

Food security and nutrition in Timor-Leste



KEY MESSAGES

- Food security challenges and opportunities in Timor-Leste differ substantially from Pacific Island Countries.
- Child and maternal undernutrition and micronutrient deficiencies are the most pressing nutritional challenges.
- Agricultural production and productivity are low and rice import dependence has grown.
- Similar to Pacific Island countries, food security relies on staple imports and is threatened by climate change and external drivers, while most people's livelihoods depend on natural resources.

CONTEXT

Since independence in 2002, Timor-Leste has occupied a unique position at the intersection of Southeast Asia and the Pacific region. Timor-Leste is ethnically and linguistically diverse, including people with Melanesian and Polynesian ancestry and several languages from the Papuan geographical grouping. Although not a member of the Pacific Community, Timor-Leste has historically had observer status, is included in the Pacific region in the United Nations listing of Small Island Developing States, and along with several Pacific nations is categorized as a Least Developed Country.

Timor-Leste is among the poorest and most food insecure countries in Southeast Asia and the Pacific region, with child stunting rates among the highest in the world. In 2021, the country ranked 140/191 countries in the UNDP human development index

and 112/125 countries in the 2023 Global Hunger Index. As this young post-conflict nation rebuilds its infrastructure, institutions and productive capacity there remain significant challenges to ensuring a more food-secure future. Poverty remains at very high levels - 42% of Timorese people lived below the national poverty line in 2014. More recent estimates remain at high levels - in 2021, UNDP estimated that 48.3% of the population, 637,000 people were multi-dimensionally poor. Food insecurity and malnutrition are well-recognized by the Government of Timor-Leste (GoTL) and they remain a focus of government policy and interventions. This focus notwithstanding, public investment in the agriculture sector is relatively small.

FOOD SECURITY AND AGRICULTURE

Most Timorese people live in rural areas and



Maliana central district food and produce market, Maliana city (Bobonaro district). Dirk Steenberg, 2017.

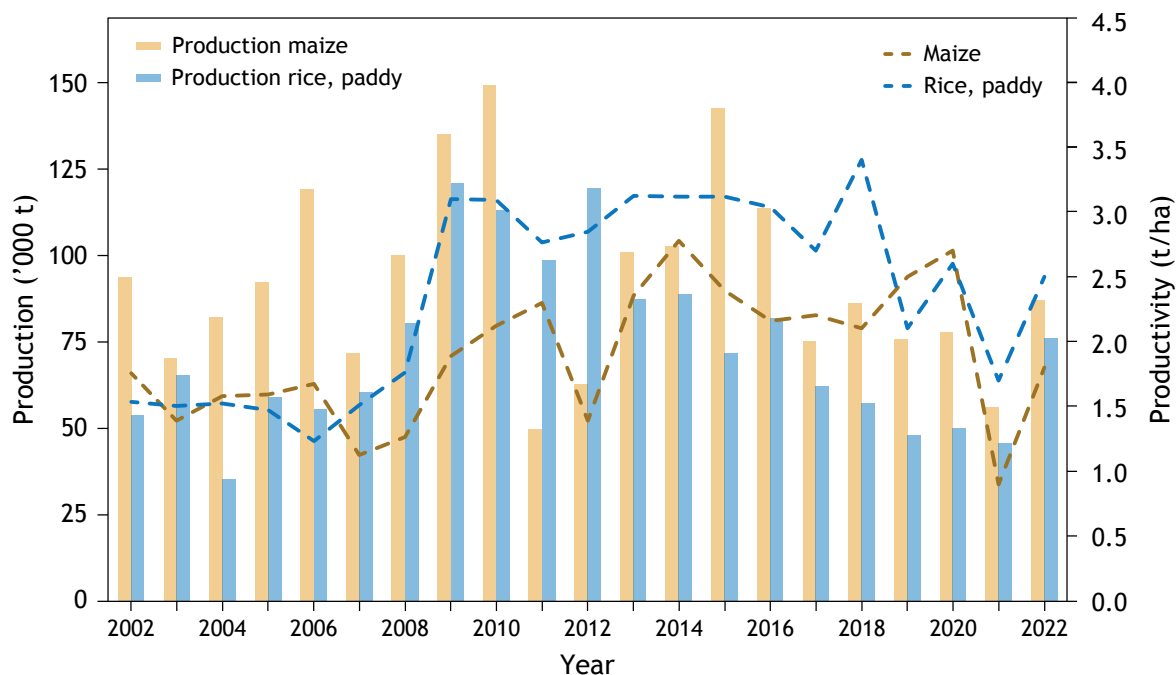


Figure 1. Production (Mt) and productivity (Mt/ha) and of key staples in Timor-Leste, 2002-2022. Data source FAOSTAT 2024.

farm for food. In 2019, 36% of Timorese people suffered moderate or severe food insecurity, and in 2023 around 21% faced acute food insecurity. Food insecurity is driven by a complex mixture of seasonal patterns in agricultural production, poor infrastructure and material poverty. The landscape is mountainous and with poor soils. Only 10% of total land area is considered suitable for agriculture. Patterns in food production and consumption differ among Timor-Leste's diverse micro-climates and agro-ecological zones. As a consequence, food insecurity is greatest in the rainy season as food reserves are depleted before annual harvests of staple crops, particularly in the uplands where rice is not grown and crops are rain fed.

