
II. Situation Analysis and Agriculture Sector Overview

2.1 Kiribati is as an atoll nation spread over some 3.5 million square kilometres of the Pacific Ocean. Physically, it has some of the world's smallest islets, but also has - in Kiritimati (Christmas Island) - the world's largest atoll. The nation is facing numerous economic, social, demographic and environmental challenges, but the greatest challenge is the tyranny of distance. The country has limited natural resources and, for those natural resources it does possess (e.g. fisheries), insufficient capacity to exploit them for maximum national benefit. GDP per capita is the lowest amongst the Pacific Island Forum group and the economic outlook is fragile. With limited exports and rising costs of imports the country runs a deep trade deficit¹⁶. The heavy dependence on imported staple foods (such as rice and flour), coupled with soaring global food prices is posing a serious threat to both food and nutrition security. Average annual household income is about A\$8,700 and an estimated 46 per cent is spent on food, which constitutes the single largest expenditure group¹⁷. Increased urbanization on South Tarawa due to migration of population from the outer islands is accentuating social issues and environmental problems. A high priority for government therefore is to provide sustainable livelihood opportunities on the outer islands. Government is encouraging outer island growth focused on Kiritimati, with the objective of locating up to 20,000 people on the island. As a low low-lying atoll nation, adaptation to the impacts of climate change is being mainstreamed into national development policy.

¹⁶ Currently deficits in trade and services are substantially offset by external earnings from the Revenue Equalization Reserve Fund (RERF), fishing license fees, remittances and donor assistance.

¹⁷ Household Income and Expenditure Survey (HEIS) 2006 Report, Kiribati National Statistics Office.

- 2.2** Agriculture and fisheries are vital for food security, sustainable livelihoods and for national economic growth. Agriculture and fisheries development, particularly for the outer islands, are emphasized as priorities in the Kiribati Development Plan (KDP) 2008-2011. An overall strategic objective for the development of the agriculture sector is to maximize sustainable agricultural production to enable the Kiribati people to have: adequate food, a generally healthy diet and increased cash income. However, agricultural conditions are extremely difficult in Kiribati because of poor soil conditions and scarce fresh water on the atoll islands. A central focus of the agriculture department is to increase availability of planting materials to increase production and productivity of traditional staple crops and for the development of home gardens to produce nutritious vegetables and fruits. An agriculture sector plan that provides a coherent policy framework and medium term financing plan for promoting agriculture development is urgently needed to progress work in the sector.
- 2.3** Copra remains the principal agricultural export commodity along with sea weed, fish and shark fins. The atolls are widely planted with coconut trees, but copra export value had fallen from around A\$9 million in 1999 to A\$1.1 million in 2005. Nevertheless, the coconut is still considered the “tree of life” with good potential to produce multiple valuable products both for food security and income generation. However, an estimated 40 per cent of the coconut population is senile, therefore rehabilitation and replanting of coconut plantations has high priority. Coconut value chain development is now the strategic objective, but because of the current vital importance of copra for livelihoods on the outer islands the government continues to maintain a copra price subsidy.
- 2.4** Livestock production in the country is mainly at subsistence level, with pigs and free-range chicken being the main livestock kept. Most households at the outer islands keep a few pigs and a number of local chickens. 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 since such feed has to be imported. 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.
- 2.5** The importance of marine resources to the Kiribati economy cannot be overestimated. It is the sector with the greatest potential for providing income earning opportunities to people in the outer islands and enhancing the sustainable development of the fisheries sector is therefore given high priority. Currently license fees and transshipments represent the main economic activities. However, marine resources are vital also for food security and livelihoods and the Kiribati Government therefore puts strong emphasis on community-based sustainable management of fisheries resources. Subsistence and small-scale artisanal fishing are conducted from traditional canoes driven by sail or paddle, from plywood canoes powered by outboard motor and from larger outboard-powered skiffs. Most inshore and coastal fishing activity in Kiribati is for subsistence purposes. Impoundment of milkfish (*Chanos chanos*) fry at spring tides occurs in brackish water lagoons on some islands. *Eucheuma* seaweeds, (*Kappaphycus alvarezii*), have been cultured in Kiribati since the early 1980s and farms established in suitable atolls throughout the country’s three island groups. Following the establishment of the Central Pacific Products (CPP) in 2001, the level of artisanal fishing in some of the islands had expanded onto income generation activities. This became possible from CPP’s interventions of providing modified canoes to all the villages in the 4 closest islands to Tarawa together with storage facilities. In turn the fishers are able to export part of their catches to CPP at Betio, Tarawa who then process them and sell them to outlets on South Tarawa. To expand income earning opportunities the fisheries department aims to develop cost effective and adaptive fishing technologies to promote fish production and to assist local fishermen in processing of fish and in value adding product development. To progress this infrastructure needs to be improved. Communities also need to be trained in

proper product handling, quality control, processing and storage, as well as gain the basic business skills needed to ensure income-generating activities are financially sustainable.

