



Food and Agriculture
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GENDER, AGRIFOOD VALUE CHAINS and CLIMATE-RESILIENT AGRICULTURE in Small Island Developing States

Evidence from:

Barbados and Saint Lucia in the Caribbean
Palau and Samoa in the Pacific
Cabo Verde, the Comoros and Sao Tome
and Principe in the Atlantic, Indian Ocean
and South China Sea (AIS) region



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ABSTRACT

In the current context of climate change, focusing on gender equality in the Small Island Developing States (SIDS) can drive improvements in resilience, food security and nutrition. This document seeks to enrich the knowledge and evidence base on gender, food systems and resilience in the SIDS of the Caribbean, the Pacific, and the Atlantic, Indian Ocean and South China Sea (AIS) region, providing evidence from Barbados, Cabo Verde, Comoros (the), Palau, Saint Lucia, Samoa and Sao Tome and Principe. It focuses specifically on gender-related roles, gender gaps and traditional knowledge in agriculture and natural resource management to better support women's participation in value chains and the benefits they receive from value chain development. It calls for radical transformations to build resilient livelihoods, overcome gender inequalities and help rural women and men reduce their exposure and vulnerability to climate change and natural disasters. Furthermore, the transformations called for, which focus on gender equity, will increase the resilience of rural livelihoods to unforeseen events, such as the COVID-19 pandemic, particularly in view of the critical role women play in ensuring food security and nutrition.

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ABBREVIATIONS AND ACRONYMS

AOSIS	Alliance of Small Island States
AfDB	African Development Bank
AIS	Atlantic, Indian Ocean and South China Sea
AWIA	Association of Women in Agriculture
BPOA	Barbados Programme of Action
CANROP	Caribbean Network of Rural Women Producers
CARICOM	Caribbean Community
CCCFP	Caribbean Community Common Fisheries Policy
CDB	Caribbean Development Bank
CFI	FAO Investment Center
CNFO	Caribbean Network of Fisherfolk Organisations
CEDAW	Convention on the Elimination of Discrimination against Women
CERMES	Centre for Resource Management and Environmental Studies in the Caribbean
DSFI	Dietary source flexibility index
ECLAC	Economic Commission for Latin America and Caribbean
EIF	Enhanced Integrated Framework
ESP	Inclusive Rural Transformation and Gender Equality Division (FAO)
FAO	Food and Agriculture Organization of the United Nations
FMM	Flexible Multi-Partner Mechanism
GAP	Global Action Programme on Food Security and Nutrition in Small Island Developing States
GDI	Gender Development Index
GDP	Gross domestic product
GII	Gender Inequality Index
GIFT	Gender in fisheries team
HDI	Human Development Index
HDR	Human Development Report
ICT	Information and communication technology
IDB	Inter-American Development Bank
IFAD	International Fund for Agricultural Development
IHDI	Inequality-adjusted Human Development Index

ILO	International Labour Organization
LDCs	Least developed countries
NCD's	Non-communicable diseases
NGO	Non-governmental organization
OECS	Organisation of Eastern Caribbean States
PIRAS	The Pacific Islands Rural Advisory Services
PPA	Pacific Platform for Action for Gender Equality and Women's Human Rights 2018–2030
SAMOA	Small Island Developing States Accelerated Modalities of Action Pathway
SBEC	Samoa Business Enterprise Centre
SCFA	Savai'i Coconut Farmers Association
SDGs	Sustainable Development Goals
SIDS	Small Island Developing States
SPC	The Pacific Community
SWAG	Samoa Women's Association of Growers
TKEC	Traditional knowledge and expressions of culture
TSSP	Trade Sector Support Programme
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UN-OHRLS	UN Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States
UN DESA	United Nations Department of Economic and Social Affairs
WIBDI	Women in Business Development Incorporated

EXECUTIVE SUMMARY

Context

The Small Island Developing States (SIDS) are especially vulnerable to the effects of climate change, in addition to facing important economic disadvantages due to their small size, limited resources, geographic dispersion and isolation from markets. Women in SIDS play an important role as food providers, representing 52 percent of the agricultural labour force (FAO, 2020a). However, due to persistent gender inequalities, they face substantial systemic barriers across food value chains and in the food systems in which they operate. In this context, gender equality in SIDS can be an important driver of climate resilience, food security, improved nutrition and economic development.

