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EVIDENCE BRIEF



Food Systems and the Pacific Region: Evidence Brief for the UN Food Systems Summit Dialogues

Prepared by SPC on behalf of the Pacific SIDS Ambassadors to the UN

The Pacific's unique contribution and challenges within the global food system

Message 1:

The Pacific region makes a significant, but under recognised contribution to global food systems.

The Pacific makes an important but under-recognised contribution to the global food system. Despite this contribution, Pacific countries face real challenges in realising equitable benefits from the global food system. This has implications for the health of Pacific people (in particular, in terms of nutrition and the burden of non-communicable diseases) as well as our environment, livelihoods and the economic development of the region. Climate change and climate-related disasters pose a critical threat to Pacific food systems, while COVID-19 has demonstrated underlying vulnerabilities to other shocks.

This evidence brief is intended to support Pacific Island countries and their representatives engage with the Food Systems Summit 2021 as well as the preliminary dialogues planned at national and regional levels. It presents three evidence-based messages, 'game changing solutions', and a situational analysis against the action track of the global summit.

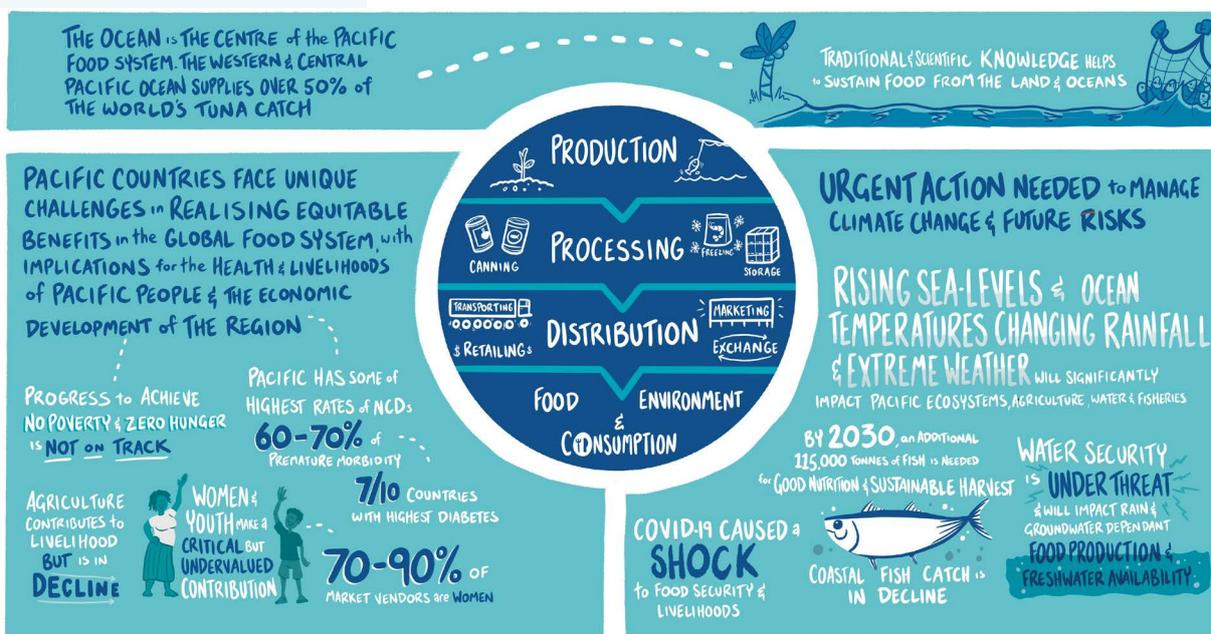
1.1 The ocean is the centre of the Pacific food system. The Western and Central Pacific Ocean supplies over half of the world's tuna catch. This resource is managed by institutions and governance systems that offer a game-changing integration of science, economics, policy and management. The custodianship arrangements for this global resource are a success story in regional food systems cooperation.

1.2 Pacific communities, based on historical experience, use traditional and Indigenous knowledge to sustainably manage food from the land and ocean. Centred on family and kinship ties, food and Pacific cultures are inseparable. These ties and traditional food systems help Pacific Island communities cope with shocks, including Covid-19.¹ The deep traditional knowledge of Indigenous people and local communities (IPLC) provides globally applicable lessons on living sustainably with the land and sea, and custodianship over natural resources.

