



SAMOA

FOOD SYSTEMS

PATHWAY 2030

*Transforming food systems for a resilient and
healthy Samoa where no one is left behind*

*Sustainable food and nutritional security and
affordable healthy diets*



Foreword



It is my pleasure to present this Samoa Food Systems Report informing the pathway for **'transforming food systems for a resilient and healthy Samoa where no one is left behind'** and for achieving sustainable **'food and nutritional security and affordable healthy diets'**.

The Samoa Food Systems Pathway 2030 has the following actions for achieving this goal:

- Transform the agriculture sector to boost local production.
- Strengthen the enabling environment for the sustainable development of food systems.
- Improve evidence-based knowledge and understanding of food systems and their components.
- Strengthen food policy and regulatory systems to facilitate a shift towards sustainable consumption patterns.
- Promote the consumption and availability of local traditional foods.
- Enhance nutrition education and promote healthy consumption patterns in the community and in the context of the whole food system.
- Promote the use of traditional knowledge to boost nature-positive production and sustainable agricultural practices.
- Strengthen extension services for improved knowledge and collaboration amongst farmers, fishers and other key players of the food industry.
- Improve environmental protection policy and regulatory measures including monitoring and evaluation of policy and regulatory impacts.
- Facilitate effective engagement of stakeholders including vulnerable groups in food system dialogues.
- Promote the role of women and youth in agricultural activities and food value chains.
- Enhance the role of communities and culture in developing the food systems and equitable livelihoods.

- As a food system involves multiple activities from production, processing, transporting and consumption, the real challenge lies in the implementation of these activities. We believe that the collective efforts of all stakeholders and our people are needed to address the many challenges we will face with ensuring food and nutritional security. The pathway actions reinforce our efforts to work in partnership across sectors in building sustainable and resilient food systems for Samoa.


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Summary

1. Introduction

With more than five years since the adoption of the 2030 Agenda for Sustainable Development, countries are mapping progress. The Agenda emphasises the importance of looking beyond hunger towards ensuring access to safe, nutritious and adequate food for everyone at all times, and to end all forms of malnutrition. As the impacts of the Covid-19 pandemic unfold, urgent foresight is needed to assess the impacts on food and nutrition security and key actions to address the challenges.

In response, the United Nations convened the global Food System Summit in September 2021, for country members to discuss key issues, challenges and solutions for transforming food systems to be healthier, safer, sustainable and equitable. Preparations for the Summit involved countries conducting national food systems dialogues. Samoa held its National Dialogue in April-June 2021, to inform the development of a **pathway** for '**transforming food systems for a resilient and healthy Samoa where no one is left behind**'. The findings from the National Dialogue and documentary evidence inform the pathway for Samoa, as presented in this Samoa Food Systems Report.

2. Status of the food systems in Samoa

The evidence suggests that Samoa is currently self-sufficient in several food groups. However, current and future trends, vulnerability to climate change, and susceptibility to shocks and other threats, within the inherent limitations of an island and small economy, present Samoa with many challenges in ensuring sustainable food systems that can cater for its growing population. The overall status of the current food systems is as follows:

Food production – areas for agriculture and household agricultural activities are in decline, with households engaging more in small scale, rather than large scale, farming. The biggest decline is in fishing and livestock. Unsustainable fishing and loss of biodiversity are some of the key concerns of the local food production systems. Food imports make up a quarter of the overall food supply in the country, with animal products (mostly chicken leg quarters) and processed foods comprising 80% of food imports.

Food processing – the food processing value chain in Samoa is not as vibrant and diversified as it should be. The sector has a large number of small enterprises producing primarily for the small local market with a restricted range of products. There is potential for developing niche markets in organic value chains.

Food consumption – the Samoan diet is not nutritionally balanced and falls short of the required micronutrients. The consumption of fruits and vegetables is low. The majority (61%) of the home food consumption is purchased, with only 37% of the top 30 food items (by share of expenditure) locally produced, suggesting a large consumption of food imports. Prices influence consumption and preference for modern (most are imported) foods over traditional foods are influenced by lower costs and convenience. Disparities in food consumption exist between poor and rich households. The shift in the Samoan diet from locally produced fresh foods to imported processed food (coupled with a sedentary way of life) adds to the burden of malnutrition and rising Non-Communicable Diseases (NCDs) in the country.

Food safety and waste – food safety is becoming a key concern given the ongoing effects of climate change and unsafe agricultural practices on the environment and ecosystem. Fish and seafood poisoning is becoming a concern given the impact of temperature variations and ocean acidification. Foodborne and waterborne diseases are expected to amplify with disasters (flooding and cyclones) becoming more intense. Land, forestry and soil health are ongoing concerns. Food waste is the largest waste discharged (36%), and postharvest losses (up to 20% of yields) are a disincentive for many local farmers.



Climate change causes harvest losses

3. Transforming food systems for a resilient and healthy Samoa

The following solutions were drawn from the National Dialogue and documentary evidence on Samoa Food Systems.

Ensure access to safe and nutritious food for all – inconsistent food supply, decreased consumption of local fresh produce, and increased consumption of cheaper imported processed foods are key ongoing challenges. The declining food tourism, restricted markets for trade, increased demands for cash, changing lifestyles, and high production, processing and transaction costs, are key disincentives for local people to remain engaged in the food sector. The key objective is for food systems to deliver the right food and quantities of affordable and safe food for nutritional health. This requires an increase in the supply and consumption of competitively priced, domestically produced food to cater for growing populations. There is a need to transform the food production sector, strengthen the enabling environment, and improve evidence-based knowledge and understanding of the food systems.



- ■ ■ **Shift to sustainable consumption patterns** – shifting to sustainable consumption patterns requires systemic actions to strengthen healthy, safe and sustainable food environments. This will enable people to adopt and maintain healthy dietary practices. Changes in dietary attitudes are also needed to shift towards a healthy eating lifestyle. This requires changes in food policy, food environments, civil society actions, private sector offerings, and consumer behaviour. This includes strengthening food policy and regulatory systems, promoting consumption and availability of local traditional foods, enhancing nutrition education, and promoting healthy eating habits.
- ■ ■ **Boost nature-positive production** – Samoa must adopt practices that protect nature, while meeting the basic human right to healthy and nutritious food for all. To be sustainable, food systems need to adapt to the adverse impacts of climate and environmental changes. The challenge for Samoa is improving its food system governance, reducing food losses and other negative environmental impacts, and adopting more nature-positive production practices. Promoting the use of traditional knowledge in sustainable agricultural practices, strengthening extension services, improving environmental protection policies and regulations, as well as monitoring and evaluation of impacts, can help improve nature-positive production in Samoa.
- ■ ■ **Advance equitable livelihoods** – targeting the 22% of the population living below the basic poverty line, including the 6% living in food poverty, is a priority. There is a need to address the systemic barriers preventing women, youth, persons with disabilities and others living in vulnerable conditions, from accessing better livelihoods in the food sector. Tailoring food system policies to reach vulnerable and marginalised groups, most of whom are in the informal sector, is a development priority. This includes bringing them into the formal labour market and social protection systems. There is a need to improve the identification and mapping of vulnerable populations. Facilitating effective engagement of vulnerable groups in food system discussions, promoting women and youth involvement in agriculture and food value chains, and enhancing the role of communities and culture in developing food systems and equitable livelihoods, will assist in advancing equitable livelihoods in the food sector.
- ■ ■ **Build resilience to vulnerabilities, shocks, and stress** – Samoa is highly susceptible to climate change, shocks and other threats. In response to the impacts of Covid-19, most local people rely on domestic farming to cope with the strain on finances and to ensure food security. Building the resilience of local people and the economy is also about building resilient food systems to withstand shocks. Climate resilient practices and resources for agriculture are needed, including diversification of agricultural practices and food production systems. The adoption of effective social protection measures is needed to provide safety nets of food supply and consumption.

4. A pathway for transforming sustainable, resilient and healthy food systems in Samoa

The pathway for ‘transforming food systems for a resilient Samoa where no one is left behind’ for achieving sustainable ‘food and nutritional security and affordable healthy diets’ comprises the following actions (Figure 1):

- Transform the agriculture sector to boost local production.
- Strengthen the enabling environment for the sustainable development of food systems.
- Improve evidence-based knowledge and understanding of food systems and their components.
- Strengthen food policy and regulatory systems to shift towards sustainable consumption patterns.
- Promote the consumption and availability of local traditional foods.
- Enhance nutrition education and promote healthy consumption patterns.
- Promote the use of traditional knowledge to boost nature-positive production and sustainable agricultural practices.
- Strengthen extension services for farmers, fishers and other key players of the food industry.
- Improve environmental protection policies and regulations including monitoring and evaluation of policy and regulatory impacts.
- Engage more effectively with stakeholders including vulnerable groups in food system dialogues.
- Promote the role of women and youth in agricultural activities and food value chains.
- Enhance the role of communities and culture in developing food systems and equitable livelihoods.
- Build climate resilient practices and resources for agriculture development.
- Implement social protection measures in response to the impact of shocks in food supply and consumption.



Promoting the consumption and availability of local traditional foods.

Scaling up investments, increasing resources, and providing strong leadership are required to adopt these pathway actions and to ensure effective implementation. The national food summit dialogues provide a platform to support regular monitoring of progress and assessing impacts.

Acknowledgement

We acknowledge the support and input of all individuals and organisations to this Report.

The Report presents a pathway for transforming Samoa's food systems, based on the 2021 National Food Systems Summit Dialogue and documentary evidence on the status of food and nutritional security, and proposed solutions for improving sustainable and resilient food systems in Samoa.

