular their ability to talk and communicate in English. The decline in spoken English started around the time that the Kiribati language was introduced in all schools in the mid 1980s. Although no study has been undertaken to verify or validate this correlation, students complain that they are not well-equipped for the job market. Good English is required for a government scholarship or job, while the international job market clearly requires good communication skills in English.

Another probable cause of the decline in the education standard in recent years is the fact that many secondary teachers do not have teaching certificates. The table below shows the percentage of qualified and certified teachers by type of school.

Table 5.11: Percentage of certified teachers, 2004-2008

	2004	2005	2006	2007	2008
Primary school	91	93	84	77	85
Junior primary school (JSS)	86	86	62	79	86
Combined secondary schools (CSS)	39	33	41	35	16
Senior secondary schools (SSS)	32	41	35	33	35
Total	76	79	67	68	

Source: Education Statistics Digest 2007 and 2008

*A certified teacher is defined as one who has at least obtained a two-year teaching certificate.

It is clear from the table above that the percentage of certified teachers for the senior secondary schools is very low, at just over a third in the five year period ending 2008. In 2008 there were 227 teachers, of which only 80 are certified to teach.

Although there has been a steady increase in the number of bachelors' and masters' degree holders over the years, the number is still low, and several skills are in short supply; specifically doctors, teachers and civil engineers. There are around 20 new graduates each year, most of

⁴⁵ The JSS started in the mid 1990s, before that, students compete to enter secondary schools.

⁴⁶ According to the Kiribati government (2007) MDG report the youth literacy rate is 98% in 1990 but declined by a percent or two in 2005.

whom work in public administration, a result partly of the lack of private sector opportunities. According to the 1990 Population Census report, there were 268⁴⁷ graduates out of the total indigenous population of 71,926. In 2005, the total number of people with diploma and above was 602 (259 with diploma, 254 with degrees, 82 with masters, and 7 PhD holders).

5.8 Conclusions

Although absolute poverty is rare, the rate of human development has been relatively low by Pacific – and global – standards. Average incomes are low: GNI per capita is well below some neighbouring countries. This is partly due to features specific to Kiribati, such as geographical isolation, environmental challenges and a particularly dispersed population. A lack of biodiversity and relative infertility reduce the availability of subsistence foodstuffs. The slow pace of economic development is reflected in the very high dependency ratio, with only a small fraction of people employed in the cash economy. Access to the basic essentials – good quality food, sanitation, health services and water – needs to be improved.

Trade, poverty and human development are not yet central to government policy, even though there are a number of linkages 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. Maintenance of inshore fishing stocks also helps secure subsistence food sources. Better environmental regulation similarly has an impact on poverty reduction as well as the prospects for sustainable fisheries trade. Finally climate change – which threatens to submerge some parts of Kiribati – will have an impact on agriculture, making it harder to grow traditional crops. The government is rightly committed to raising the issue on the international stage, although domestic energy production is as yet undeveloped. Much greater use could be made of renewables, including solar, wind and biofuels.

HIV/AIDS, which is a growing problem, particularly in South Tarawa, is partly a trade-related issue. Kiribati's likely continued reliance on overseas workers will continue to render it vulnerable to the threat of sexually-transmitted diseases in the years ahead, and this issue must be borne in mind during plans to expand opportunities for labour mobility. High rates of diabetes are also partly due to the increase in importation of foods, which is itself the result of a decline in traditional lifestyles. It will be important for the KIFT to ensure that trade and human development issues are mainstreamed into future government policy.

Whilst school enrolment rates are high, the quality of education and training needs 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. School attendance needs to be improved at the secondary level. Vocational training is primarily driven by labour demands and the nature of economic growth, and the government would find it difficult to second-guess the market by training students in the necessary areas. Before substantial growth in the private sector has taken place, it should initially partner and use vocational centres available in the region, which is much cheaper than building new facilities. The currently tiny tourism sector, for instance, does not justify building dedicated tourism training facilities.

⁴⁷ Unfortunately there is no breakdown into diplomas, bachelors, masters, etc.

Section II: Sectoral Studies

6. Tourism

6.1 Introduction

Tourism has perhaps the highest commercial potential of any industry discussed in the DTIS. First, the sector is very small and underdeveloped. A relatively small effort could lead to much higher yields. Second, it has proven economic potential in the Pacific island region, and tourism to non-traditional regional destinations has grown in recent years. Third, tourism is particularly suited to Kiribati. In an era of heightened international competition, all countries are being forced to specialize. Kiribati's comparative advantage is probably not commodities export, but a large and extremely attractive natural environment. An additional reason for prioritizing the tourism sector is that some other conventional sources of income – such as remittances and fishing licenses – have declined, putting pressure on government to look for new sources of economic growth.

This chapter reviews and analyses the potential of tourism of Kiribati, starting with an overview of the sector's development and its characteristics. A comparative review of the Kiribati 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 discussion then focuses on ways in which visitor yield can be enhanced. The emphasis on yield is critical because such an approach enables economic benefits to be maximized and sustained without having to grow visitor numbers in a potentially unsustainable fashion. A focus is also placed on ensuring that benefits are spread throughout the nation, and that linkages with the broader Kiribati economy are strengthened. At the same time it is essential to focus on environmental and cultural dimensions of sustainability, including linkages to cultural events, every-day life and the handicrafts sector. In conclusion, some priority areas for action are highlighted.

6.2 Tourism Industry Characteristics

The Government of Kiribati has identified tourism as a key sector for generating much needed opportunities for income and employment generation. Unfortunately the industry's past-performance has not been one of sustained growth and development.

Visitor numbers by air in 2009 were 3,944, representing a slight growth from the 3,871 arrivals in 2008. Both figures are considerably below the peak of 4,935 achieved in 2002 (Table 6.1). The Australian and US markets have traditionally dominated – the former mostly related to business and the latter to the bone-fishing. New Zealand remains the third largest market followed by Japan. Other Pacific nations also make an important contribution to the overall numbers.

Table 6.1: Kiribati Visitor (Air) Arrivals by Country of Residence

YEAR	Australia	NZ	UK	Ger	USA	Japan	Other Pacific	Other Countries	Total
2000	745	244	158	47	1,454	439	1,167	575	4,829
2001	759	266	187	270	908	338	1,173	673	4,574
2002	802	312	213	291	1,112	494	1,114	597	4,935
2003	745	339	146	242	826	179	1,023	856	4,356
2004	672	282	73	31	430	137	1,056	723	3,404
2005	841	260	127	55	1,032	314	984	524	4,137
2006	821	225	125	60	733	167	1,435	840	4,406
2007	908	312	157	33	1,072	247	1,106	874	4,709
2008	868	284	129	40	887	190	769	704	3,871
2009	934	352	135	50	652	234	742	845	3,944

Kiribati has received a total of 2011 overseas visitors in the first six months of 2010 (KNTO). This represents an increase of 9% over the same period in 2010. The six month period saw a small decline of 4% in the Line group (Christmas Island - Christmas Island) while there was a reasonably significant increase of 13.23% for the Gilberts group (South Tarawa).

Kiribati currently offers two diverse and spatially separate tourism destinations, with the potential for a third (Phoenix Islands Protected Area) to develop in the coming years. The current tourism industry is very much focused on South Tarawa and Christmas Island and visitors currently fall into the following categories:

- Fishermen from Australia, New Zealand, Japan and the USA travelling for bone fishing (Christmas Island – very occasional fishing occurs on South Tarawa)
- Consultants, government officials and long terms contractors to Tarawa, this group are tourists and while they are not on holiday they will still undertake tourism activities – especially on weekends. Occasionally this travel will involve small groups on workshops.
- Small groups undertaking retreats and workshops as part of wider consulting programs (primarily Tarawa)
- A limited number of yacht crew sailing throughout the Pacific. They will typically visit Tarawa, Abiang and Butaritari . Occasionally yachts will visit the Line Islands (Christmas Island and Fanning).
- A small number of bone fide holiday makers FIT (Free and Independent Travellers) visit by air
- Those visiting friends and relatives (VFR) (mostly by air, predominantly Tarawa) are also an important group.

A break-down of visitors by purpose of visit (Table 6.2) shows how significant, and constant, business related travel is to the country. Pleasure travel is largely made up of fishing focused visitors. Transit numbers reflect the significant role that stop over flights play in both Tarawa and Christmas Island though one must question the value of including them in overall visitor

numbers. The other thing to note is the lack of data for 2006 which reflects difficulties in analysing the Purpose of Visit (PoV) information during that year and highlights broader difficulties with tourism data collection.

Table 6.2: Visitors Arrivals By Air And Purpose Of Visit: Tarawa and Christmas Island

Year	BUSINESS	PLEASURE	VFR	TRANSIT	OTHERS	TOTAL
2000	2208	1426	895	264	36	4829
2001	1977	1135	831	474	138	4555
2002	2,205	1,876	105	250	499	4,935
2003	2,400	950	84	210	712	4,356
2004	1,693	1,214	95	271	131	3,404
2005	2,028	785	784	309	231	4,137
2006						
2007	1,373	1,066	677	843	750	4,709
2008	1,169	940	1,117	527	118	3,871
2009	1,704	649	774	677	140	3,944

The flow of air visitors to Tarawa has remained relatively stagnant, with numbers in 2009 almost on a par with 2000 (Table 6.3). When asked how the industry has evolved in the past 5 years a clear majority (over 90%) of those interviewed for this project felt that the industry was really at a plateau stage, or maybe slipping back slightly. The general feeling was summed up by one quote from a hotel owner:

“we don’t seem to be able to grow visitor numbers, a lot of our infrastructure and accommodation is suffering as a result of such poor numbers and limited investment”.

Table 6.3: Visitor Air Arrivals - Tarawa

YEAR	Australia	NZ	UK	Ger	USA	Japan	Other Pacific	Other country	Total
2000	677	225	122	47	272	270	1,146	412	3,171
2001	671	244	147	270	36	192	1,132	405	3,097
2002	685	289	188	291	87	199	983	537	3,259
2003	670	322	112	242	116	114	1,011	731	3,318
2004	603	265	71	29	116	114	1,012	673	2,883
2005	757	246	79	53	299	229	933	417	3,013
2006	616	196	75	58	192	98	914	473	2,622
2007	588	243	74	30	223	202	1,003	587	2,950
2008	631	231	84	33	232	160	690	423	2,484
2009	739	300	110	50	305	194	734	682	3,114

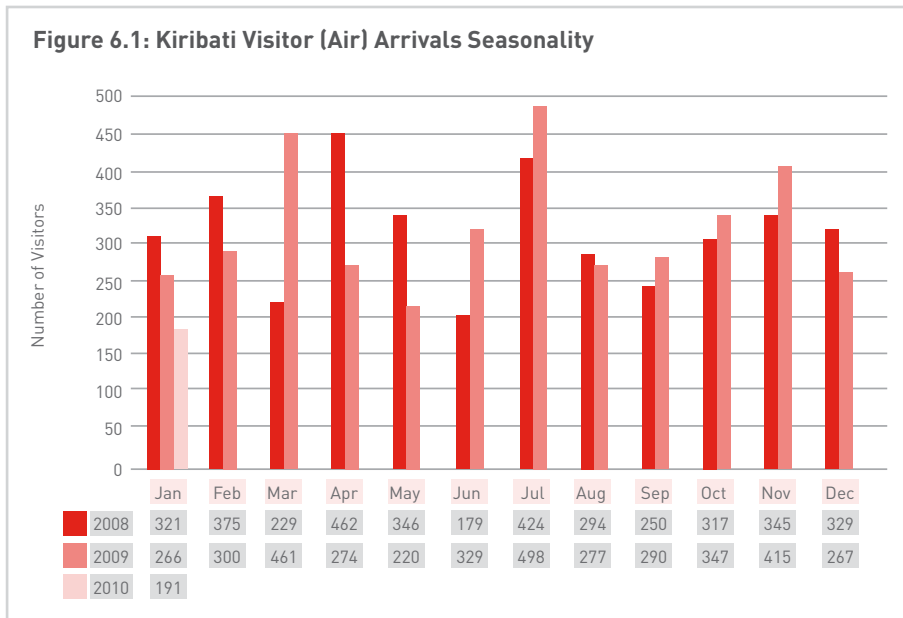
Tourism on Christmas Island consists primarily of bone fishermen, occasional cruising yacht visits and a few wandering travellers seeking a new experience. There is also a limited amount of business, donor agency and VFR traffic. Sport fly fishing for bonefish is reputed to be the best in the world. Demand for deep sea off shore fishing for trevally, wahoo and barracuda, is also growing. Reefs abound with myriad tropical fish species and the island is sanctuary to massive colonies of breeding seabirds, as well as the endemic Christmas Island Warbler. The ecological and environmental significance of Christmas Island as a sea bird habitat offers great potential for eco-tourism development.

Air visitor numbers to Christmas Island (Table 6.4) have been influenced by a sequence of negative events during the past decade. The 2004 burning of the MLPID office saw a significant decline in visitor numbers as did the axing of scheduled services to the island by Air Pacific in 2008/9 (Table 3). Air arrivals are beginning to pick up again with the re-establishment of scheduled Air Pacific flights from Fiji through to Hawaii via Christmas Island.

Table 6.4: Visitor Air Arrivals Christmas Island

YEAR	Australia	NZ	UK	Ger	USA	Japan	Oth. Pacific	Other country	Total
2000	68	19	36	0	1,182	169	21	163	1,658
2001	88	22	40	0	872	146	41	268	1,477
2002	117	23	25	0	1,025	295	131	60	1,676
2003	75	17	34	0	710	65	12	125	1,038
2004	69	17	2	2	314	23	44	50	521
2005	84	14	48	2	733	85	51	107	1,124
2006	205	29	50	2	541	69	521	367	1,784
2007	320	69	83	3	849	45	103	287	1,759
2008	237	53	45	7	655	30	79	281	1,387
2009	195	52	25		347	40	8	163	830

Seasonal visitor arrival patterns are not particularly clearly defined and the small number of monthly arrivals means that even slight shifts in figures (eg due to a special event) can have a significant impact on seasonality patterns.



Seasonality is very much a feature of the tourism industry on Christmas Island (Table 6.5). Figures have been affected by the reduction in flights during 2008/9 and also the growing numbers of Australians arriving. Typically US visitors come from January to April, with Australians and Americans coming during the June- August period

Table 6.5: Tourism Air Arrival Statistics for Christmas Island.

Months	2006	2007	2008	2009	2010
January	121	252	213	92	127
February	172	177	202	103	130
March	204	183	164	127	72
April	129	140	274	73	95
May	-	251	167	88	76
June	167	225	165	70	124
July	176	221	204	98	182
August	247	267	103	44	
September	147	127	19	69	
October	124	111	98	104	
November	170	175	61	86	
December	127	109	147	80	

The Phoenix Islands, and in particular Canton, also have the potential to attract small numbers of high yield visitors to the newly UNESCO recognised Protected Area. The Phoenix Islands Protected Area (PIPA) is the world's largest marine protected area and is newly inscribed on the World Heritage list. PIPA is a 408,250 sq.km expanse of marine and terrestrial habitats. The area contains approximately 800 known species of fauna, including about 200 coral species, 500 fish species, 18 marine mammals and 44 bird species. At present visitor numbers are very limited and are constrained by the lack of any scheduled flights or shipping services.

The 2009 Kiribati Tourism National Action Plan also mentions potential in North Tarawa, and Fanning and Washington islands in The Line Group. An important market is expatriate workers based in South Tarawa – making use of weekend or short stay experiences on North Tarawa. This market has a high level of disposable income, they take short 'domestic' recreational trips whilst in Kiribati, and having an 'off- South Tarawa' experience is an important activity for many of them. For some tourism businesses this market is, has the potential to supplement more mainstream tourism revenue.

Transport

Adequate and reliable international flight connections with major tourism source markets are very important for tourism growth in the Pacific and have been a focus for concern in Kiribati for some time (see Chapter 4 on trade facilitation).

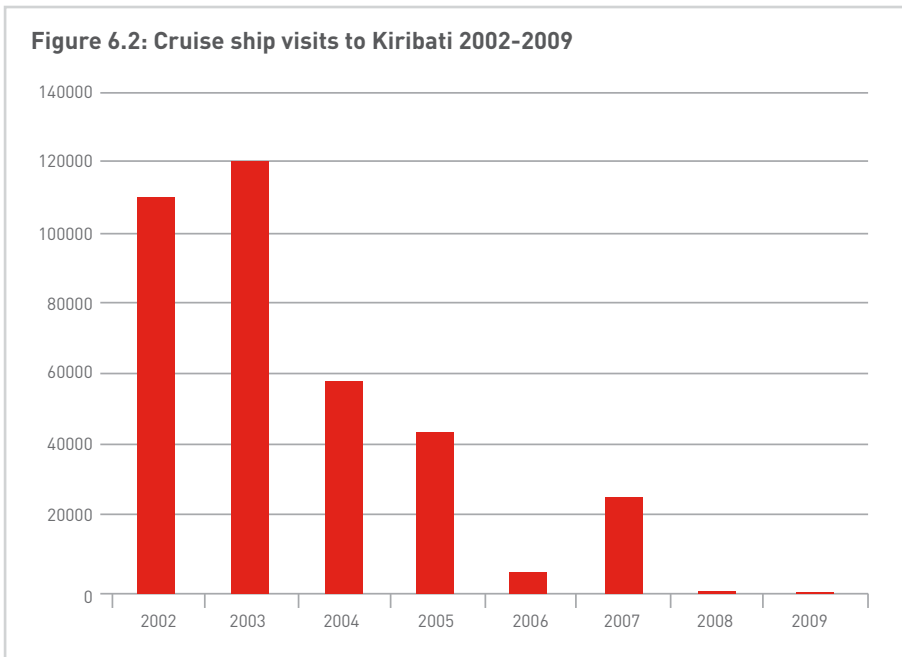
Cruise ship visitation to Kiribati peaked in 2003 with 123,000 cruise ship excursionists, conservatively generating nearly \$5.5 million dollars into the Gross Domestic product of the Kiribati economy (excluding multiplier effects). At this point most cruise visitors were visiting Fanning Island (Tabuaeran) with several vessels also visiting Christmas Island. Cruise shipping numbers fell to virtually zero in 2008 and 2009 as a direct result of infrastructural issues, the global financial crisis and shifts in industry regulation.

The decline in cruise ship numbers to Christmas Island is argued by some to be the result of silting of the existing channel that comes into the Port of Ronton (London). This channel is narrow and is less than a meter away from a sand spit. This spit is responsible for the silting process and the channel requires regular and expensive digging if cruise tender vessels are to be able to reliably reach the London embarkation area.

On both Christmas Island the on-ground co-ordination and processing of visitors has been difficult, resulting in negative visitor feedback to the cruise ship companies. Fanning also struggled with inadequate infrastructure – especially the jetty at which people landed. There are limited facilities in London once visitors arrive on shore – with many having to take the 35 minute drive to the Captain Cook Hotel for entertainment and refreshments, the tender landing area is simply a flat open space with limited shade – there are some handicraft stalls and limited local business activities but in general little to engage the cruise excursionist. Fanning was, by all accounts, better prepared to provide cruise visitor services, with pizza ovens and areas set aside for handicraft sales and cultural performance.

Until 2009, Fanning and Christmas Island benefited from an exclusive arrangement between the Government of Kiribati and the Norwegian Cruise Lines (NCL). This arrangement provided significant ports of call, relevant infrastructure as well as an agreement to accept I-Kiribati people to work on board NCL cruise ships through their network. The latter part of the agreement has limited success with few I-Kiribati receiving training on the vessels. NCL

have pulled out of visits to Christmas Island and Fanning citing the impact of the Global Financial Crisis. Both Fanning and Christmas Island Islands were also able to take advantage of the US statute called the Jones Act that provides Customs privileges to foreign flagged cruise ships who cruise US waters. To obtain these customs benefits foreign flagged vessels must call on at least one foreign port before re-entering the US. These regulations effectively helped make Christmas Island and Fanning viable ports of call for Norwegian Cruise Line’s (NCL) cruises out of Hawaii. Unfortunately for Kiribati the US-owned cruise vessels now entering service for NCL are not bound by this statute and not surprisingly visits have all but ground to a halt (Figure 6.2).



National tourism office records on Christmas Island show the major shift that has occurred with 2007 seeing several repeat visits by the vessel Regal Princess, with 1534 passengers and 677 crew. Several other vessels carried over 600 passengers. Two years later 2009 records show how dramatically things have changed with only two vessels - Silver Shadow and Clipper Odyssey arriving (144 and 21 passengers respectively).

Accommodation

The range and quality of accommodation provided is very limited compared to other destinations in the region. This places the nation at a competitive disadvantage which is not possible to over-come through discounted pricing. Very few accommodation operators are linked into easily available all-inclusive package type arrangements that can reduce costs for the traveller. Occupancy rate statistics are not currently collected by government.

The Otintai Hotel is Tarawa’s leading hotel currently maintains 40 standard hotel rooms, conference facilities as well as food and beverage areas. The hotel is government owned managed through a Board of Management appointed by the Minister for Communications,

Transport and Tourism Development. Weekend package tours and day trips to Biketawa Islet in North Tarawa are organized by the Otintaai Hotel.

On Christmas Island the Captain Cook hotel offers 24 simple rooms and 20 thatch-roofed bungalows with air conditioning and private bathrooms (30 are currently considered operational). The hotel also has a small islet where people can stay overnight and undertake leisure activities.

Both destinations also feature a range of smaller privately owned and operated accommodation (Table 6.7). On Tarawa, Mary's Motel is an important and reasonably sized alternative to the offerings at the Otintaai. The overall standard of accommodation is relatively basic – although the quality of many of the fishing lodges is reasonable in several cases.

Table 6.6: Range of accommodation in Kiribati

Accommodation	No. of rooms
Tarawa	
Betio Apartments	6
Buota Lodge	3
Fema Lodge	7
Lagoon Breeze Lodge	11
Mary's Motel	16
Sweet Coconut Motel	8
Otintaai Hotel	40
Tabon Te Kee Kee Homestay	3
Abaokoro Island Council Guest House	4
Tabuki Retreat	2
Utererei Guest House (Ambo)	4
Christmas Island	
Captain Cook Hotel	30 operational
Christmas Island Outfitters	7
Crystal Beach	12
Adventure Dive & Sports Fishing Lodge	6
Ikari House	2
Villages	6
Christmas Island Mini Hotel	8
Moumou Guesthouse	2
Teretia's Homestay	4

Source: Kiribati Tourism Office Report 2008, KNT0 website

In addition there is some village based and small scale accommodation in the outer islands of the Gilbert Group. The Monivae Hotel is located on Abemama Atoll – approx 30minutes flight from Tarawa. Ouba Islet Resort & Fishing Lodge is located just off the island of Abaiang, as is Teirio Island Escape both are approx 2 hours by boat from Tarawa. The latter offers five Kiakias (local houses with raised platform), made of local materials with one shared toilet and two separate showers. The maximum number of people it can accommodate is 10.

Activities and Experiences

The Kiribati tourism sector does not generally provide a rich range of activities and experiences based on its cultural and environmental resources. The typical visitor to Tarawa may possibly see a cultural performance at the hotel or be invited to a cultural gathering but in general it is difficult for the visitor to access and learn about the local way of life and traditions. There are some tours available that focus on WWII relics but nothing that really opens up the culture to the visitor.

On Christmas Island there are opportunities to see local dancing and cultural displays in some of the accommodation and typically this will be scheduled into one night of the fishing package purchased. Overall there is a marked lack of information about the fascinating history of the island.

The World War II heritage of Tarawa receives little attention and unfortunately many of the most significant gun emplacements and bunker sites are now in a state of major dis-repair. The post-WW2 nuclear age heritage of Christmas Island also receives relatively scant attention and yet could be a significant point of interest for some visitors.

The lack of dive operators also creates a major gap in the array of tourism products on offer. The dive operator on Christmas Island is not currently able to support the potential industry there.

Restaurants and Retailing

The range of restaurants and retailing is very limited. In addition to the meals provided at the Otintaa, Mary's Motel and the lodges/hotel on Christmas Island there are very few options for visitors who want to eat at a restaurant. There are a handful of Chinese restaurants and cafes on South Tarawa and also a bar that serves food. The restaurants in particular need assistance to improve both the quality of dishes served and their outward appearance. There are also a small number of snack bars and local shops that are open. The standard of catering is basic as is the décor and furnishing of most eating establishments. There are no standalone restaurants operating on Christmas Island

A limited array of shops, including food and clothing outlets, is available on Tarawa and to a much lesser extent on Christmas Island. The range of merchandise is basic and is not designed with the visitor in mind. Much of the clothing for sale is actually second-hand imports from Australia. Handicrafts are available from 4 outlets on Tarawa and also some road side stalls. Handicrafts are also sold at the airport on departure days. There are no formal outlets for handicrafts on Christmas Island but several local accommodation operators do sell crafts. In the past when cruise ships were a feature of the industry stalls would be set up to sell crafts. There are no handicrafts sold at Cassidy Airport.

Infrastructure

A number of infrastructural issues have a major impact on the tourism industry. Water supply remains an on-going problem, especially on Christmas Island. Water is in short supply and ground water is undrinkable in its untreated state.

The reliability of electricity supply has also improved in recent years with a major focus now placed on developing renewable sources of energy. 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. On Christmas Island service remains particularly unreliable and relatively expensive – with many local businesses make use of the TKSL run internet café. The typical speed for internet access on Christmas Island is 56 kbps which can be boosted to 256kbps with the use of an extender. In time the plan is to roll out ‘Coconut Wireless’ which will enable access from laptops through a plug in device at 512kbps. Nevertheless the amount of bandwidth has continued to improve.

The main tar-sealed road on South Tarawa is in need of repair. Other roads are unsealed and are typically difficult to traverse in wet weather. The main roads on Christmas Island are in good condition and are a legacy of the infrastructure completed during the nuclear tests of the 1950s and 1960s. Waste management facilities on Tarawa are limited and visitors are often confronted with a considerable amount of rubbish. While the population is smaller and land area larger on Christmas Island waste disposal is still an area of concern for future planning.

Another critical area of infrastructure from a tourism perspective is the fact that ATMs are available in several locations on South Tarawa and also in London on Christmas Island. While the ATM on Christmas Island has something of a reputation for unreliability it is an important asset to the community and the tourism industry.

Economic value of tourism

There are few if any reliable statistics on the economic performance of the tourism industry in Kiribati. The KNTAP states that:

Tourism is currently approximately 20% of the country’s GDP, it’s greatest economic benefit being seen on Christmas Island. Tarawa also derives significant income from tourism. At this stage the Outer Islands of the Gilbert group are yet to see any significant economic benefit, with the exceptions of Abemama, Abaiang and Butaritari.

However the SPTO estimates that the role of tourism in the Kiribati economy is much more limited in comparison to other nations in the region (SPTO 2005a). In 2003 tourism was estimated to account for less than 3% of GDP and less 2% of total employment.

Based on average spending of AUD1054.40 per visitor (source: KNTO Visitor Satisfaction Survey 2010), it is estimated that Kiribati has received a estimate revenue of AUD 2.1m from visitors spending on goods and services in the first six months of this year. However these figures do not cover the different visitor profile and expenditure patterns found on Kiritimati and are also based on a very rather general ‘overall spend’ question that does not ask the visitor to provide specific details on pre-paid costs and the break-down of spend.

Visitor spend on Christmas Island is potentially easier to estimate given the pre-paid package nature of much of the fishing activity. The ADB (2007) Christmas Island Plan estimates that in 2007 tourism generated of approximately A\$700,000 to \$800,000. It appears, however, that their estimated fishing spend may be too low. Their estimate of 75% of cruise passengers alighting may also be too high.