This publication was prepared in the context of the subprogramme Empowering Women in Food Systems and Strengthening the Local Capacities and Resilience of SIDS in the Agri-food Sector of the Food and Agriculture Organization of the United Nations (FAO), under the Flexible Multi-Partner Mechanism (FMM) Resilient and Sustainable Food Systems programme. It explores **the interconnections between gender equality, climate resilience and agrifood value chains in SIDS, from a food systems perspective**, drawing on concrete evidence from seven SIDS across three regions: Barbados and Saint Lucia (in the Caribbean); Cabo Verde, Comoros (the) and Sao Tome and Principe (in the Atlantic, Indian Ocean and South China Sea (AIS) region); and Palau and Samoa (in Asia and the Pacific). The evidence presented is expected to inform FAO's programming and policy engagement in the seven focus SIDS and to support country partners in adopting more coherent approaches to gender equality and climate resilience in their national strategies. It is also expected that this publication will pave the way for additional expanded studies in other SIDS, in order to reinforce institutional awareness and capacities to develop efficient, gender-sensitive and climate-resilient agrifood value chains at regional, subregional and national levels.

Using a food systems approach, the analysis focuses on four interlinked dimensions that influence gender equality and resilience in agrifood value chains: (i) gender roles in agricultural sectors and related issues of women's voice, rights and agency; (ii) gender gaps in accessing and controlling resources, services and decision-making, which constrain women's economic empowerment; (iii) natural resources and vulnerability to climate change and other risks; (iv) policies and governance for sustainable food systems.

Main findings

Gender roles: voice, rights and agency

Women have lower levels of participation and less decision-making power than men at the community and household levels across all the SIDS studied, including in matrilineal systems (Palau and Comoros [the]) and – albeit to a lesser extent – in the Caribbean. The situation arises from prevailing perceptions about women's role and voice at household, community and wider societal levels. Throughout the SIDS studied, women are responsible for nearly all unpaid domestic and care work, leaving them with heavy workloads and lack of time to engage fully in productive activities. Furthermore, current value chain governance and operations generally prevent women from having a voice or decision-making power within the value chains. As such, their needs and interests are not addressed and they are unable to participate fully in the value chains. One positive aspect, however, is women's participation in primarily local cooperatives, producer organizations and women's groups and committees, which enhances their confidence, skills and participation and can lead to women's greater participation in decision-making at various levels.

Gender gaps in economic opportunities

Women in SIDS engage actively in a range of crop, livestock and fisheries value chains, but have generally less access to resources and services. The extent of women's engagement in each node of the value chain varies per commodity and per country. Commonly, women control small-scale production, processing and retail of surplus food. Although most women operate small-sized farm activities, there are plenty of examples of women entrepreneurs engaging in medium-sized businesses, (e.g. poultry in the Comoros [the]) and in domestic as well as interisland trade (e.g. in the Caribbean). Across all the SIDS studied, women were found to have less access to resources and services than men, although some examples are highlighted (in the fisheries sector in Samoa, Palau and Sao Tome and Principe) in which women have sufficient access to finance and services to enable them to conduct highly profitable activities.

The most common challenges which prevent women from participating fully and gainfully in agrifood value chains were found to be: **(a) Women have limited and/or insecure land tenure** (particularly in the Caribbean), which means that they are limited to engaging in informal farming activities around the home or on available communal land. This limitation and the concentration of women in the informal sector, means they are unable to provide collateral for loans to invest in farming and necessary disaster risk and resilience measures. **(b) Financial institutions have weak capacity to manage the risks associated with agricultural finance**, in particular, to meet women's needs and collateral constraints. **(c) Women have less access to extension services and to information and communications technologies, or ICTs** (notably in AIS SIDS), limiting their access to market information and weather-related warnings. **(d) SIDS** prioritize high-value export value chains, which are commonly male-dominated.