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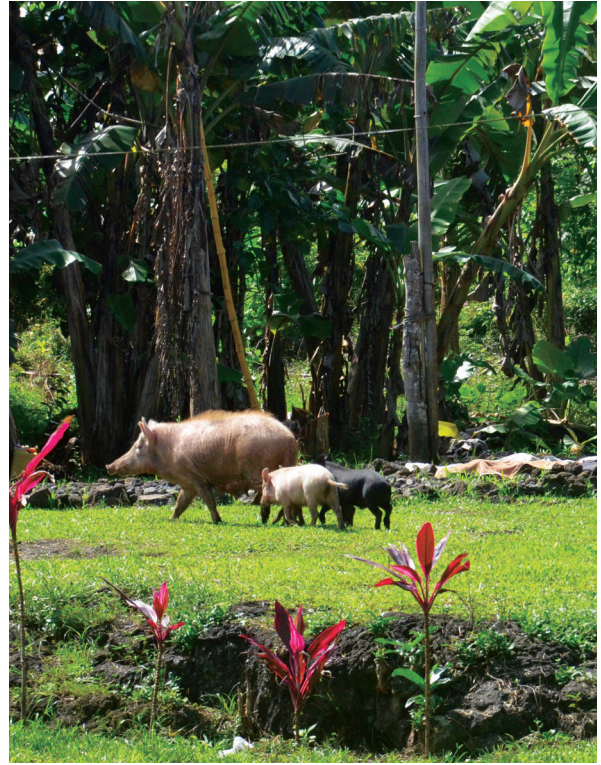


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Abbreviations

ADB	Asian Development Bank
ASP	Agriculture Sector Plan
CBS	Central Bank of Samoa
CSSP	Civil Society Support Program
EEZ	Exclusive Economic Zone
FAO	Food and Agriculture Organization of the United Nations
FSS	Food Systems Summit
GDP	Gross Domestic Product
HIES	Household Income and Expenditure Survey
HSP	Health Sector Plan
ICT	Information and Communication Technology
MAF	Ministry of Agriculture and Fisheries
MOF	Ministry of Finance
MOH	Ministry of Health
NCDs	Non-Communicable Diseases
NFNP	National Food and Nutrition Policy
NUS	National University of Samoa
PIC	Pacific island country
POP	Persistent Organic Pollutants
SACEP	Samoa Agriculture Competitive Enhancement Project
SAFPROM	Samoa Agriculture and Fisheries Productivity and Marketing
SAT	Samoa Tala
SBS	Samoa Bureau of Statistics
SDS	Samoa Development Strategy
SFSSD	Samoa Food Systems Summit Dialogue
SPC	Secretariat of the Pacific Community
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
USD	United States Dollar
WB	World Bank
WHO	World Health Organisation



C H A P T E R O N E

THE FOOD SYSTEMS IN SAMOA

1.1. The food systems summit – the national dialogue

In 2015, the United Nations made a commitment to the 2030 Agenda for Sustainable Development. The Agenda looks beyond hunger towards ensuring access to safe, nutritious and adequate food for everyone at all times, as well as ending all forms of malnutrition (Sustainable Development Goal (SDG) 2 Targets 2.1 and 2.2). It calls for action to transform sustainable food production systems and for ensuring proper functioning of agricultural and food commodity markets (Targets 2.3, 2.4, 2.5, 2.a, 2.b and 2.c). More than five years into the Agenda, countries are assessing progress. Also, as the dramatic impacts of Covid-19 continue to unfold, urgent foresight is needed to identify the impacts of the pandemic on food security and nutrition, and how to respond to the challenges.

In response, the UN convened the global Food Systems Summit (FSS) in September 2021, for country members to discuss how to transform their food systems to be healthier, safer, sustainable and equitable. The Summit aimed to generate significant actions and measurable progress towards the 2030 Agenda for Sustainable Development; raise awareness and elevate public discussion about reforming the food systems; develop principles to guide government and other stakeholders in building sustainable food systems; and create a system to review the Summit outcomes, drive new actions, and measure impacts.

This Report provides a 'pathway towards sustainable national food systems' for Samoa in line with the 2030 Agenda for Sustainable Development, and Samoa's development under the Samoa 2040 Vision; Strategy for the Development of Samoa (2016-2026); 14 sector development plans, and all other national policies and strategies.

Preparations included the 'Food Systems Summit Dialogues' (FSSD) in which governments and communities identified ways in which food systems might be strengthened. The key outcomes of these dialogues were presented at the September 2021 Summit.

Samoa implemented its national FSSD in April-June 2021, within the overall theme of **'transforming food systems to build a resilient and healthy Samoa where no one is left behind'**. A total of 242 representatives from across all sectors (government, private sector, civil society, community, and development partners) participated in the Samoa FSSD (SFSSD). They discussed how the national food systems could be built and managed sustainably to ensure food and nutrition security, build local livelihoods, generate income and boost economic development.

A 'Dialogue Report' was prepared documenting the processes Samoa adopted for its FSSD (the 'Dialogue'), as well as the outcomes. A 'Synthesis Report' analysed the status of Samoa's food systems and highlighted the key challenges in developing a sustainable food system for Samoa, based on a literature review. The Synthesis Report and Dialogue Report are to be read together with this Pathway Report on Samoa Food Systems.

This Report provides a **'pathway towards sustainable national food systems'** for Samoa in line with the 2030 Agenda for Sustainable Development, and Samoa's development under the Samoa 2040 Vision; Strategy for the Development of Samoa (2016-2026); 14 sector development plans, and all other national policies and strategies.

1.2. Samoa development agenda - for food and nutrition security

The Samoa 2040 development plan is a roadmap – in tourism, agriculture and fishing, digital economy, and labour mobility – with the potential to boost economic growth, create employment, generate revenues and raise standards of living. It lays out a platform to ensure the needs of present and future Samoan generations are met, and that no one is left behind. It recognises that ‘there are significant opportunities to boost agriculture and fishing production in Samoa to increase the scope for import substitution, raise exports, ensure food security, and promote nutrition’.

Samoa 2040 stresses that ‘the agriculture and fisheries sector is currently performing below its potential’, and that the sector can contribute more towards fostering human development, household incomes and welfare, business development, export earnings, improved food security and nutrition, and reduced incidences of Non-Communicable Diseases (NCD).

Actions identified in Samoa 2040 include support to farmers to shift from subsistence agriculture to semi-commercial and commercial production (e.g. through new technologies, better farming techniques, improved access to finance, and expanded public infrastructure and extension services); strengthen domestic and export market linkages; boost import substitution and value of exports in fisheries; and manage the overexploitation of fishing.

The Strategy for the Development of Samoa (SDS) 2021-2025 and its vision of ‘**an improved quality of life for all**’ complements the Samoa 2040 long-term vision. It highlights 14 key outcomes to achieve this vision. Under SDS key outcome 2 agriculture and fisheries productivity increased sustainably; export quality and value-added products increased; promotion of sustainable agriculture and fisheries practices were strengthened; and import substitution increased. Key outcome 8.1 seeks to build more resilient communities, strengthen adaptation, and support self-sufficiency to ensure food security and income generating opportunities against the backdrop of Samoa’s unique cultural and traditional structure.

All the 14 sector development plans contribute to the Samoa 2040 vision and the 5-year SDS vision (Table 1).

The Agriculture Sector Plan (ASP) 2016-2020 vision is ‘**a sustainable agriculture and fisheries sector for food security, health, prosperity, job creation and resilience**’. It has four outcome areas to achieve the sector vision: sector coordination improved and investment in food security and inclusive commercial agriculture/fisheries production systems increased; an increased supply and consumption of competitively priced domestically produced food; a sustained increase in production, productivity, product quality, value adding and marketing of agriculture and fisheries products; and sustainable agricultural and fisheries resource management practices in place and climate resilience and disaster relief efforts strengthened. A review of the ASP 2016-2020 is underway, including the development of the next ASP 2021-2025.

Table 1

Samoa 14 development sectors and their roles in the food system.

Sector	Function and role in the food system	Vision	Lead implementing Agency
Agriculture	Agriculture development – crops, livestock, fisheries, etc.	A sustainable agriculture and fisheries sector for food security, health, prosperity, job creation and resilience'	Ministry of Agriculture and Fisheries (MAF)
Water	Sustaining water for life and sanitation.	Reliable, clean, affordable water and improved sanitation within the framework of integrated water resources management, for a resilient Samoa, sustaining health and alleviating poverty.	Ministry of Natural Resources and Environment (MNRE)
Environment	Environmental management and conservation.	Samoa's natural and built environment are well protected and resilient to natural and human-induced hazards and supporting a sustainable and healthy human population.	Ministry of Natural Resources and Environment (MNRE)
Health	Public health and curative care.	A healthy Samoa.	Ministry of Health (MOH)
Education	Education for all.	All people in Samoa are educated and productively engaged.	Ministry of Education, Sports and Culture (MESC)
Transport and infrastructure	Transport and infrastructure development.	A transport network to future prosperity.	Ministry of Works, Transport & Infrastructure (MWTI)
Trade, commerce and industry	Trade, commerce and industry development for the food system.	Sustainable trade, commerce and manufacturing for enhanced growth and development.	Ministry of Commerce, Industry and Labour (MCIL)
Communication	Information and communication technology.	Affordable and appropriate ICT accessible to all.	Ministry of Communication and Information Technology (MCIT)
Tourism	Food tourism.	Samoa will have a growing tourism sector, which engages our visitors and people and is recognised as the leading Pacific destination for sustainable tourism.	Samoa Tourism Authority (STA)
Energy	Sustainable energy.	Sustainable energy for Samoa.	Ministry of Finance (MOF)
Community development	Social and community-based development.	Empowering communities to lead inclusive development for quality of life for all.	Ministry of Women, Community and Social Development (MWCSD)
Law and justice	Law and justice uphold the food regulatory system.	Safe, secure, fair, just and inclusive Samoa.	Ministry of Justice and Court Administration (MJCA)
Finance	Economic and financial development and management.	Fostering economic resilience.	Ministry of Finance (MOF)
Public administration	Human resource management, good governance, leadership and management, etc.	A trusted, citizen-focused, public administration.	Public Service Commission (PSC)

Similarly, the Health Sector Plan (HSP) 2019-2030 vision of ‘a healthy Samoa’ underscores the government priority for improving the health standards of all Samoans. The HSP highlights improved prevention, control and management of communicable and non-communicable diseases as one of its key outcome areas to contribute to the achievement of ‘a healthy Samoa’ vision. The National NCD Control Policy 2018-2023, National Food and Nutrition Policy 2021-2026, and all other national health policies outline the specific policy directions and detailed action plans for the achievement of the overall health sector plan of a healthy Samoa. The same goes for all other sector policy and programming priorities for achieving development outcomes.