Whatever their faults these estimates highlight the economic significance of the currently stalled cruise sector. Cruise visits included island tours, trips to Cook Island Nature Conservation Park, bird-watching tours and cultural tours. Almost all villages on both Christmas Island and Fanning Islands provided significant merchandise and local handicraft to cruise ship patrons on ports of call. Almost all trucks on both Christmas Island and Fanning Islands were utilised on port of call days. Cruise tourism brings in significant extra income for this rural community (Teannaki 2008) with some families pocketing an average of US\$100.00 per cruise visit. In addition the Government of Kiribati benefits from cruise tourism, receiving \$10USD in head taxes for every vessel that berths.

More recent estimates of the economic value of the sector are provided by the local KNTTO staff and are based around estimated costs of the fishing packages and the cost of fishing permits (\$35 per person paid to the Fisheries Unit). The figures also provide estimates for the dive sector which, as noted above, has largely ceased to operate over the past two years.

Table 6.7: Number of Bonefish anglers visiting Christmas Island 2006-2010 (Jan to June)

Year	No. of Bonefishers	Fishing Permit (Value AU\$)	Packages at US\$2,000 per person US\$	No. of Divers
2006	396	\$13,860.00	\$792,000	44
2007	458	\$16,030.00	\$916,000	22
2008	598	\$20,930.00	\$1,196,000	18
2009	260	\$9,100.00	\$520,000	5
2010	157	\$5,495.00	\$314,000	0

It is worth noting that there were 951 fishers in 2000 and 723 in 2003, the precipitous decline in numbers during 2009 and 2010 is very much a consequence of the cessation of Air Pacific flights in 2008. Even so these conservative estimates show \$0.5 million being pumped into the economy during 2009.

Of course tourism performance is about more than simply dollars spent. Unfortunately there is a relative dearth of information on visitor expectations and satisfaction. At the time of the consultant's visit an airport survey was being conducted and some preliminary data was shared by the KNTTO. What we see from a few months (March-May 2010 - 60, 28 and 44 monthly responses respectively) is that:

- It appears that most visitors spend between \$100-200 per day
- The market is characterised by few children and family groups

- Visitor incomes tend to be either relatively low or high - with much in the way 'main stream' middle income travellers
- Few visitors find their expectations are fully met or exceeded and yet there is a high likelihood of return visit – perhaps reflecting the work status of the visitors

At present there is no visitor survey in place on Christmas Island.

Estimates of the number of people employed in the Kiribati tourism industry vary widely and there are no accurate figures available. The current workforce consists of those directly employed by accommodation houses, airlines, and those employed in the fishing industry on Christmas Island. There are a relatively small number of people employed within private enterprises involved in merchandising and occasionally visitor activities. The KNTTO estimates that approximately 200-250 people are employed directly in the industry on Tarawa and the Gilbert islands. The most recent estimate for Christmas Island provided by the local KNTTO office lists 128 employees and 35 fishing guides.

When asked for their perspectives on industry performance it was interesting to note that operators on Christmas Island were slightly more optimistic than their counterparts on Tarawa. The latter felt things were relatively stagnant although there was a sense that opportunities were opening up elsewhere in the Gilbert group. By contrast the operators on Christmas Island were talking of high levels of forward booking and appeared to be somewhat buoyed by the re-establishment of the scheduled air link to Hawaii and Fiji.

6.3 Key Stakeholders

Kiribati National Tourism Office and Related GoK Ministries

The Kiribati National Tourism Office (KNTTO) is the Government body whose core role is to facilitate the development of tourism for Kiribati. It does this through working with investors and investigates options for infrastructure development. In addition the organisation also assists with education and training and marketing. The KNTTO is a part of the Ministry of Communications, Transport and Tourism Development.

The KNTTO office in Betio has the following staff: a director, a marketing officer, an education and development officer and an information/statistics officer who also plays a role as digital marketing coordinator. There is also a filing clerk employed and volunteer staff are also often involved with the group – for example an Australian volunteer was heavily involved in setting up the KNTTO website. The Christmas Island Office has a tourism officer and one administrative assistant. The office is based in London close to the site where cruise tenders berth.

The KNTTO is involved in disseminating research findings and information and is also involved in implementing the newly introduced Mauri program that is aimed at establishing quality standards in the accommodation sector.

A number of Ministries have close links to tourism beyond the MCTTD. The Ministry of Environment, Lands and Agricultural Development plays an important role in maintaining and managing the natural resources upon which the industry depends, as does the Ministry of Fisheries and Marine Resources Development. The Ministry of the Line and Phoenix Islands plays a critical role in the development of tourism in Christmas Island and Fanning but also has a vital role to play in future tourism development in the Phoenix Group. The Ministry of Public Works and Utilities has an important role to play in maintaining the facilities and infrastructure

upon which the tourism industry depends. Airfields sit under the MCTTD budget but are maintained by the MPWU.

As in any small island setting tourism truly is an 'all of government' activity and requires broad buy-in and awareness on the part of different Ministries.

Donor Agencies and NGOs

Over the past decade or two the focus of much aid has been less directly on tourism and more focused on broader priorities, particularly improving governance, capacity building in central government agencies, education, health and infrastructure development.

Australia is the largest donor to Kiribati. Under the Australia-Kiribati Partnership for Development, AUSAID supports a focus on improving education standards and workforce skills. The current Kiribati strategy does not feature the tourism sector as a direct area for targeted assistance, although funding for technical assistance and strategy development has been allocated. Australia is also supporting efforts by the Kiribati Government to strengthen its economic and financial management in key sectors such as aviation, tourism, taxation, audit and customs. Most aid focuses on issues concerning Institutional strengthening, public and legal sector reform, police force capacity building, health, and education.

The European Union's major in-country funding of relevance to tourism is through infrastructural and community development projects. The bulk of direct donor assistance to Kiribati tourism occurred in the 1990s when the EU allocated a range of funds through the Pacific Region Tourism Development Program (PRTDP) (Cleverdon et al 2003). A number of projects were funded in Kiribati, including: training, statistics and product development work. In addition considerable funding was provided to facilitate participation in tourism fairs primarily in Europe. PRTDP via the TCSP was also responsible for the development of the 1997 Tourism Marketing and Development Action Plan.

Currently New Zealand's development assistance programme is focused on three key areas: workforce skills development; sustainable urban development; improved public sector performance. The main area of relevance to tourism is New Zealand's support to the Kiribati Marine Training Centre (MTC) since 1983. New Zealand will invest \$7 million in the MTC between 2006 and 2012. To date this funding has seen the completion of new classrooms, dormitories and a galley. New Zealand is also helping the Centre to develop its training curriculum so that it is accredited to train deck officers and engineers, establish a catering facility and offer English language training. During the consultant's visit there was also informal word received that the NZ government would be providing funding to assist in transport infrastructure development on Christmas Island.

The Asian Development Bank (ADB)/World Bank have focused on funding infrastructure projects including roading on South Tarawa and the re-development of Bonriki Airport (a site for other donor agency funds as well). ADB's current program focuses on Kiribati outer-island growth, economic and financial planning, equitable economic development, sustainable development and fiscal security.

JICA has provided a limited amount of support for tourism development – mostly through broader infrastructural and human resource development. The Taiwanese government has implemented the Home Garden project which is designed to encourage I-Kiribati to grow their own produce and to develop small scale outlets for locally grown produce. The Home Garden

project is focused on South Tarawa but there are plans to expand uptake on Christmas Island. The Taiwanese are also actively engaged in aquaculture and renewable energy programs. UNIFEM and the ILO have been involved on a small scale in cultural industries and handicraft development – with a focus on empowering and strengthening the economic circumstances of women.

NGO's and industry bodies play a limited direct role in tourism development but are, nevertheless, important stakeholders in developing the broader environment for successful tourism. Local Business Associations, the Kiribati Chamber of Commerce, the National Council of Women, Church organizations and KANGO, OXFAM all have a limited role to play.

6.4 Competitive Positioning

The key sustainable point of difference for Kiribati's tourism product is assessed by many to lie in the nation's island geography, pristine environment, traditional cultures, and fishing. Much of the limited marketing material for the nation presents marketing images and messages around these themes.

KT NAP identifies three main products that Kiribati has a competitive advantage in: fishing, WWII (Historical), and Culture. They also argue that there is potential to develop other marine tourism products such as cruise, surfing and diving (KNTO 2010 - Bula Fiji).

Kiribati has adopted the promotional positioning of "For Travellers, Not Tourists". Thus telling the global community the type of experience they can expect and directly targeting those people who are looking for an experience that matches Kiribati unique selling proposition of:

A culturally intact community, off the well beaten tourist trail, that offers visitors world class fishing, access to one of the world's most pristine protected areas, and a cultural experience that takes you far from the internet, mobile phones, and the conveniences of our everyday life.

Kiribati does not offer swim up bars, fluffy towels, and cocktails. Visitors to Kiribati should expect an experience that will make them reflect on their everyday lives, it is for people who's motivations for travel are to experience another way of life far removed from the western world.

The majority of Kiribati's promotion to date has come as a result of its strong partnership with the regional tourism organisation, South Pacific Travel (the re-branded SPTO). Kiribati has been unable to undertake significant international trade missions, attendance at travel shows and other overseas marketing activities due to the lack of financial resources.

Attempts to compare and benchmark Kiribati with most other Pacific island tourism destinations are not of great value. The country has one of the smallest and certainly one of the most isolated, tourist industries in the region. Perhaps the closest comparisons that can be drawn are with Tuvalu and Niue but neither of these can be considered to be true 'competitors'. Christmas Island, with its unique size, location and fishing resources is very much a niche market with little if any regional competition. In terms of the cruise industry it is clear that Kiribati cannot offer the types of infrastructure and on-shore activities that are provided in core cruise destinations elsewhere in the region.

Relative to other tourism industries in the region it is clear that the industry is at a competitive disadvantage in relation to the frequency, reliability and cost of international flights and this is exacerbated to some extent by relatively limited domestic air services. The range of accommodation and relatively limited array of tours and packaged experiences means that

there are relatively few opportunities for tourists to spend their money beyond basic package costs (fishermen) or per diems (business, agency visitors).

Table 6.8 presents an overview of the key strengths, weaknesses, opportunities and threats that characterise the sector.

Table 6.8: SWOT Analysis of Tourism in Kiribati

Strengths	Weaknesses
<ul style="list-style-type: none"> • Largely unspoilt/unique environment • Strong culture • Traditional lifestyle • Tropical climate • Beaches & lagoons • WWII heritage & battle sites • Friendly people • Availability of handicrafts • Indigenous. entrepreneurs • Govt. committed to tourism • Donor support for tourism • Bone Fishing • Off the beaten track • Stable government, Australian dollar 	<ul style="list-style-type: none"> • Low ROI, high risk • Limited land availability • Low volume of tourists • Low levels of funding for KNTO • Environmental enforcement is ltd. • Cost & reliability of air travel • Infrastructure (air, cruise) • Human resource skills • Limited customer service • High cost of goods/services • Limited industry coordination • Limited accommodation base • Low level of public awareness of tourism • Pollution and rubbish on Tarawa • Strong Australian dollar • Limited tourism products and services to offer • Hurdles facing foreign investment • No national tourism council • Limited range of tourist amenities and facilities • Reliability of/access to power & water • Relatively high cost and low speed of internet access
Opportunities	Threats
<ul style="list-style-type: none"> • Internet based marketing • Offshore fishing • Opportunities for MTC to provide Improve industry training • Further develop dive product • Cultural experience development • Build on land-based environmental resources – for example bird watching on Christmas Island • Increase tourism awareness – potentially build on Kiribati’s role in the debate on climate change • Leverage off and develop Phoenix Island Marine Protected Area (PIPA) • Travellers are looking for self-actualization – ‘travellers not tourists’ • There is potential for cruise related development to re-emerge but probably on a different scale. • Mauri standards/quality control program can potentially raise industry performance 	<ul style="list-style-type: none"> • Climate change • Environmental degradation from pollution (Tarawa) fishing, bird poaching • Low industry standards • Tourism can damage culture and environment • Travel advisories/media coverage • Political instability affects ability to promote and sustain change • Growing global competition • Reduction in air services and access • Heightened competition • The focus on Kiribati in the debate on climate change • Travellers are looking for self-actualization • Lack of appropriate infrastructure • Poor HR/limited training • Liability lawsuits • Continued growth in digital divide with competitors • Access to and security of land

6.5 Tourism strategy and policy

The Kiribati National Tourism Action Plan 2009-14 is designed to provide the necessary strategies to stimulate a sustainable tourism industry. The 25 recommended interventions presented in the KNTAP represent an inter-related package that focuses on:

- an industry that can conserve Kiribati's unique cultural attributes, and its natural environment, while also having the potential to create sustainable economic development
- local small scale tourism development but with flexibility to encourage and enable foreign direct investment where larger amounts of capital or specialized skills are necessary
- tourists who appreciate the culture and environment of the country, and are willing and able to move beyond mainstream Pacific tourism experiences
- spread the benefits of tourism widely through the country

The overarching vision for Kiribati tourism is for the industry *“to become the largest and most sustainable economic sector driving employment, growth and the Kiribati economy.”* The focus is on building yield per visitor rather than focusing purely on building visitor numbers. By 2014 the aim is to have achieved a doubling in visitor numbers, and built a high yield destination that remains true to its traditional markets of fishing, cultural/geo tourism, visiting yachts and cruise ships. These markets are argued to offer Kiribati the opportunity to remain a ‘niche’ tourism destination.

Tourism is seen as a major employer of the I-Kiribati people by 2014 and there will be a ‘culture’ of tourism education and training. There is an aim to create a three year education and training program through one registered training provider of international standards within the tourism and hospitality industry. There is also a goal to allocate 20 annual scholarships for key skill shortage areas within the tourism and hospitality areas. It is proposed that a new training facility be created in Kiribati, based within the confines of the government owned “Otintaai Hotel” located on South Tarawa. The hotel would continue to operate and have a dual role of being a working hotel and a hospitality school.

In terms of infrastructure and transportation the Action Plan focuses on the need to upgrade Bonriki and Cassidy International Airports and terminal facilities to meet ICAO standards. Donor funding (from New Zealand and the World Bank) has either been secured or applied for in order to achieve these goals. There is also a plan to develop Kanton Airport and a related refuelling centre. The first stage of this initiative will be to seek the services of an engineer to scope out the airport and provide a thorough overview of any major work that needs to be undertaken. It is expected to achieve a 15-20% increase in seat capacity into the country with a focus on Christmas Island and Kanton Islands and an air link to the US West Coast. By 2014 there will be enhanced domestic services between all islands of the Gilbert Island Group. In addition there will be regular air services available to Fanning and Washington Islands from Christmas Island.

Cruise shipping is seen by 2004 as once again becoming one of the key drivers of tourism and economic development. This development will be underpinned by infrastructure that will not only make it easier for cruise ship tenders to come into the Port at London (with New Zealand assistance) but also new facilities ashore will be a major focus for new ports of call. In particular there is a need to develop a master planned tourism precinct around the port area including a cultural centre, tourism services, retailing, an undercover area for immigration processing and a second area for handicraft stalls. Tarawa will be a ‘special interest’ port of call with a focus

on Japanese cruise ships. The location of choice for cruise shipping will be Fanning Island. It is seen as vital to engage of a technical advisor to undertake the role of a relationships/business development manager with cruise shipping companies operating in the Pacific.

The Action Plan places considerable emphasis on the management of the environment upon which the tourism industry and local communities depend. The engagement of a Technical Assistance Advisor for a period of three years is called for in order to support the implementation and enforcement of the bone fishing regulations on Christmas Island and provide support and guidance to the Fisheries Ministry on issues relating to the preservation of fish stocks on the Island.

The Phoenix Island Protected Area is considered to be the jewel in the crown of the Kiribati national tourism and travel industry. By 2014 the vision is for this world heritage listed area to become a premier location for small numbers of high yield travellers wanting to explore unique aquatic and terrestrial environments. The area will be connected to the world through a weekly flight and will host a world renowned 'eco' lodge for up to 20 visitors. Any tourism activities must be environmentally sustainable and not destructive to the natural and marine environment.

The National Action Plan also stresses the importance of private sector driven growth. In addition to small and micro enterprises in areas such as: diving, marine activities, cultural and general tours, restaurants and handicrafts, the country is also envisioned to feature a number of larger 'nation' building businesses that will be developed with the assistance of foreign investment. According to the KNTAP examples of such businesses could include:

- 1-2 new fishing lodges on Christmas Island;
- A new fishing/adventure lodge on Kanton Island;
- Two International Standard Game Fishing businesses – one in Tarawa and one in Christmas Island;
- Commercial air flights between Christmas Island, Fanning and Washington Islands;
- A blue water yachting charter business in Tarawa;
- Revitalisation of the Otintai and Captain Cook Hotels.

To enable these developments the Action plan calls for an incubation program for the development of small business in the tourism arena with linked opportunities for finance. The Action Plan points to the fact that the Kiribati National Tourism Office will need to develop effective strategies in the area of marketing and communication. It is argued that a pool of funds will be required to constantly encourage travel journalists to visit Kiribati to write positive public relations stories and to fund regular 'familiarisation' visits and in market representations. Digital marketing is noted to be the future of the tourism industry's marketing efforts and there is also discussion of the need for a national online booking and reservation system. Engagement of a technical advisor is also required to develop these online resources.

The Action Plan also stresses the need to develop a 'whole of Government' approach to tourism with the creation of a "Tourism Month" that will focus community and political awareness of the tourism industry and its importance to the nation. It also stresses the need to standardise local government business licences and to review how the Government collects revenues from the tourism industry (hotel turnover tax, fishing licences, departure taxes). The plan also points to the importance of legislation to enforce minimum safety and security standards within

the tourism accommodation and tour sector – something that will be addressed by newly implemented Mauri program.

A summary of the full ‘wish-list’ outlined in the Action plan, with related costing estimates is presented in Table 6.9. The Kiribati National Tourism Action Plan is underpinned by a variety of key targets and indicators that underpin the initiative and that provide justification for spending levels alluded to in the table. These targets include:

- Tourism generating 40-50% of the gross domestic product for the nation by 2014 (up from an estimated 20% in 2008).
- 1200 (full, part time and casual) employees within the tourism and hospitality sector
- 40 new micro, small and medium sized businesses
- 6 enterprises of ‘national significance’
- Cruise ship visitation of 32,500 minimum excursionists
- 10,000 air arrivals
- Increased seat capacity (20%) of airlines with routes to and from Kiribati
- 15% increase in visitor expenditure

While the objectives outlined in Table 6.9 are in many cases laudable they also represent a ‘wish-list’ that is unlikely to be achieved within the 2014 time frame. Somewhat more worrying is the fact that several aspects of the Plan seem to be contradictory. For example the plan is meant to emphasize a yield driven approach to tourism development and yet we are told that a 15% increase in visitor expenditure will occur by 2014 while air and sea arrivals increase at a rate that is significantly greater. In simple terms this means that yield per visitor will decrease rather than increase. Even if visitor spend were to grow at 15% per year the projected growth in visitor numbers would still lead to a reduction in spend per visitor.

Table 6.9: Key Tourism Action Plan Interventions 2009-14 (with costings)

	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Intervention	(\$'000)	(\$'000)	(\$'000)	(\$'000)	(\$'000)	(\$'000)
Kanton Airport - Analysis Developmt		80				80
Cassidy Intl Airport (terminal)		1,100				1,100
Fire Truck at Bonriki Airport	500					500
Christmas Island Cruise Infrastructure	700	2,800				3,500
Tourism/Aviation Policy Advisor (TA)		170	170			340
New Route Development Program				1,160	2,340	3,500
Targeted Campaign Kiribati Profile	200	400	400	400	200	1,600
Whole of Govt Tourism Culture	Nil	Nil	Nil	Nil	Nil	Nil
O/Island Guest House Improvements		50	100	100	50	300

Review of Tax & Revenue Collection	50					50
Minimum Standards Legislation		Nil				Nil
S Tarawa Cultural Centre upgrading			200			200
WW2 Interpretive Centre S Tarawa		200	1,300			1,500
Online booking & reservation system			250			250
Bone Fish Law & Stocking Advisor		85	170	170	85	510
Creation of Tourism Month in Kiribati	16	16	16	16	16	80
O/Island Relic, Shrines development		25	50	50	25	150
Rogue Trader Legislation			Nil			Nil
Tourism Micro Enterprise Devt	45	90	90	45		270
Regulate Local Govt Licensing Fees	Nil					Nil
Cruise Shipping Business Devt Agent		75	150	150	75	450
Upgrade Fanning Is cruise facilities		50				50
Workforce Capacity Building Initiative		150	150	150		450
Scholarships - Hospitality	300	300	300	300	300	1,500
TOTALS (A\$'000)	1,811	5591	3,346	2,541	3,091	16,380

A single vision is required for development of tourism in Kiribati. A 'mixed', and somewhat confused, focus on visitor growth and increased visitor spend (yield) within the KNTAP has the potential to detract from the ability to achieve sustainable economic development for i-Kiribati. This confusion is mirrored at a national level with a number of other announcements and plans seeming to be at odds with the National Tourism Action Plan.

The Kiribati Development Plan 2012-2015 is the key planning tool used by the Government of Kiribati to shape and form the future of the Republic. The KDP highlights six broad priority issues: Human Resource Development; Economic growth and poverty reduction; Health; Environment; Governance, and; infrastructure. The document highlights a number of key economic priorities for the Republic over this period with tourism being one of them. The focus of the KDP with respects to tourism can be summarised as follows:

- Development of the Line and Phoenix Groups as tourism growth centres;
- The stimulation and enhancement of the private sector and public enterprises;
- Improving infrastructure – especially roads, airports and terminals, also improvement of communications;
- Improve the quality of local products and promoting them to tourists and overseas markets;
- The development and promotion of eco-tourism opportunities

- Strengthening wildlife conservation.
- Improving and updating statistics

The Government's Medium Term Strategy (MTS) objective is *"to increase the contribution to the economy from a private sector led tourism development which is compatible to our culture and friendly to the environment."* While these themes and those listed above dovetail reasonably well with the KTNAP the differing time periods covered by the KTNAP and the KDP make it difficult to achieve an effective meshing of themes and funding. Interestingly several members of government interviewed were not aware of the existence of the KNTAP.

In recent months President Tong has announced his support for an international environmental conservation effort and scientific research program that is predicated on the development of high-end luxury tourism. President Tong endorsed the program known as "The Economic Power of Wonder: From Oil Wealth to Knowledge Wealth" which asserts that through scientific research bio-diverse sites can offer potential for wealth generation comparable to the riches generated by petroleum in the 20th century. While such a model sounds appealing one must question whether 'luxury' tourism can really work effectively in the Kiribati context – it certainly seems to be slightly at odds with the dominant 'traveller not tourist' message being pushed in the National Action Plan. It could be that the focus on the luxury traveller is PIPA but one must question whether that market will see significant growth in the short to medium term.

One of the most realistic appraisals of the tourism sector comes from the ADB (2007; 2009) which argues that Kiribati must be realistic about the potential of tourism to assist national social and economic progress to avoid dissipating efforts and resources for limited long term gain. The ADB argues that Kiribati cannot compete in the mainstream of international tourism and should not attempt to do so. The cruise ship market, for example, is self-propelled and will continue to perhaps develop, or not, according to factors largely outside the control of Kiribati. The ADB argues that it is vital to target niche (i.e. small, specialized, high yield) tourism markets that relate clearly to identified natural attractions, and that good planning and effective controls are needed to ensure that these attractions are sustained. Kiribati can offer unique experiences for tourists who are adventurous and interested enough to make the journey and can afford the long haul travel costs.

It seems that a clear vision is needed for the industry – one which focuses on building yield as well as achieving realistic growth in visitor numbers. It is essential that the growth in tourist numbers, especially in the outer islands, does not exceed the carrying capacity of the environmental and cultural experiences upon which both visitor experience and resident quality of life depend.

6.6 Recommendations -- Enhancing Yield and Sustainability

This section outlines some approaches that will enable yield to be enhanced across the tourism sector. The discussion is underpinned by two key assumptions:

- That Kiribati should attempt to increase the yield of all tourism types and segments - from business travel through to bone fishing and from SME to larger hotels.
- That yield can only be increased in a sustainable sense by enhancing both the visitor and host experience of tourism.

6.6.1 Business development and networking

Throughout the Pacific Islands small and medium enterprises struggle to secure start-up and development funding. SME in Kiribati face a greater hurdle than in most areas because of the relative lack of major commercial banking presence (ANZ is the major player). The Development Bank of Kiribati is the organization that is largely charged with filling this gap and has, to date, played an important role in assisting tourism SME development.

Interviews reveal that only a few local tourism enterprises are able to successfully access business start-up or expansion funding. There is only one Business Development Manager currently working at the Development Bank on Tarawa and there is limited time that she can put into tourism related development. The bank also has an office on Kiritimati. Typically the Development Bank will assist with funds below \$20,000. In any given month there is approximately \$300,000 to lend. The Development Bank is also involved in occasional larger projects in the tourism arena with, for example, a current focus on assisting the Otintaai Hotel to develop improved conference and meeting facilities.

A number of factors work against SME being able to access Development Bank funds. Collateral must be provided at 150% of the value of the loan being taken. Salaried employees, or those who have a salaried relative who can provide a guarantee, are best able to meet this condition. Some applicants do make use of land as collateral but past problems have led the Bank to no longer accept land as the only form of guarantee. The current rate for commercial loans from the Development Bank is 12%. The high cost of finance, and a lack of credit history make it difficult for many potential tourism SME to access funds.

Another challenge is that SME must provide an effective business case and plan to be considered for a loan. This can be an expensive and time consuming undertaking and there is a real lack of public sector resourcing to fill this gap and provide input into the process. With only one Business Development Officer in the bank little support can be provided directly from the Development Bank. While other Ministries (MCIC, MCTTD, KNTD) can provide some assistance they are also limited in the staff resourcing that can be allocated.

The lack of Development Bank staffing also leads to a lengthy processing time for any funding applications that are made – with a typical processing period of three months or more for applications less than A\$20,000.

One advantage for those wishing to access funding for tourism enterprise development is that the Development Bank tends to view the tourism sector as a good area to loan to, with a lower rate of loan defaults than in sectors like fishing, agriculture and local transport. Guest house development is seen as a particularly good area for outer islands, although the fact that Village Councils often already provide accommodation of some kind can make competitive conditions difficult for private operators.

Another potential option for micro-finance is the Village Bank system which is coordinated by the Ministry of Internal and Social Affairs (MISA). However these loans are very small – usually between \$100-200 and have only limited applicability to the tourism context.

Problems in accessing finance have a negative impact on business start-ups and this in turn restricts the range and quality of offerings available to the visitor. There is clearly a need to look to new ways to develop SME in Kiribati. Funding, training and networking are critical themes that should be explored through future donor assistance.

For potential overseas investors a number of challenges must be overcome. The first is the fact that it is difficult to find clear information on the processes that must be followed to invest in business activities in Kiribati. There is no 'one stop shop' for the potential investor to visit. Indeed, at the present time it is the national tourism website that provides the most accessible information on foreign investment processes.

Any foreign investor must go through the Foreign Investment Commission. If the value of the investment is over \$250,000 then the FIC will review the application before it is forwarded to Cabinet. Potential investors must also deal with the Registrar of Companies, local Councils and also negotiate access to land. There are incentives available to entice FDI, for example an eco-tourism operator could claim 'pioneer' status as they would be operating a business that is new to Kiribati, and in this case they would receive a substantial reduction in tax on net profits for the first 5 years of operation. Development on the outer islands (excluding Christmas Island) is also encouraged through a tax holiday program.

In summary there is clearly a need to improve access to development finance and to increase the level of support for those developing small business plans and cases for finance. It is also vital that processes for FDI be improved and simplified.