Natural resources and climate-change risks

SIDS are particularly vulnerable to climate change and are experiencing the negative impacts of both extreme weather events and the slow-onset effects of climate change. Many have been affected by a number of extreme weather events in recent years, including hurricanes and cyclones, often leading to flooding and landslides, resulting in large-scale agricultural losses. Sea-level rise and changing weather patterns (in many cases, extended drought), further degrade food production and impact livelihoods, especially for those in the agriculture and fisheries sectors, with additional impacts on water availability and human health. Coastal populations and infrastructure are directly threatened by sea-level rise.

In addition to impacting the fisheries and agriculture sectors, increasingly frequent climate events, combined with the COVID-19 pandemic, have severely impacted employment in the service and tourism sectors in most SIDS. Jobs in these sectors often provide women with a better and more economically viable alternative to agriculture. However, **conventional tourism also poses environmental and health risks**, contributing to: (a) a move away from food crop production; (b) greater importation and consumption of processed, unhealthy foods; and (c) a loss of agricultural land to tourism-driven infrastructure development and environmental damage to the very attractions (e.g. coastlines) that bring tourists to the islands.

Rural women in SIDS are more knowledgeable about (sometimes considered the guardians of) sustainable production of traditional food varieties, largely due to their roles in primary production and reproductive activities. With women increasingly moving into other sectors or (together with men) being forced off their land because of natural disasters, there is a risk that such **traditional knowledge may be lost**. In all SIDS, except for those in the Pacific, the loss of knowledge about farming local food varieties can have long-term consequences in terms of biodiversity loss and environmental risks.

Policies and governance for sustainable food systems

Given that climate change is having significant negative impacts on food production throughout the SIDS and that women are key actors in food production, **governments should develop gender-sensitive policy environments that protect food systems from climate impacts** while enabling women to participate more fully and equally in agricultural production and in climate-related decision-making and action.

The Small Island Developing States Accelerated Modalities of Action (SAMOA) Pathway and the Intergovernmental Panel on Climate Change (IPCC) report 2021 urge for National Development Plans to address the negative effects of climate change and its linkages with key economic sectors including agriculture, health, education and tourism, as well as associated social risks impacting women and youth.

SIDS import a large proportion of the food consumed domestically, much of which is high in fats and sugar and low in nutritional value; but cheap and easier to prepare compared to locally produced foods. **A major shift toward consuming unhealthy imported food is leading to rapidly rising overweight and obesity rates** among children, and to high levels of anaemia, obesity and diet-related non-communicable diseases (NCDs) among adults, mostly in the Pacific, but also increasingly in the Caribbean. In some SIDS, obesity affects women much more than men, both directly and indirectly, as they care for family members with NCDs.

Most women engaged in agriculture in SIDS are in the informal sector. This enables them to fit their productive work around their domestic and care responsibilities. Although such informal work contributes significantly to rural economies, it is rarely registered, measured, or recognized in national labour force statistics, leading to a lack of interventions tailored to women's specific needs and interests. The shocks caused by COVID-19 in SIDS revealed the risks of the invisibility of women's livelihoods, important among these being their exclusion from social protection and rescue packages in times of crisis.

Recommendations

Strengthen women's voice, rights and agency

Continue to build awareness and strengthen capacities among key institutions and service providers around the importance of gender equality and women's empowerment in value chains. **Consider policies that promote a more equitable balance of workloads at household level**, incentivizing all family members (both women and men) to assume domestic and care responsibilities, improving the provision of productive services (including input supply, resources, finance and extension), and promoting labour-saving technologies and practices. **Support women's participation and leadership** in rural producer, processing and marketing organizations, which is crucial to increase their confidence and empowerment. This can be done by promoting governance structures within such organizations, such as quotas for women's participation and leadership, that improve equitable access to decision-making.

