

The agriculture-nutrition-income nexus in Fiji



In a nutshell

- Agriculture in Fiji contributes 9% of gross domestic product and absorbs 40% of the labour force. Over 70% of the population is engaged in subsistence and semi subsistence agriculture.
- Insufficient production capacity, inconsistent quality and limited knowledge of the nutrient and health benefits make local fruits, root crops, seafood and vegetables uncompetitive.
- Non-communicable diseases are the leading cause of death (77%). About 70% of the population is either overweight or obese; the prevalence of diabetes and hypertension is rising. Anemia is a public health issue and dietary diversity is poor.
- Women play an important role in household nutrition and are custodians of fishery and agricultural knowledge but face many barriers to accessing business, financial and other services. Only about 1% of the 33,000 registered farmers in Fiji are female.
- Numerous policies, programmes and organisations shape the agriculturenutrition-income agenda but with mixed results and very limited impact.



"Women play an important role in household nutrition and are custodians of fishery and agricultural knowledge."

Key recommendations

- Establish a cross-sectoral, multistakeholder, gender-sensitive technical oversight committee to improve coherence in policy and decisionmaking for improved agriculture and agribusiness performance, economic empowerment and nutrition outcomes.
- Develop and implement a monitoring and evaluation framework for tracking achievements against agreed targets across government ministries, working in partnership with producers, academia and the private sector including financial institutions.
- Support and strengthen communitybased organisations that are piloting innovative and effective solutions that contribute to women's agricultural and economic transformation and particularly benefit rural households.
- Conduct more scientific research on the nutrient content and health benefits of traditional Fijian crops and marine resources and support the development of new/improved/novel healthy Fijian food products.
- Design and conduct more targeted education, communication and marketing campaigns to promote more diversified diets for good health. Align



the agriculture and nutrition curricula from primary to tertiary level to increase awareness of the health and economic benefits of local nutrientdense foods.

Increase access to affordable business, financial and technical services and mentorship support to enhance value chain performance. Train farmers, fisher folk and agribusinesses/small-medium enterprises on food safety, postharvest handling and production/ processing techniques.

The Republic of Fiji, an archipelago of over 332 small islands, is divided administratively into four divisions (Northern, Eastern, Central and Western), 15 provinces and 86 Tikinas (sub-districts). The total landmass of 18,270 km² is inhabited by approximately 840,000 people. However, since 1960 there has been a decline in the rural population, which by 2015 had reduced from 70.3% to approximately 46% of the total population. There are two major ethnic groups: the indigenous Melanesian Fijians and the Indo-Fijians, who make up 57% and 38% of the population, respectively.

The country's annual gross domestic product (GDP) was FJ\$ 11.7/US\$5.48 billion in 2018, which was predominantly generated from tourism and agriculture. However, a third of the population lives in poverty. A higher level of poverty was reported among heads

of agricultural households (49-52%) than those working in the service sector (23-27%). The population's annual growth rate is estimated at 0.7% and the average life expectancy is 68 years.

Fiji is only partly self-sufficient in the major food nutrients: fats (29%), carbohydrates (32%) and proteins (40%), resulting in the country's high dependence on imported foods to fill the gaps.

The challenge for Fiji is not only to sustainably increase agriculture's contribution to economic and social development, but to also ensure that investments in agriculture, agribusiness and value chain development reflect the importance of the agri-food system to improving nutrition outcomes and incomes.

The policy and institutional framework

Food and nutrition security initiatives in Fiji involve over 23 major governmental and non-governmental organisations (seven international, nine regional and seven national). In 2018, the priority commodities for investment, based on specific criteria identified by the Ministry of Agriculture, Rural and Maritime Development and National Disaster Management (MoA), included ginger, rice, dalo (taro) and yaqona (kava).

Over the years, the government has adopted several policies, strategies and action plans related to agriculture, nutrition, and economic development but there has been little alignment between them. These include: the Roadmap for Democracy and Sustainable Socio-Economic Development 2010-2014; the Fiji Plan of Action on Nutrition 2010-2014; the Fiji Green Growth Framework; and the Fiji 2020 Agriculture Sector Policy Agenda. There has been an attempt to address the issues of alignment in the Fiji Development Plan 2017-2021 (see Box 1) and the Fiji Policy on Food and Nutrition Security and Plan of Action 2019-2023.