1.3 Pacific countries are developing unique value chains for markets and international supply. This includes high-value products such as cacao, vanilla and coffee. The region is also taking important steps to preserve crop biodiversity, including conserving the largest collection of taro accessions in the world.²

1.4 Pacific Island people contribute considerable labour and skills to the agriculture and fisheries industries in Australia, New Zealand and the USA.³ The role of Pacific labour has become increasingly visible and important during the COVID-19 crisis, which diminished other sources of agricultural labour.

1.5 The historical legacy of phosphate and guano rock mining in Nauru, Kiribati and French Polynesia, which supplied New Zealand with phosphate for agriculture⁴, has had destructive long-term impacts on the landscapes and the people and cultures displaced by this mining.



Message 2:

Pacific countries face unique challenges in realising equitable benefits in the global food system, with implications for the health and livelihoods of Pacific people and the economic development of the region.

2.1 Pacific Island countries face common challenges in relation to food systems, but each country has its own unique set of challenges based on their local characteristics. Progress toward achieving SDG 1 (No Poverty) and SDG 2 (Zero hunger) is not on track for the region as whole.

2.2 The Pacific faces a triple burden of malnutrition with three of the most prevalent nutritional threats: childhood stunting, micronutrient deficiency among women and children, and overweight and obesity among women, with a growing concern among children. NCDs and associated risk factors are the leading causes of premature death in most PICTs, accounting for 60–75% of premature morbidity. Rates of childhood overweight are high in Fiji, Samoa, Tuvalu and Tonga. Rates of anaemia in both women and children are of concern, ranging from 21% to 41% in women and from 27% to 43% in children under the age of five years. Stunting also threatens childhood development and as a result, the future capacity of the region.

2.3 Premature death, disability and reduced productivity from NCDs pose a heavy burden on countries. These health outcomes are linked to increased reliance on imported high-energy low-nutrient foods, which in some cases may be easier to prepare and cheaper than traditional foods. Pacific Heads of State declared an 'NCD crisis' in 2011 and some Pacific countries have been among the first to introduce taxes on unhealthy food, and have committed to a range of policy actions to address the NCD crisis. Further uptake of taxes can help shift consumer behaviour.

2.4 Most Pacific countries have either negative or highly negative trade balances. The Pacific region is twice as isolated by air and sea as other SIDS regions. This impacts the costs of food imports, the ability of Pacific communities to afford healthy food, and the ability of Pacific producers to get foods to regional and global markets. Rising energy costs also threatens food flows in the region as fossil fuel-based transport is required for cold storage to reduce food waste and for logistics throughout the region. There is recognition of global trade as a driver of NCDs, but at national and regional levels there can be tensions between the framing of health, agriculture and fisheries, and trade policy objectives.⁵

2.5 Agriculture and fisheries are major contributors to livelihoods, yet average agricultural production is declining in the region.⁶ Coastal fisheries are under increasing pressure. Growing urbanisation and aging agricultural producers and fishers create long-term challenges for the food sector. Climate change presents an immediate risk to the productivity of agriculture and coastal fisheries.

2.6 Women and youth make a critical, but often undervalued contribution to household food security, agriculture and fisheries. Women contribute, on average, about half the annual coastal fisheries catch in the Pacific.⁷ Women fish for subsistence and are heavily involved in marketing and generating household income.⁸ Overall, 70% to 90% of market vendors in the Pacific are women, and women play a central role in the local value chain.

Message 3:

Urgent global and local action is needed to manage climate change and other risks, including for the most vulnerable, to ensure no one is left behind.

3.1 Climate change poses a fundamental threat to Pacific food systems. Sea-level rise, changes to rainfall and ocean temperatures, as well as increased incidence of extreme weather events will have significant impacts on Pacific ecosystems, water resources, agriculture and fisheries. Extreme weather events damage critical infrastructure in the food systems value chain, as well as increasing agricultural and aquatic biosecurity threats.⁹ Pacific leaders noted with grave concern in the Kainaki II Declaration that global greenhouse gas emissions continue to rise and are reaching record levels; based on current trends and without urgent action, global warming will exceed 1.5°C by as early as 2030 and reach 3°C or more by the end of this century.

3.2 By 2030, the gap between fish required for good nutrition and sustainable harvests from coastal fisheries will require an additional 115,000 tonnes of fish, which will need to be supplied by tuna.¹⁰ Coastal fisheries are threatened by warmer waters and sea-level rise.