Support women's economic empowerment

Address gender gaps in access to resources and services related to the agriculture (crop and livestock) and fisheries sectors, through a stocktaking exercise assessing strengths, weaknesses and gaps in provision, both generally and gender-related. Findings of these studies could be addressed by governments, in partnership with Non-governmental organizations (NGOs), donors and the private sector, identifying actions to: address land tenure issues; support specific women's products or by-products (through branding, for instance); enhance women's access to markets (for example, through mobile farm gate markets and digital marketing systems) (FAO, 2020a); and provide gender-sensitive services close to the communities to respond to women's time and mobility constraints (though hubs, business services centres, incubators, etc.).

Develop financing mechanisms and products, as well as modes of delivery, targeted to women that reduce the barriers they face to enter into agribusiness. Support banks in agricultural lending and in developing more tailored financial products and services for women farmers and entrepreneurs, in introducing de-risking strategies, reconsidering their conditions for loan approval, exploring group-lending mechanisms and considering crop insurance modalities to protect against risks, with special attention to covering unpredictable weather events (Observer, 2018).

Gender-sensitive approaches to natural resources and climate change issues

Manage natural resources and climate change risks in SIDS **through risk-sensitive, gender-sensitive and cross-sectoral planning**, taking into account the interlinkages between employment, the environment and human health. Specifically: (a) Examine the multiple drivers of climate risks and hazards in SIDS, together with climate change projections, and consider possible responses, based on cross-sectoral gender disaggregated data and statistics. (b) Develop holistic and coherent policies regarding tourism, agriculture, the environment and human health, and consider options for a more sustainable tourism sector that boosts local production and improved the nutritional value of the food consumed by locals and tourists alike. (c) Develop risk-sensitive, cross-sectoral plans, that include building resilience, to increase the capacities of value chains actors across the food system to withstand current and future risks and shocks, such as the COVID-19 pandemic.

Research and draw on women's (and men's) traditional knowledge related to agriculture, livestock, fisheries and natural resource management, and share this knowledge and experience across SIDS in the Pacific, Caribbean and AIS regions.

Policies and governance for sustainable food systems

Develop gender-sensitive policy environments that enable women to participate more fully and equally in agricultural production and in climate-related decision-making and action, including: (a) inclusive, long-term national development plans that reflect the different needs, preferences and knowledge of specific groups including women, youth and Indigenous Peoples; and (b) develop gendered adaptation and mitigation policies that promote the role of local communities, including women, in disaster risk reduction activities and in preventing loss and damages caused by climate change.

Strengthen cross-sectoral policies that can coherently and effectively break the vicious cycle of unhealthy food imports, foreign currency deficit, declining local food production, biodiversity loss, and the rapid deterioration of human and environmental health. Specifically: (a) Re-invigorate and popularize local production, strengthening added value and marketing of staples, fruits, vegetables and livestock products, prioritizing those produced by women. (b) Shift from conventional to sustainable tourism, promoting responsible production and consumption while protecting natural and cultural heritage. (c) Conduct continued research and innovation to reduce the time needed in food preparation of some of the traditional staples. (d) Develop gendered adaptation and mitigation policies that promote the role of local communities, including women, in disaster risk reduction activities and in preventing loss and damages caused by climate change.

Consider ways to formalize men's and women's work in the informal sector and to account for such work in national labour statistics, in particular to better target services (input supply, resources, finance and extension) to address women's specific needs.

INTRODUCTION

Context of the study

Small Island Developing States (SIDS) are characterized by their “small size, limited resources, geographic dispersion and isolation from markets”, which places them at an economic disadvantage and prevents economies of scale (FAO, 2019a). In view of these constraints, and particularly in the context of climate change, several global and regional commitments underscore the need to focus on gender equality in SIDS, as an important driver of resilience and food and nutrition security. Empowering women to better sustain and improve their livelihoods is critical for attaining more inclusive, efficient and climate-resilient agrifood value chains.