Agriculture

Agriculture contributes 9% of GDP and absorbs 40% of the labour force. Subsistence farming, sugar cane production and fisheries make up the backbone of the agricultural sector. Forty four percent (44%) of all farms are below 1 ha in size and 0.2% are over 100 ha. Backyard gardens have traditionally sustained local food supply and the diets and livelihoods of the majority of rural families in Fiji.

There has been a constant decline in agricultural production for various reasons, including rural-urban migration and loss of market for sugar. Crop and livestock theft have also become more frequent, resulting in a high level of insecurity and negatively affecting larger-scale investments in agriculture. In addition, the traditional farming sector has not developed to a commercial level.

Box 1. Excerpt of Fiji's 5-Year National Development Plan 2017-2021

Policy goal: Develop a national food and nutrition security policy or framework.

Key strategies include:

- Create an enabling environment for the agriculture-nutrition nexus.
- Support evidence-based policy and planning.
- Promote nutrition-sensitive value chains to improve accessibility of nutritious food products.
- Improve multi-sector co-ordination of food and nutrition security policy.Mainstream nutrition into national
- sectoral policies and action plans.

Key Performance Indicators include:
Food sourced domestically compared to total food available (%): 2015 at 32% to reach 42% in 2021.
Cereal import dependency ratio: from 95% in 2015 to less than 95% in 2021.



"There has been a constant decline in agricultural production for various reasons, including rural-urban migration and loss of market for sugar."

Dalo is one of Fiji's most important agricultural crops, fulfilling 80% of the MoA criteria for food security, income and livelihood generation, and export earnings. Ginger also fulfils 80% of the MoA criteria for import substitution, income and livelihood generation, and export earnings, but it is mainly used as a spice. Rice, on the other hand, fulfils 80% of MoA criteria for import substitution and also saves on foreign exchange.

Binding constraints need to be addressed if dalo is to maintain its importance as an export commodity (see Box 2). There is need to: better organise farmers; restore sustainable commercial production on Taveuni (Fiji's third largest island) and achieve viable levels of production expansion into new areas; ensure the ready availability of quality planting material; adopt climate mitigation measures; reform market access for fresh taro; significantly transform toward value adding and processing; improve information flows, including financial, market and technical information; reduce the cost of doing business for farmers, processors and exporters; and invest in modern infrastructure including information communication technologies (ICTs) and environmental sustainability.

Women's participation in the sector, especially in commercial agriculture and agribusiness is minimal or primarily at the cottage level. Only about 1% of the 33,000 registered farmers are female. About 4% of women farmers make up 19% of paid farm labourers and 29% of unpaid farm labourers. Generally, women farm kitchen gardens for subsistence, which is generally unpaid. This situation needs to be improved.



Box 2. Good Practice: Fiji Crop and Livestock Council – Making Dalo FIT

Fiji dalo farmers' action and collaboration for improving local Food production and nutrition, improving farmers' Income and promoting Trade

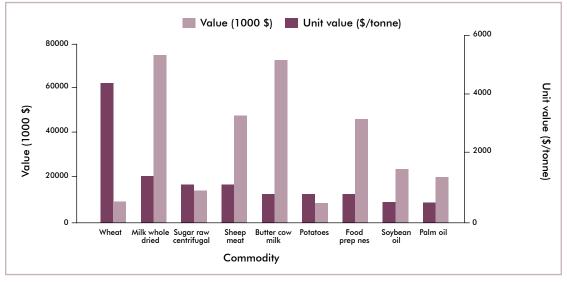
FCLC was mandated by the government in 2010 to help provide a more efficient and productive environment for the estimated 60,000 farmers in the non-sugar, agricultural sector. Dalo is a major staple food, providing complex carbohydrates. The leaves and branches are also rich in Vitamin B. FCLC aims to support the farmers to be formally organised and address gaps in production and market access. The Council has identified that farmers need training on financial literacy, business planning, post-harvest processing and understanding rules and standards for the local and export markets. A demand-pull approach is to be used whereby farmers plant according to the quota given by the buyers, and to support their family's daily consumption.