2.6 Aquaculture is seen as another important area for further development to enhance employment and income opportunities. Export oriented aquaculture will continue to face stiff competition from countries with low production costs and efficient transportation links to major markets. There is already a body of knowledge available in the country on mariculture production and commercial aspects of such operations. The major task is developing models that can translate this knowledge, including ongoing research and experimentation, to the community level. A clear strategic programme for development which is well coordinated and has strong private sector involvement needs to be implemented. Innovative financing solutions for budding entrepreneurs need to be considered; including credit guarantee schemes coupled to business and technical skills training.

2.7 The government of Kiribati recognizes both external and internal challenges for environmental sustainability. Mitigating the threats of Climate Change and Sea level Rise is of paramount importance for continued survival and it is therefore vital to have in place contingency/adaptation plans. Community-based management of natural resources and maintenance of the environment is critical for sustainable growth in the agriculture, marine resources and tourism sectors. Increasingly, climate change is being mainstreamed into Ministry Operational Plans.

III. Key issues shaping priorities for FAO assistance

- ☐ High and volatile food and oil prices and a deep trade balance deficit.
- ☐ High dependency on imported foods
- ☐ Rapidly increasing levels of food and nutrition related non communicable diseases, which impact negatively on health system, families and national economy.
- ☐ Limited livelihood options particularly for outer islands.
- ☐ High level of youth unemployment particularly in urban areas.
- ☐ Lack of a sector plan that provides a coherent policy and financing framework for promoting agriculture development and food security.
- ☐ Limited human resource capacity for sector development.
- ☐ Limited capacity for staple food crop and livestock production.
- ☐ Limited water supply for competing demands between domestic and agricultural uses.
- ☐ Need to sustainably develop and diversify fisheries and aquaculture commodities for domestic and international markets.
- ☐ Need to sustainably develop coconut value added industries.
- ☐ Vulnerability to adverse impacts of Climate Change and Sea level Rise

IV. Country programme framework

4.1 The Kiribati Development Plan (KDP) 2008-2011 with the theme of “*Enhancing economic growth for sustainable development*” identifies six key policy areas for development: human resource development; economic growth and poverty reduction; health; environment; governance; and infrastructure. Individual line Ministries’ strategies are aligned towards these key policy areas. The KDP also seeks to contribute to goals and agendas aspired to in three prominent conventions: the Mauritius Strategy; the Millennium Development Goals; and the Pacific Plan. Developing and commercialising fisheries and marine resources, revitalizing the replanting of staple food crops on all islands, strengthening and diversifying the copra industry, and updating statistics and relevant information for planning and policy formulation are all highlighted as strategies under the key policy area: “Economic Growth and Poverty Reduction”. Broadening and diversifying production and export base, and reducing imports

through import-substitution are highlighted strategies to lower the substantial trade deficit. Kiribati is highly vulnerable to extreme events, especially coastal flooding from storm surges and droughts. Government has prepared a National Adaptation Programme of Action on Climate Change (2001) and implementation is being supported by World Bank (GEF), Australia and New Zealand.

4.2 Taiwan (ROC) provides significant bilateral support to Kiribati focused by government requests for assistance. The programme includes support for infrastructure, community development and agriculture. A Taiwan Technical Mission is present in Tarawa which is providing support to horticulture (including floriculture), food processing, livestock and aquaculture (milkfish propagation by providing fingerlings, formula research to develop a cheaper supplemental feed for aquaculture use, and high value saltwater fish rearing techniques). Japan provides support for infrastructure with an emphasis on fisheries. They have provided support for Betio Port maintenance, a Fisheries Center in Kiritimati Island and ice machine for Onotoa Island. A Fisheries Partnership Agreement with EU entered into force in 2003 and has been renewed in 2006. The agreement will provide support for fisheries sector policy and sustainable management of fisheries resources. SPC/IFAD in cooperation with the department of agriculture is supporting the development of an “Atoll Centre of Excellence” to undertake agricultural research and development. UNICEF and WHO are providing support for awareness activities on healthy and nutritious diets and WHO has also assisted with development of food safety legislation and regulations.