6.6.2 Marketing - Information Technologies

Because of severe limitations in marketing budgets the Kiribati tourism industry needs to focus its attention on where it can make the most targeted impact with the least cost. Effective marketing underpins the ability of Kiribati to build visitor numbers in a manageable (and realistic) fashion while also increasing visitor yield. While on-line marketing receives considerable attention in the KNTAP there is still also a reliance on costly approaches such as 'fam trips' (industry familiarisation trips) that may not be that effective in reaching the target market: travellers not tourists.

While the current Kiribati website is a reasonably effective tool to market the country it is vital that it 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. There is a need to provide content that can support enhanced linkages between tourism and other sectors of the economy.

If a visitor is provided with sufficient information pre, prior and post visit they will be aware of the experience that awaits them and can budget both time and money. 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.

There does not appear, at this point, to be a big need to develop an on-line booking system that can be added to the existing national tourism website. Such sites will inevitably compete with other booking systems and will face the challenges associated with secure on-line purchasing. At this point in time it would make more sense to build simple telecommunications and email capability among smaller operators.

Discussion of the internet as a marketing tool also raises important infrastructural issues. Reliability and cost of telecommunications remains a concern for many operators – especially on the outer islands.

In summary it is vital that a thorough ‘web-audit’ of current on-line resources for the industry be conducted, with a focus on basic content and usability but also on network and linkage formation. Given that Kiribati is blessed with one of the better websites in the region it is also important that new areas of marketing through social media be explored and developed. User generated content uploaded to sites like Trip Advisor or onto personal blogs can be a useful source of information to planners and industry alike and can be used to improve product offerings.

It is also important to strengthen understanding between the telecommunications and the tourism sector with perhaps a working committee being formed to look at ways forward. There is no question that tourism is an information intensive industry and as such a clear line of communication with Kiribati telecom is vital to establish and sustain.

6.6.3 Product development and linkage creation

Research on linkage structures and leakages associated with the tourism sector in Kiribati is limited. Past evidence shows that leakages from the tourism sector are relatively high (SPTO 2005). The interviews conducted for this chapter reveal that local linkages have remained relatively static, with imported goods still dominating tourism business purchases and the industry struggling to build links to many of the cultural attributes that surround it. In this section we will review a number of areas where linkages could be developed further – focusing on food, handicrafts and local heritage.

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 encourage import substitution; potentially diversify exports and encourage smallholder involvement in the formal economy. Improved linkages to local food can also provide the visitor with a ‘sense of place’ that simply cannot be gained through the consumption of imported food. Tourism can also provide an incentive for growers to produce a greater amount and range of products, thereby strengthening food security.

The supply of locally grown produce has always been a critical problem for the Kiribati tourism industry but in recent years there has been a considerable step forward courtesy of the Taiwanese funded Home Garden project. The project on Tarawa is designed to teach local staff and the broader population about the growing of produce in their own gardens.

Some tourism accommodation providers have benefitted directly by being able to grow some of the produce their guests consume. Of more significance, however, is the fact the local producers can generate a surplus that can then sold to the broader community including accommodation and restaurants. Produce is now sold on some roadside stalls which enhances access for the tourism sector.

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. Most importantly

there is now a plan to expand the Home Garden project to Christmas Island where tourism links to locally grown produce is very limited.

Where Christmas Island out performs Tarawa is in its access to local seafood. The availability of fish, lobster and other seafood on tourist menus is probably unparalleled in the Pacific islands and can be developed further as a distinct point of difference for the industry. On Tarawa access to fish is a little more limited and is also constrained by local weather – it is not uncommon for fish to be scratched from menus due to limited supply.

It is critical also that visitors are made aware through the internet of the kind of local food experiences that may be available to them during their visit to Kiribati and to encourage opportunities for them to seek out and consume local produce. Such experiences can really add value to both the local economy and also the visitor experience.

Handicrafts

Locally produced handicrafts and souvenirs represent important areas for the building of linkages to the tourism sector. No accurate information on the number of people involved in producing and selling handicrafts is available. At present on Tarawa the Catholic and Protestant churches have two handicraft retail outlets and the Kiribati Handicraft and Local Produce (KHLP) also have a very limited outlet in the old Parliament Building. Another outlet has been opened recently, close to the Otintaa hotel and run by AMAK. Small stalls are also operated at the airport to coincide with aircraft departures. At present there is no formal handicraft outlet on Christmas Island and the sector is struggling with the demise of the cruise ship sector.

There are a number of challenges that face the sector at the present time and that diminish opportunities for linkages to the tourism sector. Handicrafts need to be highlighted more effectively for visitors on the web (pre-arrival) and there needs to be more information on availability once in the country. At the present time there is very little signage or information to lead visitors to existing handicraft outlets.

The availability and cost of raw materials is also a growing problem on both South Tarawa and Christmas Island. The former suffers from a simple lack of land on which to produce key raw materials – especially pandanus – while in Christmas Island there is no tradition of growing this vital raw material. The short supply of pandanus is reflected in the current cost which is estimated to be 20 cents or more per leaf, by way of contrast the cost was 5 cents in the late 1980s/early 1990s. It is critical that raw material supplies be improved from the outer islands if possible.

Another challenge lies in the inter-generational passing on of handicraft skills. Those interviewed from the sector felt that the younger generation had limited interest in producing handicrafts for either personal use or sale. Also the Church based outlets work on a system that sees women paid for their crafts if and when they are sold. AMAK is attempting to change this model with their new outlet – focusing on improving quality and paying handicraft producers ‘up-front’ for their work.

None of the handicrafts viewed by the consultant are sold with an accompanying ‘story’. Interpretation of what a particular craft means to the traditional culture, who made the craft and so forth can be of interest to the visitor – it is important that retailers and producers receive more skills to provide better interpretation of products. At the same time it is important for new ideas and designs to be incorporated into the crafts being produced – especially those that are

aimed at the visitor market. Issues of size, fragility and bio-security need to be looked at carefully by producers and retailers.

Another key issue relates to cruise ship preparedness. At present there is a lack of awareness on the part of handicraft producers as to when a vessel will be arriving. This can make it very difficult to prepare crafts for sale and has a direct impact on the quality of what can be presented to cruise ship visitors. In the past when visits were more common to Christmas Island and Fanning this was not such an issue – but now the very limited and haphazard arrival of vessels makes it very difficult to plan ahead.

Those interviewed from the handicraft sector would also like to see the development of an export market in handicrafts. They require assistance to identify overseas markets for export, and to understand overseas market needs in terms of quality pricing. There are a number of permits required to export. These include Quarantine, Customs, relevant airline documentation and handling on the side of the exporter - this is time-consuming and has cost implications. There need to be a more user-friendly and easy-to-understand forms for handicraft exporters that give clear and specific instructions on export procedures.

One area of potential export interest is New Zealand. There has been outward migration over the years to the country and the numbers have risen following the introduction of New Zealand's Pacific Access Category scheme. It is worth exploring the degree to which familial and village links to New Zealand could be effective tools to facilitate small scale export of handicrafts – as has happened in recent years with the Pasifika festival in Auckland.

There was also some desire expressed about the need for a more centralised location for the sale of handicrafts on both Tarawa and Christmas Island. In both cases this would be a high visibility location in which crafts would not only be sold but also produced and interpreted for visitors – in a sense these would become cultural centres with a significant role to play in the sale of handicrafts. On Tarawa most people felt the ideal location for such a facility would be Betio and felt that the existing Cultural Centre was not well located.

On Christmas Island the focus is on the development of a master planned tourism precinct around the port area of London on Christmas Island. Such a precinct would include a cultural centre, tourism services, retail, undercover area for immigration processing and a second for handicraft stalls, landscaping of the 'spit' area, relocation of unsightly buildings. In addition this project would include a major dredging of the channel that would allow cruise ship tenders safe passage to the harbour in London. This would all come at an estimated project cost of \$3.5 million.

While the idea of a precinct type development in London is appealing in some respects, it is important to remember the ADB's (1997) prescient perspective on the cruise industry. This is a sector that makes decisions on ports of call based on a range of criteria – both global and local. The fact that in recent years cruise visits have almost totally dried up is not a good sign for this proposal and there must be significant questions asked about the ability of such a precinct to create a reason for cruise vessels to again visit Christmas Island.

An approach based on a 'build it and they will come' perspective is very risky and one would have to ask whether the resources could be better applied elsewhere. It should also be remembered that the bulk of air visitors to Christmas Island are bone fishermen and while they are perhaps likely to buy a small souvenir of their visit their focus is on fishing and most will do this on every day available to them. The degree to which locals would use such a facility is also open to debate. The cultural life of most local people is focused on their church and village – it seems unlikely

that they would make a move to this type of precinct. There is a high risk that such a precinct would become a ‘white elephant’ very quickly.

Another area that is highlighted for development in the KNTAP is WWII interpretation, with a focus on South Tarawa and particularly Betio. There is a proposal to develop an interpretive centre and museum facility to provide a location for the preservation of relics and memorabilia of the Battle of Tarawa as well as a place of commemoration for the 6000 people who lost their lives in the battle. In addition to the centre it is proposed that the new facility could include the offices of the Kiribati National Tourism Office as well as a visitor information centre and space for a cafe/eatery, creating a tourism hub on Tarawa.

The proponents of this Centre (with an estimated cost of well over \$1.5m) have already highlighted some significant problems:

1. Land tenure issues and the securing of long term leases
2. Establishment of a commercial platform by which the project can operate on a sustained basis
3. Securing display memorabilia and relics from the war
4. The viability of outsourcing arrangements to generate revenue for the venue

Beyond this lies the broader issue again of who would visit? The 1997 Tourism Strategy document includes correspondence with Pacific battle field tour operators who make it clear that Tarawa lacks the appeal of sites like the Solomon Islands and that the quality of experience provided is limited. While a centre such as that proposed would undoubtedly improve matters it is very doubtful that it would be enough to draw in large numbers of ‘war tourists’.

One could certainly argue that the money allocated to the Cultural Precinct development in London and the Interpretation Centre on Tarawa would be better spent on some basic clean-up work (especially work to protect rusting relics on Betio) and the development and packaging of simple cultural tours and experiences. This would need to include improved tour guide training and the ability to link tours more effectively into the visitor experience – through internet information and improved booking opportunities once in the country.

There is also potential to develop more in the way of small scale cultural/educational experiences for tourists on the outer islands of the Gilbert group and also Christmas Island and Tarawa. Such a development would require careful coordination with local communities to enable the more regular provision of experiences based around creating a greater understanding of Kiribati culture, food and everyday way of life. Any such developments would need to be small scale packages that minimize unwanted impacts of tourism and educate visitors beforehand about appropriate behaviour. In simple terms this approach would be about linking everyday life to the visitor experience.

One example of recent attempts to link accommodation more effectively to broader community economic benefits comes from the ‘Villages’ resort in Christmas Island. The resort has been developed as a community based project and features 3 bungalows – each with two rooms. The KPC has been involved from the start although some of those involved are from other denominations. Each community member contributed approximately \$1000 to provide the \$120,000 required to set up the resort which also includes a dining area, office, small handicraft shop and a simple maneaba where visitors can gather after fishing.

The focus of the resort is on fishing and it was hit hard by the shut-down in Air Pacific flights, with the resumption of flights however things have improved dramatically and they have bookings during the peak US fishing season January-May and also the period when many Australians visit (June-August). They rely heavily on sole agents to promote fishing in Japan, UK, US and Australia. The internet also represents an important source of information. Some of the money generated goes back directly to the church for broader use in the community. Each fishing package sells for approximately \$2,200 and this compares favourably with the most expensive fishing packages that are now close to \$3000 per person per week. The packages include transfers, full meals, transport, guides, and local entertainment. The impact on local employment is considerable with 8 guides, 15 land based staff and 3 boatmen. Young people are paid to help tidy the beach and also to put on a cultural performance night for guests. Any tips that are provided by guides are kept by the individuals concerned. The local village is also providing a range of produce for visitors through some gardens that have been recently established – they are now able to supply tomatoes, cabbage, melons and papaya. In addition to this local handicraft producers are also able to sell their products through the small retail outlet on the premises.

6.6.4 Human resource development

The Kiribati Development Plan 2008-11 notes: *“Human resources are of paramount importance in the development and future of economic growth of the country. While formal education is important in nurturing our human resources at all school levels, ‘human resource development’ goes one step further in highlighting the need to build capacity of our human resources for both domestic and external labour markets.”*

Kiribati tourism needs an increase in the number of trained staff and is also lacking individuals with middle management and SME development skills. These skills have the potential to be transferred overseas which means that tourism represents a critical area for future climate change adaptation through labour and general population migration.

An institution of direct relevance to HRD in the tourism sector is the AusAID funded Australia-Pacific Technical College (APTC), which aims to deliver vocational training across the Pacific to a standard accredited in Australia – this has particular relevance to Kiribati as one of the key centres of training is in Fiji. Twenty teachers from the Kiribati Institute of Technology graduated from APTC with Australian-standard certificates in teacher training. This enables KIT to progress towards providing courses with internationally recognised standards.

Unfortunately the costs of studying overseas are beyond most I-Kiribati and so there is also a need for in-country training to be provided. The value of in-country training was highlighted in past evaluations of the EU funded PRTDP. Small, isolated destinations, including Kiribati, placed a very high value on in country training and ‘train the trainer’ workshops provided through the program. Unfortunately such approaches are expensive and do not always create a lasting legacy.

The KNTAP outlines plans for the establishment of a new training facility within the confines of the government owned “Otintaai Hotel”. While such an approach would utilise existing facilities it is important to note that it is difficult to strike a balance between working and training hotels and that such approaches must be carefully planned. At the same time the facilities at the Hotel (including the previous entry/reception area) are in major states of disrepair. In effect the students would be training in facilities that are far below basic international standards

A better option would be the Maritime Training Centre or MTC. This facility is a partnership between the Government of Kiribati and a German owned shipping company. The MTC has been running since 1967 and provides training and education that is recognised internationally. The Maritime Training Centre has received considerable support from New Zealand and boasts a number of new well resourced teaching facilities including a training kitchen. The MTC already boasts hospitality and stewardship programs that would be well suited to local training needs. More significantly it has recently formed an alliance with the Auckland Institute of Studies (AIS) in New Zealand to run AIS pre-degree programs in hospitality and tourism.

Whatever hospitality training is undertaken, and through whatever mechanisms, it is vital that students' English standards improve. Several of those spoken to in the tourism sector on Tarawa and Christmas Island pointed to the lack of confidence on the part of youth in using English as one of the major impediments in improving the job opportunities and prospects associated with tourism (see also ADB 2008).

Whatever in-country training is developed it will clearly also be valuable for tourism staff to gain overseas experience. The scholarship concept raised in the KNTAP is a good one but will be costly to administer and run. It may well be that donor funds can be leveraged in this area. Certainly the Taiwanese government has been active in sending key tourism personnel overseas to attend training. At present the Taiwan government is planning to send a senior tourism industry representative to Taiwan from Christmas Island for further studies.

6.6.5 Transport and infrastructure

The chapter on trade facilitation deals with international and domestic transport. However with respect to tourism there is no question that upgrades are required for Bonriki and Cassidy Airports and that outer islands could also benefit from upgrades to air strips and facilities.

Donor funding will be required to enable these developments to occur but it is also vital that better coordination occur between MCTTD and MPWU. These Ministries need to work closely not just on transport infrastructure but also on the protection and maintenance of relics and other resources of value to Kiribati.

The case of the upgrading of cruise related facilities is somewhat more difficult to sustain. While there is no doubt that dredging work on the cruise tender access channel to London is important this issue remains an on-going problem – and affects occasional yachts as well. Clearly there is a need to find an improved technique to dredge the channel (currently done by a digger balanced somewhat precariously on the edge of a sand spit) and to find a way to prevent the rapid build up of coral sand and other detritus that blocks the passage so rapidly. There is only a slim chance that such a development will encourage cruise vessels to come back to Christmas Island. It should be remembered that even with far better water access for large vessels Fanning has also dropped of the port of call list for cruise companies.

Domestic inter-island shipping also faces particular challenges and this has an indirect impact on the tourism industry – especially on Christmas Island. The lack of reliability in these visits and the fact that there have been a number of mid-journey break-downs and disruptions sometimes leaves Christmas Island quite vulnerable to shortages in basic commodities such as rice. This in turn has an impact on the ability of resorts and hotels to feed clients.

If numbers of tourists in the outer islands are to grow, even in a limited fashion, it will be important to develop some form of improved air/sea-based transport. Likewise the internal

land-based sector requires further development and review (roading, mini-buses etc). It will be important to review and benchmark existing domestic transport offerings for tourism and propose ways to enhance performance. It is also important to evaluate and benchmark yacht preparedness among communities and provinces.

There is also a need for improvements in basic infrastructure such as public toilet facilities and signage. Waste management and the provision of reliable electricity and water also remains an issue on both Tarawa and Kiribati. Recent initiatives from the Taiwan government and also EU EDF10 have focused on solar power in outer islands to provide some electricity to light homes and schools. Such initiatives will be of value to the tourism sector – not only because of benefits to visitors but also because they offer the opportunity to market the nation as a ‘green’ and ‘renewable’ destination.

6.6.6 Research and decision support

Good data on visitor characteristics, tourist spend, industry linkage structures and outer island travel must lie at the heart of any future 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 demographic information but also ‘psycho-graphic’ material – with a focus on satisfaction.

In this respect it is pleasing to see the current effort on the part of the KNTO to implement a visitor departure survey at Bonriki airport. The survey has been running since March 2010 and involves the KNTO statistics officer usually visiting 3 out of four departing flights each week. Basic information is gathered on the following: nationality, age, gender household income, booking methods used, previous visits, purpose of visit, length of stay, spend (an overall figure), expectations, satisfaction and suggestions for improvements.

The results from the survey, which appears to generate around 30-60 responses per month, are then fed into the KNTO’s monthly industry newsletter. The KNTO also conducts regular Google analytics reviews of the national tourism website and relays some of the information through the newsletter.

Unfortunately the survey does not cover Christmas Island and so a substantial component of the tourism market remains invisible in terms of this data collecting exercise. At the same time the manual distribution and collection of surveys is very time consuming and draws the statistics officer away from other tasks such as updating web content and disseminating information.

There is currently no occupancy rate or cruise ship data collected, the latter because of the demise in the sector and the former because of a general lack of willingness and interest on the part of the industry. Basic immigration forms are collected by immigration and then relayed to the statistics and tourism offices for analysis.

The lack of accurate information makes it difficult to plan and develop a yield focused industry and also makes it impossible to evaluate the performance of key strategy goals and outcomes. A lack of data on the economic role of tourism also constrains lobbying for more tourism marketing, limits understanding of tourism’s linkages to other sectors and also makes it very difficult for both locals and overseas interests to make informed business decisions and develop effective business cases.

There are a number of initiatives that could be taken to improve performance in data collection and dissemination. There needs to be a clear understanding and definition of research needs and a careful review of the current tools and questions that are being used to collect data. There also needs to be the development of a more cost effective mechanism to collect visitor data on an on-going basis – an on-line survey/barometer approach is probably the most realistic option to pursue and experience elsewhere in the Pacific shows that if well managed it could be a very cost effective way to gather information. Such an approach also allows the visitor to complete the survey away from the congestion and heat of the visitor terminals and to reflect on their experiences in a more detailed manner. Another advantage is that the visitor is, in effect, entering the data themselves. Such an online survey can be easily adjusted to meet changing data needs and can also be calibrated to meet the quite different visitor characteristics of Tarawa and Christmas Island. It is also important to conduct an evaluation of how statistical information is disseminated to those that need it – and how this can be improved.

6.6.7 Environment and sustainability

The issues of environmental sustainability and climate change are critical for the future development of the Kiribati tourism industry. Any attempts to develop sustainable yield must be based on an understanding of the environmental impacts on, and performance of, the tourism industry. It is unfortunate therefore that very few of the policy documents reviewed on the tourism sector for this DTIS specifically make mention of the potential impacts of global climate change, or closely related issues such as the growing scarcity of oil and increasing cost of travel to long haul destinations.

One area that lies within the control of the industry 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. Development of improved awareness of environmental issues in the tourism sector is critical – whether it be something as simple as reducing water use by encouraging visitors to re-use towels or whether there are more detailed energy-use reduction policies (see chapter 5). These developments need to be promoted to the visitor as well. It is also essential that broader community awareness of litter control and waste management be developed.

Future development of tourism facilities must also take into account issues of sea-level change. It is imperative that developments occur in areas that will be least vulnerable to climate change and that adaptation procedures be built in to future planning for the development of the industry. At present these dimensions are missing from the KNTAP.

Environmental dimensions are central to the visitor experience and underpin the potential development of new visitor experiences. The PIPA is an example of an environmental ‘jewel in the crown’ that has great future potential to generate high yield visitation. Unfortunately there is still a long way to go before infrastructure is in place to enable development to occur but in some ways this is good as it allows time to work on an effective tourism strategy for the Protected Area. The KNTAP makes a number of contradictory statements about PIPA including talk of an ‘ecotourism’ lodge that will cater to both non-consumptive resource users and also fishermen. This is a strange combination of consumptive and non-consumptive uses and it is unlikely to be a recipe for success. The focus for PIPA should remain on non-consumptive use of the physical

environment and if done well the development of tourism could, and should, be held up as best practice in terms of limiting negative environmental impacts.

The greatest short term potential for environmentally based tourism development clearly lies in Christmas Island. The largest untapped opportunity is in bird watching, with some potential also existing for the further development of diving activities. Bird watching offers great potential with over 40 million serious birders' around the world looking for new species to tick off on their 'lists'. The 18 species of seabirds which breed are all spectacular in their own ways and display a range of interesting and unique behaviours. They are easy to approach and photograph. In addition there is one vulnerable species (the White Throated Polynesian Storm Petrel) and the endangered, Phoenix Petrel, in addition to the Bokikokiko, or Christmas Island warbler, an endemic species that numbers about 1000 and occurs nowhere else in the world.

The challenge in developing the bird-watching sector is to increase the amount of information available to potential clients, to reach out to major bird watching package providers and most importantly to make sure that the birds themselves are protected from exploitation. The latter issue is very much the responsibility of the Wildlife and Conservation Unit on Christmas Island. The unit has a total of 7 staff tasked with protecting the bird species and managing the 9 closed areas that exist in the broader wildlife sanctuary on Christmas Island. The amount of work involved is simply not possible for the 7 staff to manage and in recent times the office has also been charged with enforcing and overseeing the bonefish sector that is so vital to the local economy.

Any tourist visit to a bird sanctuary is supposed to be notified to the Wildlife and Conservation Unit and an officer is required to go with the visitors. The fee is \$10 if someone else is providing a vessel or \$100 if the tourists travel in a Unit vessel. Most visits are to Motu Tapu and Cook Island – two small islets that are a short distance by boat from London. Most trips take between 2 and 3 hours. At present the office estimates that it receives approximately 5 visitors a month who are seeking this service. It is clear, however, that many more tourists are visiting the bird sanctuaries but usually with fishing guides who do not inform the Wildlife Unit. If they are caught they will receive a warning letter but with the limited resources available this is a relatively rare occurrence. Poaching of birds by locals is also a problem – with Sooty Tern eggs and Frigate birds being most vulnerable, there was some criticism among tourism operators that fines and penalties for poaching are often not enforced by the local judiciary.

It is clear also that the taking of bonefish by local people is still continuing but the use of nets has reduced significantly and all of the fishing guides spoken to felt that bonefish stocks had improved from five years ago. It is clear though that the local conservation and wildlife officials need more resources if they are to police and regulate these important natural resources effectively in the future.

Opportunities for diving are limited by the fact that the one dive company on the island does not currently have a registered diver to take tourists out. The only licensed diver has left the company to work for another operator on the island but his dive license has been kept by the original company that paid for him to get it. In effect the dive market – which used to generate a small but high yield group of visitors has now disappeared. It is unlikely that the market will ever become large because of the isolation of the destination and the fact that several other areas in the Pacific offer, by all accounts, superior diving experiences.

There is also potential for Christmas Island to become energy self sufficient using solar and wind power. The island could become the first energy independent island in the region if not the

world, and a model for other small island countries in the trade-wind belt and tropical latitudes. The disadvantages with solar and wind power are: maintenance and potential technological problems; and most importantly danger to valued bird life. But there are locations on the island, away from the more heavily travelled seabird flyways which could possibly support small wind farms.

Finally there is the somewhat controversial opportunity for Kiribati to leverage off the considerable world attention that is focused on the nation as it stands at the forefront of the impact of sea-level rise. Kiribati's neighbour, Tuvalu, has begun to focus on this opportunity with the development of a King Tide Festival. The KNTTO feels that such an approach is negative and will not provide hoped for benefits however, a climate-change tourism promotion theme could attract a growing number of tourists and academics interested on climate change issues and likely impacts on the environment. Recent publicity around climate change meetings in Kiribati are a good example of how media coverage reaches a number of global markets and this could certainly be leveraged – with a focus perhaps on the nation's attempts to raise awareness of climate change and to adapt to meet challenges. It is interesting to note that in Tuvalu the highest visitor numbers now occur during the King Tide period and that package tours specifically incorporate this dimension into their visitor experiences.

6.6.8 Institutional structures, vision and legislation

The KNTTO needs to show industry that it is providing real value for money and to be realistic in its expectations of increased levels of government funding for tourism. The organization has strong staff and a good knowledge base to build on, but it requires further resourcing to reach its potential – and to assist the nation in reaching its visitor arrival estimates. In terms of its website, willingness to engage in research, and desire to create a sustainable vision for the industry, the KNTTO cannot really be faulted when compared to other SIDS in the region.

The KNTTO office in London is run on a skeleton staff – if the tourism officer is away then there is really only administrative assistance remaining. Given the significance of the industry there it would make sense to strengthen the office or to perhaps create a supporting position in the MLPID.

The general feeling among those interviewed is that there needs to be better coordination of the various organisations and agencies that are charged with developing and promoting tourism – which is something that has been identified in a number of previous reports.

Networking, coordination and cooperation is vital if the true potential for tourism is to be realised. It is vital that an organisation be established that can work to achieve the goal of creating a sustainable tool for income generation and employment. It 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 – whether they be business travellers, back-packers or bone fisher.

The lack of an effective National Tourism Association for Kiribati means that there is no clear public-private lobbying force for tourism – something that is highlighted as significant in the recent tourism action plan. There is also no effective tourism association on Christmas Island despite attempts to develop one in the past. More importantly the industry lacks a common organization in which it can share ideas and learn from the collective wisdom of the industry.

The KNTAP's call for the formation of a Kiribati Tourism and Travel Alliance (KTTA) is a timely one. The functions of this body are outlined in the KNTAP as:

- acting as an regional and national advisory body on issues affecting the private sector;
- working in partnership with the Kiribati National Tourism Office to develop and promote marketing opportunities to enhance Kiribati's tourism and travel brand;
- fostering leadership within the tourism private sector
- assisting with the implementation of the Kiribati National Tourism Action Plan 2009-14; helping the sourcing of funding for private sector focussed donor programs.

It would be important that a Christmas Island branch be formed and that the MLPID, as the lead agency for island planning and development, also be linked into the relationship.

Another area that requires urgent attention from a regulatory perspective is the opening up of land for tourism development use on Christmas Island. At present land is the biggest frustration for many of the tourism operators that were interviewed and the consultant was told that over 200 applications are awaiting approval and that some have been in train for more than 3 years. In simple terms access to land must be eased – it should however be done in a planned and responsible manner.

It is the latter point that also causes concern among the tourism industry on both Tarawa and Christmas Island. There is a desire for some zoning to be put in place to minimize conflict between different land uses. For example one community based accommodation operation in Kiritimati finds itself located next to a noisy carpentry business. This is a major concern on Tarawa where population density creates awkward economic 'bed-mates' at times.