3.3 Water security is increasingly threatened by sea-level rise and projected changes in rainfall. This will impact rain and groundwater dependent food production, and freshwater availability for some countries, such as atolls. It will also impact the health of communities through increasingly polluted and saline water, as well as affecting water catchments and coastal fisheries. Extreme weather events will also increase the risk of flooding and food losses in countries like Papua New Guinea and Fiji.

3.4 Covid-19, combined with a number of extreme weather events, resulted in cumulative shocks to food security and livelihoods across the Pacific, including through disruption to supply chains and loss of income (including from downturns in tourism and other economic shocks), with significant gendered impacts.¹¹ High frequency nutrition monitoring in multiple countries has identified concerning trends highlighting inequitable food security and nutrition outcomes for female-headed households, households with persons with a disability and children under four. Regional recovery strategies are centred on supporting agricultural production, continuation of markets (including tuna exports), enabling local supply chains and learning from disaster preparedness strategies.

3.5 Biosecurity risks continue to threaten value chains and livelihoods in marine and land systems. The threat is highlighted by issues including taro leaf blight, coconut rhinoceros beetle and other threats, which severely threaten Pacific agriculture.

3.6 In order to ensure equity, youth, women and people with disability need to form part of the solution. The Pacific has over 50% of its population under the age of 35, and women play major roles in sourcing, preparing, distributing and acquiring food. These groups are also most vulnerable to economic and environmental shocks. There is evidence that traditional food systems and knowledge, including subsistence fishing, has played an important role in buffering these impacts.¹²

Possible Systemic and Game Changing Solutions

[Note to readers: this section is still under development, and will continue to be added to, based on feedback from stakeholders]

- 1 **Systems thinking and practice as the foundation for all game changing solutions:** systems approaches can be transformative for ecosystems and human health and wellbeing. Systems thinking helps food stakeholders link their activities with other sectors and to think of future generations. Systems practice can help guide programmes and policies that create more equitable trade, livelihoods, agriculture and fishing. Trade-offs and feedback are more easily identified through systems practice. Systems practice allows for inclusion of diverse Pacific cultural knowledge and its role in agroecological production and sustainable fishing, and helps develop transformative opportunities for gender equality, women and youth.
- 2 **Maintain global warming below 1.5 degrees Celsius** to avoid the most severe impacts of climate change and ensure the ongoing viability of Pacific food systems.
- 3 **Scale approaches for adaptation of coastal fisheries, aquaculture, ocean farming and agriculture.** This includes greater action at the nexus of food-energy-water and ecosystems, and scaling up community, atoll and ecosystem-based approaches to fisheries management and adaptation. Supporting diversified farming systems that improve adaptive capacity of farming families is essential. Critical infrastructure in value chains needs to be protected from shocks, and future biosecurity and health risks need to be managed with multidisciplinary evidence and data.
- 4 **Reorganise trade systems to enable equitable health and environmental outcomes from food systems: trade agreements need to be compatible with health needs and priorities of**

countries, and not jeopardise environmental systems. Global trade rules need to help Pacific governments have space for policy and law that supports health outcomes. Scope can be built into trade agreements for health exceptions to be allowed, subject to necessary proof of risk. Trade needs to support the future Blue Pacific economy.

- 5 **Transforming agriculture through agroecological nature-based solutions that leverage Pacific knowledge and expertise.** Agroecological farming reduces dependencies on foreign inputs, reduces energy needs and can support much needed agrobiodiversity to support diverse diets and ecosystems. Transformative agriculture supports sustainable inputs and markets, reduces waste, and focuses on human rights and future generations.
- 6 **Maintain and augment strong tuna fisheries governance as a major food system activity.** WCPFC, FFA, SPC and PNA present a sophisticated and important sustainable fisheries management system in the region. However, as pressures grow on this resource, as well as their distribution, it will be critical to invest in ensuring food supplies of this important shared resource are able to supplement the diet of Pacific people.
- 7 **Maximising ocean resources for future generations.** While land is limited, the Pacific is a large ocean with potential for innovative technologies and solutions. These need to be developed with strong Pacific knowledge and voice, and support expertise developed in coastal and aquaculture systems to maximise ocean resources for food systems.