Food

Fijians' food choices are mainly determined by value for money, followed by ease of preparation; and especially for Indo-Fijians, they are also determined by personal preference. Women are responsible for food purchasing and meeting the family's nutritional needs. In traditional functions, indigenous Fijians continue to use dalo and yams as gifts; however, these crops appear to be getting more expensive. Instant noodles are increasingly being used in the majority of dishes, especially in rural communities. For example, instant noodles have been mixed with wacipoki (dalo leaf pattie) and curry.

The traditional staples for the indigenous Fijian are breadfruits, plantain and root crops, which are typically consumed with fish and green leafy vegetables, such as dalo leaves and edible hibiscus cooked in coconut milk.





Source: FAOSTAT, 2014

Indo-Fijians, on the other hand, consume rice and roti which have also been adopted by indigenous Fijians. The most frequently consumed staples on a daily basis are: cassava (59.2%), rice (24.2%), breadfruit (14.7%), roti (12.5%) and dalo (10%). On a weekly basis, Indo-Fijian households consume dalo (40.9%), cassava (31%) and breadfruit (29.1%). Intake of animal protein (red meat: fresh and tinned) has increased and production of pork, poultry and goat has grown in response to domestic demand.

Other adverse dietary changes include shifts towards a higher-energy dense diet, with more fat and sugar; and reduced intake of complex carbohydrates and dietary fibre, primarily due to low fruit and vegetable consumption -1.2 servings of fruit and 1.9 servings of vegetables per day instead of the required 5 servings per day. This dietary transition was confirmed in the food balance sheets, in which between 60-80% of major food groups (cereals, fat, meats, milk and animal products, pulses, vegetables and vegetable oil and fat) are imported. In 2013, the total food import bill for the aforementioned groups was FJ\$747,700,000/US\$350,450,728, corresponding to 11-19% of total imports (Figure 1).

In 2009, the imported foods provided significant portions of the macro-nutrients that the country needed: fat (71%), carbohydrates (68%) and protein (60%);

confirming the dependence on these foods. High consumption of energy-dense foods is also considered a contributing factor to the increasing prevalence of non-communicable diseases (NCDs) in Fiji.

Nutrition

The major nutrition challenges in Fiji are the high incidence of NCDs and micronutrient deficiency, primarily iron and iodine; anaemia – especially among women of child-bearing-age, affects 40.3% of the population. Over a third of the population is at high risk of NCDs (35.8%) and 62% at moderate risk. Hypertension is increasing – 31% in 2011 compared to 19.1% in 2002 – as is diabetes, which affects 29.6% of the population compared to 16% in 2002.

The high prevalence (66.9%) of overweight and obesity in the population, and low levels (20.8%) of physical activity, seen among adults, are other primary risk factors associated with NCDs. The low consumption of fruits and vegetables combined with the high consumption of imported, processed and calorie-dense foods are other associated factors.

Strengthening the agriculture-nutrition-income nexus

To achieve transformation of the agricultural sector will require agribusiness and value chain development and a strong focus on nutrition-sensitive local food crops and



fisheries. Improvements will be necessary in production efficiency, value-added processing and preservation facilities, logistics and telecommunications – including ICTs – and in creating stronger market linkages and an enabling policy and regulatory environment.

Jurisdiction over food production and food supply is assigned to the MoA, while nutrition though multidisciplinary, is generally the sole responsibility of the Ministry of Health. To improve nutrition outcomes, a cross-sectoral, multi-stakeholder approach is required. This can best be achieved through the government institutions working with several other players, including producer organisations and farming households, civil society, and public and private sector agents. It also requires the formulation of sound public policy that can influence the environment in which agriculture-nutritionincome pathways are operationalised. It is also important to ensure that all stakeholders are engaged in the participatory process to decide on priority issues and actions to take. Each has a role to play to contribute effectively to the development and implementation of agreed actions.