A further area that requires careful analysis on a regulatory and legislative front is tourism safety and the broader issue of liability. In the week the consultant was in Tarawa he saw two groups of tourists travelling by boat without life jackets and with no evidence of radio communication on the boat. On both occasions I interviewed experts involved with maritime activities I was told of very real concerns about the safety of tourists and the limitations of relying on cell phone coverage to reach help in case of an emergency. Safety standards need to be improved – but at the same time there needs to be a greater education of the industry for the use of waiver forms if tourists are placing themselves in situations where accidents may happen. While a visitor injury or death could prove costly in the short term it can also raise publicity and create difficulties in terms of public perception.

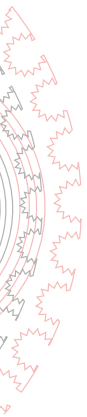
6.7 Conclusions

Sustained improvements in tourism industry performance should focus on yield rather than visitor numbers. It is recommended that priority be given to the support of the projects shown in the action matrix. As would be expected in a situation where tourism is in a nascent state the focus of the matrix is on marketing, human resource development, product/experience development, linkages and networks, and the need for research.

It is clear that Kiribati has two very different destinations, each of which boasts its own specific markets. A third destination (PIPA, Canton) is emerging. Yet in each case the underlying issues are quite similar: a need to build on and develop visitor experience, to diversify markets and

to maximize the economic benefits that can flow to local communities and the economy more generally in a sustainable fashion.

Certain areas have not made it into the final action matrix, but are by no means insignificant. As the tourism industry struggles to build momentum following a very trying period the areas outlined in the matrix represent critical building blocks that need to be put in place before other concerns can be addressed.



7. Fisheries

7.1 Introduction

The fisheries sector of Kiribati is comprised of offshore (oceanic) and inshore (coastal fisheries). Offshore fisheries are primarily undertaken by industrial-scale vessels including purse seine, longline and pole-and-line vessels targeting four main tuna species. The main source of revenue from the tuna fisheries is derived from resource rental to Distant Water Fishing Nations (DWFN), providing a significant proportion of government revenue.

Inshore fisheries include coastal and nearshore (reef and lagoon) fisheries, and play a very significant role in providing food security, welfare, livelihood diversification and revenue generating options throughout Oceania. This is especially true for Kiribati, whose land mass is only 800 km², thereby limiting agricultural production and livelihood options. A significant commercial and artisanal (small scale semi-commercial) tuna fisheries for subsistence and domestic markets occurs in coastal waters. The most active commercial and artisanal coastal fisheries are based at south Tarawa as there is a significant market based there. It is also developed on a smaller scale on Christmas Island where exports of tuna to Hawai'i are possible via air freight.

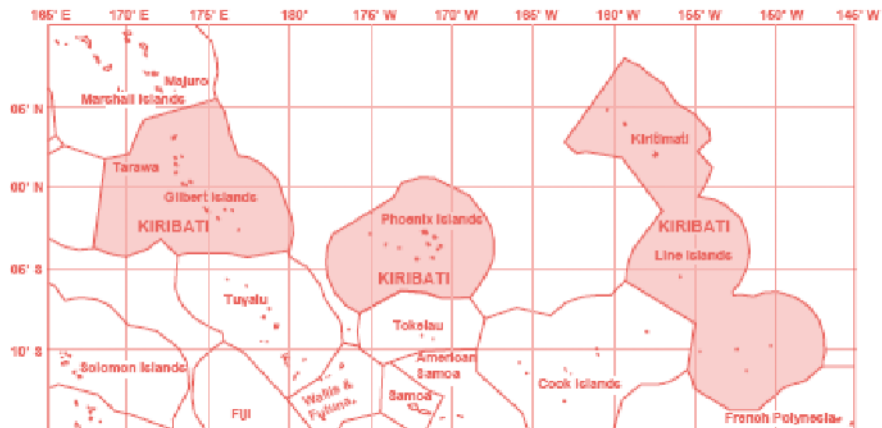
Aquaculture of seaweed and milkfish are also included in inshore fisheries. Game-fishing especially for bonefish and pelagic fish including tunas occur in coastal waters and is closely linked to tourism development. Bonefish fishing is currently the main attraction for tourists to Christmas Island. The importance of the inshore fisheries in providing food security in the form of fresh, sources of protein and its value in import substitution is highly significant.

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

7.2 Background

Kiribati has one of the largest Exclusive Economic Zones (EEZ) in the Western Central Pacific (Figure 1). Under Article 76 of the United Nations Convention on the Law of the Sea 1982 (UNCLOS), Kiribati is entitled to claim a portion of the continental shelf beyond its 200 nautical mile EEZ. Kiribati has until 2013 to prepare and present its claim, and if successful, could significantly increase the size of Kiribati's EEZ and the offshore fisheries and seabed mineral resources associated with it. With Kiribati's EEZ size and productivity, it contributes the highest fisheries production and value from the Western Central Pacific Ocean (WCPO) after PNG (Gillett 2009).

With dwindling global fisheries stocks, the relative importance of the contribution Kiribati makes to Pacific tuna fisheries catches represents a significant bargaining position when negotiating access rights from DWFN. This will become increasingly so, as global populations and food demand grows and overfishing of tuna in other regions will result in the Pacific becoming increasingly attractive to global-roaming tuna fleets and increasing the value of fisheries access in the WCPO (Gillett and Cartwright 2010).

Figure 7.1: The Republic of Kiribati and its EEZ

Kiribati has a strong tradition of tuna fishing from finely built canoes using pear shell lures and other traditional techniques. Today, outboard powered small craft have largely taken over from canoes and 100s of 5-7-m skiffs are now involved in commercial and artisanal tuna fishing off Tarawa as well as at some outer islands.

On an industrial commercial scale, Te Mautari Ltd (TML) was established 1981 by the government to develop the tuna fishery using donor provided pole-and-line vessels and established the first cold stores, blast freezer and ice machines in Kiribati. The aim was to produce frozen tuna for export to canneries. Japanese aid funded an extension to the facility in 1984 and a further upgrade in 1989 at the same time as the building of a jetty complex. In 1988, the US government provided a new office complex. The cold stores were refurbished with Japanese aid again in 1992–93, then fell into disuse followed by another round of Japanese aid that refurbished the facilities again (1999–2003), this time reorienting with a plan for fresh fish for the local market and export in conjunction with the Outer Islands Fisheries Program (OIFP) (Chapman 2003).

The government also established Marine Exports Division on Christmas Island in the Line Group in 1979 that later became Kiritimati Marine Exports Limited (KMEL). This company mainly focused on buying and selling lagoon caught species and crayfish, but was also involved in handling tunas and deep-water snappers.

Following a cabinet decision in 2001, the government-owned Central Pacific Producers (CPP) Limited was incorporated and consolidated TML, KMEL as well as the OIFP that had established ice plants and fish marketing centres on outer-islands. CPP operations are still based at the old TML facility at the main wharf in Betio, Tarawa Island with a subsidiary facility at London, Christmas Island.

In 1995, the private sector Teikabuti Fishing Company (TFC) acted as an agent for 3 US tuna long-liners to fish and export fresh sashimi grade tuna to Japan and Hawai'i. Catches were reasonable but the trials only lasted a short time due to many problems encountered including irregular air transportation. TFC equipped a twin-hull vessel with hand-hauled, small-scale horizontal long-line gear in 2000/2001, however, the trials produced very low catch rates and

ceased. Since the initial trials by TFC, there has been no domestic private sector medium-scale development in the Kiribati tuna fishery. Nor are there any locally-based offshore fishing vessels currently in Kiribati.

7.3 Revenue derived from tuna industry and licensing

Four main tuna species are commercially fished within Kiribati's EEZ: Skipjack, Bigeye, Yellowfin and Albacore. By-catches include other pelagic fish such as Billfish, Mahimahi, Wahoo, turtle, sharks and numerous other fishes depending on the gear type. Industrial tuna fishing in Kiribati consists of fleets of foreign-based DWFN licensed through fishing agreements to fish in Kiribati's EEZ. Fishing agreements may be either bilateral or multilateral. Supporting vessels such as bunkering vessels and reefer carriers are also licensed to support fishing operations. In 2009, the offshore fishing licensing revenue comprised some 35% of the total government's revenue (WCPFC SC6, 2010).

Kiribati has current bilateral access fishing agreements with fishing companies/associations from China, Korea, Japan, New Zealand, Spain, Chinese Taipei, European Union, Tuvalu and the Cook islands. Furthermore, Kiribati is also part of the FSM multilateral arrangement and the US Multilateral Treaty. However current arrangements with foreign fishing companies are not optimal despite the best efforts of the Government. Recommendations for increasing the size and sustainability of fishing license revenues include collective regional action with other PICs, introducing auctions, and perhaps separating license fee arrangements from development aid. Further details are included in the Selected Issues paper written by the IMF for the 2009 Article IV Consultation report, available at <http://www.imf.org/external/pubs/cat/longres.cfm?sk=23048.0>.

Table 7.1 provides a summary of the number of vessels licensed to fish in Kiribati by vessel type from 2005 to 2009 (WCPFC SC6, 2010). In 2009 over 500 DWFN vessels, including supporting vessels, were licensed to operate in Kiribati's waters. This was the highest ever recorded for the last five years (2005-2009). Relative to 2008, the licensed vessels increased by 14% in 2009. The main reason for such an increase is directly related to the movement of warmer water and food concentrations into the Kiribati EEZ that favors tuna during El Nino periods.

Table 7.1: Bilateral Licensed Fishing Vessels for 2005-2009

Gear	2005	2006	2007	2008	2009
BU	5	5	11	9	20
LL	229	188	184	186	233
PL	4	2	7	25	25
PS	159	154	157	178	192
RC	0	0	0	27	74
TOTAL	401	353	359	425	544

BU=Bulk ;LL=Longline; PL=Pole & Line; PS=Purse Seine; RC=Refrigerated Container

Indicative estimates of the catch and value of the four main commercial species (albacore, Bigeye, skipjack and Yellowfin) caught within Kiribati's EEZ from 1997 to 2009 are given in Table 7.2 (WCPFC 2010).

Indicative estimates of the catch and value of the four main commercial species (albacore, Bigeye, skipjack and Yellowfin) caught within Kiribati's EEZ from 1997 to 2009 are given in Table 7.2 (WCPFC 2010).

Table 7.2: Catch and value from Kiribati waters from 1997 to 2009

Year	Catch (mt)	Value *(USD)
1997	203,464	297,000,000
1998	160,588	199,000,000
1999	150,644	190,000,000
2000	155,785	180,000,000
2001	274,652	287,000,000
2002	368,782	345,000,000
2003	90,171	97,000,000
2004	115,755	155,000,000
2005	214,223	220,000,000
2006	176,176	203,000,000
2007	191,728	302,000,000
2008	234,314	448,000,000
2009	339,901	433,000,000
Total	2,676,183	3,069,368,782
Mean	205,860	236,105,291

*values are based on "delivered" prices in that they reflect the price received at entry to the country in which they are usually sold.

Catch rates are liable to vary considerably on an annual basis in response to climatic and oceanographic variations as well as with fishing effort (number and type of vessels licensed). These figures reveal the mean tuna catch and value within Kiribati's EEZ from 1997 to 2009 to be 205,860 mt with a value of US \$236,105,291.

The total catch estimates (including by-catch) of foreign-based Offshore fleets was calculated by Gillett (2009) based on FFA (2008) which used data from the Oceanic Fisheries Program of the SPC. These data are also all "delivered" prices, i.e., those received at entry to the country which they are usually sold (for processing or consumption). Also, by-catch, a significant component of the longline fisheries, was excluded. Table 7.3 below uses correction factors to include the estimated by-catch component.

As shown in Table 7.3, a maximum tonnage was caught in the Kiribati EEZ in 2005, with 230,583-t caught. While the catch dropped to 163,215-t in 2007, this is still 60% higher than in the catch in 2003. The highest catches are made by the purse seine fleets, which are generally lower-valued skipjack followed by longliners that tend to target Yellowfin, Albacore and Bigeye and have the highest by-catch rates.

Table 7.3: Catch estimates of foreign-based offshore fleets (t)

Item	2003	2004	2005	2006	2007
Foreign longline catch ⁴⁸	13,367	37,369	14,016	15,041	6,149
Foreign purse seine catch ⁴⁹	84,827	105,023	216,567	174,406	156,938
Foreign pole-and-line catch	236	600	0	0	128
Total	98,429	142,992	230,583	189,447	163,215

Source: Gillett 2009

The value of the foreign-based catch is given in Table 7.4 below. The mean catch values generated from catches within Kiribati's EEZ between 2003 and 2007 was \$A238,515,429. The pole-and-line catches were of the highest value.

Table 7.4: Catch values of Foreign-Based Offshore Fleets (\$) ⁵⁰

Item	2003	2004	2005	2006	2007
Foreign longliners	39,016,404	129,919,299	46,696,204	57,090,431	22,359,622
Foreign pole-and-line	52,707,832	77,498,588	164,567,058	138,670,788	174,498,702
Foreign purse seiners	263,689	752,910	0	0	193,051
Total (\$)	91,982,925	208,170,797	211,263,262	195,761,219	197,051,374
Total (A\$)	139,814,046	283,112,284	276,754,873	258,404,809	234,491,135

Source: Gillett 2009

7.3.1 Government revenue from fisheries

Fishing license (access fee) revenue to the Kiribati government from 2001 to 2007 is given in Table 7.5. With fishing license revenue in 2006 and 2007 of over A\$25 million in those years (Table 5), access fees received from foreign fishing provided 43% of the total recurrent revenue for 2006 and 42% in 2007.

Table 7.5: Kiribati Fishing License Revenue

Year	Revenue (A\$)
2001	46,404,039
2002	41,719,107
2003	31,281,142
2004	26,645,812
2005	24,586,751
2006	25,825,463
2007	25,419,845

From Gillett 2009

⁴⁸Increased by 30% for bycatch

⁴⁹Increased by 5% for bycatch

⁵⁰Values less 15% for transport costs and, in the case of longliners, bycatch.

Revenue from access fees to Kiribati has varied widely over the years depending on number and type of vessels licensed as well as rates. In 1996 revenue from access fees was only 9.9% of overall government revenue while in 1999 it was 34%. In 2004, fishing license fees exceeded 50% of the total government revenue. On average, licensing fees amounted to over 40% of total government revenue in most years (Yeeting 2010). A significant challenge for the Kiribati government that depends so much on DWFN licensing fees is the annual variations in revenue associated with natural cycles of tuna availability due to oceanographic and climate variations. This unpredictable variability makes it difficult for budget planning purposes.

Another form of indirect revenue from fisheries access is in aid flows. Skilful negotiations for fisheries access in exchange for aid and/or opportunities for leveraging development of domestic fisheries have been part of the Government of Kiribati's strategy. Significant aid assistance from some of the main fishing nations utilizing Kiribati's EEZ is apparent from nations particularly Japan and Chinese Taipei. The government has also negotiated to have I-Kiribati fishermen employed on distant water fleets. The fishers are trained at the Japanese funded Fisheries Training Centre on Tarawa specifically established for this purpose that allows Japan access to well trained and more affordable crew members for their fishing fleets⁵¹. Hundreds of I-Kiribati fishermen are employed on Japanese and other DWFN vessels and their remittances (along with those from merchant seamen trained at the Maritime Training Centre) contribute to private disposable income, which in turn yield domestic tax revenues⁷.

The aim of the government is to get as much revenue as possible from negotiating with DWFNs, but on average it is estimated that PICs receive only 6% of the value of the fish caught within their EEZs while much of the value of the catch is added at processing facilities in Asia, Spain or American Samoa (Yeeting 2010). For this reason, most PICs see the need to develop a domestic fishery to catch their own fish and develop value-added processing facilities within country. This strategy is also seen as a way to even out the inter-annual variations in license revenue. However, there has been only limited success with this approach throughout the Pacific and Kiribati is not alone in their struggle to develop a domestic tuna fishery. There have been similar efforts among several other PICs including neighbouring Tuvalu. To date, only PNG has managed to develop a domestic fishery relatively well, in part due to their exceptionally rich tuna resources and range of raw materials and infrastructure required for successful domestic industry development (Barclay and Cartwright 2007).

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 2003) (Barclay and Cartwright 2007) (Gillett 2003, Gillett 2010). For Kiribati these have highlighted the rich tuna resources, large EEZ containing some of the richest skipjack fishing areas in the region and good longline fishing around the Line Islands but a 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 as well as its distance from major trade routes such that shore-based processing developments will be so costly as to be uncompetitive. In addition, a lack of trading and marketing expertise, technical skills, appropriate technologies, appropriate policies and outdated laws have been cited additional constraints.

⁵¹ New Zealand has recently agreed to progress the design of a Kiribati Fisheries Training Programme to redevelop the Fisheries Training Centre.

Awira (2004) concluded that the major factors that contributed to the demise of previous domestication efforts included the lack of skilled man power to operate effective fishing vessels, the lack of knowledge transfer and technology by donor countries who are at the same time were DWFNs and therefore undermining the localization of expertise to safe guard their own interests. Other factors included the geographical nature and isolation of the Kiribati Islands that makes 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.

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).

In many cases the number of failed government-driven, donor supported tuna domestication operations has not deterred on-going interest by some government officials for 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 or even fisheries personnel (Barclay and Cartwright 2007). However, most regional fisheries organizations and donors now support alternative options to repeating the same development model until significant upgrades in supporting infrastructure, human resources and capacity, investment friendly environments and trade routes have significantly improved to ensure sustainability of domestication efforts (ADB 2007). Improved tuna resource management capacity, domestically and through cooperation with regional fisheries management organizations (RFMO), building human resource capacity and optimizing returns from licensing fees and joint ventures are some immediate alternatives for many countries so as to increase yields and ensure the sustainability of their most valuable resource to maintain or increase their future development options.

There are two key issues that underpin Pacific Island Countries (PICs) tuna development efforts i) the sustainability of tuna stock in the WCPO; and ii) maximisation of the economic rent or net benefits from tuna resource. There are two main ways to capture increased wealth from tuna resources: i) the development of domestic tuna industry and ii) maximising returns from distant water fleets (Barclay and Cartwright 2007).

7.3.2 Joint ventures

Joint Ventures are an attractive option in that much of the capital for the necessary infrastructure may be supplied by the partner organization in return for long term fishing access rights, tax concessions and other incentives. In this way, the local lack of capital may be overcome for the development of a domestic fishery and shore-based value-added facility. Foreign personnel are also perceived as capable of providing on-the-job training for building capacity of nationals to operate and manage modern fisheries facilities and fishing vessels, marketing and trading structures, vessel maintenance and the host of other skills required to domesticate a fishery.

The Government of Kiribati has been engaged in a joint venture with the Otoshiro Gyoko Company of Japan since 1994. The fishing operation owns one purse-seine vessel, the Kao No.1 that only occasionally fished in Kiribati's EEZ and currently fishes under the FSM arrangement

for regional access⁵². Vessel management is conducted at the Japanese-based office. The Permanent Secretary for the then Ministry of Natural Resources and Development (now Ministry of Fisheries and Marine Resources Development) is the Secretary for the company. For the first four to five years, the Kao operation went well and was profitable, however since 2002, operations have declined (Barclay and Cartwright 2007). Because the transshipment of tuna occurs outside of Kiribati, its catch is not considered an export of Kiribati for the purpose of this report.

A JV is currently being negotiated with a Chinese tuna fishing company, Golden Ocean, which operates in Levuka, Fiji. The plan includes Golden Ocean bringing in some 20 long-line tuna vessels as part of the venture. Cold storage facilities and a loining plant will be established at the current CPP site in Betio. The loining plant is expected to employ a significant number of local people. The JV expects to export high-value fresh tunas by air freight and the frozen by-catch by cargo ship, most likely to the Golden Ocean processing facility in Levuka, Fiji. The plan includes that local fishers will also be able to sell their catch to support the loining facility. Discussions to fish the Line Islands and upgrade the loining plant on Kiritimati to export from there at a later stage was also included in overall plans⁵³.

If this JV eventuates as envisaged, it would be breakthrough for Kiribati to realize its long time quest for further developing the domestic tuna fishery, increasing employment in the sector and realizing significantly greater returns than from just license fees. It is also at a reduced risk level due to the majority of the capital inputs coming from the partner side. It will, however, be necessary to establish a competent authority to ensure fish quality is up to export standards to enable access to EU and other overseas markets. The establishment of a competent authority is an area where donors could assist as it will also require considerable long term capacity building of local personnel to manage and operate such a facility.

With the landing of the JV longline catch to Tarawa for processing, it is anticipated that rejected fish (not suitable for the international market) will be sold locally to satisfy the considerable demand for fish in Tarawa. Currently, this demand is being met by some 130 active full-time commercial tuna trolling small-craft with an additional 88 part-time artisanal fishers (Gillett 2009). The availability of a large volume of cheap, reject fish from the offshore longline fleet will negatively affect the commercial viability of the local commercial trolling fleet. The best affordable option to assist such a high number of operators is to adapt their present small craft to vertical long-lining gear to fish for high value tuna to sell to the export operations. For cost-effective longlining, a Fish Aggregating Device (FAD) program will be necessary in order to aggregate the high value tuna for economical harvesting. There will be a need for considerable training in vertical longlining skills as well as access to donor funds or credit to convert vessels and acquire new gear. There will also be need for support in constructing, deploying and maintaining FADs, as they have a limited lifetime.

To support the inclusion of the outer island fishermen in this fish export JV, small craft for outer islands fishermen are being built and ice-plants will be installed to cater for outer islands cold storage needs for tuna and other fish. CPP will be responsible for uplifting outer islands catches to its Tarawa cool storage for further processing to feed both local and export markets (pers. comm., Teaioro 2010).

⁵² A multilateral arrangement whereby members may fish in each others waters.

⁵³ pers comm., R. Awira.

Also necessary will be the acquisition of a medium size fishing vessels to engage in long-lining and collecting fish from artisanal fisheries.

In addition to the Kao No.1, there are also three additional purse-seiners and one pole-and-line vessel that operated in the WCPFC area under the Kiribati's flag. The total catch for Kiribati national fleets in 2009 was over 20000 mt which is three times larger than the average catch for the last 13 years (WCPFC 2010 SC3). This increase is due to the increase in the number of national vessels licensed to fish during that period. As with the Kao No.1 purse seiner, the transshipment of these Kiribati-flagged vessels tuna catches occurs outside of Kiribati.

7.4 Institutional arrangements: Tuna development and management

The development and management of the marine resources within Kiribati falls under the jurisdiction of the Fisheries Division of the Ministry of Fisheries and Marine Resources Development. The Fisheries Division works under two pieces of fisheries-related legislation: The Fisheries Ordinance (CAP 33) and the Fisheries Act 1988 (Pacific Island States' Treaty with the United States of America). The Fisheries Ordinance has been amended by the Fisheries (Amendment) Act 1992; the Fisheries (Amendment) Act 1995 and the Fisheries (Amendment) Act 1997. In addition to these two pieces of legislation, the Republic of Kiribati has a National Development Strategy that also covers marine resources.

The development of fisheries, particularly the tuna industry, has been the targets of previous and current governments. A key strategy in the Development Plan for 2008-2011 is to 'Develop and commercialize the fisheries, marine and mineral resources' (KDP 2008-2011).

7.4.1 Tuna Fisheries Management Issues

The primary management measure introduced for tuna fisheries in Kiribati has been that industrial-scale vessels are prohibited from coming within 60 nautical miles of the coast, so as to conserve coastal resources for nationals. No total allowable catches (TACs) (by gear or species) for the national fishery or limits on number of licenses for industrial tuna fishing had been set by 2005 (Barclay and Cartwright 2007). There was also concern by the Ministry that the TACs recommended by SPC were the right level, but should be higher.

A Tuna Development and Management Plan (TDMP) has been in the process of development since 1999 when Cabinet appointed a tuna task force to address the development and management of the tuna industry. Its purpose was to address the vision of Cabinet to: i) develop a sustainable tuna industry that maximises the benefits to all I-Kiribati; and ii) ensure effective participation by Kiribati in arrangements for the management and conservation of regional tuna resources (Government of Kiribati 2003).

The TDMP called for the establishment of a national Authority along the lines of PNG's National Fisheries Authority or Australia's Fisheries Management Authority that would oversee the industry. The Authority would be funded directly by vessel registration fees. The existing Fisheries legislation that stemmed from independence days with numerous amendments needed to be revised so that a statutory authority could be legally established. Because there was limited follow up action to revise the legislation necessary for the TDMP, the Authority has not been established and the Plan has not been implemented. There has also been some questioning of the content of the plan by successive governments, in that it didn't necessarily

reflect the ideals of the government of the day. The loss of government revenue by directly funding the Authority out of license fees also concerned the government as it may result in less funding for central government purposes.

Tuna management plans have been formulated and adopted by the majority of PICs since their promotion in the early 1990s as a rational means to sustainably manage the offshore tuna resources. A stable and reliable set of policy measures promoted by the plans are critically important for attracting bona fide domestic and foreign investors to the sector. In some countries, government and industry consultative mechanisms are stipulated in the plans to promote dialogue between these stakeholders from the outset (Gillett 2010).

7.4.2 Vessel Day Scheme (VDS)

As of 2007 a new system called the Vessel Day Scheme (VDS) for controlling access and charging license fees to DWFNs was introduced rather than the annual flat rate. The VDS is under The Palau Arrangement of Parties and sets and allocates the total allowable effort level (in terms of purse seine effort days) among The Palau Arrangement Parties while ensuring that various treaty obligations are met. The VDS scheme is considered the most sophisticated management schemes in place in any multi-jurisdictional tuna fishery in the world (FFA 2007). Under this system, member countries are allocated a number of fishing days based on their catch histories over the last six years based on FFA data. This allocation may then be sold to DWFNs on a daily rate basis bilaterally negotiated with the DWFN. This gives resource owners much more refined control over access to their EEZ rather than the annual license for a flat fee. It is also part of a management strategy to reduce the number of fishing days by purse seiners. In this regard, VDS can not only generate more revenue for resource owners, but it is also considered a highly effective management tool. For these reasons, the FFA has been encouraging PICs to adopt the VDS and in Kiribati most of the purse seiners (mostly US) now use the VDS system and it is hoped that it will be introduced to the foreign-based longliners by next year.

7.4.3 Trans-shipment and monitoring

Tarawa's deepwater lagoon and proximity to prime fishing grounds makes it a good potential site for a major trans-shipment hub; however, from a service supply perspective, it suffers from a lack of freshwater, general provisions and fresh produce. In addition, the isolated geography, poor transport connections and limited services availability are inhibitors. Tarawa has limited access (via Nadi) to suitable airfreight to export sashimi or longline fleet catches and it is relatively expensive due to the distance. While trans-shipment represents an economic opportunity there are social costs including alcohol abuse and prostitution. Nevertheless, because of its proximity to the fishing grounds, Tarawa does significant purse-seine trans-shipment business most years. One of the management benefits of trans-shipment is the opportunity to collect log sheets and to port sample that generates useful data for management purposes.

The Fisheries Division collects data on unloading and trans-shipment of catches from two designated ports, Betio Port on Tarawa and London, Kiritimati. Trans-shipments at sea within Kiribati's EEZ is permitted to foreign licensed long-lining fleets provided there are observers on those vessels to witness and collect catch sample data (WCPFC SR3, 2010). Port sampling data collection is carried out by trained fisheries port samplers and observers. In 2009, out of the 209 boats that trans-shipped in Kiribati waters, 176 were sampled. Port sampling coverage

was thus 84% for trans-shipment in 2009. The data collected is scanned and sent to SPC for processing and analysis (WCPFC, 2010).

Log-sheet submission from Kiribati’s licensed foreign fishing vessels remains an obstacle to accurate data recording and which ideally requires 100% coverage. High log-sheet coverage of approximately 87% is being achieved from Kiribati’s national fleets as compared to lower log-sheets coverage obtained from foreign fleets licensed to fish in Kiribati’s EEZ. Retrieval of log sheet data from licensed foreign longline vessels by far is the major impediment in obtaining good data coverage for licensed fleets. This is due to the poor compliance of the fishing masters to submit log-sheets in a timely manner coupled with the submission of log-sheets long after completion of fishing trips, often taking over a year to be received (WCPFC, 2010). Underpricing and under-reporting (including of by-catch) of catches have also remained a significant issue. This is done in order to obscure the true value of access to host nations EEZ as well as to conceal interactions with protected species such as turtles. Fisheries observers assist to address these issues.