Despite limitations, Samoa continues to perform well when compared to other small island developing countries

Samoa’s development agenda continues to stress the developing of agriculture, fisheries, tourism and other service industries to boost social and economic development performance. Agriculture and fisheries remain a significant sector of the economy for maintaining local livelihoods, informal employment, income generation, and food security. Contextual challenges that Samoa continues to face include high vulnerability (to disasters, climate change, external shocks and other threats such as pests and diseases), small markets, high transportation and transaction costs, limited economies of scale and economic diversification, imperfect competition, little power to compete on the global level, income volatility, and few local specialists. The impacts of frequent cyclones and flooding; the recent 2019 measles epidemic, as well as the effects of Covid-19 have adversely affected national development. Despite these inherent limitations, Samoa continues to perform well when compared to other small island developing countries and has the potential to ensure its people enjoy an improved quality of life, with food and nutritional security for everyone.

1.3. Samoa food systems – the current status

The key question is whether Samoa’s food systems can sustain the food and nutritional needs of its growing population. Food systems encompass the entire range of actors and their roles in the production, aggregation, processing, distribution, consumption and disposal of food products, and parts of the broader economic, social and natural environments in which they are embedded.

A sustainable food system delivers food security and nutrition for all in such a way that the economic, social and environmental bases to generate food security and nutrition are not compromised. This means that it is profitable throughout (economic sustainability); has broad-based benefits for society (social sustainability); and has a positive or neutral impact on the natural environment (environmental sustainability) (FAO, 2018).

Examining the status of Samoa’s food systems can provide some answers. Following is a summary based on the Synthesis Report of the Samoa Food Systems (literature review) and Samoa Food Systems Summit Dialogue (SFSSD) Report (primary data).

1.3.1. Food production and supply

Samoa has a small population of only 195,979 people, and a population density of around 67 people per square kilometer. With high labour mobility, there are more Samoans living overseas than in-country, which makes remittances one of the key contributors to the economy and an informal social protection mechanism for local people. The informal system provides for the livelihoods of 80% of the rural population and is the backbone of the economy. The agriculture sector contributes 10% of the Gross Domestic Product (GDP) but employs the largest proportion (22%) of Samoa's labour force.

The evidence suggests that Samoa is currently self-sufficient in several food groups - starchy roots, oil crops, fruit, fish and seafood (FAO, 2017) which are staple foods. However, Samoa should be proactive in ensuring the sustainability of its food systems to cater for the nutritional needs of its growing population. Summarised below is the status of food production and supply in the country:

- Agricultural land is estimated at 26.7% of Samoa's total land area; 1.5% higher than the average across the Pacific island region, but 11% lower than other low- and middle-income countries.
- The overall trend of the last 30 years shows a decline in the average areas of holding for agriculture land, suggesting households are more small-scale than large-scale farming.
- The domestic production of fresh produce traded in local markets is estimated at up to 500 tonnes a year, with staple crops accounting for 60% and fruit and vegetables 40% of supply.
- The domestic production of meat (beef, pork and poultry) traded in local markets is estimated at up to 6,000 tonnes a year. A total of 67% of the retail beef and 95% of chicken meat consumed is imported, with an estimated per capita meat consumption of 100kg per head a year.
- Fresh fish is Samoa's largest merchandise export (37%) and about a quarter of Samoan households receive some income from fishing.
- Fisheries production continued to increase over the years, estimated at around 9,779 tonnes in 2018 - almost all (99.9%) are captured fisheries - which is considerably low when compared to the average of 62,572 tonnes of fisheries production in other Pacific island countries.
- While many local families remain engaged in some level of agricultural activities, that engagement is declining over time. The biggest decline is noted in fishing and livestock. For crops, a major decline is noted in households growing taamu and taro palagi crops.

- Overfishing, unsustainable fishing, and increased loss of biodiversity with real risks of the extinction of native species are some of the key issues concerning the sustainable management of the natural landscape underpinning the food systems. Data gaps present limited understanding of the status of other food resources (land, soil, marine, animals, forestry, weather, etc.) in country.

1.3.2. Food processing, imports and exports

The food processing value chain in Samoa is characterised by ‘a large number of small enterprises producing primarily for the local market’, frequently using imported raw materials, and exports dominated by processing of traditional commodities, (primarily coconut oil, coconut cream, copra and taro) and fish. The sector is constrained by a limited range of local agricultural products and the small size of the local market (UNCTAD, 2003). Summarised below is the status of the food processing, imports and exports, in Samoa:

- There is potential to develop niche markets such as organic value-added products. However, the scope for expanded development in niche market areas is fairly restricted due to a lack of technology and mechanisation, as well as the labour intensive and high production costs.
- The total value of selected agricultural and fish exports in the first quarter of 2020 fell 47% compared to the same quarter in 2019. With the exception of fish exports, the value of taro, nonu juice, coconut and kava (main export commodities) all declined through 2019 and 2020.
- Samoa depends on food imports contributing to around 25% of overall imports a year. Most food imports are live animals and animal products (e.g. chicken leg quarters and mutton) and processed foodstuffs (rice, sugar, salt, flour, canned foods, etc.).
- The majority of food imports (45%) are from Asia, with 27% from New Zealand, 10% from Australia and 7% from Fiji.
- Limited data on local food processing does not provide for a complete picture of what is being processed and made available in the local markets for consumers.

1.3.3. Food consumption and nutritional security

Samoa faces the double burden of malnutrition – undernutrition (stunting, anaemia and other nutrient deficiencies) and increasing burden of NCDs. Overweight and obesity across all age groups now exceed global averages. Over 70% of the population are overweight and around half are obese. NCDs contribute to around 80% of deaths; more than half are premature deaths. NCDs are estimated to cost 8.5% of GDP by 2040. Poor nutrition is the leading risk factor of malnutrition. The evidence shows:

- A total of 24.2% of Samoans are food insecure at moderate levels, while 2.6% (1 in 40 persons) face severe levels of food insecurity, and with around 5% of the population undernourished. Poverty measures show that 22% of the population are living below the national basic poverty line, with 6% living in extreme poverty (or food poverty).
- The Samoan diet is not nutritionally balanced – it falls short of the required micro-nutrients – and is too rich in fats and too low in carbohydrates. The consumption of fruit and vegetables is low and declining; only 1% of Samoans consume at least 20 servings of fruit and vegetables a week.
- The Samoan diet is not diversified. Only five food groups contribute to 67% of the total dietary energy consumed – with cereals and their products, oil products, and meat contributing 56%, while roots and tubers contribute only 11%. Fish contribute only 4%, which is way below the recommended intake; that up to 50% of the daily intake will need to come from fish.
- The Samoan diet has moved away from a more traditional diet (of root crops, starchy fruit and seafood) towards a modern one of white rice, bread, chicken leg quarters, sugars and processed food.
- Most (61%) home food consumption is purchased, with only 37% of the top 30 food items (by share of expenditure) locally produced, suggesting a large consumption of food imports, most of them processed energy-dense food.
- Prices influence consumption. Within limited household/consumer purchasing power, and low minimum wages in the local labour market, preferences for modern food (most are imported) over traditional food are influenced by lower costs as well as by convenience.
- Disparities exist between poor and rich households. The share of food expenditure for the poorest is 53% compared to 31% for the richest households. The richest households spend 22% more than the poorest households on food, and therefore have more access to healthy and diverse food than the poorest households.
- Samoa's food culture further contributes to food insecurity and nutritional health issues, especially given the large bulk preparation, sharing and consumption of food, during family, communal and public feasting, events and ceremonies.
- The significant nutritional shifts over the years from traditional foods to imported foods (coupled with a more sedentary way of life) have resulted in the increased consumption of canned foods, sugar-sweetened beverages and micronutrient-poor processed foods.



1.3.4. Food safety and waste

Food and nutrition security requires food safety. This means that the environment (land, soil, sea/ocean, infrastructure, transport, etc.) in which food is cultivated, extracted, produced, stored, distributed, processed, packaged, sold, and consumed should be safe. It is often assumed that food is generally safe for consumption and it is only in some minor cases of foodborne diseases where reactions are directed at the need to examine the safety of food.

However, concerns about food safety are also about the healthy development and well-being (i.e. long-life) (or otherwise) of the population. These concerns are becoming more prevalent with the increased use of chemicals and other inputs in agriculture, as well as the ongoing impacts of climate change and environmental degradation on the quality and health of the ecosystems. Threats from invasive species, pests and diseases, as well as waste and sanitation issues are other concerns. These food safety threats and risks are intensified by the increased globalisation of the food supply and processing value chains.