4.3 Climate Change is being addressed through the Kiribati Adaptation Program (KAP) started in 2003 under World Bank/Japanese assistance. KAP has been merged with the UNDP/GEF supported preparation of a National Adaptation Programme of Action (NAPA). The current project, KAP-II, builds on the merged activities of KAP-I and the preparation of the NAPA by continuing the process of consultation-based mainstreaming of adaptation, including economic planning, legislative and regulatory issues; and by building experience in implementation of adaptation through select pilot activities. Lessons learned from KAP-II are being used to plan the long-term national response to climate change envisaged for 2008/9 onwards.

Overview of FAO on-going and recent assistance.

4.4 Through TCP assistance and the RPFS recent support has focused on increased food crop production to enhance food security and improve diets. TCP support has been provided for growing sigatoka disease resistant banana varieties and a RPFS project aimed at increasing local food production through the establishment of nurseries to supply planting materials and training of farmers. Additional TA has been provided for establishing a food processing unit.

Other assistance

4.5 Technical and financial support was provided to Kiribati for the preparation of their country report on Forest Sector Outlook Study 2020, and for preparation of a National Plan of Action to address Illegal, Unregulated and Unreported Fishing (NPOA IUU). Kiribati has also benefited from the Telefood Program of FAO. Since its inception in 1997, there have been 4 Telefood projects approved and implemented.

V. Proposed Programme Framework

5.1 Based on the situation analysis and existing medium-term priorities of the Government and the UN System, and taking into account past and on-going FAO and partner’s programmes, the following four priority outcomes will be pursued in the next four years:

- 1) Strengthened policy, legal and regulatory frameworks for sustainable agriculture and fisheries development.

- 2) Increased production, productivity and resilience of crop and livestock systems suitable for atoll conditions.
- 3) A strengthened and diversified copra industry.
- 4) Sustainably developed aquaculture, inshore fisheries and value added products.

Strengthened policy, legal and regulatory frameworks for sustainable agriculture and fisheries development.

5.2 Agriculture and fisheries constitute the mainstay of the everyday life of the I-Kiribati people and this should be fully reflected in the national development framework if Kiribati is to attain a high level of food security. As a first step, the national policy framework needs to be strengthened to clearly define what food security issues are, set clear goals, targets and outputs, activities and the role of all stakeholders. Improvements are also needed to expand data for effective planning and policy formulation. FAO will focus technical assistance to support a strengthened policy framework for sustainable agriculture and fisheries development to enhance food security and livelihoods.

Increased production, productivity and resilience of crop and livestock systems.

5.3 The atoll environment is one of the most challenging for crop and livestock production. Poor soils, scarcity of the water resource, and vulnerability to environmental degradation and impacts of climate change limit options to increase production. Nevertheless, rapidly increasing population density in urban areas, soaring international fuel and oil prices and deteriorating diets, make it imperative that the level of self-sufficiency in food production is improved. Furthermore, opportunities exist to improve livelihoods (particularly on outer islands) through improved agriculture and fisheries productivity. Where there is sufficient local production of crops processing and value adding opportunities for income generation and import substitution may exist. Through the FSSLP and TCP resources support will be provided to strengthen traditional food production systems and services to the sector. Particular attention will be accorded to Kiribati's vulnerability to the impacts of climate change and sea level rise.

A strengthened and diversified copra industry.

5.4 A thriving coconut industry remains vital for rural livelihoods and the economy. The sector needs to be restructured and revitalized with a stronger focus on whole nut processing and value added products. Extensive replanting is now required. FSSLP resources will focus assistance on an integrated coconut development programme and further support through TCP funds could be provided to strengthen resource management (GIS mapping) and for utilization of the coconut timber resource.

Sustainably developed aquaculture, inshore fisheries and value added products.

5.5 Sustainable development of the marine resource offers the greatest potential for economic growth, sustainable livelihoods and food security in Kiribati. It is necessary to expand fisheries projects on marketable marine resources whilst also ensuring conservation of stocks of vulnerable species. Potential exists for mariculture development, but it is necessary now to effectively manage the transition from government research to commercial production. Resources from the FSSLP and TCP should focus support on sustainable development of aquaculture, inshore fisheries and value added products. Capacity building support in the area of food safety and standards will enhance opportunities for processed and value added products.