MAINTAIN & AUGMENT STRONG FISHERIES GOVERNANCE as a MAJOR FOOD SYSTEM ACTIVITY: CATALYSING GREEN & HEALTHY TRADE SYSTEMS, to ENSURE THAT TRADE DELIVERS for HEALTH & LIVELIHOODS of PACIFIC PEOPLE. ESTABLISHING GUIDELINES for NUTRITION SENSITIVE FOOD AID

* FAIR, SUSTAINABLE & NUTRITIOUS FOOD CERTIFICATION SYSTEMS & SUPPORTING ACCESS of 'CONVENIENT' HEALTHY FOOD
 * IMPORTING HEALTHY FOODS THROUGH TRADE DEALS * FINANCIAL INCENTIVES for HEALTHY FOOD SOURCING * TAXES for UNHEALTHY FOOD PRODUCTS

REORGANISE TRADE SYSTEMS to ENABLE EQUITABLE HEALTH & ENVIRONMENTAL OUTCOMES from FOOD SYSTEMS * TRADE DEALS COMPATIBLE WITH HEALTH PRIORITIES * POST-CYCLONE & DISASTER RESPONSES to EMBED FOOD LIVELIHOODS in RECOVERY * HIGH VALUE NICHE MARKETS for PACIFIC FARMERS



MAINTAIN GLOBAL WARMING BELOW 1.5° * SCALE APPROACHES for ADAPTATION of COASTAL FISHERIES & AGRICULTURE * USE of TRADITIONAL KNOWLEDGE to BUILD RESILIENCE * DEVELOP BIOSECURITY FRAMEWORKS to FACILITATE TRADE * FINANCIAL & SOCIAL PROTECTION SYSTEMS to CREATE BUFFERS for the VULNERABLE

SCALE-UP SOLUTIONS such as AGROECOLOGY & NATURE POSITIVE PRODUCTION * ENHANCED KNOWLEDGE EXCHANGE * COMMUNITY BASED FISHERIES & FOREST MANAGEMENT * TRANSFORMING AGRICULTURE to INCREASE SUSTAINABILITY & PRODUCTIVITY

The Pacific and the Food System Summit Action Tracks

The Food Systems Summit and preparatory dialogues are centred around five 'Action Tracks' that support the Summit objectives. The table below maps evidence of the state of the Pacific food system against the action tracks, as well as identifying systemic and game changing solutions. The action tracks are interconnected and do not sit in siloes. Each Action Track is designed to address possible trade-offs with other tracks, and to identify solutions that can deliver wide-reaching benefits.