The available evidence to date give the following status on food safety and waste in Samoa:



- Fish and seafood poisoning are becoming a major threat due to temperature variations, with marine resources affected by growing ocean acidification and worsening coastal eutrophication.
- Land and soil health is an ongoing concern given increased use of unsafe farming practices (e.g. chemicals, mechanisation, and poor waste discharge) and limited rehabilitation of the ecosystem to facilitate a regenerative, circular and food system environment.
- Foodborne and waterborne diseases are expected to increase with the intensity and frequent occurrence of disasters (flooding and cyclones) and their impacts.
- Postharvest loss, especially for fresh fruit and vegetables is estimated at up to 20% (1/5) of total yields. The lack of basic postharvest infrastructure, understanding of good postharvest handling practices, and access to storage capacity with appropriate conditions, and delays in transport logistics or rate of market throughput, are key contributing factors to loss.
- Food waste amounts to 36% of total waste discharged across Samoa, followed by plastic (16%), paper and cardboard (13%), and diapers (13%).

1.4. Conclusion

This synthesis provides a profile of food production, food processing, food consumption, food safety and food waste in the country. Hunger is not an issue in Samoa. The real problem is access to a balanced and nutritional diet which requires a shift from eating processed imported foods to locally produced fresh products, which will help to address the rising burden of NCDs. The sustainable management of natural resources, especially overfishing or unsustainable fishing, is a concern. Efforts to address postharvest loss and food waste are needed, including building awareness, adaptation and resilient responses against the ongoing impacts of climate change, and other shocks and threats.





C H A P T E R T W O

TRANSFORMING FOOD SYSTEMS FOR A RESILIENT AND HEALTHY SAMOA

The 2021 Samoa Food Systems Summit Dialogue (SFSSD) (the national ‘Dialogue’) reinforced the key findings in the previous sections about the status of the national food systems. The SFSSD strengthened a shared understanding of the key challenges Samoa faces with building the sustainable food systems to support economic development, livelihoods, income generation, and food and nutritional security. The full participant narratives of the SFSSD are documented in the Dialogue Report. The solutions on how to transform the national food systems for a resilient Samoa, as presented in the following sections, are drawn from the national Dialogue.

2.1. Ensure access to safe and nutritional food for all

Samoa’s food systems must ensure access to safe and nutritional food for every citizen. The aim is to reduce (and prevent) hunger, inequality, and all health risks. Access to safe and nutritional food is threatened by climate change and other shocks, together with increased globalisation and monetisation of the food system, declining engagement of households in agricultural activities and decreasing agricultural labour.

The inconsistent food supply in the country, decreased consumption of local fresh produce, and increased consumption of cheaper imported processed foods, further exacerbate the imbalanced Samoan diet and inequalities in accessing nutritional food. The declining food tourism (further impacted by Covid-19), restricted markets for trade, postharvest loss, increased demands for cash, sedentary lifestyles, and high input costs, are disincentives for people to remain engaged in agriculture.

The key objective is to deliver the *right* food to people for their *nutritional* health and well-being. This requires an increase in the supply and consumption of competitively priced, domestically produced food. Changes in dietary attitudes (at the individual, family and society levels) are needed to support a shift towards a healthy and nutritional balanced eating lifestyle and food culture.

Solutions proposed through the Dialogue and supported by available research and documentary evidence are discussed as follows:

2.1.1. Transform the agriculture sector to boost local production

The transformation of the agriculture sector to boost local production requires sustainable actions that go beyond business as usual. Investments in the sector have remained low. Boosting local production and value chains requires sustained resourcing that go beyond existing commitments. Improving the consistent local supply of healthy foods is to be addressed through strengthening the incentive mechanisms for farmers and fishers, and encouraging the commercialisation of the agriculture sector. Government needs to provide capacity development for value chain actors. It also needs to address key production issues including high labour costs, water and irrigation, transport and infrastructure,

and facilitating local and overseas markets for farmers and fishers. Transforming the agriculture sector will involve developing opportunities in using digital and technological innovations to boost local production and to strengthen value chains. Accessing finance, and improving capacity for good governance, management systems and business models in agriculture, are other development needs for farmers and fishers. Boosting food production and influencing consumption patterns at the local level require significant involvement from the community and civil society. Hence the resources, funding, capital and technology investments, and technical assistance are to be scaled up and directed at the community and civil society levels, where major impacts on food and nutritional security take place.

2.1.2. Strengthen the enabling environment for the sustainable development of food systems

While agriculture and fisheries remain the backbone of Samoa's development agenda, they have yet to achieve their potential despite government reforms and public investment to support the sector. Participants at the Dialogue expect government to strengthen the enabling environment to help transform the food sector and to encourage a more productive and commercially oriented agriculture sector. Strengthening the enabling environment will require:

- A strong and robust policy and legislative framework;
- A strong and robust monitoring and evaluation system;
- Clear implementation including enforcement and compliance procedures; and
- Operational instruments that are well-understood by key implementing actors.

The implementation of whole-of-government policies, legislation, processes and operating systems, and investments (relating to improving access to safe and nutritious food for all) across sectors are key components of strengthening the enabling environment for the food system. A clear understanding is required of the policies spanning the food system, including the identification of linkages and tradeoffs in policies and their implementation. Strengthening a bottom-up approach to policy development will facilitate national and community ownership of policies and their implementation. Ongoing resource allocation for policy implementation and monitoring efforts is a key focus in improving action. At the same time, there is a need to formulate clear macro and meso level indicators and targets for the sustainable development of the food systems.

Reviews and assessments show a number of key policies have yet to be completed or updated spanning the different components of the food system. Fiscal policy for the food system (e.g. food pricing and taxation) is still under development but necessary to support the nutritional security movement. Strengthening the food safety policy and regulatory system requires the identification and development of further standards for food, better enforcement of standards across the food industry, and improving awareness and coordination of the performance of roles and responsibilities for food safety among relevant partners.



2.1.3. Improve evidence-based knowledge and understanding of the food systems and their components

Building evidence-based knowledge and awareness of the food systems is an ongoing need. It is crucial that everyone has a shared understanding of the complexity of the production-consumption-nutrition loop and how it is linked to safe and nutritional food for all. Understanding the key issues, and providing the right solutions, requires solid evidence derived from scientific data and analysis, as well as valid social constructs of the realities and experiences of local people (farmers, fishers, etc.) who are developing and maintaining the food systems. Examples of data and evidence gaps which require research and development, and improved knowledge sharing include:

- Limited understanding about current and future capacities of the food resources (land, soil, seas, animals, forestry, weather, manpower, etc.) to sustain production and consumption. This understanding is needed to better inform adverse implications of existing policies and practices (e.g. overfishing, soil, land and forestry degradation), appropriate actions and sustainable practices that emphasise conservation and biodiversity.
- Little is known about the compliance level of most of the imported processed food with national food standards and nutrient profile.
- Lack of evidence to establish the reach by vulnerable people of the support and development programmes, including incentives that will help with improving their livelihoods.
- Better understanding of food waste in Samoa, and ways to use waste in the food cycle.
- Research about the role of culture in developing the food systems including proper documentation of traditional knowledge in sustainable food systems.
- Research and development in local value chain products and processed organic food products.



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- Research about the role of culture in developing the food systems including proper documentation of traditional knowledge in sustainable food systems.
- Research and development in local value chain products and processed organic food products.

2.2. Shift to sustainable consumption patterns

Shifting to sustainable consumption patterns for the whole of society requires systemic actions aimed at strengthening healthy, safe and sustainable food environments. This will enable people to adopt and maintain healthy dietary practices. Improving customer motivation for nutritious food will increase demand for healthier diets and lifestyle choices, and for the food environments to enable the making of those choices. The transition to sustainable consumption is about empowering people to take ownership of what they eat for their own health, including becoming more informed about the impacts of the food environments on their diets and lifestyle risks (and vice versa). Sustainable consumption requires a transition towards diets that are healthier, safer, and climate and nature-positive, including eliminating food waste and building circular food economies. This shift in sustainable consumption patterns requires changes in food policy, food environments, civil society actions, private sector offerings, and consumer behaviour.

Solutions proposed through the Dialogue and supported by available research and documentary evidence are presented as follows:

2.2.1. Strengthen food policy and regulatory systems to shift towards sustainable consumption patterns

Food choices and consumption are influenced by affordability and availability of food. As such, and given low minimum wages and limited household purchasing power, Samoa's fiscal policy for food needs to encourage consumer behaviour towards sustainable, safe and nutritious food. The enforcement of food legislation requires building wider understanding of food regulatory requirements. At the same time, the food industry needs support and capacity development so that they have the support systems in place to facilitate compliance.

Managing trade-offs in food policy and regulatory measures (e.g. increased taxation for unhealthy food versus increased business and employment interests in the food industry) requires strengthening inter-sectoral public policy measures. The multi-sectoral approach provides a vital governance and strategic leadership platform to the policy and regulatory systems for food production and consumption. The contribution of every sector of society (government, private sector, civil society and community) should be sought, coordinated and monitored.

2.2.2. Promote the consumption and availability of local traditional foods

A shift to sustainable consumption will require a shift in the Samoan diet from (convenience and imported) processed energy-dense foods to local traditional foods comprising fresh organic produce. The processing of traditional foods is relatively labour intensive and time consuming, and hence not convenient to the busy modern lifestyles, especially



for working families. A significant transition of the Samoan diet to the consumption of local traditional foods will require making local traditional food into value-added products that are affordable, easily available, healthy, fresh and tasty.

The consistent supply of those products in local markets, public facilities, and public events will promote local traditional foods, and hopefully encourage a cultural shift. There is a need for investment and capacity development to promote local traditional foods in ways that attract consumers.

2.2.3. Enhance nutrition education and promote healthy consumption patterns

The vision of a healthy Samoa should be promoted across all sectors: that a healthy population depends on environmental (land, soil, forestry, water, sea, etc.) and animal health. This requires a better understanding about the contribution of a healthy and quality food system to population health. Having a sufficient and diverse range of locally grown fresh produce does not necessarily translate into better nutritional choices across the community, given local food culture and behaviour. Ongoing community-based education and health promotions are necessary to encourage positive changes in dietary patterns.