The observer program in Kiribati is expanding with more observers being recruited since 2005 to assist in national and regional observer data collection. Observers are put on-board fishing vessels to collect catch records and promote compliance with other important regulations including by-catches such as sharks, billfish, etc. to be utilized instead of thrown overboard and wasted (Riinga, T., 2005) as well as recording interactions with endangered species such as turtles, seabirds and marine mammals.

The main constraint for Kiribati to provide good quality observer data includes the lack of qualified observer de-briefers to check the quality of data collected after voyages and to brief observers, especially new recruits prior to boarding fishing vessels (WCPFC SC3, 2010).

Table 7.6 indicates the continual strengthening of the Kiribati observer program from 15 observers in 2005 to 51 observers in 2009.

Table 7.6: Annual observer placement (2005-2009)

YEAR	LL	PS	FFA	TOTAL
2005	4	8	3	15
2006	4	13	3	20
2007	2	19	0	21
2008	3	21	2	26
2009	3	46	2	51

(WCPFC SC3, 2010).

Tuna fishing in Kiribati EEZ is monitored by domestic carriers, Australian and New Zealand Air Force patrols and by local cargo boats. Kiribati’s single patrol boat, RKS Teanoai is also engaged in the patrol of the EEZ.

The vastness of the PICs EEZs and the difficulties in monitoring such remote areas to detect illegal, unregulated and unreported (IUU) fishing has always been a major constraint in deterring poaching by un-licensed vessels. This prompted FFA members to address this by making it compulsory for DWFNs to install Vessels Monitoring System (VMS) devices on their fishing boats as a condition for licensing. The VMS, which transmits a signal via satellite to a Fisheries Division computer (as well as to FFA) is largely a conservation tool designed to

help FFA members monitor the position of foreign fishing fleets licensed to fish in their EEZ. (Riinga, T., 2005).

Poaching activities from neighboring EEZs by unlicensed vessels (who turn off their VMS) remains a significant problem due to the vast size of Kiribati's EEZ. The response time of the patrol vessel to reach the location of the infraction means the offending vessel would be long gone before RKS Teanoai arrives. Considerable effort is made to counter illegal fishing and many vessels apprehended have faced significant fines, including vessel impoundment and/or imprisonment of skippers and crews (Riinga, T., pers. comm., 2010). With the vastness of the EEZ, the cost of monitoring and enforcement is often prohibitive for PICs.

7.5 Coastal Fisheries

Kiribati's coastal habitats (including coral reefs, lagoons, sandflats and mangroves) harbour many species of finfish and invertebrates that are extremely important in food security and import substitution. There are also a number of coastal resources important in commercial fisheries. Coral reefs and atoll lagoons are highly productive habitats with a diversity of species limited by Kiribati's remoteness and distance from the centre of biodiversity further west near Indonesia/Papua New Guinea. The KNBSAP (2005) indicates there are nearly 500 species of finfish, 96 species of invertebrates and six turtle species documented for Kiribati. By far, the most accessible animal protein in Kiribati comes from the sea and it is fresh, nutritious and in most cases free or affordable to purchase. I-Kiribati have a long tradition of harvesting a variety of coastal resources and developed elaborate stone fish traps for the collection of bonefish (*Albula glossodonta*), and other coastal species like goatfish (*Mulloidichthys* sp.) (Johannes and Yeeting 2000).

The most important shallow water finfish in Tarawa catches in the recent past was the bonefish and some 150 such stone traps are clearly visible today from the air on Tarawa's outer-reef flat (op cit.). Considerable traditional knowledge of the sea and the spawning habits and movements of fish and specialized fishing techniques that led to greater catches were an important part of a family's heritage. Some 50 different techniques were deployed for harvesting some 80-100 different types of fish (op cit., Koch 1986, Grimble 1952, Catala 1957). Milkfish (*Chanos chanos*) were also cultured in specially constructed ponds for centuries prior to European contact to enhance food security (Catala 1957).

The bonefishery of Tarawa has largely been lost due to a number of factors including the blockage of migratory pathways with the construction of a number of causeways between islands over the last few decades (Johannes and Yeeting 2000). In addition, the lagoon fishery greatly changed with an increase in the use of monofilament gill nets introduced in the late 1950s and 1960s. The introduction of boats with outboard engines also allowed for more distant areas to be more easily fished and these impacts coincided with the decline in use of traditional fishing methods. This resulted in an increased effort and landing of fishes selected by gill nets, and bonefish was significantly impacted. A high occurrence of ciguatera on the outer reefs of the atoll (McCarthy and Tebano 1988) meant increased fishing effort in the lagoon, while outside the lagoon tuna or flying fish are primarily targeted (Beets 2000).

The Tarawa bonefish conservation was launched in early 1990s in an effort to sustain the failing bonefishery through a combined effort of the Ministry of Environment, the University of the South Pacific (USP) and Eutan Tarawa Island Council that formed a technical body. Technical assistance was provided by the Ministry and USP with the support of villages through

the island council. Destructive fishing methods such as ‘cling cling’ where an iron bar is used to splash the water surface to scare bonefish into nets and small gauge nets were banned through an agreement between the technical body and the Island Council. The bonefish stock began to recover within the year after it was declared ‘crashed’. The politics of marine tenure and market forces intent on maintaining open access for the benefit of the electorate managed to later overturn the ban. The bonefish stock that was once the backbone of the nearshore fishery in Tarawa collapsed and remains so to this day. However, bonefish remains an important part of the catch on other atolls that control the use of nets and haven’t had causeways constructed that affect spawning migrations.

The atolls of Kiribati also have coastal resources of commercial interest including crayfish, deep-water shrimp, giant clams, ark shells, pearl oysters and bêche-de-mer. In general, however, these inshore resources are limited and highly sensitive to the impacts of commercial pressure and over fishing, habitat alterations in urban areas and the effects of climate change including coral bleaching as seawater temperatures rise.

By far, the most extensive coastal resources are the tunas that can be caught within the 12 mile territorial limit where (on Tarawa) commercial and artisanal fishers as well as local outrigger canoes in the outer islands regularly fish.

There are also deep slope bottom-fish resources (Etyline snappers) with an estimated maximum sustainable yield (MSY) of between 73 and 219 t/year. These resources were actively promoted for commercial exploitation by SPC starting in the 1980s and high levels of exploitation near population centres occurred in some cases. This resource is no longer actively targeted and with its relatively low MSY, slow growth and reproductive rate, wouldn’t withstand intense commercial export pressure for long. The more abundant and easily caught tunas using less expensive and elaborate gear are currently the preferred type of fishing amongst the I-Kiribati.

7.5.1 Estimates of coastal fisheries production

There have been a number of estimates of coastal production in Kiribati. For 1991 it was estimated to be 3,240 t worth \$4.8 million (Dalzell et. al. 1996). Using the above estimate, Gillett and Lightfoot (2001) factored in studies by the Fisheries Division as well as other agencies and input from specialists with considerable experience in Kiribati to adjust this figure to 6,000 t worth \$9.8 million for the late 1990s.

A national HIES survey performed in 2006 recorded about 2,000 t of fish purchases nationwide for A\$5.9 million and another 3,371 t of fish worth A\$8.4 million were caught for subsistence purposes (unpublished SPC data quoted in Gillett 2009).

The commercial component of the outer island catches has expanded over recent years with the introduction of ice production facilities in outer islands. The four closest islands to Tarawa including Abaiang, Maiana, Kuria and Abemama currently have working ice plants to supply the South Tarawa market with fish.

Fisheries production from the Gilbert Group consolidated from various sources from 1999 to 2006 is given in Table 7.7.

Table 7.7: Fishery Production Data in Kiribati, by Island

Island	Year Surveyed	Population During Survey Year	Fishing Households During Survey Year	Weekly Catch per Fishing Household (kg)	Annual Catch by Island (t)
Gilbert Islands					
Banaba	1999	339	60	32.8	95
Makin	1986	1,738	61	33.0	413
Butaritari	1992	3,742	651	44.0	1,375
Marakei	1998	2,842	361	34.0	594
Abaiang	1995	6,020	717	30.0	1,038
North Tarawa	1996	6,061	544	17.0	447
North Tarawa	2003	5,678	693		1,065
North Tarawa	2006	5,678	693		1,372
South Tarawa	1999	29,994	4,019	35.5	6,849
South Tarawa	2005	40,311	4,529		7,504
South Tarawa	2006	40,311	5,245		5,370
Maiana	1993	2,331	374	21.3	383
Abemama	1996	3,499	153	92.8	682
Kuria	1994	957	515	26.7	660
Nonouti	1990	2,801	535	48.4	1,244
North Tabiteuea	1999	3,579	482	20.3	469
South Tabiteuea	1995	1,404	258	29.5	366
Beru	1998	2,190	295	34.5	488
Nikunau	1987	2,823	452	35.7	775
Onotoa	1992	1,839	455	35.1	768
Tamana	1998	1,233	215	36.9	381
Tamana	2002	875	214		719

Tamana	2006	875	916		781
Arorae	1998	1,284	225	29.1	314
Arorae	2001	1,256	244		709
Arorae	2006	1,256	275		596
Line Islands					
Tabuaeran	2000	1,733	241	40.1	926
Teraina	2000	1,409	167	140.0	1,121

Coastal subsistence fisheries production

Coastal subsistence production in 1991 was estimated at 9,084 t worth \$13.4 million (Dalzell et al 1996) while in the late 1990s it was estimated at 10,000 t worth \$12.2 million (Gillett and Lightfoot 2001). Based on the above information, the subsistence production of Kiribati in the mid 2000s was 13,700 t worth \$34 million (Gillett 2009). Senior Fisheries personnel indicated in 2008 that 60-70% of the coastal fisheries production in Kiribati is for subsistence purposes (Gillett 2009).

Commercial export fishery production

Estimates of Kiribati fishery export data are given in Table 7.8. It should be noted that export production data is sometimes inconsistent or incomplete. There is a need to improve the collection and collation of coastal commercial data in order to obtain more accurate estimates of commercial production and revenue as well as changes in production to feed back for management purposes.

Table 7. 8: Available Information on Exports from Kiribati Coastal Fisheries

Item	2002	2003	2004	2005	2006	2007
Value (A\$)						
Fish	27	12	84	426	585,000	1,244
Aquarium fish	2,500	311	694,639a		900,000b	
Shark fins	437	469		131,000		
Bêche de mer	454	254			216,000	220
Lobster					65,000b	

Quantity (t)						
Fish	3	1	0	189	663	2,362
Aquarium fish			111,134 pieces	110,098 pieces	143,967 pieces	
Shark fins	2	3	0		1	
Bêche de mer				40	58	
Lobster					4.6	
Live fish		20.4	58.8	0	0	0

(from Gillett 2009)

A\$ = Australian dollar, t = ton.

a Preston (2008).

b present study estimates.

c the shark fins would equate to 118–152 t of live sharks.

Source: National Statistics Office unpublished data, except where indicated

The export of aquarium fish from Christmas Island now accounts for 78% of the value of all fishery exports from the country with the nominal reported FOB value of US\$1,160,000 in 2009 (SPC Newsletter #131, 2010). These exports are made possible by direct air freight connections to Hawai'i. This sub-sector will be discussed in further detail below.

A survey of the most important domestic tuna fishery in the country was commissioned by FFA, namely a survey of trolling for tuna off South Tarawa was conducted in mid-2008 (Sullivan and Ram Bidesi 2008). Survey results include:

- 126 active full-time commercial tuna trolling small-craft (5-7-m) operated out of South Tarawa, plus 88 part time artisanal trollers;
- On average, 6,300 kg of tuna and other pelagic fish were landed per market day, totalling 126 t/month. An additional 5% should be added for household consumption out of the catch by fishers bringing the total catch to 132 t/month, or 1,584t/year
- The market price was 2.65/kg; therefore tuna sales were approximately 334,000/mth or \$4 million/year

This is one of the most successful domestic fisheries in Kiribati that directly markets its catch, mostly from ice-boxes by the roadside on South Tarawa. The sale price in late 2010 was as high as \$A2.80-3.00/kg depending on supply. These tuna are easily the most affordable meat source for the large population centre of South Tarawa. As many of the meats marketed there are frozen imports, these local-caught tunas are fresh and nutritious and a fraction of the price of imported meats such as chicken, lamb, turkey, beef, etc. (see Agriculture Chapter). The import substitution value of this fishery is therefore very high. With 126 full-time and another 88 part-time boats (with three-to four crew per boat) this fisheries supports a number of families with incomes (and free fish) in an area of high unemployment.

On the outer islands, tuna and other fish species are sold for as low as between A\$1.00 -1.50/kg. Trolling is still done with traditional pearl shell lures with increasing amounts of imported plastic lures used. The estimate of the number of commercial/artisanal trolling small craft (<7-

m) found throughout Kiribati for 2007 was 4,895 and for 2008/09 was 4,766 (WCPFC 2010 SC3). With the increase in numbers of outboard powered skiffs used in coastal fishing on the outer islands, traditional sail canoes are now rapidly being displaced.⁵⁴

Another productive fishing technique is vertical handling for large deepwater tunas. For this to be effective however, FADs need be deployed. Due to the current lack of FADs around South Tarawa this technique is rarely put into practice.

As discussed above, if the JV with Golden Ocean eventuates, the South Tarawa Market will be flooded with cheap 'reject' fish from the longliners that will upset the economic balance of this very successful local fishery. A quick, affordable adaptation for these fishers will be a priority. As covered above, this can be economically done by adapting their existing small craft to vertical longlining for high value tuna to sell to the export operations. However, this will require the deployment of FADs for vertical longlining to be competitive. Outer island fishers will also have the opportunity to sell their catch for export, however a suitable transport vessel will be required to make this work and the CPP (who will be responsible for facilitating this) will be looking for donors to assist with this.

One sustainable option to assist with funding FADs and other coastal development needs is to include in the draft TDMP a provision for a percentage of revenue from licensing offshore tuna vessels to be diverted to a coastal fisheries development fund. This would ensure a steady stream of funds to be available for FADs, fisheries training, maintenance of Outer Island Fisheries Centres and other coastal fisheries development needs.

If the JV eventuates, an additional potential adaptation for local fishers would be to support committed commercial fishers to move to a medium-sized longlining vessel that could fish for high value tunas for the export market. The specifics of that vessel would best be decided in consultation with SPC, Fisheries Division, CPP and local fishers. It would need to be affordable enough that it could be purchased through a loan from the Development Bank, and perhaps managed by CPP that rotated crews of commercial fishers on it to build capacity amongst South Tarawa fishers in working a medium sized vessel (pers comm.; Mike Savins.).

7.5.2 Domestic Tuna Fishing around Christmas Island

In 2006 the Japanese Government funded the construction of a new CPP facility on the waterfront in London (the main port in Christmas Island). This includes freezer and chill rooms along with block ice production facilities and administrative offices. There is also an existing wharf, workshop and haul out facility for small vessels remaining from earlier developments. To date, CPP has been exporting chilled sashimi grade tuna to Hawai'i caught from locally made

⁵⁴ The loss of traditional canoes represents a significant loss to the culture heritage of Kiribati as their canoes represent a very high level of sophistication within their material culture in terms of engineering and construction techniques as well as the renowned I-Kiribati sailing skills. It would be worth maintaining this rich canoe cultural heritage by supporting the increasingly irregular sail canoe competitions that keep these age old skills and knowledge alive and transferred to youth. As well, Kiribati could consider joining an increasing number of PICs that form voyaging societies to maintain the larger inter-island canoes once found in Kiribati and used to visit other areas like Tuvalu and Nuie in the past (Koch 1986). Sail and paddle canoes also continue to assist in day-to-day transport and fishers needs in more remote areas of the Pacific where fuel prices are cost prohibitive or the supply is irregular (Hickey 1999). The knowledge and skills associated with canoe construction and use is an important element of Oceania's human development, economic self-reliance and import substitution.

KIR-5 canoes. There are two 12-m KIR-5 outrigger canoes constructed locally from plywood and powered by 30-40-hp outboards. These vessels are only suitable for 1 or 2 day fishing trips relatively close to shore and are good trolling boats with considerable deck space for their length but limited range and storage capacity. They are, however, shallow drafted to deal with the shallow entrance (barely .5m on low tide) to London harbour where the CPP facility is. One canoe is manned by four CPP fishers that average catches of 100-150 kg/trip. The other KIR-5 canoe is made available to local fishers that form rotating teams to troll for pelagic fish, and they catch on average 100 kg/trip. On average these two canoes fish for two weeks out of the month.

The air freighting of fish to Hawai'i is primarily via an air freight service subsidized by the Kiribati government. The schedule for this air freight service is not regularized, however, such that fishers must primarily concentrate their catches in the two weeks prior to learning of the timing of the air freight service. They are generally given a one week advance notice.

The expansion of the domestic fleet based at Christmas Island to increase capacity faces complex issues. This includes the limited high value tuna resources close to Christmas Island. Christmas lays along the path of the Equatorial Counter Current between two westerly flowing currents that result in a divergence zone and upwelling that leads to high plankton growth and primary productivity. However, the area with the greatest tuna concentrations lies further north and south along convergence zones some two days travel from Christmas Island (Beverly 2003). This then has implications for the development of small-scale tuna catching operations based at Christmas Island. Research by SPC (Beverly 2003) has shown medium sized vessels such as the former CPP vessel Tekokona III (13-m inboard powered double-hull/outrigger design termed the Kir-16) are probably too small to effectively fish tunas for export to the sashimi market to Hawai'i. The fish hold capacity of the Kir-16 was approximately 2 tonnes and carried enough fuel for seven days continuous steaming. It was considered by SPC that a vessel of this size would eventually impact the resident population of high value (Yellowfin and Bigeye) tunas that could be caught within the immediate vicinity of Christmas Island and that larger vessels would be required to access the richer tuna waters found further north and south at the convergence zones. However, larger vessels would require not only greater capital investment and maintenance, but also increased support infrastructure such as haul out facilities as well as a much deeper port entrance. The shallow entrance to the main port at London currently limits the size and style of vessels that may access the port facilities where CPP has its recently built fisheries processing facility. Dredging would be required for displacement vessels to enter the harbour on all tides while multi-hulls (with much lower drafts) would be less restricted.

Lack of training provided to CPP Christmas Island staff merits some consideration. Very little training has been provided to the employees of this new facility to assist in the success of the export of fisheries products. This seems to be an example of the transfer of technology by a donor to Kiribati without the capacity building required to fully exploit it. The CPP manager indicated the need for more thorough and comprehensive training in fish handling and quality standards by employees and local fishermen as well as in diversifying the types of fisheries products that could be produced by the CPP staff. Also, that the refrigeration engineer that maintains the CPP equipment will be retiring soon and it will be important for another person to be immediately trained to fill this position. He also emphasized that the office staff had very little training provided in record keeping, database use or data analysis.

7.6 Aquaculture

7.6.1 Milkfish

Milkfish were traditionally reared in ponds for food security by I-Kiribati (Catala 1957). The Fisheries Division with Japanese support developed commercial milkfish ponds near the airport where the colonial government had built a causeway and reclaimed a large area of land. The initial idea was to rear the milkfish to be used as bait for the pole and line fishery. Fourteen half acre ponds have been constructed and twelve have been stocked with an average of 18,000 milkfish each. High tides refresh the ponds with seawater and milkfish are naturally recruited to the ponds from the lagoon this way as well.

To promote algal growth for natural feed the ponds are fertilized with manure generated by an associated facility known as the Temaiku Eco Farm that is raising pigs and chickens. Fish are raised to about 110 gm and sold for A\$2.50/kg.

Production has been limited by the amount of feed available. Natural algal growth is supplemented by the intermittent availability of outdated bread and other flour products being used to feed the fish, but the fish growth rates were reported to be less than optimum. Attempts to make feed have been hampered by copra cake being sold to the Taiwanese milkfish facility. Insufficient product was available for both operations.

Other constraints to production included predation on fry by tilapia that live in the pools along with trevally and barracuda that manage to enter the ponds from the lagoon on high tides. These larger fish can be angled to reduce their numbers but there has been no effective solution to reducing the tilapia numbers.

Poaching by nearby village members is an acute problem that needs to be resolved. Employing several watchmen is costly and perhaps the idea of raising several trained watch dogs may be more effective in reducing poaching impacts.

There has been no on-going donor support for this initiative and it is funded through limited recurrent funds as well as the sale of eggs and chickens.

The Taiwanese Technical Mission has also recently established milkfish rearing facility close to the Parliament grounds. They have been experimenting with producing their own feed using copra cake. They are also doing research on sea cucumber culturing to assist in enhancing beche-de-mer exports. They have also established an educational centre to promote greater awareness of marine related conservation issues as part of the same facilities.

It is recommended that the TTM milkfish facility and Fisheries Division work together along with the Oil Mill that produces copra cake to continue research into the production of an affordable milkfish meal to support the production of milkfish to enhance food security for South Tarawa.

7.6.2 Black Pearls

Kiribati began investigating the culture of black pearls in 1996. The example of French Polynesia and Cook Islands showed that pearl oysters could be farmed and pearls produced in lagoon waters of Pacific islands. A hatchery was established at the Fishery Division headquarters at Tanaea, and field trials were established at potential oyster farming sites at Abaiang, Butaritari, and Onotoa.

The process involves collecting and growing young oysters (“spat”) to a size where injection of a small particle into the oyster causes it to form a pearl growth. The process is problematic at several stages, some biological (e.g., high mortality, not all oysters grow pearls, and water conditions may be unsuitable for optimal growth), and some caused by humans (e.g., inexpert insertion of the particle, irregular maintenance of farms and theft of growing oysters).

All these problems have affected the Kiribati project. After an encouraging start and the harvest of a number of pearls of marketable quality, the project has experienced several difficult years and its future appears uncertain (ADB, 2008). The Fisheries Division resumed the project in 2007, but funding and staff resources for the additional work to overcome identified problems are reported to be inadequate.

7.6.3 Seaweed

The culture of seaweed (*Eucheuma alvarezii*) was run by a public enterprise (Atoll Seaweed), established in 1993. Annual production ranged in value from A\$184,580 when production began, to a peak of A\$954,895 in 2000, to A\$82,000 in the final year of operations in 2007 when the company closed and CCPL took over seaweed operations. The main active seaweed production area since then has been on Fanning Island in the Line Group. The government continues to subsidize the price of seaweed in order to support rural livelihoods and as part of central governments inducement to relocate people from South Tarawa to the Line Group. Seaweed production continues to make a useful addition to household incomes (ADB 2008) primarily on remote Fanning Island. Due to problems with disease, very little is currently grown in the Gilbert Group (Gillett 2009). With the advent of climate change impacts likely to affect copra production in the outer islands due to saltwater inundation and increased droughts, it is worth maintaining seaweed production as a fallback option for outer islands to supplement household incomes.

7.6.4 Beche-de-mer (dried sea cucumber)

The export of beche-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 beche-de-mer. This fishery typically follows a boom and bust cycle as the resource overfished and left to recover for some years. Prices vary considerably by species as well as 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).

Sea cucumbers were apparently never used for subsistence purposes in Kiribati. Small artisanal fisheries exist on Christmas Island as well as in the Gilbert Group where about seven main species are harvested. The fishery experienced a boom in 2000-2002 and is now considered depleted (Kinch et al 2008). A main producer of beche-de-mer is Christmas Island along with a few islands in the Gilbert group. A noticeable shift to the formerly unharvested low value lollyfish (*H. atra*) has recently occurred. Production figures by month as recorded by CCP in Christmas Island are given in the following table.

Table 7.9: Christmas Island beche-de-mer landings

Monthly summary of Beche- de- mer landed at CPPL- 2006		
Month	Weight(Kg)	Value(AUD)
January	0	\$0.00
February	0	\$0.00
March	0	\$0.00
April	0	\$0.00
May	0	\$0.00
June	5221.05	\$9,397.89
July	7367.56	\$13,261.61
August	3279.53	\$5,903.15
September	3384.98	\$6,092.96
October	0	\$0.00
November	0	\$0.00
December	0	\$0.00
Total	19,253	\$34,656

Table 7.8 above for commercial fisheries production figures gives exports of 40 t and 58 t in 2005 and 2006 respectively.

A management plan has been developed for beche-de-mer but hasn't been widely implemented (Awira pers comm. Sept 2010). The Fisheries Division should seek assistance to promote greater awareness of the ecological value of beche-de-mer to the public and implement the management plan to sustain this livelihood option for outer islands.

7.6.5 The aquarium trade

The catching and live export of decorative fish (also known as pet fish) destined for private aquariums is an important export business for Christmas Island. The industry is entirely in the hands of the private sector and targets a large number of species with the major families being butterflyfish (Chaetodontidae), damselfish and angelfish (Pomacentridae), and surgeonfish (Acanthuridae). It started with a single operator in late 1970s and established high quality exports to the U.S. market via Hawai'i. The number of operators quickly grew to ten by around 2000, but fish quality standards was lacking amongst the new operators and operator numbers dropped to only six in early 2000s. With these changes came a decline in prices for the specialty fish that Christmas was known for, mainly the flame angel (*Centropyge loriculus*) and a number of rare deepwater butterfly and angel fish species. In 2010, there are now eleven operators exporting approximately 150,000 ornamental fish with a value well over \$US 1 million (SPC Newsletter #131, 2010). Two firms account for over half the trade and the flame angel still accounts for over 70% of the trade.

The fishery depends on regular air service from Kiritimati to Honolulu and the market is largely limited to there, although at least one operator accesses Hong Kong markets via Nadi. Also, Hawai'i restricts the importation of live corals, so coral exports are not possible (Lovell 2003). There is a passenger jet that transits Kiritimati on the way to Nadi on a weekly basis but air

freight is more expensive with this service. There is also a monthly air freight service from Hawai'i subsidized by the Kiribati government that provides more competitive air freight rates. The schedule for this air freight service is not regularized however, such that AT operators must primarily make fish collections immediately prior to learning of the timing of the air freight service. They are generally given a one week advance notice but occasionally the service may be rescheduled resulting in storage complications of fish already packed for shipping and high mortalities.

An additional source of fish stress and high mortality is heat stress at the airport facilities while awaiting for export. Customs officials require the fish export consignments to be checked in long before departure and with no proper storage facilities available there, heat stress in the equatorial heat has led to high mortalities (Lovell 2003). The industry should look for support to create more appropriate storage facilities to reduce this problem.

There are applications for more licenses to operate in the AT, but pressure on the resource is evident, particularly on the most valuable and popular species and divers already must go further and dive deeper than in the past. Some decompression sickness and diving accidents have occurred in the past and the industry lacks a dedicated recompression chamber to treat such illnesses, although there is a privately owned one on the island belonging to a resort facility. The Fisheries Division plans to introduce a quota system for the species, but feels handicapped by lack of scientific knowledge of the stock and its biological parameters (SPC Newsletter #131, 2010). The SPC provided some training to AT operators in early 2010 to address the fish quality standards issues and at the same time provided some training to Fisheries personnel in monitoring the AT. They have also begun the process of developing an AT management plan for Christmas Island.

The ecological impacts of pet fish extraction on the reefs of Kiritimati are not yet properly assessed nor is there any management plan in place. Unofficial reports claim there have been destructive activities related to the destruction of corals to dig out damsel and other high priced pet fish as they are getting scarce after uncontrollable heavy and continuous exploitation. With the longterm tourism development potential of Christmas Island, it will be important to improve the management of this fishery to ensure its sustainability for high value species and to reduce potential conflicts with the emergent diving and snorkelling tourism activities.