ACTION TRACK	STATE OF THE ACTION TRACK IN THE PACIFIC FOOD SYSTEM, WITH EXAMPLES	SYSTEMIC AND GAME CHANGING OPPORTUNITIES
<p>ENSURE ACCESS TO SAFE AND NUTRITIOUS FOOD FOR ALL</p>	<p>CONTEXT</p> <p>The Pacific provides safe and nutritious food to the world, including through sustainably managed tuna fisheries. Traditional nutrition-rich Pacific diets have eroded with globalization.¹³ Trade systems have created food environments that lead to negative health outcomes¹⁴, contributing to an NCD crisis in Pacific countries.</p> <p>The large geographic area and small populations create challenges for food distribution. Supply chains are vulnerable to climate change and energy shocks.</p> <p>Women play a critical role in small-scale agriculture and fisheries, supporting household nutrition and income.</p> <p>Climate change presents significant threats to Pacific agriculture, coastal ecosystems and fisheries.</p> <p>EXAMPLE</p> <p>Total agricultural output has declined while food imports have increased.¹⁵</p>	<ul style="list-style-type: none"> - Catalysing green and healthy trade systems to ensure that trade supports the health and livelihoods of Pacific people, including through intra-regional trade. - Ensuring that trade reforms benefit Pacific producers and consumers, including supporting the availability of healthy food while achieving environmental outcomes and increasing domestic productivity. - Establishing guidelines for nutrition sensitive food aid. - Investing in adaptation of small-scale fisheries to protect coastal ecosystems while ensuring that communities have access to adequate nutrition. - Energy efficient cold chain and food preservation options (including traditional practices) to maximise the distribution of fresh food. - Elevating science and technology funds to support agroecological farming. - Scaling up and supporting capacities for agroecological innovation. - Development of ocean-based food production systems given limited land. - Improving data coordination across the full food system – from production to health outcomes.
<p>SHIFT TO SUSTAINABLE CONSUMPTION PATTERNS</p>	<p>CONTEXT</p> <p>The sustainability of international food value chains impacts the Pacific's ability to source sustainable food.</p> <p>There are high levels of non-communicable diseases, causing 75% of deaths. PICTs are among the top 10 countries with the highest rates of diabetes.¹⁶</p> <p>Food availability and consumption has changed through time. Top food items consumed (purchased): Chicken breast, rice, sugar, bread (Palau, Tonga, Tuvalu), rice and cassava (Solomon Islands). Home grown foods are still important in many countries, such as reef fish, kumara, bananas and breadfruit.</p> <p>EXAMPLES</p> <p>Some counties export healthy food to the world, but receive unhealthy imports. Kiribati is an example of this unequal food exchange.</p> <p>Local food production is in decline and coastal fisheries are under pressure. Future populations will require healthy food to be imported or fresh production intensified.</p> <p>Examples from Vanuatu's 'aelean kaikai' supporting local production and healthy consumption, and celebrating island gastronomy.</p>	<ul style="list-style-type: none"> - Effective and climate resilience value chains to supply healthy food to remote islands. - Fair, sustainable and nutritious food certification systems and supporting access to 'convenient' healthy food (i.e. less preparation time). - Greater availability of research and data to inform effective and coherent policies and programmes, including in agriculture, fisheries, trade and public health. - Strengthening of policies and programmes that reduce consumption of food and drink products that are high in sugar, salt and fat content and directly linked to NCDs, through targeted preventative measures, taxes and better regulation, enforcement and policy monitoring. - Resourcing of intergenerational dialogue and action to elevate traditional food production and preservation.
<p>BOOST NATURE-POSITIVE PRODUCTION (PROTECT NATURAL SYSTEMS)</p>	<p>CONTEXT</p> <p>Land has been cleared for food and cash commodities, causing biodiversity loss, soil erosion and water pollution.¹⁷</p> <p>Ridge-to-Reef initiatives link coastal areas with land productions systems and waterways.</p> <p>Agroforestry and integrated small-scale systems are common in Pacific Island countries.</p> <p>Cross-sectorial work needs strengthening. For example, the water-food-energy-ecosystem nexus is limited.</p> <p>Coastal ecosystems and fisheries are critical to nutrition and livelihoods, but production is declining and critically threatened by climate change.</p> <p>EXAMPLES</p> <p>A network of organic and agroecological demonstration farms across seven PICTS.</p> <p>Community-based forest management, such as Drawa in Fiji.</p> <p>The expansion of certified organic production to over 100,000 ha in 2019 and over 16,000 producers.</p> <p>Whole island approaches to development based on sustainable land, forest and marine management, such as Emae in Vanuatu.</p> <p>The promotion of integrated crop management and biocontrol for agricultural pests and diseases.</p>	<ul style="list-style-type: none"> - Land and ocean-based aquaculture, deployment of anchored FADs and better management of bycatch to reduce pressure on land and coastal systems while supporting access to fisheries. - Locally managed marine areas draw from traditional knowledge and science. This can be upscaled to other systems. - Community-based forest management to empower communities and deliver sustainable market products. - Agroecological scaling and extension services to enable diversity of production and knowledge exchange. - Community Based Fisheries Management (CMFM) is a game changing approach towards coupling human and environmental governance.