Priority NMPTF Outcomes and their Relationship to the Government and UN Medium-term Priorities

National Medium-Term Development Agenda KDP 2007-2011		UNDAF Results Areas: 1. Equitable economic growth and poverty reduction, 2. Good Governance and Human Rights & 4. Sustainable environmental management		
Strategic Goals	Key Issues/constraints	NMPTF Outcomes	NMPTF Outputs	Potential areas for FAO assistance
<p>Increasing and expanding economic growth</p> <p><i>Improve and update statistics and relevant information for planning and policy formulation</i></p> <p><i>Revitalize the replanting of staple food crops on all the islands</i></p> <p><i>Improve, strengthen and diversify the copra industry</i></p> <p><i>Develop and commercialize the fisheries, marine, and mineral resources</i></p> <p><i>Expand and enhance production and export from Kiritimati (fish, prawns, solar salt, etc)</i></p>	<ul style="list-style-type: none"> <input type="checkbox"/> Lack of a sector plan that provides a coherent policy and financing framework for promoting agriculture development and food security. <input type="checkbox"/> Rapidly increasing levels of food and nutrition related non communicable diseases <input type="checkbox"/> Limited capacity for staple food crop and livestock production. <input type="checkbox"/> Limited livelihood options particularly for outer islands. <input type="checkbox"/> Limited water supply for competing demands between domestic and agricultural uses. <input type="checkbox"/> Need to sustainably develop coconut value added industries. <input type="checkbox"/> Limited human resource capacity for sector development. <input type="checkbox"/> Need to sustainably develop and diversify fisheries and aquaculture commodities for domestic and international markets. 	<p><i>Strengthened policy, legal and regulatory frameworks for sustainable agriculture and fisheries development.</i></p> <p><i>Increased production, productivity and resilience of crop and livestock systems.</i></p> <p><i>A strengthened and diversified copra industry.</i></p>	<ul style="list-style-type: none"> <input type="checkbox"/> Evidenced-based sector policy in place <input type="checkbox"/> Appropriate technologies for crop and fruit trees disseminated to farmers and increased awareness of nutrition <input type="checkbox"/> Livestock feed mix developed and training provided <input type="checkbox"/> Increased areas of new plantings, appropriate training on processing and equipment for processing <input type="checkbox"/> Technical and economic feasibility studies for aquaculture undertaken <input type="checkbox"/> Fish processing facilities in place and training provided <input type="checkbox"/> Canoes and other infrastructure provided and strengthened regulatory framework in place 	<p>Support for sector policy development and for data & statistics collection and management systems (TCPF, TCP)</p> <p>Integrated Atoll farming systems project (FSSLP)</p> <p>Integrated Livestock Development (FSSLP)</p> <p>Technology for water conservation and irrigation (TCP)</p> <p>Integrated Coconut Development (FSSLP)</p> <p>Support for development of timber resource and GIS mapping. (TCP)</p> <p>Community fishing centres and aquaculture development (FSSLP)</p> <p>Support to Central Pacific Producers (FSSLP)</p>

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Strategic Goals	Key Issues/constraints	NMTPF Outcomes	NMTPF Outputs	Potential areas for FAO assistance
<p>Lowering the trade deficit</p> <p><i>Reduce imports through import-substitution and promotion of local produce</i></p> <p><i>Improve quality of local products and promote them to tourists and overseas markets</i></p> <p>Protection of island biodiversity (i.e. plants, animals, and living systems)</p>	<p><input type="checkbox"/> High and volatile food and oil prices and a deep trade balance deficit.</p> <p><input type="checkbox"/> High food import dependency</p> <p><input type="checkbox"/> Vulnerability to adverse impacts of Climate Change and Sea level Rise</p>	<p><i>Sustainably developed aquaculture, inshore fisheries and value added products.</i></p>	<p><input type="checkbox"/> Processing equipment, products developed and training provided.</p> <p><input type="checkbox"/> Training and capacity building provided.</p> <p><input type="checkbox"/> Increased resilience of agricultural systems to impacts of climate change</p>	<p>Food processing and value adding development (FSSLP)</p> <p>Food safety/standards capacity building in HACCP and Codex.</p> <p>Horizontal component of FSSLP on climate change adaptation/mitigation</p>

The FAO activities have been determined through dialogue with the government and other sector Stakeholders, and in accordance with the priorities set out in the Kiribati Development Plan 2007-2011.