The export of aquarium fish now accounts for 78% of the value of all fishery exports from the country with the nominal reported FOB value of US\$1,160,000. The Gilbert Group lacks good connections to overseas markets so there is very little AT there, but the potential is there when reliable air services are put in place (SPC Newsletter #131, 2010).

A high priority should be given to the completion of the AT management plan that includes monitoring of key sites used for targeting high value species.

7.6.6 Sport fishing

The foundation of tourism development in Christmas Island is sport fishing. The main fish targeted are bonefish in the lagoon and secondarily larger game fish like tunas and associated species in the pelagic waters outside the lagoon. Although the ocean fishing is usually excellent, there are other good ocean game-fishing areas in the region with better shore facilities. The main draw at Christmas Island is the bonefishing in the lagoon. This attracts a type of fisher who is content with basic accommodation facilities provided the fishing is exceptional.

Bonefish are individually fished with light tackle and specially prepared lures, and are famous for fighting vigorously when hooked. The fishing in Christmas Island attracts fishers from around the world, but especially from the US due to the air connection through Honolulu. Unfortunately, bonefish are easily taken in large quantities using gill nets, and the increasing population of Christmas Island has impacted the bonefishery, despite the efforts of the six-man Fisheries Subdivision to prevent it. As a result, the number of visiting fishers declined steadily from over 1,000 in 1999 to less than 400 in 2006. In response to this, the Fisheries Division has implemented a ban on netting bonefish within the lagoon over the last few years and the bonefish have begun to recover.

Via the internet, the US and international sport fishing fraternity communicate and stay well informed of conditions at Christmas Island. With the recovery of the bonefish stocks the sport fisher visitation has also increased. Virtually all fishers practice catch-and-release to promote sustainability within the sport. All fishers are also accompanied by local guides that provide advice on best times, places and techniques for fishing the different lagoon species found. This is a relatively well paid profession for Christmas islanders that also engender their cooperation in maintaining the sustainability of this lucrative fishery.

One issue that could enhance the sustainability of the lagoon fishery is switching to the use of barbless hooks, so as to reduce the stress in handling the fish when releasing them. According to expert sport fishers, barbless hooks should make no difference to catches by skilled sport fishers, but would significantly reduce stress while releasing them. Another potential issue affecting the ecology of the reef flats fished within the lagoons is trampling of coral outcrops on some flats by fishers. This could be easily avoided through more coordinated training of fish guides regarding these issues and the guides encouraging their clients to avoid fishing areas with coral cover on the sand flats.

7.7 Institutional arrangements for coastal fisheries management

Ministries and government divisions that are directly or indirectly responsible for fisheries development and management include the Ministries of Fisheries and Marine Resources Development (MFMRD) and of Ministry of Environment, Lands and Agriculture Development (MELAD); the Police Services, Ministry of Communications, Transport and Tourism Development (MCTTD), Ministry of Foreign Affairs and Immigration, and the Office of the Attorney General.

The primary fisheries legislation in Kiribati is the Fisheries Act, 1978 (Cap. 33) under which the Minister may take such measures as he may see fit to promote the development of fisheries and to ensure that the fisheries resources are exploited to the full for the benefit of Kiribati. The Act confers upon the President of Kiribati, acting in accordance with the advice of Cabinet, wide powers to make regulations to the licensing of fishing vessels, the protection of all species of fish, prohibition of fishing gear and methods and the organization and regulation of seafood marketing and export. The Act also contains a provision to protect the traditional fishing rights of Kiribati communities by prohibiting the taking of fish in any traditional fishing areas except by members of the area's traditional owners or custodians. The Native Land Code also recognizes various forms of customary tenure over fish traps, reefs and fish ponds. (see Annex I).

However, the customary marine tenure (CMT) system has been significantly marginalized since the British colonial era when common property laws were introduced starting from high

water and extending seaward. None-the-less, traditional resource management practices and CMT continues in a de facto sense in some of the outer islands (Johannes and Yeeting 2000) where traditions remain stronger (see details under Marine Tenure System).

Other relevant legislation includes the Marine Zones (Declaration) Act which establishes Kiribati's 12-mile sea and 200-mile EEZ. Local fishery by-laws established by individual Island Councils in the outer islands are also recognized, but are subjugated by national fisheries and other laws and regulations. Harmonization of all fisheries, environmental and resource management related legislation to support the decentralization of some degree of resource management autonomy to Island Councils is recommended along with the strengthening and recognition of CMT where appropriate. The least appropriate place would be Tarawa where most people are migrants and trying to revive CMT would be politically and socially unacceptable.

The MFMRD has responsibility for policy and management matters relating to Kiribati's marine resources. It is also responsible for development coordination and project evaluation prior to the consideration by the Planning Office of the Ministry of Finance. The Fisheries Division of MFMRD is the key agency dealing with marine resource development and management and is charged with undertaking research, data collection, project implementation, project evaluation, and the commercialization and privatization of marine resource projects. Fisheries management activities include resource assessment, monitoring, regulation and enforcement. The Division has a staff of more than eighty, supervised by the Chief Fisheries Officer. Each of the Division's operational units, which include Statistics, Aquaculture, Fisheries Development, Training, Extension, Marketing, Research, Licensing and Enforcement, and the Pearl Oyster Collaborative Project is headed by a Fisheries Officer or Assistant Fisheries Officer (Riinga, 2005).

The Environment & Conservation Division under Ministry of the Environment, Environment, Land and Agriculture Development (MELAD) is responsible for evaluating the environmental impacts of marine resource export developments and is also concerned with the protection of subsistence fisheries, and the protection of marine habitats and marine life.

The Ministry of Commerce, Industry and Cooperatives is charged with evaluating foreign investment in the marine resources sector, local companies involved in marine product export, and supporting private sector development. The Ministry of Internal and Social Affairs is responsible for internal affairs, including Outer Island Development activities and the Ministry of Line and Phoenix Groups oversees all developments in those islands.

The traditional foundation of Kiribati's conservation and management of marine resources has been the customary marine tenure (CMT) system that was in effect prior to colonial times. However, British rule in the colonial era instituted common property rights to all marine resources from high tidal waters seaward with exception of stone fish traps, certain reefs and islets and this has undermined the tenure system in Kiribati (Teiwaki 1988, Thomas (2003), Johannes and Yeeting 2003). These studies documented how Kiribati underwent dramatic changes in laws governing access to intertidal resources as a result of colonial governance. As Johannes (2001) asserted, re-establishing some form of local marine tenure seems essential to sound marine resource management and conservation. Thomas (2003) argued that there remains the challenge of enforcing territorial rights.

A number of researchers have advocated for the strengthening of CMT in Kiribati as a way of effectively decentralizing management to the smallest possible unit as proposed by the

Convention on Biological Diversity (CBD 2000) (Teiwaki 1988) (Johannes and Yeeting 2000) (Thomas 2003). The merits of community-based management underpinned by CMT and the application of traditional knowledge (TK) are well documented in the region (Johannes 2002, Veitayaki 2001, Tira 2006, Johannes and Hickey 2004, Vierros et. al. 2010).

The Environment and Conservation Division (ECD) also recognizes the need to promote a community-based management approach that strengthens tenure systems and integrates TK to engage communities to take greater interest and responsibility for coastal resource management through decentralization. These objectives are highlighted in the Kiribati National Biodiversity Strategies and Action Plan (KNBSAP 2005) and include:

- Sustainable use and management of land and terrestrial resources that are in line with traditional and customary land and marine tenure systems
- Documentation of biodiversity related knowledge of indigenous and local communities embodying traditional lifestyles (KNBSAP 2005 pp 19/20).

ECD personnel indicate some progress in promoting community-based management that has been enhanced by a project that includes the replanting of mangroves; a process that has assisted to engender ownership of the initiative with the sound knowledge that increased mangrove coverage leads to greater fishing yields.

The Environment and Conservation Division of MELAD is embarking on community-based management of marine resources with voluntary assistance provided by willing villages. As of 2009 efforts have been made to revive a similar system as marine tenure but in a more holistic approach – ecosystem approach whereby all systems and resources are conserved and enhanced in practical ways. One of them is mangrove planting to protect shorelines from coastal erosion and enhancing juvenile and frays.

The major constraint faced by marine tenure systems is Kiribati legislation supporting common property, adopted from the British Colonial Law, claiming that the ‘coastal zone starting from the highest tide mark to the open sea belongs to the State, all resources contained in it belong to the State’ On Tarawa where most residents are migrants from other islands and therefore have no marine tenure claims, it is difficult for them (or the politicians) to support reintroducing CMT. This is exacerbated by high population increase in the urban area. However, a de facto form of CMT exists on many outer islands including the outer islands, no sandbar or reef area is owned individually, only islets and stone traps.

7.8 Inshore domestic fisheries management

Inshore fisheries comprise fishing for inshore species such as flying fish and coastal tunas, reef associated fin-fish (snapper, emperors, trevally, etc.) and shellfish such as giant clams (*Tridacna* spp), *Anadara* as well as various types of marine crabs, octopus and a host of other edible invertebrates. As central government increasingly assumes the role of stewardship for marine resources, the centrally administered laws and regulations put in place remain weak and ineffective in many instances, in part due to the inability to centrally manage a number of atolls spread over a large geographical area. A lack of awareness regarding global conservation issues by the public are also cited as impediments to contemporary conservation ideals (KNBSAP 2005).

Box 7.1 Phoenix Islands Protected Area (PIPA)

This is a unique initiative in that revenue that can be derived from fishing in the area is foregone for the purpose of conserving the unique marine biodiversity found there. The PIPA encompasses eight atolls, each with a 60 nautical mile protected perimeter, and two submerged reef systems. More than 120 species of coral and 520 species of reef fish have been identified in the area. Dolphins are common in coastal waters, and there is evidence of sea turtle nesting on most beaches. Furthermore, healthy seabird populations indicate good conditions for continued nesting and illustrate the importance of the Phoenix Islands in migratory routes across the Central Pacific (Carter, 2007). It will serve as a reserve for marine life and is also an important seabird nesting area. The Kiribati Government agreed to the PIPA concept for payment in the form of trust money that will be generated by international NGOs. The area may attract marine scientists, naturalists, tourists attracted to remote, pristine atolls who will pay for services they require while there. As of mid-2010, PIPA was designated an UNESCO World Heritage Site.

Fisheries regulations for marine species include those for lobster and bonefish on Kiritimati Island and the giant clam, *Tridacna gigas* in the Gilbert Group. Giant clam resources are heavily exploited in Tarawa with lesser levels on the outer islands and the KNBSAP lists three species of giant clam as endangered along with some species of cowry shells (*Cypraea* spp.) (KNBSAP 2005).

There are a range of other factors compounding increased stress to resources including the impact of population growth, urbanization, more efficient extractive technologies, and expanding market opportunities have prompted Island Councils to adopt by-laws to protect existing resources. However, bylaws are subjugated by national government's Acts and Ordinances including the Fisheries Act (1978).

The shark population within Kiribati is most likely being impacted by the offshore tuna longlining that is estimated to have a 30% by-catch rate (Gillett 2009). The impact is difficult to estimate due to the poor catch data recovery from offshore longliners and lack of detail of by-catch statistics. It has been documented however, that sharks comprise a significant proportion of the longline by-catch and crews normally de-fish sharks caught as the dried fins are in high demand by Asian markets. Nationally, Gillett (2009) recorded a total of six tonnes of dried shark fin exported from Kiribati from 2002 to 2006. This volume of dried shark fin equates to 118-152 t of shark harvested (Gillett 2009).

With the advent of the ecological approach to fisheries that takes into account not only the management of target species but other species and the ecosystem as a whole, it is a good time to develop a shark fish management plan that could be inserted as part of the Tuna Management Plan (TDMP).

The humphead wrasse and three species of grouper are listed as endangered in the KNBSAP (2005). On South Tarawa the shellfish *Anadara* and *Strombus* are heavily exploited on a daily basis, but to a lesser extent on the outer islands. As noted above, the bonefish stocks of Tarawa have been severely impacted from causeway development and overharvesting using monofilament nets. A national bonefish management plan should be initiated by the Fisheries Division to attempt to revive this fishery and prevent its demise on other outer islands. Healthy bonefish populations provide not only food security and livelihoods but as seen on Christmas Island may form the basis of a significant sport fishery and underpin tourism development on other islands of Kiribati.

7.9 Conclusions

Marine resource use and exploitation represents an important long-term source of economic growth. In order to maximise the potential of the sector the government will have to pursue policies aimed at improving the efficiency of institutions responsible for marine resource management and development. For the coastal nearshore fishery, many species have reached or exceeded sustainable production limits, so (in light of population increase and limited livestock production potential) development pressure should be monitored closely and the focus turned to improved management. In the Line Islands where population 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 seen as 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 realizing 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 cooperative management of resources is an obvious way forward for Kiribati in cost-effectively decentralizing coastal resource management. This involves government partnership with communities for them to become increasing responsibility for the management of coastal areas. This includes implementing their 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.

For the offshore tuna industry, ensuring long-term and sustainable revenue flows through DWFN access agreements and properly managed JVs; improving surveillance, observer and port sampling coverage; and promoting further diversification in the fishing industry likely to increase the flow of domestic benefits. Sport fishing is one option and with the catch and release strategy, this area may be further developed, especially on Christmas Island.

With the past high levels of public investment in the offshore fisheries sector having broadly failed, it is likely that future development will be enabled by government increasing efforts to ensuring an attractive investment climate, providing 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 closely monitored to document benefits.

8. Agriculture

8.1 Introduction

Kiribati's agriculture is less productive than in many other Pacific Island states. The relatively harsh environmental conditions of atolls results in a paucity of agro-biodiversity. The coral-derived soils are highly alkaline and coarse-textured, making them among the poorest in the world. The Gilbert group has only an estimated 83 indigenous plant species, and some are in decline. While subsistence agriculture is widespread, cash-related agricultural production is more difficult. Export presents yet further challenges.

It is in this context that this chapter first presents a picture of the agricultural background in Kiribati before briefly discussing climate-related issues, and the opportunities for growth of existing agricultural products – including coconuts, breadfruit, papaw, banana and floriculture. The next section discusses threats to the agricultural sector, followed by an outline of existing research and development activities and future opportunities. The conclusion makes a number of suggestions regarding government activities in the sector.

8.2 Background

Kiribati's soils have very low water-holding capacity, are typically shallow with little organic matter and low available macro- and micronutrients apart from calcium, sodium, and magnesium (Thaman, 1992). Fertility depends on organic matter for the concentration and recycling of plant nutrients and for water retention in such well drained soils. Due to the porosity of the limestone substrate and the islands small size and low elevation there are no surface streams. Rainfall quickly drains through the porous surface soil creating an underground freshwater lens (or sometimes slightly brackish freshwater) floating on higher density saltwater beneath it. These freshwater lenses are the primary source of water for human and agricultural needs on the atolls and accessed by digging wells (now augmented through rainwater harvesting and storage in cisterns). Traditional taro production was based on excavating large pits through the limestone penetrating the water lens and practicing elaborate composting techniques to enrich the soil.

The relatively harsh environmental conditions of atolls results in a general paucity of agro-biodiversity. There are only an estimated 83 indigenous plant species in Kiribati (Gilbert group), none of which are endemic. This paucity is due to their distance from continents, relatively young geological age and limited landmass area. Some eight plants are presumed to have been aboriginally introduced including the giant swamp taro (*Cyrtosperma chamissonis*), taro (*Colocasia esculenta*), giant taro (*Alocasia macrorrhiza*), yam (*Dioscorea* spp.) two breadfruit species (*Artocarpus altilis* and *A. mariannensis*) in addition to a hybrid of the two and Polynesian arrowroot (*Tacca leontopetaloides*) (Thaman, 1990). The total current diversity of vascular plants is 306 species including a wide range of exotic imports, many of which are invasive and considered 'weeds' (Thaman 1989). The Kiribati National Biodiversity Strategies and Action Plan (KNBSAP) identified some 54 species of culturally important plants as "Increasingly not common/ Decrease in availability", many of which had multiple varieties of each species (Kiribati National Biodiversity Strategies and Action Plan 2005).

Pandanus (*Pandanus tectorius*) is thought to be both an indigenous and aboriginal introduction as evidenced by the considerable diversity of local cultivars. Coconut (*Cocos nucifera*) is most

likely to also have had a dual origin. The coconut, pandanus, breadfruit and swamp taro were principle staple items prior to European contact and continue to play an important role in diets today. The Pacific fig (*Ficus tinctoria*) was also an important staple, particularly on the more arid islands in the south.

Despite the agricultural limitations of the atoll environment, (or because of them), traditional agricultural practices in Kiribati showed a high degree of sophistication (Baiteke, 1994; Tofiga, 1985). Thaman (1990; 1993a) stressed the importance of a tree-crop based multistory farming system. Polyculture and arboriculture (the culture of trees) are distinguishing characteristics of early agriculture throughout Oceania and remains prominent in Kiribati today, including in urban areas. Agroforestry is “the deliberate incorporation of trees into, or protection of trees within an agricultural system or agricultural land use philosophy, in order to ensure short-and long-term productivity, cultural utility, and ecological stability”(Thaman and Clarke 1993a). Thaman also notes that the “combination of both species and genetic diversity of both wild and domesticated plants and animals make traditional polycultural agricultural systems much more biodiverse and much more resilient than modern agriculture.” (Thaman 2008).

Furthermore, Thaman emphasizes that “the conservation and sustainable use of “agrobiodiversity” and associated “ethnobiodiversity” (the cultural link with biodiversity) constitute one of the most important preconditions for food and subsistence security and sustainable living in island states of the tropical Pacific Ocean (Thaman 2005). This is particularly true for the smaller “biodiversity “cool spot” islands, such as atolls, that have among the most limited and highly threatened terrestrial biodiversity inheritances on Earth and the fewest options for modern market oriented development (Thaman 2004a).” The KNBSAP produced by the Environment and Conservation Division echoes these concerns and emphasizes the need to preserve the biodiversity of Kiribati’s atolls to ensure food security and ecosystem integrity including the traditional knowledge, practices and cultural values associated with the atoll environment (KNBSAP 2005).

The atoll environment remains one of the most challenging, not only for crops, but also livestock production. With poor soils, lack of water resources and ecological vulnerability to degradation and impacts of climate change, options to increase production are limited. However, increasing population density in urban areas, rising fuel and oil prices along with deteriorating diets increasingly based on imported processed foods leading to health issues and a higher trade deficit make it imperative that the level of self-sufficiency in food production is improved. Opportunities also exist to enhance livelihoods (particularly on outer islands) through improved agriculture and fisheries productivity.

The poor agricultural production capacity of atolls is partially offset by relatively high fisheries production capacity, but this is mainly for animal protein as well as potential for livelihoods diversification.

An important program initiated around independence was to broaden the range of crops traditionally found to enhance household food security and reduce dependence on imported foods. This program has come to be known as ‘home gardens’ whereby garden crops were trialled by the Agricultural Division to test their suitability to atoll conditions and distributed to households for growing out. This was done for both outer islands as well as the urban area. Where there is sufficient local production of crops, processing and value adding opportunities for income generation and livelihoods diversification are possibilities. This program has more recently received additional support from the Taiwanese Technical Mission (TTM) that has

established vegetable seedling nurseries at certain localities on Tarawa and is looking to expand to Christmas Island in the near future.

The home garden program builds on the tradition of composting to improve soil fertility as was done to cultivate giant taro and other crops in the past. Its other advantages include low capital investment (in most cases seedlings are distributed freely) and small areas of land available around households are easily put under cultivation to increase household food security, reduce household expenses and provide more nutritious fresh local foods.

Kiribati's low lying atolls with high population growth, uncontrolled urbanization coupled with erosion of traditional agroforestry practices and biodiversity along with rising socio-economic and environmental challenges has a number of constraints shaping and affecting the agriculture sector including:

- Limited arable land and capacity for staple food crop and livestock production.
- High dependency on nutrition-poor imported foods
- High and volatile food prices (and consequent trade balance deficit)
- Rapidly increasing levels of food and nutrition related non communicable diseases further impacting health systems, family integrity and the national economy
- Limited alternative livelihood options particularly for outer islands
- High level of youth unemployment/underemployment especially in urban areas
- Lack of a sector plan that provides a coordinated policy and financing framework for promoting sustainable agroforestry development and national food security
- Limited human resource capacity for sector development coupled with limited tertiary educational opportunities
- Limited water supply for multiple demands amongst domestic and agricultural uses
- Need to sustainably develop alternative coconut-based value added products
- Need to sustainably develop fruit juice and other local value added agricultural products such as dried breadfruit and babae (swamp taro) to contribute to import substitution and food security
- High vulnerability to climate change and sea level rise impacts

8.3 Climate

As the atolls are rarely more than 3-4 m above sea level, they remain extremely sensitive to the impacts of climate change and associated sea level rise. Sea level rise leads to salt inundation of soils and the water lens that further limits agriculture production. Climate change impacts of rising temperatures and prolonged periods of drought also pose significant threats to crop production. As Kiribati lies along the equator, the seasonal variability is primarily limited to a wet and dry season. The wet season generally spans between November to March and the dry season from April to October. The dry season is susceptible to prolonged drought periods affecting agriculture production and may be exacerbated further by El Nino events and climate change impacts. The Gilberts Group where most of the population is concentrated has three

distinct rainfall zones that in turn influence vegetation and agriculture production. These are (i) north (Makin and Butaritari); (ii) central (from Marakei to Aranuka); and (iii) south (from Nonouti to Arorae) (Catala, 1957).

Most of the Phoenix and Line Islands lie within the dry belt of the equatorial oceanic climatic zone and may be characterized as having equally poor soils as described above and also prone to prolonged periods of drought and susceptibility to climate change and sea level rise impacts. The exception to this is Banaba (Ocean) Island east of the Gilberts that is Kiribati's only non-atoll that has relatively rich phosphate soils (but limited water availability) and is high enough to avoid the acute impact of sea-level rise. It was the source of the Gilbert's chief export commodity (phosphate) and foreign exchange earner prior to independence.

8.4 Agricultural products

Because of the poor nature of atoll soils, crops that are commonly found are limited to coconuts and breadfruit as well as root crops such as giant swamp taro and taro, sweet potato (kumala), cassava; fruit crops such lemons, lime, local fig, banana, pumpkin and pawpaw; and leafy vegetables including cabbages, edible hibiscus (bele), chaya and kangkong. The coverage estimate for each crop is unavailable, however the table below from the 2005 Census indicates the percentage of households cultivating these various crops. As the table shows, coconut is the most popular crop, followed by breadfruit, although cultivation varies among different islands, mostly to differing climatic conditions. Sweet potato and cabbage are amongst the least-cultivated crops. Tamana and Teeraina do not grow sweet potato, while Kanton grows neither sweet potato nor cabbage.

Table 8.1: Percentage of households engaged in cultivation of various crops

Island	Total house hold	Coco nut	Bread fruit	Pan-danus	Cut toddy	Paw-paw	Ba-nana	Swamp taro	Local fig	Sweet po-tato	Cabb ages
Banaba	61	67	15	28	25	90	87	0	10	5	8
Makin	328	93	92	78	73	55	61	29	16	11	5
Butaritari	561	92	87	67	74	62	84	38	16	4	7
Marakei	473	79	79	63	60	44	54	37	14	9	9
Abaiang	853	95	77	77	81	69	43	41	27	3	9
NTarawa	867	96	80	82	58	61	30	19	18	4	14
STarawa	5,245	80	55	51	39	65	39	5	11	6	12
Maiana	354	97	77	81	74	63	39	28	15	2	3
Abemama	592	95	70	74	74	74	42	55	24	15	9
Kuria	202	98	80	67	69	74	28	18	21	2	18
Aranuka	211	98	80	63	78	80	30	5	15	1	6
Nonouti	540	91	67	65	79	65	23	21	25	3	3
NTabiteuea	573	96	68	73	63	66	16	21	13	1	3
STabiteuea	262	92	59	71	68	59	24	12	14	6	5
Beru	464	92	72	85	68	55	26	11	9	1	6
Nikunau	335	91	80	87	50	63	27	6	10	23	20

Onotoa	332	95	67	88	81	41	11	29	25	1	3
Tamana	196	64	76	45	52	44	20	1	6	0	3
Arorae	241	97	83	79	90	80	31	64	54	5	4
Teeraina	198	95	86	89	79	49	38	20	26	0	3
Tabuaeran	438	93	79	83	75	68	62	48	37	1	4
Kiritimati	702	84	50	51	74	72	22	2	12	4	6
Kanton	9	89	78	67	0	78	67	0	11	0	0

Source: 2005 Census

8.4.1 Coconut

The coconut palm is the most important crop in Kiribati, providing household food security and producing many valuable products. Coconut palms are easy to grow, requiring little effort. They survive very well in atoll soils. There are many varieties, including dwarf varieties that grow to about 4m and flower about three years after planting, and tall varieties which grow to 21-25m, flowering in about eight years. Once the palm bears nuts, it continues all the year round. It takes about one year for a nut to become mature and ripe.

The life of an I-Kiribati revolves around the coconut tree. Every part of the plant is useful. The coconut fruit can be prepared in different ways for food and drink; the trunk is used for building houses, furniture and pig enclosures; and the leaves are used for making mats, baskets, dancing skirts, hats, brooms, fans, and thatching. The leaf mid ribs make house platforms, fences, and walls; the coconut shells are used for utensils such as cups, toddy containers, ornaments and fuelwood; fibre from the coconut husks make mats, mattresses, strings and rope; oil pressed from grated mature coconut meat can be used as cooking oil, hair oil and is now commercially produced for soaps and cosmetics.

Many foods and drinks can be prepared from the coconut. The typical I-Kiribati breakfast is mainly grated coconut with hot tea. The germinating nut is edible (te bebe) and can be cooked or eaten raw. Some coconut tree varieties also have sweet husks and these can be eaten by sucking the husk juice while it is still green. A popular drink is toddy, a sap collected from the coconut flower bud after being cut in a special way to allow the sap to exude and be collected twice daily. The fresh toddy and the green coconut water are both excellent sources of vitamins and minerals, while the coconut milk can be used to sweeten breadfruit or babai puree and many other dishes. Boiled toddy thickens to become a viscose, sweet molasses-like product called kamwaimwai. In this form, it can keep for years and be used as a sugar substitute to sweeten drinks or can be made into a hard confection. Toddy is also fermented to make sour toddy – a popular alcoholic drink. Toddy making and the toddy derivatives are unique to Kiribati and Tuvalu in the Pacific.

For local markets, the coconut fruit itself is sold as well as many other coconut products such as toddy, kamwaimwai, te beneka and caramel sweets. Producing toddy and kamwaimwai along with proper marketing of this product highlighting the superior health value of these products may serve to replace imported drink mixes such as cordial and soft drinks. Grated coconut flesh can also be preserved frozen in an airtight package.

An estimated 40 per cent of the coconut population, however, is now senile. It remains a high priority to rehabilitate and replant coconut plantations.

8.4.2 Copra and copra products

Copra, copra oil and copra cake are key exports, although copra oil is far more valuable on international markets and copra should be used predominantly to supply the coconut oil mill. The development of a variety of coconut value-added products is a strategic objective. Coconut oil is processed into soap, body oil and associated products. Experiments in producing biofuel from oil sludge and copra cake have also recently been undertaken. The government, however, continues to maintain a significant copra price subsidy due to the importance of copra for livelihoods on the outer islands.

Box 8.1 | Kiribati Copra Cooperative Society (KCCS)

The KCCS, a division of the Ministry of Commerce was established primarily to manage the copra industry. The KCCS has been operating since colonial times, when copra was the main source of income for rural communities. During the colonial era, Island Cooperatives were very active and were the main copra agent in the outer islands, supported by a pool of auditors who travelled regularly throughout the country. The auditing system ensured proper management and utilization of the copra fund and other operational expenses of the Island Cooperatives.