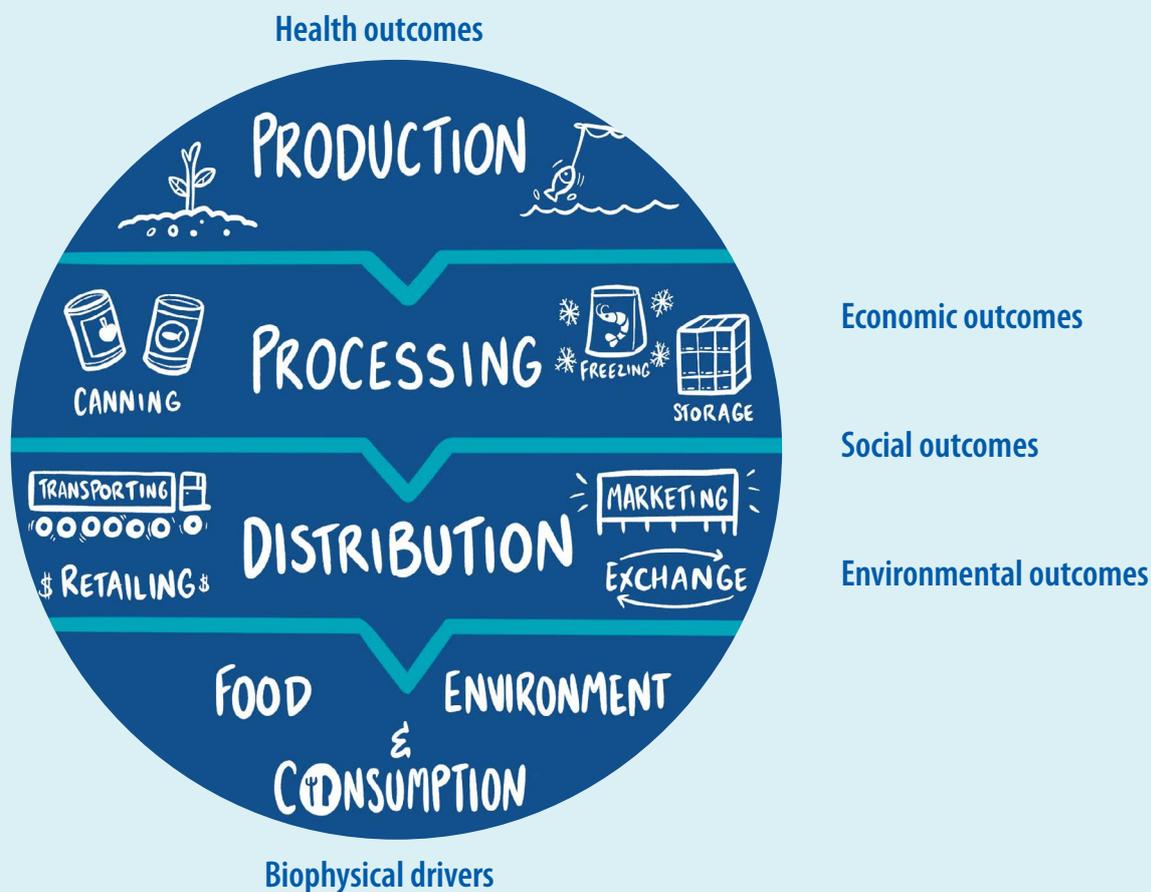
ACTION TRACK	STATE OF THE ACTION TRACK IN THE PACIFIC FOOD SYSTEM, WITH EXAMPLES	SYSTEMIC AND GAME CHANGING OPPORTUNITIES
ADVANCE EQUITABLE LIVELIHOODS	<p>CONTEXT</p> <p>Poverty and inequality are growing in the Pacific, and this influences the food security of different socio-economic groups.¹⁹ Large numbers of Pacific Islanders are involved in labour within the food system.</p> <p>PICTs use family-based approaches to farming and community-based approaches to managing fisheries. Women play a critical role in household nutrition and food security and income, but their contribution is not always recognised or supported.</p> <p>High value exports do not always contribute to household food security.</p> <p>Social safety nets are limited – the Pacific has one of the lowest rates of social protection systems.</p> <p>The Pacific is an increasingly urbanised region and the urban youth bulge impacts livelihoods and food choices. Over 50% of the population is under the age of 35.</p> <p>EXAMPLES</p> <p>The Youth@Work programme</p> <p>Pacific Organic Certification (Organic Pasifika)</p> <p>UN Markets for Change programme</p>	<ul style="list-style-type: none"> - Solutions that create opportunities for small and medium-scale production and value adding, and access to high-value markets such as organic and Fairtrade. - Supporting the participation of women and celebrating the links between Pacific cultures, gastronomy and food. - International value chains embedding support for new markets for producers. - Post-cyclone and disaster responses can embed resilient food livelihoods in recovery strategies. - High-value niche markets are enabled for Pacific farmers and businesses. - Opportunities for youth participation in food systems, including in agriculture, fisheries and value adding. - Mainstreaming of gender equality in all dimensions of food activities, including production, packaging, distribution and consumption. - -
BUILD RESILIENCE TO VULNERABILITIES, SHOCKS AND STRESS	<p>CONTEXT</p> <p>The Pacific region uses a range of strategies to manage shocks (climatic change, disasters, economic).</p> <p>‘Slow shocks’ are occurring – water quality and availability, soil degradation, NCDs and poverty.</p> <p>‘Extreme and cumulative shocks’ are also occurring – economic, health (COVID-19), and the increasing frequency and impact of hazards, including of cyclones, flooding events, drought and salinity. This is on top of existing variability from drivers including El Nino and La Nina.</p> <p>Biosecurity threats continue to grow, and pest and disease outbreaks, such as taro scale and coconut rhinoceros beetle, highlight the exposure of Pacific people. Covid-19 food security and nutrition monitoring is showing higher vulnerabilities for female-headed households, households with persons with a disability and children under four.</p> <p>Further action is needed protect plant and animal biosecurity on land and in the sea to protect ecosystems and livelihoods, and facilitate trade. Biosecurity is a critical issue to address at the regional level due to transboundary issues.</p> <p>EXAMPLES</p> <p>During COVID-19 lockdowns, communities organised to maintain fresh food supplies domestically.</p> <p>There is rapid mobilization of people and information during cyclone shocks.</p> <p>CEPACT and the Pacific Seeds for Life programme safeguard Pacific crop diversity and distribute seeds and tissues.</p>	<ul style="list-style-type: none"> - Support agricultural extension that focuses on adaptation strategies. - Innovative water storage and management solutions to support human health and food production. - Climate adaptation in food value chains. - Funding regional climate finance activities across value chains. - Use of traditional knowledge and oral histories to build resilience based on experience. - Developing biosecurity frameworks to facilitate trade. - Ensuring data informs evidence-based policy and programs to support the resilience of the most vulnerable. - Strengthening social protection systems to be more shock-responsive, including through horizontal and vertical expansions. - Promoting climate risk finance, including forecast-based financing linked to anticipatory action and micro/inclusive insurance for the most vulnerable. - Financial and social protection systems create buffers for the most vulnerable during shocks, for example, through a database of poor households at national levels. - Supporting community resilience activities combined with scientific evidence.