Children are more vulnerable to nutritional shifts and a possible intergenerational malnutrition problem in Samoa. A key priority is to target school food programmes within the community and village settings, starting from early childhood education to senior school in order to instil healthy eating behaviour at a young age. The involvement of parents and food vendors in the school nutrition and feeding programmes needs encourage-

ment. Building sustainable and healthier consumption patterns amongst school children requires locally available foods to be used in school food programmes. Local producers should be an integral part of the school food system.

Children's diets and nutritional health are largely influenced by what is consumed at home, extended family and community settings. As such, promoting healthy consumption across the wider community settings is an inevitable need. Providing food, nutrient content and dietary information, nutrition education programmes, and nutritional counseling, can encourage a shift toward healthier diets. The use of multi-media campaigns can have considerable impacts on public health promotion.

People need to be more well-informed about what is safe to eat, the food and nutrients that they are consuming, and how these impact on their health and well-being. Food literacy and targeted consumer awareness will assist consumers to make informed decisions about what to purchase and prepare. Clear messaging for both urban and rural populations will build understanding about nutritional problems and the changes that need to happen.

2.3. Boost nature positive production

Nature positive production is 'a form of food production characterised by regenerative practices that manage soil and water and enhance biodiversity. It is the non-destructive use of natural resources that protects and builds upon natural and social capital' (UN Food System Summit Secretariat, 2021). Samoa must adopt practices that protect, manage and restore nature, while meeting the fundamental human right to healthy and nutritious food for all. The sustainability of Samoa's food systems is underpinned by its biodiversity and ecosystem functioning and adapting well to the ongoing adverse impacts of climate and environment changes. The survival of many species is important to the vitality of natural food systems and the human species. The health and productivity of land, forestry, soil, water and sea resources are critical for the sustainability of food systems and value chains. The Dialogue discussed the constraints and opportunities facing smallholder farmers and small-scale enterprises along the food value chains. This included improving food system governance, reducing food losses and other negative environmental impacts, and adopting more nature-positive production practices and behaviours.

Solutions proposed through the Dialogue and supported by available research and documentary evidence are presented as follows:

2.3.1. Promote the use of traditional knowledge to boost nature-positive production and sustainable agricultural practices

Traditional knowledge about agricultural practices for resilient landscapes, and environmental conservation and restoration practices (e.g. soil fertility improvement, crop rota-

tions, intercropping, and planting nitrogen-fixing crops) have long existed in Samoa. The Dialogue discussions suggest that nature-positive production is about using traditional to sustainably manage and preserve food from the land and ocean, including farming and fisheries practices that are safe and healthy for the environment and humans. Boosting nature-positive production requires promotion of traditional knowledge in agriculture for sustainable land, marine and terrestrial practices along with conventional best practice methods of production. It is also important to look at using traditional knowledge of the food system (e.g. natural farming, food preservation and cooking) for improving health and nutritional security in Samoa. This includes incorporating traditional knowledge into food preparation and processing to make local nutritious food more accessible and affordable, and to promote organic farming, fishing and other activities. It is important that this knowledge is captured, documented, preserved and shared with the current and future generations.

2.3.2. Strengthen extension services for farmers, fishers and other key players

The agricultural economy remains the backbone of all development efforts directed at boosting nature-positive production in Samoa. Extension services are critical in providing technical support, training and expert assistance to rural farmers and fishers to address the many challenges of food production, especially in managing climate change impacts. Extension (and veterinary) services are limited in Samoa and need strengthening for improved assistance to farmers and fishers. This includes sharing of agricultural knowledge and skills, collaboration, networks, new technology, information, research, planting materials, seedlings and stock. Assistance is also needed to access resources, markets and other opportunities. There is room for the Ministry of Agriculture and Fisheries to partner with farmer and fisher organisations in strengthening extension services.

2.3.3. Improve environmental protection policy and regulatory measures

There is recognition of the problems concerning nature-positive production, such as over-fishing or unsustainable fishing, biodiversity and habitat loss, poor waste management, environmental degradation and the adverse impacts of climate change. Responding to these concerns will involve systemic improvements in environmental protection policy and regulatory measures, and strengthening monitoring and evaluation of the impacts of those measures. A classic example is the inconsistent enforcement of the ban on the use of plastics in Samoa. Improving environmental protection also involves better management of food waste. Training is needed on how local people should manage food waste. When seeking to improve policy and regulatory measures for sustainable food systems, it is important to manage the trade-offs between boosting food production and the adverse impacts on the environment.



Store owners in Falelauniu

2.4. Advance equitable livelihoods

In every society, including Samoa, there is always a segment (families and individuals) of society lacking the space, power structure, or enabling environment in which to exercise their voice and rights, and to access opportunities to improve their standards of living. This group may refer to the 22% of the population living below the national basic poverty line, or the 6% living in extreme (i.e. food) poverty who require special attention and targeted assistance. Building sustainable food systems is about inclusivity; that every citizen is able to participate and contribute to the sustainable development of their food systems, and thereby benefit from their contributions. Advancing equitable livelihoods is about empowering the under-represented by strengthening their capacities to contribute and to make an impact. Developing sustainable and inclusive food systems involves efforts that will contribute to poverty eradication, enabling entrepreneurship, promoting employment and decent work for all actors along the food value chains, reducing risks for the poorest, and addressing inequitable access to resources and distribution of value.

Solutions proposed through the Dialogue and supported by available research and documentary evidence are presented as follows:

2.4.1. Engage more effectively with stakeholders including vulnerable groups in food systems dialogues and exchanges

There are institutional and systematic barriers (access to land, social norms about roles stereotyping, traditional divisions of labour, etc.) preventing women, youth, persons with disabilities, and others living in vulnerable conditions, from accessing the resources to pursue better livelihoods. Strengthening effective engagement of everyone, especially

vulnerable groups in food system discussions where those barriers are confronted in open forums, is an important part of building equitable participation. A question raised at the Samoa Food Systems Summit Dialogue was how the voices of vulnerable people were being heard. It is important that these groups can present their concerns and contribute to the building of inclusive food systems.

Tailoring food system policies to reach the marginalised population will empower them along the food value chain, while addressing key challenges that they face, such as inter-generational poverty; malnutrition; and lack of income, education, information and basic services. About 49% of Samoa's working age population are involved in the agriculture sector (SBS, 2018a), mostly in subsistence agriculture and fisheries. Special targeting of these groups (small-scale farmers; small family farmers; livestock keepers; women and single mothers who are smallholders; youth farmers, etc.) remains an ongoing need in



development policy, programming and assistance. The subsistence agriculture and fisheries sector and other informal domains must be recognised in the formal system as part of the formal labour market and social protection systems. This can improve their working conditions, protect their rights as workers and citizens, and improve their skills.

There are gaps in the identification and mapping of vulnerable populations, including evidence to establish their access to economic, financial and other support, including incentives (small grants, stimulus packages, etc.) to improve their livelihoods. Programmes such as the Civil Society Support Program (CSSP) show that there are barriers (e.g. lack of awareness and basic understanding of concepts, inability to access and submit an application, and not meeting criteria for entry into a programme) for vulnerable people accessing support services and incentives. These barriers must be recognised and addressed.

The development of a Vulnerability Indicator Index will assist with identifying vulnerable people, and for means testing and targeted assistance to those in need.

2.4.2. Promote the role of women and youth in agricultural activities and food value chain

The development of sustainable and inclusive food systems must provide opportunities for effective participation by everyone. There are few women in the production side of agriculture (11% females to 89% males). On the value chain side, most market vendors and food processors are women, and as such, they can play an influential role in shaping what the family eat. Evidence from community-based projects have shown that women contribute to effective project governance, management and implementation at the local level. Providing support (access to land and finance, capacity building, networking etc.) will empower more women to become engaged in agriculture and the food value chains and thereby enhance their livelihoods and standards of living. This could have spill over effects on boosting local food production, processing and retailing.



Chocolate production in Samoa

Developing unique and niche value chains for markets and international supply will assist the large proportion of the youth population working in agriculture, forestry and fisheries. However, limited markets, impacts of shocks (e.g. Covid-19) and availability of decent work in other industries (e.g. seasonal workers schemes) are not encouraging youth to become involved in agriculture and fisheries. There is a need to improve the image of agriculture and fisheries as attractive career options and provide a clear pathway for students to study food-related subjects from a young age.

2.4.3. Enhance the role of communities and culture in developing the food systems and equitable livelihoods

Communities and culture play a major role in the development of food systems and equitable livelihoods, such as the distribution of food. The National Food Systems Summit Dialogue suggests that projects that use the Samoan culture are successful in their implementation. Local village communities are governed by the *fa'amatai* system within the overall *fa'aSamoa* cultural framework, and as such, engagements with key institutions at the village community levels are critical to the effective implementation of community interventions. The Dialogue suggests a need to find best practices from the Samoan culture in food security that can be replicated across village communities.

For instance, there are a number of established village farming and fishing cooperatives (e.g. Poutasi Development Trust, Savaii Koko, Savaii Coconut Cluster, Faleasiu-uta Farmer's Cooperative, and other village youth planting projects) that have contributed to the sustainable food security at the community level. These local mechanisms should be promoted through agricultural extension services and programmes providing support in finance, technical assistance, technology, market access, civic education and training, and information dissemination.

2.5. Build resilience to vulnerabilities, shocks and stress

As an agriculturally dependent small economy, Samoa is highly susceptible to shocks, stress and other threats. The adverse effects of Covid-19 continue to unfold. In response, the government has re-calibrated its development priorities, one of which is a focus on food security and import substitution (Samoa 2040). The evidence shows that domestic farming has been the main safety net for most people who had less income due to the impacts of Covid-19. Building resilience is about investment in agriculture and fisheries as the backbone of food and nutritional security, improved livelihoods, safety nets and for reviving the economy. Samoa's food systems need to ensure all people are more resilient and able to access food and nutritional security.