Few Island Cooperatives still operate, and most have been replaced by government agents whose role is to buy and store the copra for shipping to Tarawa. The Island Council is responsible for the copra fund sent by the Ministry of Commerce who is in charge of dispersing copra funds to outer islands through Island Council Treasurers. The copra agents claim their agent fee from the Island Council based on the amount of copra collected and stored. The KCCS pay for transportation from sheds to the Tarawa port and also the freight and other wharf charges. In recent years copra supplies have declined, partly due to transportation difficulties. The shipping schedule and cargo space is run by the Kiribati Shipping Services Limited (KSSL). Liberalisation of the industry may help (see the chapter on trade facilitation). It may be necessary to subsidise unprofitable routes in order to encourage the KSSL to continue to collect copra. Copra should be supplied to the mill for processing into oil.

Copra exports and value from 1970 to 2008 are given in the table below. Export earnings peaked in 1999 with a value of A\$8,841,000, gradually declining to A\$1,460,000 in 2008. The decline is due to a fall in production as the coconut trees grow less productive with age, continued problems with shipping from the outer islands and livelihood diversification including household revenue derived from alternative sources such as remittances and fishing. Since 2007, copra has also been sold to the Kiribati Copra Mill Company Limited (KCMCL) where it is crushed to produce coconut oil for export, rather than being exported as copra. Holland Commodities Company is the only copra buyer, although other companies have shown interest. HCC provides its own ship to transport copra from Kiribati.

Table 8.2 : Total copra production, metric tones and export value, A\$'000, 1970-2008

Year	Quantity Produced	Quantity Exported	Export Value
1970	6,932	5,603	927
1971	8,572	8,557	1,172

1972	5,113	4,974	417
1973	8,668	6,432	1,335
1974	12,034	11,785	4,871
1975	4,227	5,674	981
1976	7,827	5,567	839
1977	7,921	8,536	2,479
1978	10,426	9,033	2,946
1979	8,937	7,250	3,684
1980	7,527	6,940	2,171
1981	11,270	11,957	2,638
1982	9,889	8,795	1,454
1983	6,948	6,764	2,158
1984	13,388	11,333	6,987
1985	8,483	10,377	4,719
1986	5,911	4,611	459
1987	6,026	4,437	1,173
1988	14,406	11,790	4,203
1989	9,924	10,175	3,166
1990	5,603	4,641	1,023
1991	8,861	7,817	1,625
1992	10,011	9,907	4,349
1993	10,489	8,430	2,348
1994	11,986	10,317	4,480
1995	10,804	13,249	6,367
1996	9,324	5,989	3,605
1997	5,165	7,722	4,040
1998	11,368	7,577	4,533
1999	11,776	12,322	8,841
2000	6,133	6,867	2,501
2001	6,741	6,648	1,985
2002	6,101	3,274	1,130
2003	10,501	7,134	2,114
2004	12,334	5,353	1,579
2005	6,194	5,000	1,094
2006	9,686	-	-
2007	8,808	5,253	1,885
2008	9135	3296	1,460

Source: Kiribati National Statistics Office

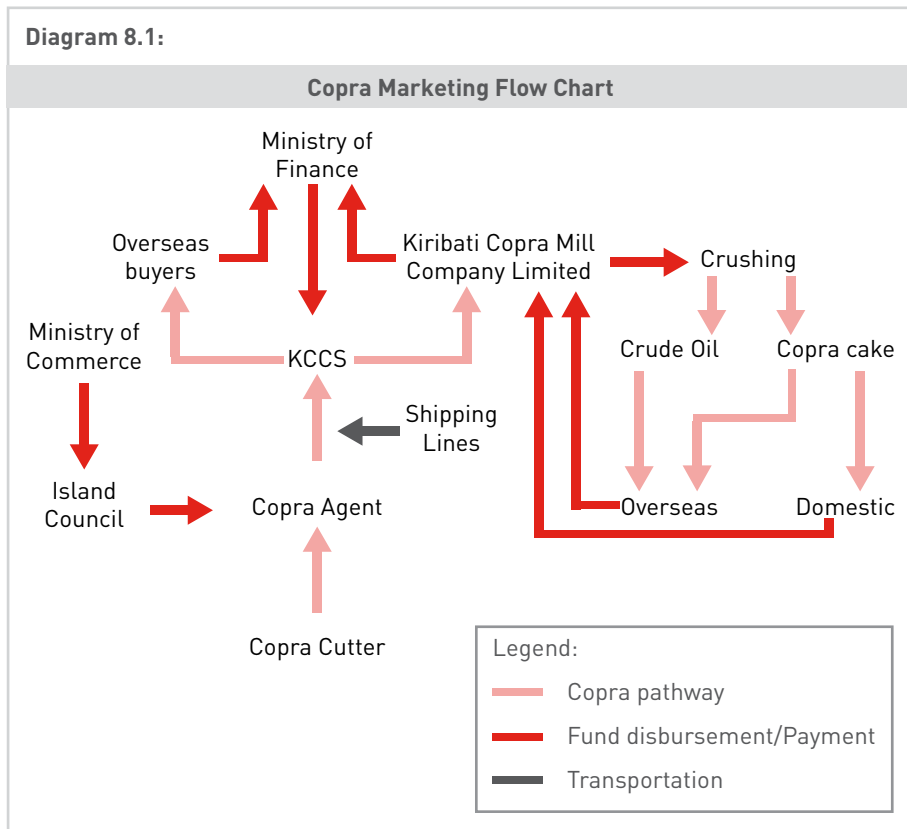
Notes: (1) Export quantities are based on outturn weights i.e. weights recorded at the export destination.

(2) Export value is based on FOB valuation i.e. excluding external freight and insurance costs

(3) All figures related to calendar year

(4) 1993 export data has been revised to take into account the shipment made in December 1993

Kiribati Copra Mill Company Limited (KCMCL) was established in Betio in 2007 to process copra into crude coconut oil for export to overseas markets, as well as copra cake. Value adding activities for soap, body oil and pet bottle production have also commenced but are on a much smaller scale. Biofuel production using cake waste and oil sludge provide an alternative and more affordable cooking fuel. Oil production and these other activities depend on the availability of copra, which has increasingly become a constraint. The diagram below indicates the current system for the production and marketing of copra oil and derivatives.



Because revenue from copra is not paid directly to the KCCS, the KCCS must submit a request to the Permanent Secretary of Finance when funds run short for its operational funds. In this case, an imprest is warranted and issued with a condition that the next release of funds is subject to submission of acquittal on the utilization of the fund. The operational fund includes staff salaries, freight and wharfing charges of copra, transportation and other administrative and office running charges. This system removes KCCS from copra revenues, reducing the incentives to reinvest its profits and make the system more efficient.

The revenue from selling copra both from international and local buyers is paid directly into the Stabex fund which is controlled by the Ministry of Finance. This fund stabilizes the national price of copra. The Government continues to subsidize the copra price using the Stabex fund. At the time of writing the farm gate price for copra was \$700/tonne. For comparison, the average global price of copra over the month of October 2010 was US \$947/mt while coconut oil was US \$1,411 (Development Prospects Group, World Bank 2010).

It may be necessary to remerge the management boards of KCCS and KCMCL or introduce a purchase contract for KCCS to provide copra to KCMCL to overcome the main issue leading to copra shortages, namely the export of copra by KCCS. To address the lack of regular shipping services to outer islands to purchase copra a subsidy from KCCS to KSCS may be necessary to ensure copra reaches market.

Data on oil production since 2005 indicate the highest output at 3,728 mt in 2007 with a decline to 3,389 mt in 2009. This decline was related to supply problems related to shipping from the outer islands (which remains intermittent and unreliable) as well as the KCCS decision to sell their copra to overseas buyers rather than to KCMCL for processing to oil. This follows from the lack of a contract for KCMCL to purchase the KCCS copra since 2006 when the management boards of these two entities were separated. In many cases since the separation, KCCS has preferred to export the raw copra leaving KCMCL short of copra to purchase for processing to oil and value-addition. This results in a loss of opportunity for value-addition and national employment and revenue benefits as well as leaving the KCMCL to run at under-capacity.

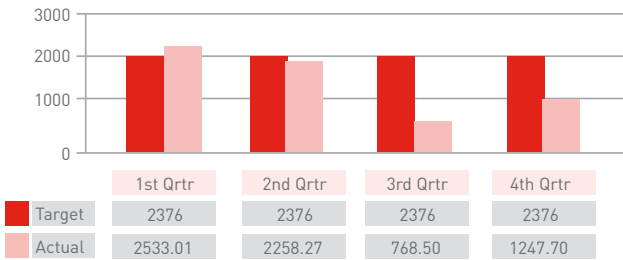
Table 8.3: Monthly Coconut Oil Production – 2005 to 2009

CNO=Crude Oil	CNO 2005	CNO 2006	CNO 2007	CNO 2008	CNO 2009
Jan	269.99	414.85	207.08	178.25	437.18
Feb	227.58	94.05	306.92	278.20	410.78
Mar	237.73	253.54	340.58	263.88	491.00
Apr	153.81	309.36	126.53	226.07	367.79
May	143.62	264.32	329.12	286.29	385.65
Jun	272.97	383.33	286.87	163.79	427.53
Jul	191.23	236.70	285.40	251.10	81.518
Aug	461.99	0	405.13	353.29	0
Sep	47.21	454.65	435.72	396.22	220.59
Oct	178.03	38.91	442.93	449.49	151.03
Nov	-	196.99	308.35	284.46	302.77
Dec	-	511.99	253.10	347.05	112.94
TOTAL	2184.17	3158.71	3727.68	3478.10	3388.77

Source: KCMCL 4th Quarter Progress Report 2009

The lack of copra supply to KCMCL was greatest during the 4th quarter 2009 as can be seen in the diagram below, where the first two quarters produced company targets while the second two quarters fell far short.

Figure 8.1: Copra processed: Fourth Quarter 2009 comparative performance against targets.



[KCMCL 4th Quarter Progress Report 2009]

Issues of copra quality have also been reported, affecting supply levels. KCMCL sampling confirmed immature coconuts and high moisture content was found indicating the coconuts were not adequately dried. Impacts of copra quality are apparent in the oil extraction rate which has been less than expected: the target level is 58-60% but has only been in the vicinity of 45-48%. Thus oil produced from the quantity crushed is slightly lower in quality. Quality of copra also affects the crushing machine efficiency and maintenance and shut downs for maintenance is a factor affecting production days. For example downtime during the fourth quarter of 2009 was 48.5 days due to copra shortage as well as lack of spare parts, break downs (some due to oversight by workers) as well as electricity black outs (KCMCL 4th Quarter Progress Report 2009).

Copra cake (or meal) production for 2009 ranged from 195 mt to 706 mt/quarter with a mean of 673 mt/quarter and a total of 2024 mt for the year. The production target during this period was 3228 mt with the shortfall being primarily due to a copra availability shortage as with oil production.

The main coconut oil buyer is Pacific Commodities Group (PCG) based in Australia. Long term purchase contracts have been signed. King Tar International Corporation, a Taiwanese company is a short term-spot buyer of oil that has a Tarawa based agent (Liused Development Corporation). Management continues to search for other markets and there are on-going talks with potential buyers in NZ but production limitations remain an issue to an expansion of markets. Currently, the sole overseas buyer of copra cake is also PCG.

8.4.3 Breadfruit

Breadfruit (*Artocarpus altilis* and *A. mariannensis*) has long been an important staple crop and a primary component of traditional agroforestry systems in Kiribati, commonly grown and intercropped with other fruit trees. There are both seeded and non-seeded varieties common throughout Kiribati. In 1991, six new breadfruit varieties were introduced from Hawaii and have been very successful and productive. These varieties have been multiplied through root cuttings and marcotting and distributed to the general public.

The fruit can be cooked and eaten at all stages of maturity, is high in carbohydrates, and is a good source of minerals and vitamins (Raynor, 1989). In addition to producing abundant, nutritious, tasty fruits, this multipurpose tree also provides medicines, construction materials, animal feed and habitat for birds.

The breadfruit trees grow to heights of 15 to 21 m or more and the trunks may be as large as 2 m in diameter at the base. The trees begin bearing in 3–5 years and are productive for many decades. They are easy to propagate, require little attention and input of labour or materials, and grow under broad ecological conditions evident from its abundance in all the islands (Raynor, 1989). Most breadfruit is produced for subsistence purposes and small quantities are available for sale in town markets as fresh fruit or chips. Fruits are variable in shape, size, and surface texture. They are usually round, oval, or oblong ranging from 9 to 20 cm wide and more than 30 cm long, weighing 0.25–6 kg.

There is interest in establishing small scale processing breadfruit enterprises to process fresh fruits into simple products such as chips or flour for the local market to preserve these fruits and broaden the availability of food. Milling breadfruit to flour can be a potential substitution for imported rice and flour. The facility established for fruit processing at Temaiku has a very small capacity which requires upgrading to increase production.

Although breadfruit contribution to food security is recognized, the number of trees has declined over the last few decades. The 1995 census noted 9,677 breadfruit trees and the 2005 census documented 9,357. A steeper decline is expected if there is no immediate action taken to address the issue. Therefore planting of more breadfruit trees should be emphasized given the need to promote agrobiodiversity and food security resilience.

Breadfruit is a good source of Vitamin C, and rich in fibre. The seeds are a source of protein and Vitamin B1 (thiamine). Breadfruit leaves are good sources of Vitamin C, iron, and calcium. Breadfruit blossoms before they are brown and hard are also edible and may also be eaten.

Breadfruit is marketed on Tarawa at a fixed price of \$2.00 per fruit raw or cooked. The fruit currently has limited demand possibly due to its high price. Breadfruit can be potentially milled as flour and is naturally enriched with essential elements.

8.4.4 Pawpaw

Pawpaw (*Carica papaya*) or papaya is commonly grown by most households on all islands. It has natural healing properties and an excellent source of vitamin A. It is easily grown in poor soils and fruits all year round. Overripe or spoiled fruits are also useful as pig feed. It is in high demand but remains in limited supply, like most other locally grown fruits and vegetables especially at South Tarawa markets. One limitation is that pawpaw is highly perishable and requires quick transport to market retain its freshness.

8.4.5 Banana

Banana (*Musa acuminata*) grows well in the northern islands as well as some islands in the Line & Phoenix group where there is higher rainfall. South Tarawa banana supply is currently supplied from the northern islands, especially Butaritari. There is an increase in the number of households and islands now engaged in growing bananas as in the past they were rare in the southern islands due to their drier climate. The increase stems from people knowing how to better cultivate bananas through composting and mulching. This improved method of growing bananas, termed a “banana circle” was promoted on South Tarawa through a radio (broadcasted to all islands) and newspapers in 2004 – 2006.

There are two general types of bananas, the cooking type (plantains) and the type eaten raw. Plantains a good source of starch and eating bananas are sweet-tasting, rich in vitamin C and minerals and grows in more abundance. Eating bananas may be used in drinks, salads, meat dishes, sandwich fillings, cakes or other desserts. It is easily digested and therefore a good diet for the sick and the elderly.

Though banana is a very healthy and popular fruit there is usually a limited supply in the South Tarawa markets keeping the retail price steady at \$3.50/kg. The fact that it can now be easily cultivated by all islands, is unseasonal, asexually reproducing (no need to purchase seeds), its potential to increase production are quite promising. This would allow the price to come down so as to make it more accessible to more people in the urban areas. However, there are no available data on the number of banana varieties available in Kiribati nor information as to which varieties have a higher return.

There are a number of varieties introduced from SPC which are still being trialed for their adaptability to various island conditions. In February 2009, 13 varieties of banana tissue cultures were introduced to Christmas Island. These tissue cultures were carefully raised at the Agriculture Station as the plantlets are delicate and can easily die. They remained in the Agriculture Division's nursery until ready, then transplanted to households selected randomly as test sites. Since the adaptability of the crop varieties are being trialed, production at the farmers' level of management is crucial in the study.

The survey carried out on October 2010 confirmed that most of the above varieties survived well under the atoll environment; however more work to collect suckers from the households to multiply these varieties for further distribution is necessary. This can be a labor intensive exercise and requires significant human and financial resources.

8.4.6 Pumpkin

Pumpkin (*Cucurbita moschata*) is one of most common unseasonal crops as it thrives well in dry or wet areas, is free of pests and can be grown without much labour and effort. It is a very popular food full of vitamins, potassium, alpha-carotene, zinc, beta carotene and lutein. Some beauty product companies overseas are using pumpkin enzymes as a leading ingredient in their skincare products.

Pumpkin remains severely under supplied and its increased production will assist in reducing the present farm gate price of \$2.50 - \$3.00/kg to make it more available to urban markets. There are a number of varieties of pumpkin which are apparent from variations in the fruit shape and size. They can be easily grown from its seeds or cuttings.

Unlike pawpaw or banana, the pumpkin fruit after harvest is less perishable and survives better when shipped from further destinations. Pumpkin is one of the main agricultural products marketed locally through government institutions and the general public. The demand is very high as people are becoming more health conscious and more willing to buy the product but only if the price is maintained at a reasonable level. One mature pumpkin can weigh up to 10-15 kg which in most cases makes it rather costly.

8.4.7 Giant Swamp Taro or Babai

Babai or giant swamp taro (*Cyrtosperma chamissonis*) is another important traditional crop. In olden days it was carefully cultivated in specially prepared swamp pits dug to the water lens and was highly valued as a traditional wealth crop in ceremonies. During ceremonies such as at the completion of a new maneaba (meeting house), every family would bring the whole uncooked corm to the opening ceremony. Village recognition would be accorded to those who present the largest corms while those with none or the smallest corms would be dishonoured. The wet conditions and the higher water table in the northern group are favourable conditions for the babai crop and therefore are commonly found in abundance in the northern islands. For this reason, it is not kept exclusively for traditional ceremonies as in the southern islands, but also eaten as a staple food.

Generally, its value and popularity appear to be diminishing and has become a luxury nowadays as shown by the low percentage of households in most of the islands actually having a babai pit and the decreasing trend in their use. The 1995 census indicated there were 7,371 babai pits nationally and in 2005 census it declined to 2,572. The babai pits are excavated through limestone rock to reach the fresh water lens which could be as deep as 4-5 m in the southern islands and as low as .3 m deep in the northern islands. It is a very labour intensive task to dig such a pit and most extended families today rely on their ancestral babai pits to share amongst themselves. Many pits have been abandoned today due to migration of people to urban areas and/or the effects of consumerism and change of lifestyle drawing more upon convenience foods; also from saltwater inundation of some pits.

There are only two common varieties of babai; one is 'te ikaraoi' that develops only a single corm and grows to large size. It is cultivated by replanting the top of a harvested corm. The te ikaraoi cultivar has many sub cultivars. This larger babai is the one that is highly valued for ceremonial purposes. The second variety is called 'te katutu' and does not grow to a giant corm also produces multiple smaller corms so one plant produces plenty plants as it grows to maturity. Like te ikaraoi, te katutu also has many sub cultivars and is usually harvested anytime for home consumption. According to Small (1982), there are about 20 named cultivars.

The babai beetle is the only pest known to this crop but is currently confined to Tarawa.

Babai is a starchy food and has never been experimented with for processing or preserving but has some potential for processing into dried flour for example. If innovative ways of processing and preserving babai were conducted to make it convenient for cooking it could be marketed domestically and supplement imported staple foods such as rice and wheat flour. Unlike fruits such as banana or pawpaw, the corm of the babai crop can last up to 3 to 4 days before it can be cooked.

8.4.8 Native Fig Tree

The native fig (*Ficus tinctoria*) known locally as te bero is an important staple food especially in the drier southern islands. It is propagated through cuttings; the fruits are small and round about half an inch diameter and are picked when they are ripe but also when they are green, boiled and blended into a puree where it can be mixed with sweetened water (kamaimai-boiled toddy or sugar) and grated coconut. It can also be made into bread, or a bekei (puree added with coconut cream and kamaimai) or preserved by drying in the sun.

Though it can be found in all of the islands as shown in the table above, there is evidently not many households with this native fig because of the local belief that planting the fig near homes will force dwellers to leave their homes.

Like the babai corm, it has never been tried out for marketing except as a cooked bread or bekei by street marketers. Harvesting the fruits can be very time consuming but much cherished if properly prepared. Marketing of this local fruit domestically as a start could be tried both in a dried and freshly cooked form.

8.4.9 Pandanus

Pandanus (*Pandanus tinctorius*) is one of the most important traditional food crops and remains very common throughout most the islands in Kiribati (although Christmas Island reports limited numbers). It is a seasonal crop fruiting mostly towards the end of the year and until February and March in most cases. There are also varieties that fruits in the beginning, middle and end of the year. Koch (1986) recorded 259 pandanus varieties found on Nonouti, Tabiteuea and Onotoa islands in the southern Gilberts. Thaman and Temakei (1994) noted about 200 pandanus different names which may correspond to the different varieties as noted by Koch (1986). However, some varieties may be known by different names on different island which may affect the list. At present, there is evidence that the diversity of pandanus is declining, with certain varieties becoming difficult to find. The KNBSAP lists 112 pandanus cultivars considered to be threatened, rare or extinct (KNBSAP 2005). The reasons include less replanting, deforestation, fire, decreasing interest by the younger generation and rapid population growth leading to urbanization. Planting pandanus should be promoted in both rural and urban areas. Pandanus is also a good timber usually used in the construction of larger maneabas. One meeting hall can use up 30-40 large pandanus trees and it is usually rare to find this many mature pandanus trees in the vicinity of villages. The construction of maneabas as well as houses continues to create a demand for pandanus timbers. The use of local timbers is important for local economy in that imported timbers can be avoided.

Pandanus grows very well in Kiribati it being adapted to the poor nature of the soil and other challenging atoll environmental conditions. Thompson et al (2006) noted different uses of pandanus in which certain varieties are preferred for certain purposes including thatch, food, timber and so forth. Pandanus is also very important as a weaving material, both for traditional roofing thatch as well as for mats and baskets. The availability of pandanus is therefore very important in handicraft production and its abundance cannot be over-emphasized in assisting to keep local weavings affordable to the tourist market. A shortage of pandanus, especially on Christmas Island (where there was no resident population at the time of European contact), is of particular importance with the greater potential for tourism sector growth there due to better air connections. Assuring a plentiful supply of pandanus will also assist to ensure that weaving skills are practiced and transmitted to the next generation.

8.4.10 Sweet potato

Sweet potato (*Ipomoea batatas*) is an introduced crop that grows relatively well in atoll soils and is in demand in the urban area of Tarawa. Through the Centre of Excellence for Atoll Agricultural Research and Development, promotion of sweet potato was carried out intensively with the idea to mass produce it to supply the local market in Tarawa. There were more than 30,000 sweet

potato planted in 2008 on Beru Island. However, due to a shortage of shipping availability to the island during the harvesting period these crops never made it to market. Instead, they were utilized as family food. This incident highlights the impact of one of the main constraints to marketing crops from outer islands, namely unreliable and intermittent shipping schedules.

8.4.11 Other green shrubs

There are a few other leafy plants that are easily grown such as drumstick (*Moringa oleifera*), creeping or Ceylon spinach (*Basella alba*, *B. rubra*), amaranthus or tropical spinach (*Amaranthus* spp.) and chaya (*Cnidioscolus chayamansa*). Such shrubs produce edible leaves including during dry periods and seasons and some can also be used as hedges such as chaya. These plants are more nutritious as shown in the bar chart below and are cheaper compared with the Chinese cabbages which are the main greens presently found in the market. Furthermore, growing Chinese cabbage depends on seed availability and requires more effort in maintaining its growth.

Some other plants thrive better in moist soils such as bele (or edible hibiscus *Abelmoschus manihot*), and kangkong (*Ipomoea aquatica*), and are very good sources of iron and vitamins. Considering their nutritious value and low cost of cultivation, these greens have a great potential as crops for increased production when coupled with proper marketing.

8.4.12 Commercial floriculture

Floriculture, a relatively recent initiative, appears to have reasonable potential but is still extremely small and is unlikely to become an export product. There are two small floriculture businesses. The first is a sideline venture alongside a small retail shop while the other is more less a full time hobby-based venture. Potted plant sales average 5/month with prices ranging from \$25.00 - \$100.00. The main market for purchasing plants is expatriates such as from the New Zealand or Australian High Commission.

There are approximately 20 varieties of ornamental plants utilized in floriculture. All plants are raised as cuttings and seedlings before transplanted to a pot filled with sandy soil mixed with humus and manure. Well water is used on the plants and although there is no cost involved, the freshness of water can be affected in prolonged droughts or where use of water is significant. The availability of soil is also a challenge.

Potted ornamental plants are also rented for special functions. The rental market is mostly by government for special functions, or occasionally, for private functions such as weddings and birthdays. Rental earnings are about \$100.00 to \$500.00 per function per week.

8.4.13 Livestock and poultry

Livestock – pigs and chickens – is mainly at a subsistence level. Most households on outer islands typically rear a small number of pigs in enclosures and as well as a larger number of free-range chickens. The agriculture department aims to promote import substitution through improved livestock management and production. A key factor affecting increased livestock production is the high cost of imported livestock feed. Further experimentation with local

feed materials such as copra cake, animal manure and other organic waste and fish offal shows some potential. The introduction of higher yield breeds to improve the local breed of pigs and chicken through interbreeding will also assist to help increase production and is also a priority for increasing yield.

Livestock husbandry in Kiribati also fulfils an important social role, particularly pigs, as they represent a valuable traditional wealth item that is important for fulfilling social obligations at times of births, marriages and deaths as well as contributing to human nutrition (Thorne, 2005). Most households in Kiribati (87%) keep pigs and 37% of households (as shown in the table below) keep free range chickens. These are mainly for special meals for example when there is an esteemed visitor to the family. It is also apparent from this table that the level of crossbreeding remains very low, at 11% and 5%. There is therefore considerable scope for increasing production through encouraging more interbreeding with high yield breeds.

Table 8.4: Percentage of households engaged in livestock production

	Households without:	Households with:
Local pigs	13%	87%
Exhorted or imported pigs	95%	5%
Crossbreed pigs	89%	11%
Local chickens	63%	37%
Exhorted chickens	98%	2%
Crossbreed chickens	95%	5%

Source: Kiribati Population Census, 2005

Pigs are primarily fed kitchen scraps and left over food while chickens, which are of less traditional value, are normally left to free range for their daily needs. As a result, local chickens are normally relatively small with tough meat.

In terms of the commercial livestock production, pigs and chickens have been the only livestock kept in the urban centre for commercial purposes. There are currently no private sector commercial pig farms: the two in Tarawa are both government owned. There is currently no commercial broiler chicken production but there are three private layer poultry farms and two government owned layer farms.

A feed study trial (Thorne 2005) concluded there is a considerable economic benefit from the use of a locally produced feed for fattening pigs, while broiler chicken and egg laying production have so far produced disappointing results compared with the pig trials. It appears that the current private commercial layer chicken operations are only profitable when eggs (in high demand) are sold at their current price of \$0.40 - \$0.45 per egg.

8.5 Research and development activities

Agricultural Development Plans/Strategic Plan

With assistance of the Secretariat of the Pacific Community, the Agriculture Department has identified six main objectives:

1. Crop production - .
 - a. Revitalize the replanting of staple food crops on all the islands;
 - b. Improve, strengthen and diversify the copra industry;
 - c. Encourage replanting of both staple food crops and other native plants;
2. Livestock production
 - a. Stimulate and expand the private sector;
3. Biosecurity
 - a. Ensure and maintain protection and conservation of agricultural and marine resources;
 - b. Prevent the introduction of dangerous foreign species;
 - c. Promote efficient waste management systems;
4. Marketing
 - a. Explore and secure overseas market for animals' and plants' products and commodities;
 - b. Improve the outreach of the NCD services;
5. Training
 - a. Improving the quality of curriculum and assessment;
 - b. Raising education standards and improving quality curriculum;
 - c. Expand and promote awareness programs on child health;
6. Land issues

The following programs are currently underway:

a) Butaritari Agricultural Commercial Project

This is a new program which aims to boost production of locally grown foods for sale in the local market. There are five acres cultivated in this project that are government leased lands tendered out to individual operators interested in participating in the program.