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Annex 1: What is a food system?

Social, economic and cultural drivers



A story of food systems in the Pacific

A food system is generally defined as the interaction of food-related activities, including production, distribution, consumption and waste management, that are carried out across different socio-economic and environmental contexts (Ingram 2011). National food systems in the Pacific share attributes with other Small Island Developing States, such as remoteness, import dependence, climate vulnerability and limited arable land.

Food systems operate at different levels that influence each other, from household to regional and global scales. For example, Malani's family in a coastal village source fish daily using their boat, and Malani harvests vegetables from their home garden – sometimes with help from their three children. Malani also goes to the local shop to purchase imported rice for carbohydrates to supplement the increasingly hard-to-catch fish. The fish and vegetables depend on local labour, but the rice may be imported from an industrial food system far away. Malani's brother, a hotel worker in the city, sends remittances back home, and other non-farm income comes from fishing. These are used to buy the food needed for the household.

Economics, social context and environmental change also influence the food system. In Malani's family, COVID-19 meant that the additional income from hotel work disappeared. This led to an increased focus on growing vegetables and fishing in deeper water for larger fish. A heavy cyclone destroyed their home vegetables, and without much income, the family is now forced to rely on foreign government-funded food aid. That foreign government has been hesitant to spend on international aid, given their upcoming election, so the food aid provided is limited and full of low-nutrition cheap food. Because Malani is responsible for feeding the family, the children and Paula get the first rations allocated to the family, and she eats any left-over food.

Relevance to progress towards the Sustainable Development Goals

The Pacific food system contributes to global food supply – for example through high quality tuna, horticulture products, coffee, copra and cocoa. The system also receives a lot of imports, some of which are low in nutritional value. As trade liberalization unfolded, Pacific countries saw an increase in imports of unhealthy processed and sugary foods. At the same time, coastal fish populations and agricultural productivity continued to decline. Limited freshwater and land resources have created a challenge for the rural communities that depend on food production for their incomes, while a growing urban population means more imported food is consumed.

Progress towards all sustainable development goals is influenced by food system activities. The distribution of food – be it for export tuna markets in Japan or hotels in Suva – influences poverty reduction (SDG1), zero hunger (SDG2) and decent work (SDG8). The global trade agreements for the Pacific influence the type of food that consumers can access. Women play a crucial role in all food activities, making gender equality core in food systems (SDG5). The strategies

farmers and fishers use can make positive contributions to nature (SDG6, 14, 15), and stable food supplies can prevent conflict and tensions over accessing food (SDG16). The multiple markets to which food is delivered can include a mix of businesses, civil society and government groups that work in different ways to coordinate food supply (SDG17). Leaving no-one behind means taking explicit action to address extreme poverty and curb inequalities and discrimination in all its forms.

While there is a depth of knowledge in specific parts of the Pacific food systems (such as nutrition, fisheries and agricultural production), there is much more limited integrated work linking different food sectors and disciplines. This creates a large opportunity for innovation and high-impact investment across people and environments. There is further limited attention to leaving no-one behind, including inequitable food security and nutrition outcomes based on factors such as age, gender, diversity and disability.