Solutions proposed through the Dialogue and supported by available research and documentary evidence are presented as follows:

2.5.1. Build climate resilient practices and resources for agriculture development

Building resilience of the food systems is not only about people but also about agroecosystems - all food system elements such as marine and terrestrial biodiversity and biological systems. The Dialogue highlighted the need to build resilience in agriculture through diversification, research and development, services, seeds and stock availability, and capacity building. For Samoa to adopt climate resilient agricultural practices, increased public and private investment is needed, enabled by the right policy mix and incentives, and supported by strong leadership and good governance.

2.5.2. Implement social protection measures in response to the impact of shocks in food supply and consumption

Building and strengthening nationally owned and sustainable social protection systems in Samoa in response to shocks and stress is needed. This will complement efforts addressing resilience through the food systems, and mitigate the negative impacts of shocks on food security and healthy consumption. Social protection, if implemented and targeted well, can reduce chronic vulnerability, severe food insecurity, and exposure to risk. Social protection kicks in as safety nets when people experience hardship.

With 40% of the population considered vulnerable (which is expected to increase), social protection must be strengthened for the large proportion of people involved in subsistence agriculture and fisheries. Priority should be given to the most vulnerable. With children becoming more vulnerable to malnutrition and NCDs, targeted social protection measures are needed (e.g. school programmes based on healthy and nutritious local food). This will help to address malnutrition, promote healthy diets at a young age, and encourage the production and consumption of healthier local food.

2.6. Conclusion

Section 2 above provides solutions for transforming food systems for a resilient Samoa, based on the documentary evidence and the national narrative from the National Food Systems Summit Dialogue in Samoa in April-June 2021. The solutions and recommendations are interwoven into the five action tracks (or thematic areas) of the Global (UN) Food Systems Summit: ensure access to safe and nutritious food for all; shift to sustainable consumption patterns; boost nature-positive production; advance equitable livelihoods; and build resilience to vulnerabilities, shocks, and stress. These proposed solutions shape and inform the development of a pathway for transforming sustainable and resilient food systems in Samoa, as presented in the next Section 3 of this Report.



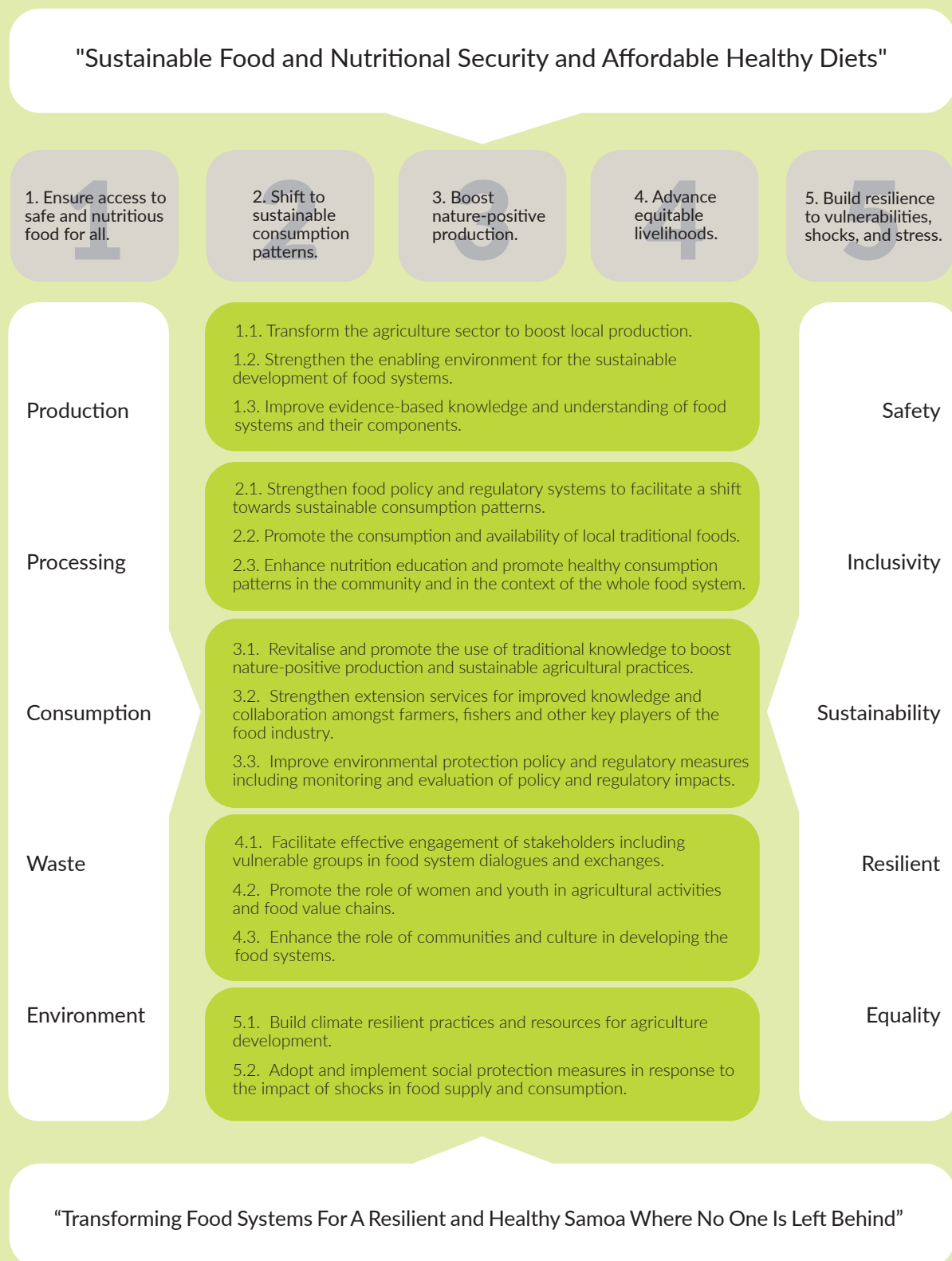


C H A P T E R T H R E E

A PATHWAY FOR TRANSFORMING SUSTAINABLE AND RESILIENT FOOD SYSTEMS FOR HEALTHY DIETS IN SAMOA 2030

3.1. Pathway

The Samoa pathway for ‘transforming food systems for a resilient and healthy Samoa where no one is left behind’ for sustainable ‘food and nutritional security and affordable healthy diets’ comprises of 14 pathway actions:



3.2. Action Plan

Table 2 outlines the specific actions of the 14 pathway actions under the five Action Tracks:

Table 2: Pathway Action Plan 2021-2030

Pathway actions	Actions for implementation	Key policy and planning framework	Lead agency / agencies	Implementing partners
1. Ensure access to safe and nutritious food for all				
<ul style="list-style-type: none"> 1.1. Transform the agriculture sector to boost local production. 	<ul style="list-style-type: none"> Strengthen incentives for farmers, fishers and other key actors of the agriculture sector. Strengthen measures for improved commercialisation of the agriculture sector. Scale-up capacity development opportunities for value chain actors. Address key issues facing production, including high labour costs, water and irrigation, transport and infrastructure. Facilitate local and overseas markets for farmers and fishers. Use digital innovations to boost local production and strengthen value chains. Improve access to finance and capacity for good governance, management systems and business models in agriculture and other needs of farmers and fishers. Engage community and civil society in local food production and value chains through programmes and other measures providing resources, funding, capital and technology investments, and technical assistance. 	<ul style="list-style-type: none"> Agriculture sector plan. Communication Sector Plan. Transportation and Infrastructure Sector Plan. Water Sector Plan. Community Development Sector Plan. Trade, Commerce and Manufacturing Sector Plan. Finance Sector Plan. Relevant national policies on agriculture or the food systems. 	<ul style="list-style-type: none"> Ministry of Agriculture and Fisheries. Ministry of Finance. Ministry of Works, Transport and Infrastructure. Ministry of Natural Resources and Environment. Ministry of Women, Community and Social Development. Ministry of Commerce, Industry and Manufacturing. 	<ul style="list-style-type: none"> Agriculture sector members. Farmer and fisher stakeholders.
<ul style="list-style-type: none"> 1.2. Strengthen the enabling environment for the sustainable development of food systems. 	<ul style="list-style-type: none"> Strengthen the coordination of whole-of-government policies, legislation, processes and operating systems and investments (relating to improving access to safe and nutritious food for all) across sectors. Strengthen understanding of policies spanning the food systems. Identify linkages and tradeoffs in policies and their implementation, and address them through the sectoral coordination processes. Strengthen bottom-up approaches to policy development and implementation in the food sector. Strengthen policy implementation through improved resource allocation, capacity development, partnerships and other measures. 	<ul style="list-style-type: none"> All 14 sector plans. Relevant national policies on the food systems – National Food and Nutrition Policy, Fisheries Policy, Waste Management Policy, etc. 	<ul style="list-style-type: none"> All 14 sector coordinators/ lead agencies. 	<ul style="list-style-type: none"> Key public sector, private sector, civil society and community stakeholders.