Timor-Leste's primarily subsistence agricultural sector produces less food than is needed to feed the population. Staples production has declined over the past decade despite improvements in productivity, then hampered by the COVID-19 pandemic (Figure 1). As a result, the country is dependent on imports of staple foods, importing over 160,000 t of rice in 2022.

The four major crops, by volume, are maize, rice, cassava and sweet potato, with non-rice crops accounting for at least 75% of staple food production. In addition to staple crops, most households own livestock in small numbers and grow vegetables and tree crops. Only 5% of households participate in fishing as a livelihood. Aquaculture is promoted by the GoTL and development partners, and whilst the sector is growing, production remains low, contributing 13%

to the 7,450 t estimated from domestic fisheries production.

Most value chains are short and simple; bottlenecks include poor roads, high transport costs and a lack of processors, leading to generally sub-optimal post-harvest management and processing systems. Coffee is the major export commodity, comprising 97% of all non-oil exports.

NUTRITION AND DIETS

In contrast to Pacific Islands Countries, undernourishment remains the most prevalent form of malnutrition. Undernutrition is greatest among women and children in poor households and rural areas. Poor quality diets and protein deficiency are significant contributors to the high prevalence of stunting in children, 47% in 2020, and of underweight in women of reproductive age, 19%, and anaemia, 23%, that paint a picture of a food system that is not adequately serving its people.

Around 30% of people receive more than 70% of their total calories from starchy staples, indicating very poor quality diets lacking in macronutrient and micronutrient balance. In addition to the staple crops of maize and rice, diets are also supplemented with sweet potato and cassava, peanuts and other legumes, vegetables plus fruit. Yams and other local foods may also be harvested from forest areas during lean seasons. Wild food harvesting and intertidal gleaning provide an important food buffer, particularly for poor coastal households in deficit years when grain stores are exhausted faster than in normal years.

Consumption of animal-source foods in Timor-

Leste is very low. Meat in rural areas is typically consumed during ceremonies when chickens, pigs, goats, or buffalo are slaughtered. Consumption of meat in urban areas is higher than in inland areas due to greater market access and income, and fish consumption is low compared to other Pacific countries. Animal-source foods are desired yet expensive. Whilst women mostly manage food acquisitions, men often make the final decision regarding animal protein purchases. Timorese culture remains strongly patriarchal, and there is a gender imbalance in access to the means of production, particularly land, credit, technical advice and information, as well as Government provided inputs, impacting on nutrition outcomes and women's empowerment.

CLIMATE CHANGE

Climate change is expected to increase temperature and the frequency and intensity of droughts and floods, ranking Timor-Leste 16th in the World Risk Index and indicating a lack of coping and adaptive capacities. These changes are predicted to lead to decreased agricultural productivity and will also affect the suitability of key crops—particularly rain fed paddy, coffee, maize, and cassava.

Maize, a key subsistence crop, is particularly vulnerable due to its reliance on regular rainfall and lack of viable irrigation infrastructure in the country. Water insecurity is a key constraint for crop production and water access is highly variable in rural areas particularly during the dry season when many wells and water sources dry up. Nonetheless, the GoTL and development partners are making substantial efforts to spread

conservation agriculture and climate-smart approaches.

CONCLUSION

The GoTL is well positioned to improve food security and nutrition of the Timorese population through its political commitment, a comprehensive policy framework and resources derived from petroleum exports. Nonetheless, there are many challenges to overcome. Crops production is not sufficient to meet the requirements of a growing population and staple imports are necessary to ensure adequate food availability. Weather seasonality affects the stability of crops yields year-round, exacerbated by the increasing impacts of climate change that will compromise the sustainability of crops in future. These difficulties are compounded by unaffordable nutritious foods for many, such as those from animal origin, material poverty, and limited women's agency that restrict access to optimal nourishment and food utilisation.

Solutions exist and efforts through conservation agriculture, better irrigation infrastructure, improved husbandry, agro-forestry, and greater fish production, can yield more nutritious food as well as prosperous livelihoods for producers. Beyond food production, scaling proven nutrition-sensitive approaches is necessary. Importantly, governments that can catalyze inter-sectoral cooperation will be more effective at improving food systems for better nutritional outcomes. While food security and nutrition challenges in Timor-Leste are different from Pacific Island Countries, a strong cultural identity and a history of resilience can unite them to overcome such challenges on their own terms.

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- Note: the reader is directed to these sources and references therein for comprehensive citation of sources and analysis.

ABOUT

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