Outcomes:



At a general level, a sustainable food system that delivers to future generations and contributes to natural systems needs to contribute to six major outcomes:

- Availability of food
- Equitable access of food
- Utilization of food
- Stability of food
- Agency of people
- Sustainability in the system



References

- 1 Iese, V., Wairiu, M., Hickey, G.M., Ugalde, D., Hinge Salili, D. et al. 2021. Impacts of COVID-19 on agriculture and food systems in Pacific Island countries (PICs): Evidence from communities in Fiji and Solomon Islands. *Agricultural Systems* 190: 103099.
- 2 SPC (Pacific Community) 2019. Pacific Community Results Report. Pacific Community, Noumea/Suva.
- 3 World Bank 2018. Maximizing the Development Impacts from Temporary Migration: Recommendations for Australia's Seasonal Worker Programme. World Bank, Washington DC.
- 4 Burnett, W.C. and Lee, A.I.N. 1980. The phosphate supply system in the Pacific region. *GeoJournal* 4(5): 423-36.
- 5 Tin, S.T.W., Vivili, P., Na'ati, E., Bertrand, S. and Kubuabola, I. 2020. Insights in Public Health: COVID-19 Special Column: The Crisis of Non-Communicable Diseases in the Pacific and the Coronavirus Disease 2019 Pandemic. *Hawai'i Journal of Health & Social Welfare* 79(5): 147.
- 6 Farrell, P., Thow, A.M., Wate, J.T., Nonga, N., Vatucawaqa, P. et al. 2020. COVID-19 and Pacific food system resilience: opportunities to build a robust response. *Food Security* 12: 783-91.
- 7 Harper, S., Zeller, D., Hauzer, M., Pauly, D. and Sumaila, U.R. 2013. Women and fisheries: Contribution to food security and local economies. *Marine Policy* 39: 56-63.
- 8 Thomas, A., Mangubhai, S., Fox, M., Meo, S., Miller, K. et al. 2021. Why they must be counted: Significant contributions of Fijian women fishers to food security and livelihoods. *Ocean & Coastal Management* 205: 105571.
- 9 Bell, J. and Taylor, M., 2015. Building climate-resilient food systems for Pacific Islands. *WorldFish*.
- 10 SPC 2015. A new song for coastal fisheries pathways to change: The Noumea strategy. Pacific Community, Noumea/Suva.
- 11 Davila, F., Bourke, R.M., McWilliam, A., Crimp, S., Robins, L. et al. 2021. COVID-19 and food systems in Pacific Island Countries, Papua New Guinea, and Timor-Leste: Opportunities for actions towards the sustainable development goals. *Agricultural Systems* 191: 103137.
- 12 Iese, V., Wairiu, M., Hickey, G.M., Ugalde, D., Hinge Salili, D. et al. 2021. Impacts of COVID-19 on agriculture and food systems in Pacific Island countries (PICs): Evidence from communities in Fiji and Solomon Islands. *Agricultural Systems* 190: 103099.
- 13 Connell, J. 2015. Food security in the island Pacific: Is Micronesia as far away as ever? *Regional Environmental Change* 15(7): 1299-311.
- 14 Plahe, J.K., Hawkes, S. and Ponnampereuma, S. 2013. The Corporate Food Regime and Food Sovereignty in the Pacific Islands. *The Contemporary Pacific* 25(2): 309-38.
- 15 Farrell, P., Thow, A.M., Wate, J.T., Nonga, N., Vatucawaqa, P. et al. 2020. COVID-19 and Pacific food system resilience: opportunities to build a robust response. *Food Security* 12: 783-91.
- 16 Tin, S.T.W., Vivili, P., Na'ati, E., Bertrand, S. and Kubuabola, I. 2020. Insights in Public Health: COVID-19 Special Column: The Crisis of Non-Communicable Diseases in the Pacific and the Coronavirus Disease 2019 Pandemic. *Hawai'i Journal of Health & Social Welfare* 79(5): 147.
- 17 Thaman, R. 2014. Agrodeforestation and the loss of agrobiodiversity in the Pacific Islands: a call for conservation. *Pacific Conservation Biology* 20(2): 180-92.
- 18 SPC 2015. A new song for coastal fisheries pathways to change: The Noumea strategy. Pacific Community, Noumea/Suva.
- 19 UNDP 2014. The State of Human Development in the Pacific: A report on vulnerability and exclusion in a time of rapid change. UNEP, Suva. Available at: file:///Users/138991/Downloads/State_Human_Development_Pacific_ES.pdf



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