	<ul style="list-style-type: none"> • Formulate macro and meso level indicators and targets for the sustainable development of the food systems. • Improve monitoring and evaluation of progress made with the achievement of food sector indicators and targets. • Stocktake policy requirements across all components of the food systems. • Strengthen the food safety policy and regulatory system. 			
1.3. Improve evidence-based knowledge and understanding of food systems and their components.	<ul style="list-style-type: none"> • Develop evidence-based knowledge of the food resources for sustainable production and consumption. • Assess the compliance levels of imported processed foods with national standards and nutrient profiles. • Strengthen evidence on the reach by vulnerable people of the support and development programmes including incentives for improved livelihoods and engagement in the food sector. • Improve evidence and understanding of issues concerning food waste. • Conduct research about the role of culture in developing the food systems. • Document traditional knowledge in sustainable food systems. • Foster research and development in local value chain products and processed organic food products. 	<ul style="list-style-type: none"> • Agriculture sector plan. • Health Sector Plan. • Environment Sector Plan. • Community Development Sector Plan. • Trade, Commerce and Manufacturing Sector Plan. • All relevant national policies. 	<ul style="list-style-type: none"> • Ministry of Agriculture and Fisheries. • Ministry of Health. • Ministry of Natural Resources and Environment. • Ministry of Women, Community and Social Development. • Ministry of Commerce, Industry and Labour. • Scientific Research Organisation of Samoa. • Ministry of Education, Sports and Culture. 	<ul style="list-style-type: none"> • Key public sector, private sector, civil society and community stakeholders.

2. Shift to sustainable consumption patterns

2.1. Strengthen food policy and regulatory systems to shift towards sustainable consumption patterns.	<ul style="list-style-type: none"> • Strengthen fiscal policy for the food system. • Strengthen enforcement of food legislation. • Build wider understanding of food regulatory requirements. • Provide targeted support to the food industry including capacity development to enable their compliance with food legislation. • Strengthen inter-sectoral approaches to manage trade-offs and address contradictions in food policy and regulatory measures. 	<ul style="list-style-type: none"> • Health Sector Plan. • Agriculture sector plan. • Community Development Sector Plan. • Trade, Commerce and Manufacturing Sector Plan. • All relevant national policies. 	<ul style="list-style-type: none"> • Ministry of Agriculture and Fisheries. • Ministry of Health. • Ministry of Commerce, Industry and Labour. 	<ul style="list-style-type: none"> • Key public sector, private sector, civil society and community stakeholders.
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Pathway actions	Actions for implementation	Key policy and planning framework	Lead agency / agencies	Implementing partners
2. Shift to sustainable consumption patterns (cont.)				
2.2. Promote the consumption and availability of local traditional foods.	<ul style="list-style-type: none"> Assist with making local traditional food into value-added products that are affordable, available, healthy, fresh and tasty choices for consumers. Improve the supply of those products in the local markets, supermarkets and other popular food outlets, including public settings. Invest and develop capacity in the reformulation of local traditional foods to improve nutritional content, lower processing time and costs, improve mass production, and influence consumer choices for traditional foods. 	<ul style="list-style-type: none"> Agriculture sector plan. Health Sector Plan. Environment Sector Plan. Community Development Sector Plan. Trade, Commerce and Manufacturing Sector Plan. Finance Sector Plan. All relevant national policies. 	<ul style="list-style-type: none"> Ministry of Agriculture and Fisheries. Ministry of Health. Ministry of Women, Community and Social Development. Ministry of Commerce, Industry and Labour. Scientific Research Organisation of Samoa. Ministry of Natural Resources and Environment. 	<ul style="list-style-type: none"> Key public sector, private sector, civil society and community stakeholders.
2.3. Enhance nutrition education and promote healthy consumption patterns in the community and in the context of the whole food system.	<ul style="list-style-type: none"> Strengthen school nutrition programmes within the governance and support systems of the community and village settings. Strengthen the involvement of parents and vendors in the formulation, implementation and monitoring of school nutrition and feeding programmes. Encourage the use of locally available foods and improve linkages to local producers. Strengthen public and community nutrition education and awareness programmes and services. 	<ul style="list-style-type: none"> Agriculture sector plan. Health Sector Plan. Education Sector Plan. Community Development Sector Plan. Trade, Commerce and Manufacturing Sector Plan. All relevant national policies. 	<ul style="list-style-type: none"> Ministry of Health. Ministry of Agriculture and Fisheries. Ministry of Education, Sports and Culture. Ministry of Women, Community and Social Development. 	<ul style="list-style-type: none"> Key public sector, private sector, civil society and community stakeholders. Village governance institutions
3. Boost nature-positive production				
3.1. Revitalise and promote the use of traditional knowledge to boost nature-positive production and sustainable agricultural practices.	<ul style="list-style-type: none"> Promote the use of traditional knowledge in agriculture for sustainable land, marine and terrestrial management practices along with conventional best practice methods of production. Use traditional knowledge of the food system (e.g. natural farming, food preservation and cooking) for improved health and nutritional security. Share traditional knowledge with current and future generations. 	<ul style="list-style-type: none"> Agriculture sector plan. Health Sector Plan. Education Sector Plan. Community Development Sector Plan. Environment Sector Plan. Other relevant national policies. 	<ul style="list-style-type: none"> Ministry of Agriculture and Fisheries. Ministry of Natural Resources and Environment. Ministry of Health. Ministry of Women, Community and Social Development. Ministry of Education, Sports and Culture. 	<ul style="list-style-type: none"> Key public sector, private sector, civil society and community stakeholders. Village governance institutions.

3.2. Strengthen extension services for improved knowledge and collaboration amongst farmers, fishers and other key players of the food industry.	<ul style="list-style-type: none"> Strengthen agriculture extension services. Scale-up programmes and support for improved knowledge and collaboration amongst farmers, fishers and other key players of the food industry. Foster public-private partnerships and community collaboration across the food sector. 	<ul style="list-style-type: none"> Agriculture sector plan. Trade, Commerce and Manufacturing Sector Plan. Community development sector plan. All relevant national policies. 	<ul style="list-style-type: none"> Ministry of Agriculture and Fisheries. 	<ul style="list-style-type: none"> Key public sector, private sector, civil society and community stakeholders. Village governance institutions.
3.3. Improve environmental protection policy and regulatory measures including monitoring and evaluation of policy and regulatory impacts.	<ul style="list-style-type: none"> Assess existing environmental protection policy and regulatory measures, to identify areas for improvement. Improve food waste management. 	<ul style="list-style-type: none"> Agriculture sector plan. Environment Sector Plan. Health Sector Plan. All relevant national policies. 	<ul style="list-style-type: none"> Ministry of Natural Resources and Environment. Ministry of Health. 	<ul style="list-style-type: none"> Key public sector, private sector, civil society and community stakeholders. Village governance institutions.
4. Advance equitable livelihoods				
4.1. Facilitate effective engagement of stakeholders including vulnerable groups in food system dialogues and exchanges.	<ul style="list-style-type: none"> Ensure the representation of vulnerable groups in dialogues on food systems. Ensure food system policies include programmes supporting improved reach of the marginalised population. Strengthen coverage/inclusion of the informal sector in the formal labour market and social protection systems. Strengthen the identification and mapping of vulnerable populations. 	<ul style="list-style-type: none"> Agriculture sector plan. Community Development Sector Plan. Trade, Commerce and Manufacturing Sector Plan. All relevant national policies. 	<ul style="list-style-type: none"> Ministry of Women, Community and Social Development. Ministry of Agriculture and Fisheries. Ministry of Commerce, Industry and Labour. 	<ul style="list-style-type: none"> Key public sector, private sector, civil society and community stakeholders. Village governance institutions.
4.2. Promote the role of women and youth in agricultural activities and food value chain.	<ul style="list-style-type: none"> Improve engagement of women in different areas of the food sector. Improve engagement of youth in different areas of the food sector. 	<ul style="list-style-type: none"> Agriculture sector plan. Community Development Sector Plan. Trade, Commerce and Manufacturing Sector Plan. All relevant national policies. 	<ul style="list-style-type: none"> Ministry of Women, Community and Social Development. Ministry of Agriculture and Fisheries. Ministry of Commerce, Industry and Manufacturing. 	<ul style="list-style-type: none"> Key public sector, private sector, civil society and community stakeholders. Village governance institutions.
4.3. Enhance the role of communities and culture in developing the food systems and equitable livelihoods.	<ul style="list-style-type: none"> Identify best practices of the Samoan culture in food security. Use those best practices when engaging village communities in the different areas of the food systems. Use successful village community practices in other communities and assess the ongoing impacts. Promote local mechanisms in the sustainable development and maintenance of the food systems. 	<ul style="list-style-type: none"> Agriculture sector plan. Community Development Sector Plan. All relevant national policies. 	<ul style="list-style-type: none"> Ministry of Women, Community and Social Development. Ministry of Agriculture and Fisheries. 	<ul style="list-style-type: none"> Key public sector, private sector, civil society and community stakeholders. Village governance institutions.

Pathway actions	Actions for implementation	Key policy and planning framework	Lead agency / agencies	Implementing partners
5. Build resilience to vulnerabilities, shocks, and stress				
5.1. Build climate resilient practices and resources for agriculture development.	<ul style="list-style-type: none"> • Ensure ongoing smallholder-related research and development, seeds and stock availability, capacity building, and scale-up of existing measures. • Support diversification of agricultural farms and value chains. • Increase public and private investment in climate resilient agricultural practices. • Adopt the right policy mix, incentives and support measures for improved climate resilient agricultural practices. 	<ul style="list-style-type: none"> • Agriculture sector plan. • Trade, Commerce and Manufacturing Sector Plan. • Finance Sector Plan. • Environment Sector Plan. • All relevant national policies. 	<ul style="list-style-type: none"> • Ministry of Agriculture and Fisheries. • Ministry of Natural Resources and Environment • Ministry of Finance. 	<ul style="list-style-type: none"> • Key public sector, private sector, civil society and community stakeholders. • Village governance institutions.
5.2. Adopt and implement social protection measures in response to the impact of shocks in food supply and consumption.	<ul style="list-style-type: none"> • Strengthen social protection measures for improved resilience of the food systems, and to mitigate the negative impacts of shocks on food security and healthy consumption. • Provide social protection floors, schemes and programmes for the large proportion of the population involved in subsistence agriculture and fisheries. 	<ul style="list-style-type: none"> • Agriculture sector plan. • Community Development Sector Plan. • Trade, Commerce and Manufacturing Sector Plan. • Social Protection Policy. • All other relevant national policies. 	<ul style="list-style-type: none"> • Ministry of Women, Community and Social Development. • Ministry of Agriculture and Fisheries. • Ministry of Commerce, Industry and Labour. 	<ul style="list-style-type: none"> • Key public sector, private sector, civil society and community stakeholders. • Village governance institutions.