Mainstreaming gender may be an opportunity to increase women's engagement in strengthening the agriculture-nutrition-income nexus. Women's empowerment is associated with the economic and social development of the family due to their traditional role as carer of the children and family's well-being. Hence, they should be the most critical target group for improving nutrition outcomes. This calls for the strengthening of women's groups in community-based actions and agribusiness (see Box 3).

Public awareness and education campaigns on the importance of diversified diets, good health and nutrition and sustainable agricultural development, including home gardens and school food programmes, and value-addition, need to be intensified. The capacities of individuals and institutions also need to be strengthened to support the adoption of good practices.

Box 3. Good Practice: Foundation for Rural Integrated Enterprises & Development (FRIEND)

FRIEND, a charitable trust, has been very active in social, health, and economic aspects in the Western and Northern Divisions of Fiji since 2001. FRIEND uses an integrated holistic approach to agricultural development by combining socio, economic and health aspects in its projects. FRIEND has a trading and processing arm known as Tatadra Pacifika. Products include: chutneys, dried fruits, flours, honey, jams, pickles, spices and teas. FRIEND also runs a restaurant which sells only local foods and fish sourced from the communities in which they work. The food is prepared using traditional methods and with little or no fat, salt and sugar.

Recommendations

Recommendations for strengthening the agriculture-nutrition-income nexus include:

• Adopt and enforce policies that: reduce dependence on imports of processed foods; promote research on the nutrition and health benefits of local foods and; support product development, processing and preservation to increase the availability of and access to competitively priced nutrientdense local foods.

• Foster stronger inter-ministry cooperation among the Ministries of Agriculture, Economy, Industry and Trade, Health and Women, and partnership with the private and civil society organisations. NCDs, undernutrition, poverty and an underperforming agri-food system, cannot be solved entirely by one ministry alone or by solely focusing on increasing agricultural productivity and yield. The Ministry of Women and community leaders can work with various women's groups and communities to assist in the development and implementation of nutrition and gender-sensitive agriculture and enterprise development for improving household nutrition and incomes.

• Establish multi-stakeholder, cross-sectoral platforms for enhancing cooperation and collaboration to address the agriculturenutrition-income nexus. Provide adequate resources to operationalise and integrate the necessary inputs of the various actors and to effectively monitor and evaluate the respective contributions of sector ministries as well as the outputs and outcomes. Targets set in the Fiji National Development Plan 2017-2021 can be used to align commitments and track progress of joint coordinated actions of the multi-stakeholder partnership.

• Put an increased focus on improving the food retail environment to increase access to nutritious local foods. Adopt a communitybased approach, working in partnership with organised producer groups, successful NGOs and social enterprises to strengthen the agriculture-nutrition-income nexus.

Further reading

FAOSTAT (2014), Food and Agriculture Data. http://www.fao.org/faostat/en/

Ministry of Agriculture (2014). Fiji 2020 Agriculture Sector Policy Agenda http://www.agriculture.gov.fj/images/docs/publications/fiji-2020-agriculture-sector-policy-agenda.pdf

Ministry of Agriculture (2018). Fiji Agriculture & Rural Statistics http://www.unsiap.or.jp/e-learning/el_material/Agri/1808_Sampling_FJI/P_FIJI.pdf

Ministry of Economy (2017). 5-Year & 20-Year National Development Plan – Transforming Fiji https:// www.fiji.gov.fj/getattachment/15b0ba03-825e-47f7-bf69-094ad33004dd/5-Year---20-Year-NATIONAL-DEVELOPMENT-PLAN.aspx

Ministry of Health (2010). The Fiji Action Plan for Nutrition [FPAN] 2010-2014 https://www.health.gov.fj/wp-content/uploads/2014/09/4-Fiji-Plan-Of-Action-For-Nutrition-2010-2014.pdf

Ministry of Health and Medical Services and WHO (World Health Organization) (2011). Fiji – NCD Risk Factors STEPS Report 2011 https://www.health.gov.fj/wp-content/uploads/2018/11/Fiji-STEPS-Report-2011.pdf

Ministry of National Planning (2009). Roadmap for Democracy and Sustainable Socio-Economic Development 2010-2014

https://www.fiji.gov.fj/getattachment/Govt--Publications/Peoples-Charter/RSSED.pdf.aspx