The three crops to be planted are taro, sweet potato and cassava. The Agriculture Division has carried out production of these three crops to supply growers with planting materials. The business plan developed for this project forecasts a significant impact on the livelihoods of Butatari as well as at a national level. Islanders will benefit from self-employment opportunities created by the project and the supply of fresh root crops to the local market will have substantial economic and health benefit to people living in the urban areas.

Since the commercial aspects of this operation include marketing excess production to Tarawa, similar constraints as seen with other commercial operations shipping bananas and pumpkins from the outer islands will be encountered. Thus the following problems are anticipated:

- Post harvest losses due to handling and processing techniques
- Infrequent transportation and unpredictable schedules

- Sourcing and availability of credit through loans
- Exclusion of these three agricultural commodities in the freight levy fund
- Only people from the island of Butaritari bid for the operationalization of the project

b) Coconut replanting

Coconut replanting to increase the number of coconut and boost coconut production falls under the mandate of the Agriculture Division. The Agriculture Division has established a target of 2,000 coconut plants to be planted on each island per year. This is an extract from the Ministerial Operational Plan for year 2010. The Agricultural Officer based on the islands is responsible to carry out this program. However, the agricultural extension program lacks sufficient capacity to implement this activity and most islands could not meet their target.

Some of the specific problems encountered which affect this program;

- Disbursement of funds for this activity is disorganized. Most Agricultural Officers responsible for handling funds in the outer islands were slow in acquitting funds which resulted in a hold on funds until a full acquittal on the use of previous fund is received
- Monitoring and support for Agricultural Extension programs is poor leading to staff not being aware of their specific roles
- The limited funding provision for Agricultural Development program caused gaps in site visits to monitor the progress of outer islands programs

c) Livestock improvement

Opportunities for import substitution through improved livestock management and production is a key strategic objective for the agriculture department. A decisive factor determining increased livestock production is the cost of animal feed. Further experimentation with local feed materials and appropriate animal breeds is warranted. Improvement of local breed of pigs and chicken through breeding and introduction of improved breeds is a priority.

Box 8.2 | The Christmas Island Agriculture Division subcentre

The Christmas Island Agriculture Division subcentre is located near the community of Banana. It is performing research trials on a number of crops and varieties being introduced and trialled for introduction through the home garden initiative including bananas, cassava, kumala as well as pumpkins, tomatoes, beans, cabbages and other leafy greens.

Consultations with a number of Woman's Associations on Christmas Island confirmed their support for the home garden approach promoted by the Agriculture Department and Taiwanese Mission. They expressed the need for assistance in a number of areas that would require only small amounts of funding or technical support. These include:

- 1 Hand pumps for accessing ground water for use in their home gardens
- 2 Assistance in selecting appropriate pandanus varieties for use in promoting food security, weaving and handicraft production
- 3 Small business management skills to assist them with their fledgling agriculture enterprises (as well as handicraft/tourism).⁵⁵
- 4 Access to micro-credit for agriculture and other livelihood enterprises
- 5 Capacity building in project proposal development and writing to facilitate access to small grants through direct aid schemes by High Commissions and other sources of funding available to NGOs
- 6 A training facility (such as a cultural centre) where older women/men could train their youth in traditional practices, knowledge and skills associated with agriculture and other associated fields to support food security and livelihoods (including traditional systems of preserving and preparing foods, etc.) as there is warranted concern regarding the accelerated loss of this knowledge and associated loss of household food security and resilience
- 7 Many women are interested in becoming trainers in the home garden program and becoming part of a 'train the trainers' program that could be initiated by the Agriculture Division

Other agricultural practices that could be experimented with to further enhance agricultural production include:

- 1 Trialing alley cropping techniques whereby nitrogen fixing legumes are planted between crop rows to increase soil fertility; this would require trialing various legumes to find ones best suited to Christmas soils and climate; there are currently a number of introduced legumes growing on Christmas but no alley cropping was observed;
- 2 Feasibility study on the use of windmills and solar powered pumps for use in the irrigation of home gardens as well as small commercial garden enterprises; only one windmill was observed but research into their further use would be warranted;
- 3 The Agriculture Division initiates a 'train the trainer' program for home gardens with Women's Groups and other appropriate NGO's to expand the reach of this program while assisting to overcome the lack of human resources within the Division to expand this program on Christmas Island;

⁵⁵New Zealand is helping the government establish Small Business Development Agencies in South Tarawa and Kiritimati. They will provide business advice, mentoring and small business loans for the establishment of new businesses. The agencies would also identify, promote and attract funding for opportunities to fuel new small businesses. In Kiritimati, tourism is expected to be a major focus.

8.6 Agricultural programmes

8.6.1 Food and Agriculture Organization (FAO) projects

The FAO Technical Cooperation Programme (TCP) aims to provide technical expertise to its Member countries through targeted, short term, catalytic projects. These projects address technical problems in the field of agriculture, fisheries, forestry and rural livelihood. The TCP may be used in all areas that pertain to FAO's mandate and competence and which are covered by the Organization's Strategic Framework. This includes issues related to food security; nutrition; institutional reform; policy and strategy formulation; strengthening of production and support systems in the agricultural, forestry and fisheries sectors; market access and international trade; management of natural resources; pest and disease prevention and management; pre-investment activities and formulation of project proposals to leverage additional resources for rural development; implementation of international standards; and needs assessments and emergency responses. TCP projects aim to fill critical technical gaps by providing technical inputs that are not available locally, or that project beneficiaries cannot access through their own means, or through local support systems. The FAO also provides technical assistance through its regular programme, assisting member countries in priority areas identified in the National Medium Term Priority Framework.

The TeleFood Special Fund (TSF) was set up in 1997 to finance grassroots-level micro-projects in developing countries and countries in transition. They are intended to improve poor families' means of production, enabling them to produce more food and to generate cash income, thereby allowing them better access to food. Each project should provide direct assistance to groups of small-scale farmers, fishermen, herders or rural poor of a particular village or community, or local institutions such as schools and health centres, in the launching of new food production and income-generating activities. TeleFood funds should be used exclusively for the provision (including transport) of physical inputs such as seeds, starter livestock, feed, fertilizers, hand tools, field supplies, building materials, and small, non-motorized equipment. All inputs should be distributed free of charge, but on condition that the recipient group(s) contributes part of their income to a community fund. TeleFood projects should not aim to introduce complex technologies unfamiliar to the community. All activities should be sustainable and environmentally friendly (FAO TeleFood Guidelines, April 2003).

The Food Security Sustainable Livelihood Program (FSSLP) aims to support agricultural and fisheries programs at the national level. Countries develop their own programme, aimed at improving the livelihoods of people particularly in rural communities. The FSSLP comprises three main components: (1) Support to community and household investments (increased and sustainable agriculture production and productivity, improved incomes from farm and non-farm sources and enhanced dietary practices of targeted communities and households); (2) Developing service provision capacities and facilities (improved access of vulnerable communities, especially households in remote locations and women, to sustainable agricultural services, inputs and markets); and (3) Multi-country support and food security initiatives (strengthened capacities, enhanced policies, and strategic actions at country and regional level to address immediate and long term food security challenges).

8.6.2 Secretariat of the Pacific Community (SPC)

The SPC Agriculture Programme's key objectives are to increase efficiency and sustainability of agriculture, improve food security and public health, facilitate trade in agricultural products, and reduce the impact of natural disasters. The programme includes:

- the Regional Animal Health and Production Services
- the Crop Improvement Service
- the Development of Sustainable Agriculture in the Pacific (DSAP)
- Plant Protection Service

8.6.3 Centre of Excellence for Atoll Agriculture Research and Development

The International Fund for Agricultural Development (IFAD) funded the Centre of Excellence for Atoll Agricultural Research and Development (located in South Tarawa) and was initiated in 2006 and opened in 2009.

The Goal of the Program is to establish and pilot a "centre of excellence" for atoll agriculture in Kiribati for the Pacific Island Countries. The Centre's goals will be achieved with the following objectives: (i) Establish a knowledge base on atoll agriculture at the Centre with participation of farmers; (ii) Improved knowledge management and a dissemination approach developed and implemented for Atoll Agriculture; and (iii) Capacity and institution building of the Centre for sustainability. The Centre will provide an opportunity for the scientific community to support activities of national, regional and international agencies as they address agricultural related problems of the highest priority for alleviating poverty and promoting development in the atolls.

Islands in which the Centre is currently operating on include: (i) South Tarawa; (ii) Christmas Island, (iii) Buataritari island, (iv) Beru island, and (v) Abemama island.

The communique signed during the Atoll Conference held at Otintaai Hotel 12-16th February, 2010 will guide the future operation of the Centre. The communique covered the following areas;

1. Research: To address the specific challenges of atoll food production and environmental sustainability in light of climate change issues.
2. Development: Addressing the most pressing development needs of atolls including food and nutritional security, climate change mitigation and sustainable management of the environment.
3. Trade: Enhanced livelihood opportunities for atoll farmers through facilitating domestic and international trade.
4. Partnership: Building strategic partnerships at national, regional and international level to ensure the goals of the Centre are met to the benefit of atoll farmers
5. Capacity Building: Building the Centres institutional capacity for sustainability and also the Centres contribution to building enhanced human resource capacity within atoll countries.

8.6.4 Pacific Agribusiness Research and Development Initiatives (PARDI)

PARDI is an initiative of the Australian Centre for International Agricultural Research (ACIAR) implemented by the Land Resources Division of the Secretariat of the Pacific Community (SPC and the University of the South Pacific, with technical support from the University of Queensland, James Cook University, University of Adelaide, Massey University and the University of Sunshine Coast. This project will look into providing and establishing mechanisms to facilitate trade of agricultural products through the use of 'value chain' analysis to identify where problems are occurring anywhere along the producer-to-consumer chain. Collaborative research will be designed to address those problems.

PARDI will be looking for opportunities to more efficiently supply existing international and domestic markets. PARDI will work closely with the private sector and encourage the constructive agreement of government and private sector. This is a regional program for the Pacific Island Countries in which Kiribati is also covered.

8.6.5 Facilitating Agricultural Commodity Trade (FACT) project

FACT is an Australian Centre for International Agricultural Research (ACIAR) project based at SPC Headquarter in Fiji. The purpose of the project is to provide assistance to strengthen and facilitate trading of agricultural commodities. Countries covered in this project are Fiji, Tonga, Samoa and Kiribati.

The FACT project will assist Kiribati by developing marketable agricultural products and to connect the product to overseas niche market. So far this project has been providing some assistance to Kiribati through training and capacity building. Activities already undertaken in Kiribati include the following:

1. training on breadfruit product development such as breadfruit flour
2. training on the production of coconut virgin oil
3. training on toddy sugar production and contracting locals to carry out such training

8.6.6 Taiwan Technical Mission (TTM)

The Taiwan Technical Mission is supporting household agricultural programs by setting up vegetable seedling nurseries at certain localities on Tarawa. The aim of the program is to grow seedlings and distribute to the interested households. Vegetables such as cabbages, tomato, capsicum, beans and so forth are promoted for household gardening and the surplus from household consumption could be marketed to assist with revenue generation.

The TTM has also supported the building of roadside stalls in some villages whereby vegetables and other local products such as handicrafts may be sold.

8.6.7 Asia Pacific Copra Community (APCC)

Kiribati is a party to this regional organization which based in Jakarta, Indonesia. The main functions of this organization are promoting and to facilitate marketing of coconut products. It is also through this organization that member Countries receive assistance. This organization

meets annually and Kiribati at this stage is represented by the Minister of Commerce who is getting full funding support from APCC for attending this meeting while the agricultural officials accompanying the Minister on this mission are sponsored by the Kiribati Government. In this circumstance where there are two main stakeholders (commerce and agriculture) involved in the process; there should be a better coordination to ensure that issues pertinent to agriculture including coconut production and value adding are all well addressed

8.6.8 International Labour Organization (ILO)

The ILO program aims to engage youth in agricultural activities including livestock and vegetable production. Training is being provided to youths on the various aspects of these two activities. The programme started on South Tarawa and is being extended to some outer islands.

8.7 Conclusions

Agriculture is critical to livelihoods as a source of subsistence, as a commercial product for the domestic market, and in the form of coconut-related products for export. Government policy acknowledges both of these requirements. However as in a number of other policy areas, 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 perceived fragmentation and increase coordination within the Agriculture Division's programmes and activities as well as with related sectors. Depending on the government's overall priorities and relative spending commitments, more human and financial resources may be required.

It is critical that the current shortage of copra to KCMCL be addressed so that copra is available for the production of oil. Coconut replanting would help tackle this problem. A merging of the two management boards of KCMCL and KCCS (as in the past) is a possibility. Alternatively a copra purchase contract may be arranged with KCCS. In order to regularize the supply of copra from outer islands, KCCS should consider establishing a contract with the KSCS. This could include subsidizing the KSCS for routes that are not profitable to them so as to ensure that copra makes it to market.

In addition support may be provided to the Environment Division to preserve atoll biodiversity and associated traditional knowledge so as to further promote food security and agro-biodiversity. Specific attention should be directed to the development of agriculture on Christmas Island. Activities here may also apply in other locations, particularly on islands other than Tarawa. Tourism development on Christmas Island is closely linked to eco-cultural biodiversity. Enhanced training would assist in the training of students, guides and the general public, as well as tourists, to promote greater understanding and appreciation of the limited resources, fragile atoll ecosystem and assist to improve agro-biodiversity management.

A survey of traditional crop varieties on the Gilbert Islands would help assess the rate of loss of agro-biodiversity and establish an updated national baseline so as to gauge future losses including from impacts stemming from climate change and sea level rise. For the same reason it may be worth conducting Geographical Information Systems (GIS) mapping of the country so as to establish a baseline of babai pits, coconut groves, Ficus trees, breadfruit and pandanus, as well as coastlines.

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Annex 1: Status of audit of all public enterprises in Kiribati, as of Dec 2009

Audit Status of Key State Owned Enterprises		
State Owned Enterprise	Financial Year Statements	Status
1.Otintaii Hotel	2007	Tabled in August 2009
Otintaii Hotel	2006, 2008	Overdue accounts
2. Central Pacific Producer	2007-08	Tabled in August 2009
3. Television Kiribati Limited	2007-08	Tabled in August 2009
4. Telecom Authority of Kiribati	2008	Tabled in August 2009
5.Kiribati Copra Mill	2008	Tabled in August 2009
6.Development Bank of Kiribati	2005-06	Tabled in August 2009
Development Bank of Kiribati	2007	Currently in progress
Development Bank of Kiribati	2008	Overdue accounts
7.Kiribati Copra Society	2005-08	Tabled in August 2009
8.Kiribati Oil Company Limited	2007-08	Tabled in August 2009
9.Kiribati Provident Fund	2004-05	Tabled in August 2009
.Kiribati Provident Fund	2006-07	Currently in progress
10.Kiribati Supplies Company Limited	2007 (will close soon)	Tabled in August 2009
11.Kiribati Supplies Company Limited	2008	Currently in progress
12.Captain Cook Hotel	2008	To be tabled in November 2009
13.Betio Shipyard Limited	2007-08	To be tabled in November 2009
14 Kiribati Shipping Services Limited	2003-07	To be tabled in November 2009
Kiribati Shipping Services Limited	2008	Overdue accounts
15. Solar Energy Company	2008	To be tabled in November 2009
16. Public Vehicle Unit	2006-08	To be tabled in November 2009
17. Kiribati Housing Corporation	2006	To be tabled in November 2009
Kiribati Housing Corporation	2007-08	Overdue accounts
18.Kiribati Insurance Corporation	2002-05	To be tabled in November 2009
Kiribati Insurance Corporation	2006-08	Currently in progress
19.Telecom Services Kiribati Limited	2007-08	To be tabled in November 2009
20.Kiribati Handicraft & Local Produce	2002-08	Currently in progress
21. Kiribati Port Authority	2008	Overdue accounts
22.Public Utilities Board	2006-07	Currently in progress
Public Utilities Board	2008	Overdue accounts
23.Air Kiribati Limited	2006-09	Overdue accounts
24.Atoll Seaweed Corporation	2006 (closed down in 2008)	Returned for resubmission
Atoll Seaweed Corporation	2007/08	Overdue accounts
25. Bobotin Kiribati Limited	2008	Overdue accounts
26. Broadcasting Publication Authority	2006-08	Overdue accounts
27. Tarawa Biscuit Company	Closed last year.	

Source: Kiribati PEFA report (2010)

Annex 2: Prohibited and restricted imports**PROHIBITED IMPORTS**

Item No	Goods
1	Base or counterfeit coin, currency or banknotes of any country.
2	Articles of food intended for human consumption declared by the Minister responsible for health to be unfit for human consumption.
3	Indecent or obscene goods.
4	Animals, carcasses and hides that have been prohibited by the Minister, acting in accordance with the advice of the Cabinet, by notice published in the Gazette, to prevent the introduction or spread of any communicable disease.
5	Matches containing white or yellow phosphorous.
6	Goods manufactured outside of Kiribati bearing the name or trademark of anyone in Kiribati, unless the goods indicate the country of origin.
7	Prepared opium.
8	Pipes and other utensils used in smoking opium or preparing opium for smoking.
9	Goods bearing - (a) the National Emblem of Kiribati; or (b) any token or symbol so nearly resembling the National Emblem as to be capable of being readily mistaken for it, without authorisation from the Office of the Beretitenti.
10	Fictitious postage stamps and anything capable of making fictitious postage stamps.
11	Knives having a blade which opens automatically by hand pressure applied to a button, spring or other device in or attached to the handle of the knife.
12	Knives having a blade which is released from the handle or sheath by - (a) the force of gravity; or (b) centrifugal force, and when released is locked in place by means of a button, lever or other device.
13	Solid contraptions that are - (a) made or adapted to be gripped in the fist or fitted to or over one or more fingers; and (b) equipped with any projection or striking surface; and (c) made or adapted for causing injury to the person.
14	Imitation firearms so closely resembling firearms as to be calculated to deceive.
15	Machines for playing games of chance, which require no action by any player other than the actuation or manipulation of the machine.
16	Goods the possession of which is prohibited by any law of Kiribati.
17	Goods the importation of which is prohibited by any law of Kiribati.

**SCHEDULE 4
(SECTION 57)**
RESTRICTED IMPORTS

Item No.	Goods	Restriction
1	Absolute alcohol.	May only be imported in the quantities permitted by the Minister, acting in accordance with the advice of the Cabinet.
2	Ethyl Alcohol, as defined in the British Pharmacopæia, as published from time to time.	May only be imported in the quantities permitted by the Minister, acting in accordance with the advice of the Cabinet.
3	Earth, soil, loam, sand, mud, dust, clay, ashes, and similar substances from any other source other than soil.	<p>May only be imported if the goods originate in, and are imported directly from -</p> <ul style="list-style-type: none"> (a) Australia; or (b) New Zealand; or (c) Fiji; or (d) the Solomon Islands; or (e) Hawaii, <p>and are accompanied by a certificate given by an agricultural or scientific officer in the employment of the government of the country of origin of the goods which proves to the Comptroller that the goods are free from disease and any harmful form of animal, insect or plant life.</p>
4	Goods the importation of which is subject to conditions imposed by any law of Kiribati.	Compliance with any conditions for importation set out under that law.

Annex 3: Air Kiribati domestic flight schedule (with two aircraft in operation)

DAY	A/C	ROUTE	ETD	ROUTE	ETA	DAY	A/C	ROUTE	ETD	ROUTE	ETA
MON	CASA	TARAWA	0900	TABNORTH	1035	FRI	Y-12	TARAWA	0900	TABNORTH	1015
		TABNORTH	1105	BERU	1135			TABNORTH	1045	TARAWA	1200
		BERU	1135	NIKUNAU	1155						
		NIKUNAU	1225	TABNORTH	1305		Y-12	TARAWA	1230	ABAIANG	1240
		TABNORTH	1335	TARAWA	1450			ABAIANG	1300	MARAKEI	1310
								MARAKEI	1330	TARAWA	1350
							Y-12	TARAWA	1415	MAIANA	1425
	Y-12	TARAWA	0900	NONOUTI	1000			MAIANA	1445	TARAWA	1455
		NONOUTI	1020	TARAWA	1120						
							CASA	TARAWA	0900	BUTARI-TARI	0945

								BUTARITA	1005	MAKIN	1015
TUES	Y-12	TARAWA	0900	TABNORTH	1015			MAKIN	1035	TARAWA	1125
		TABNORTH	1045	ONOTOA	1106						
		ONOTOA	1126	TARAWA	1300		CASA	TARAWA	1150	ABEMAMA	1220
								ABEMAMA	1240	TARAWA	1310
	CASA	TARAWA	0900	TABNORTH	1010						
		TABNORTH	1040	TABSOUTH	1050		CASA	TARAWA	1340	KURIA	1410
		TABSOUTH	1110	TARAWA	1230			KURIA	1430	ARANUKA	1440
								ARANUKA	1500	TARAWA	1530
WED	CASA	TARAWA	0630	TABNORTH	0735						
		TABNORTH	0805	NONOUTI	0821	SAT		NIL			
		NONOUTI	0841	TARAWA	0941						
	CASA	TARAWA	1021	ABEMAMA	1051	SUN	Y-12	TARAWA	0900	BUTARI-TARI	0945
		ABEMAMA	1112	TARAWA	1142			BUTARITA	1005	TARAWA	1050
							Y-12	TARAWA	1120	MAIANA	1130
	Y-12	TARAWA	0900	BUTARI-TARI	0945			MAIANA	1150	TARAWA	1200
		BUTARITAR	1005	MAKIN	1015						
		MAKIN	1035	TARAWA	1125		CASA	TARAWA	0900	MARAKEI	0920
								MARAKEI	0940	ABAIANG	0950
	Y-12	TARAWA	1150	MARAKEI	1210			ABAIANG	1010	TARAWA	1020
		MARAKEI	1230	ABAIANG	1240						
		ABAIANG	1300	TARAWA	1310		CASA	TARAWA	1050	KURIA	1120
								KURIA	1140	ARANUKA	1150
								ARANUKA	1210	TARAWA	1240
THU	Y-12	TARAWA	0900	TABNORTH	1015						
		TABNORTH	1055	TAMANA	1137		CASA	TARAWA	1310	ABEMAMA	1340
		TAMANA	1157	ARORAE	1218			ABEMAMA	1400	TARAWA	1430
		ARORAE	1238	TABNORTH	1338						
		TABNORTH	1418	TARAWA	1528						

ANNEX 4: THE AMBO DECLARATION

We, Leaders, Ministers and Representatives of Governments participating in the Tarawa Climate Change Conference held on 10th November 2010, recognizing that, climate change is one of the greatest challenges of our time and that there is an urgent need for more and immediate action to be undertaken to address the causes and adverse impacts of climate change, expressed;

1. Alarm at the impacts of the climate change crisis already being felt in our countries threatening the sustainable development and security of our countries, especially the immediate threat to the livelihood and survival of the most vulnerable States on the frontline, including Small Island States, Least Developed Countries and countries susceptible to drought and desertification;
2. Grave concerns over recent scientific findings on the worsening state of the global climate as a result of human induced climate change, especially the primary impacts such as sea level rise, ocean acidification and extreme weather events and their adverse consequences, threatening the survival of atoll and low lying nations, their people and biodiversity;
3. Acknowledgement that anthropogenic climate change can be mitigated through greater cooperation by Parties to the United Nations Framework Convention on Climate Change (UNFCCC) and through individual and global commitment to achieving deep cuts in current and future emissions levels, and agreed to pursue this vigorously;
4. Ongoing commitment to the principles and provisions of the UNFCCC, the Kyoto Protocol, the Bali Road Map mandate and to building on the political understandings of the Copenhagen Accord.
5. Deep concerns over the slow pace that international negotiations within the UNFCCC is taking to reach legally binding agreements necessary to meet the ultimate objectives of the Convention and call upon all Parties to work together to fast track the pace of these negotiations to safeguard the future of peoples, particularly those in the most vulnerable States in the frontline;
6. Acknowledgement that there are elements of common ground in the negotiations that can be agreed on to form the basis of action in the immediate term, elements which when implemented will reduce the vulnerability and enhance the resilience and adaptive capacity of developing countries, in particular, the most vulnerable States on the frontline, especially Small Island States, Least Developed Countries and those countries susceptible to drought and desertification.
7. Express concern over loss and degradation of biodiversity and its impact on human livelihood and welfare, in particular, in the most vulnerable States in the frontline, and also concern over the emissions added by land degradation;
8. Recognise the connection between low cost, sustainable adaptation and mitigation options and maintaining a healthy biodiversity and urge all nations to use aspects of biodiversity to increase their climate resilience and pave the way for cost-effective, environmentally friendly and sustainable development especially in the most vulnerable States in the frontline and further support the initiatives to implement the outcomes of CBD COP 10 including the CBD Biodiversity Strategic Plan 2011-2020.

We, Therefore Declare our resolve in moving forward with our collective commitment to addressing the causes and impacts of climate change and:

9. Call for decisions on an “urgent package” to be agreed to at the COP 16 for concrete and immediate implementation reflecting the common ground of Parties, consistent with the principles and provisions of the Convention , and the Bali Action Plan, inter alia, to assist those in most vulnerable States on the frontline to respond to the challenges posed by the climate change crisis;
10. Welcome the growing momentum and commitment for substantially increasing resources for climate change financing and call on developed country Parties to make available financial resources that are new and additional, adequate, predictable and sustainable, and on a clear, transparent and grant basis to developing country parties, especially the most vulnerable States on the front line, to meet and address current and projected impacts of climate change;
11. Acknowledge that the new fund to be established under the Convention should be operationalized as soon as possible with efficient and transparent institutional arrangements that ensures improved access, a balanced allocation of resources between adaptation and mitigation and considers the unique circumstances of most vulnerable States in the frontline;
12. Acknowledge that the new fund should provide for developing countries and in particular, the unique circumstances of the most vulnerable States on the frontline to the adverse impacts of climate change;
13. Call on Parties to the UNFCCC to consider the need for establishing an international mechanism responsible for planning, preparation for, and managing climate change related disaster risks in order to minimize and address the environmental and economic costs associated with loss and damage;
14. Urges the developed country Parties to the UNFCCC to support the implementation of country-driven institutional strengthening and concrete adaptation priorities aimed at reducing vulnerability and building resilience in developing country Parties, in particular, the most vulnerable States on the frontline to the adverse effects of climate change;
15. Support consideration of the development and implementation of strategies and actions directed at protecting people displaced within or across borders as a result of adverse effects arising from climate change extreme events;
16. Call on the developed country Parties to support the implementation of capacity building and transfer of technology priorities of developing country Parties to enhance their ability to contribute to the rapid reduction and mitigation of global emissions and to adapt to the adverse impacts of climate change, and further supported by transfer of environmentally sound technologies on mitigation and adaptation;
17. Call on developed country Parties to give priority support to the capacity building and technology transfer needs and priorities of the most vulnerable States in the frontline due to the urgency of the climate change crisis facing them;
18. Called on all Parties to the UNFCCC, in recognition of the urgency of the climate change crisis, to aim for concrete decisions at COP 16 that will give an explicit mandate for the timely conclusion of negotiations towards a legally binding outcome in line with the Bali Road Map and the political understandings of the Copenhagen Accord;

Adopted in Tarawa, Kiribati, 10 November, 2010

Adopted by:

AUSTRALIA

BRAZIL

CHINA

CUBA

FIJI

JAPAN

KIRIBATI

MALDIVES

REPUBLIC OF THE MARSHALL ISLANDS

NEW ZEALAND

SOLOMON ISLANDS

TONGA