3.3. Way forward

The challenges in transforming Samoa's food systems are immense and the Government cannot do it alone. The way forward requires a collective commitment, investment and adequate resourcing, strong leadership, and a willingness to work collaboratively among stakeholders to adopt and effectively implement pathway actions.

Strong partnerships come from sharing common goals and understanding of priority areas where targeted interventions can amplify development impacts. Opportunities exist for scaling up innovation, to increase investment across the 14 Pathway Actions, and work towards sustainable food and nutritional security, and affordable healthy diets for Samoans.



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Annex 1

Samoa's development performance and food system profile



Samoa's development performance

<i>Development indicators</i>	<i>Samoa</i>
Human Development Index (HDI)	111 (out of 188 countries) (2018)
Gross domestic product (GDP) growth	3.5% (2018/19); -3.3% (2019/20)
Gross National Income (GNI)	USD4,190 (2019) (WB, 2019)
Classification by income level	Middle income country (2018)
Population living below the national basic needs poverty line	18.8 (2016); 22.7 (2018)
Population living in extreme poverty (below national food poverty line)	4.3 (2016); 6.0 (2018)
Population that are vulnerable (Vulnerability Rate)	42% (2018)
Population economically active rate	41% (2011); 47% (2016)
National unemployment rate	8.7% (2012); 14.5% (2017)
Inequality	47% (2008); 56% (2013/14)

Food system characteristics

<i>Characteristics</i>	<i>Status</i>
Climate	Tropical
Land area	2,934 km ²
EEZ	120,000 km ² - 0.4% of total Pacific EEZ (the smallest EEZ in the region)
Population	195, 979
Population growth (annual)	1%
Population density	69 people per km ²
Rural population	80% (SBS, Samoa 2016 Population and Housing Census, 2017)
Agriculture land area	26.75% (2016)
Agriculture sector contribution	10% of GDP (2019); 22% of labour force (2017)
Main domestic export commodities	60% domestic exports and 40% re-exports. Domestic exports - fresh fish (37%), taro (6%), beer (3%), coconut & coconut-by-products (2.8), nonu juice (2%), and others (8.7%)
Trade deficit	-SAT312.9 million (2018/19); -SAT421.1 million (2019/20)
Merchandise trade deficit	-SAT783.7 million (2018/19); -SAT728.3 million (2019/20)
Agriculture fisheries and forestry as a share of the workforce	42% (2016)

Food production profile

<i>Production aspects</i>	<i>Status</i>
Average area of holding (acres)	5.8 (2009); 8.0 (2015); 4 (2019)
Number of households growing crops	84% (2009); 97% (2015); 94% (2019)
Number of households with livestock	69% (2009); 68% (2015); 50% (2019)
Number of households engaged in fishing	25% (2009); 21% (2019); 10% (2019)

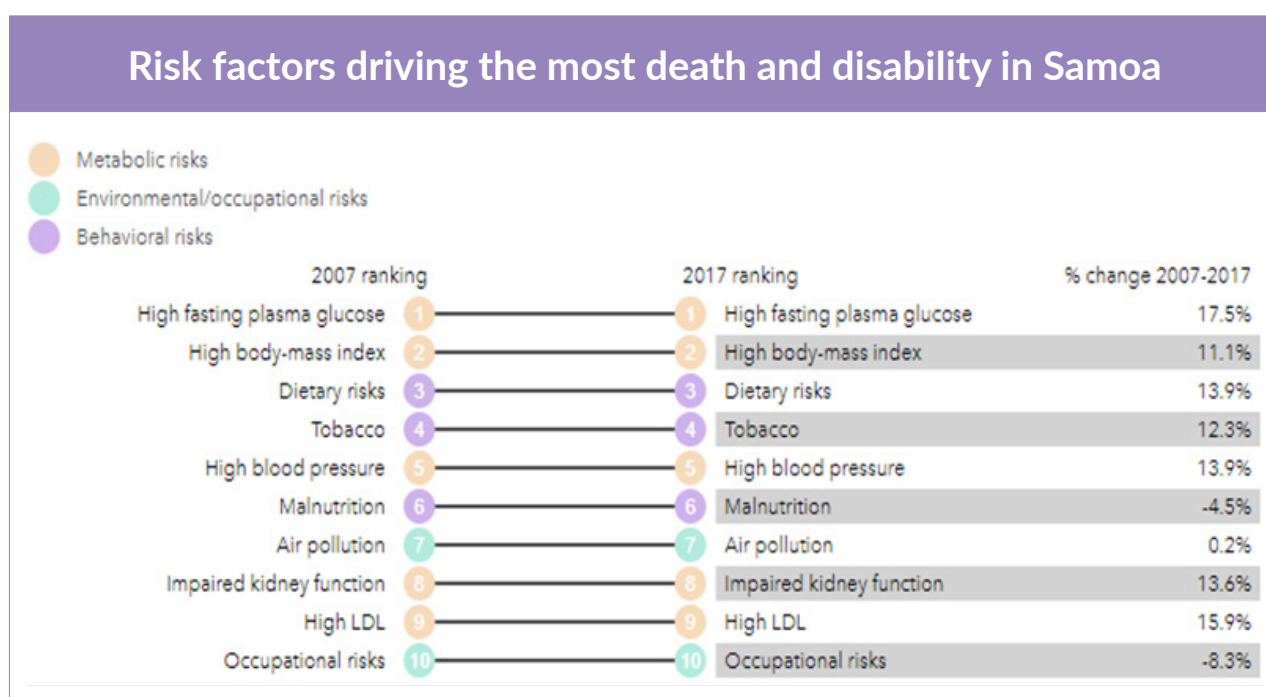
Food security and consumption profile

<i>Indicators</i>	<i>Status</i>
Population with food security	73.2% (2018)
Population with moderate food insecurity	24.2% (2018)
Population with severe food insecurity	2.6% (2018)
Population that is undernourished	5% (2018)
Average national daily consumption per capita	2,800 kcal
Share of food consumption by food groups	28% cereals and products (mainly rice & bread); 18% oil crops (coconuts); 11% meat (mainly chicken); 10% roots and tubers (mainly taro); 7.6% sugars and syrups; 7.5% vegetables and vegetable products; 5.9% processed food; 3.7% fish and fish products; 2.7% fruits and fruit products; 2.5% vegetable oils and fats; 2.7% others
Nutrient consumption	55% carbohydrates; 34% fats; and 11% protein*
Fruits and vegetables per capita Consumption	300 grams per day*
At least 20 servings of fruits per week Consumption	1.7% women and 0.5% men (2019)
At least 20 servings of vegetables per week consumption	1.5% women and 0.7% men (2019)
Share of food expenditures in total household expenditures	45% (53% poorest; 31% richest)
Average cost to acquire 1,000 calories kcal	SAT2.2

* WHO recommended intakes is 400 grams per day per capital for fruits and vegetables, 55-75% for carbohydrates 15-30% for fats, and 10-15% for protein.

Nutritional health profile								
Nutrition indicators	N	M	F	N	M	F	Global average	Global Targets
Infant (%)	1999-2013*			2019**			2015-2018	2025
Under-five wasting	3.9 [2013]	3.0	4.9	3.1 [2019]			7.3 [2018]	5.0%
Under-five stunting	4.9 [2013]	5.6	4.1	7.3 [2019]			21.9 [2018]	4.0% (40% reduction)
Under-five overweight	5.3 [2013]	6.2	4.3	8.7 [2019]			5.9 [2018]	5.5%
Under-five with anaemia	23.2 [1999]			34.1 [2015]*	32.5	35.8		
6 months exclusive breastfeeding	70.3 [2013]			51.7 [2019]			42.2 [2018]	At least 50%
Low birth rate							14.6 [2015]	10.5%
Childhood/adolescent (%)	2000*			2014*			2016	2025
5-19 aged underweight		2.2	1.6		1.4	0.9	31.6 (M); 25.9 (F)	
5-19 aged overweight		25.4	37.1		47.5	57.6	19.2 (M); 17.5 (F)	
5-19 aged obesity		8.8	6.4		23.3	19.9	7.8 (M); 5.6 (F)	
Maternal (%)	2000*			2016*			2015-2018	2025
Reproductive women with anaemia			22.1			31.3	32.5	15.0%
Pregnant women with anaemia			34.1			42.5	40.1	
Adults (% and grams)	2000-2017*			2014-2016*			2014-2017	2025
Adult diabetes		15.5	18.7		22.7	26.6	9.0 (M); 7.9 (F)	9.0% (M); 7.9% (F)
Adult overweight		65.3	74.5		73.6	82.0	38.5 (M); 39.2 (F)	
Adult obesity		28.3	45.5		39.9	55.0	11.1 (M); 15.1 (F)	10.4% (M); 14.4% (F)
Adult raised blood pressure		25.2	19.4		26.6	21.0	24.1 (M); 20.1 (F)	18.2% (M); 15.2% (F)
Sodium intake (grams per day)	2.2 [2017]						5.6 [2017]	3.95g per day
Life expectancy	73 (2011)			75 (2016)				

N – National. F – Female. M – Male. * Source: WHO (2019). * Source:Choy, et al.(2017). Global averages/targets were obtained from 2020 Global Nutrition Report: Action on equity to end malnutrition. ** SBS (2019). Blank means data not available.



Source: Institute for Health Metrics and Evaluation, 2017