Ministry of Strategic Planning, National Development Statistics (2014). A Green Growth Framework for Fiji: Restoring the Balance of Development that is Sustainable for Our Future https://pafpnet.spc.int/pafpnet/attachments/article/475/GREEN%20GROWTH%20FRAMEWORK.PDF

National Food and Nutrition Centre (2009). 2009 Fiji Food Balance Sheet http://www.nutrition.gov.fj/wp-content/uploads/2013/02/2009-FBS-Report-JGEd-print.pdf

World Bank (2011). Republic of Fiji Poverty Trends, Profiles and Small Area Estimation (Poverty Maps) in Republic of Fiji (2003-2009) http://documents.worldbank.org/curated/en/541511468249704606/ pdf/638420ESW0P1150isclosed0100310110FJ.pdf

World Bank (2019). Employment in Agriculture (% of total employment) (modeled ILO estimate) https://data. worldbank.org/indicator/SL.AGR.EMPL.ZS?locations=FJ

About the project

The project "Leveraging the Development of Local Food Crops and Fisheries Value Chains for Improved Nutrition and Sustainable Food Systems in the Pacific Islands with a focus on Fiji, Kiribati, Marshall Islands, Samoa, Solomon Islands, Tonga, and Vanuatu" (short project title: Promoting Nutritious Food Systems in the Pacific Islands) is co-funded by the International Fund for Agricultural Development

(IFAD) and the Technical Centre for Agricultural and Rural Cooperation (CTA) and is implemented in partnership with the Pacific Islands Private Sector Organisation (PIPSO). The goal is to strengthen the capacity of the Pacific Island governments, farmer and private sector organisations, and sub-regional institutions to develop strategies and programs – as well as mobilise financing – that can increase poor rural people's access to nutritious and healthy food. CTA has overall responsibility for the implementation of the project.

About the partners



The International Fund for Agricultural Development (IFAD), a specialised agency of the United Nations, was established as an international financial institution in 1977 as one of the major outcomes of the 1974 World Food Conference.

The Pacific Islands Private Sector Organization (PIPSO) is the premier private sector representative body in the Pacific Islands region. It was set-up through the mandate of the Forum Economic Ministers in 2005, and legally established in 2007, to be the representative body of the Pacific region's private sector. In doing so, it focuses its work on 4 key areas: Supporting National Private Sector Organizations (NPSOs) to be strong and responsive organisations; Assisting Pacific businesses to enhance their business competitiveness and growth; Championing the interests of private sector in the appropriate fora; and Ensuring the sustainability of PIPSO's resource and enhancing its capabilities.

Authors

J. Lako, J. Francis, J. Dietershagen

Photo credits Page 1: 1) Nature's Way Cooperative; 2) CTA Page 2, 3, and 4: CTA Page 6: FRIEND Fiji

About the series

CTA Technical Briefs document experience and learning in topical issues of interest to the ACP agricultural development community. They are intended as a practical guide for people involved in an issue professionally or for people with a strong interest in the topic.

Technical Centre for Agricultural and Rural Cooperation P.O. Box 380 - 6700 AJ Wageningen - The Netherlands Tel: +31 (0) 317 467 100 | E-mail: cta@cta.int | www.cta.int

This work has been made possible with the financial assistance of the European Union. However, the contents remain the sole responsibility of its author(s) and can under no circumstances be regarded as reflecting the position of CTA, its co-publisher or the European Union, nor of any country or member State. The user should make his/her own evaluation as to the appropriateness of any statement, argument, experimental technique or method described in the work.

This work is the sole intellectual property of CTA and its co-publishers, and cannot be commercially exploited. CTA encourages its dissemination for private study, research, teaching and non-commercial purposes, provided that appropriate acknowledgement is made:

- of CTA's copyright and EU financing, by including the name of the author, the title of the work and the following notice "© CTA 2019 EU financing",

- and that CTA's or its co-publishers', and European Union's endorsement of users' views, products or services is not implied in any way, by including the standard CTA disclaimer.