Gender equality is a central aspect of the Global Action Programme on Food Security and Nutrition in Small Island Developing States (GAP), which supports the commitments of the SAMOA Pathway, developed in 2014, to which FAO is committed. Gender equality is also a central and cross-cutting element of the United Nations (UN) 2030 Agenda for Sustainable Development, which further develops the provisions of the Beijing Declaration and Platform for Action and the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW). Likewise, at the high-level meeting to review progress in addressing SIDS priorities through the SAMOA Pathway, a declaration was issued calling for action around “the continued integration of a gender perspective in priority areas for sustainable development, strengthening of women’s economic empowerment and women’s full, equal and effective participation in all fields and leadership at all levels of decision-making” (United Nations General Assembly, 2019. p. 16 item 30k).

In addition, through the 2018 Samoa Declaration on Climate Change in the Context of Sustainable Development for SIDS, issued by the Alliance of Small Island States (AOSIS, 2018), the SIDS confirmed their commitment to increasing mitigation measures, in accordance with the objectives of the Paris Agreement, with particular focus on limiting the increase of temperatures, which results in increased droughts, changing rainfall patterns, more frequent storms and increased incidence of diseases, all of which aggravate existing vulnerabilities, including limited water availability, disproportionately affecting vulnerable groups, including youth, women and lower income communities.

In addition to these international commitments focusing on SIDS, there are global guiding principles for achieving gender equality and women’s empowerment to promote inclusive and sustainable food systems. These include the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests (VGGTs) (FAO, 2012); the Voluntary Guidelines on Food Systems and Nutrition (FAO, 2021); and the Voluntary Guidelines on Gender Equality and Women’s Empowerment in the Context of Food Security and Nutrition (FAO, forthcoming).

This publication was prepared in the context of FAO’s subprogramme, Empowering Women in Food Systems and Strengthening the Local Capacities and Resilience of SIDS in the Agri-food Sector, under the FMM Resilient and Sustainable Food Systems programme, which aims to enhance women’s participation and benefit from selected value chains, by improving their access to resources and to innovative and climate-resilient services, technologies and practices. The subprogramme targets six focus countries¹ where FAO has ongoing projects and where conditions for upscaling proven initiatives are favourable.

¹ Barbados, Cabo Verde, Comoros (the), Palau, Samoa and Saint Lucia.

It directly contributes to the three pillars of the GAP: (a) strengthen the enabling environments for food security and nutrition; (b) improve sustainability, resilience and nutrition-sensitivity of food systems; and (c) empower people and communities for food security and nutrition (FAO, 2017). The subprogramme also contributes more broadly to the commitments of the SAMOA Pathway and to the achievement of SDG target 13.b, regarding raising capacity for effective climate change-related planning and management in least developed countries (LDCs) and SIDS, including focusing on women, youth, local and marginalized communities and to SDG 5, Gender Equality and Women's Empowerment.

Purpose of the study

This publication explores the **interconnections between gender equality, climate resilience and agrifood value chains in SIDS, from a food systems perspective**. It draws on concrete evidence from seven SIDS across three regions: Barbados and Saint Lucia (in the Caribbean); Cabo Verde, Comoros (the) and Sao Tome and Principe² (in the AIS region); and Palau and Samoa (in Asia and the Pacific). The evidence presented is expected to: (a) inform FAO's programming and policy engagement in the seven focus SIDS; (b) support country partners in adopting more coherent approaches to gender equality and climate resilience within their national strategies; and (c) pave the way for additional expanded studies in other SIDS, in order to reinforce institutional capacities for efficient, gender-sensitive and climate-resilient agrifood value chains at regional, subregional and national levels.



Approach, methodology and structure of the paper

This publication was prepared during 2020–2021, based on a desk review of secondary data and literature, complemented by key informant interviews with FAO staff at headquarters and at relevant regional and subregional offices. Using a food systems approach, it considers gender inequalities and climate risks in the context of a broad range of interconnected actors and activities related to agrifood systems in SIDS. As shown in **Figure 1** (p. 3), the analysis focuses on four interlinked dimensions that influence gender equality and resilience in agrifood value chains:

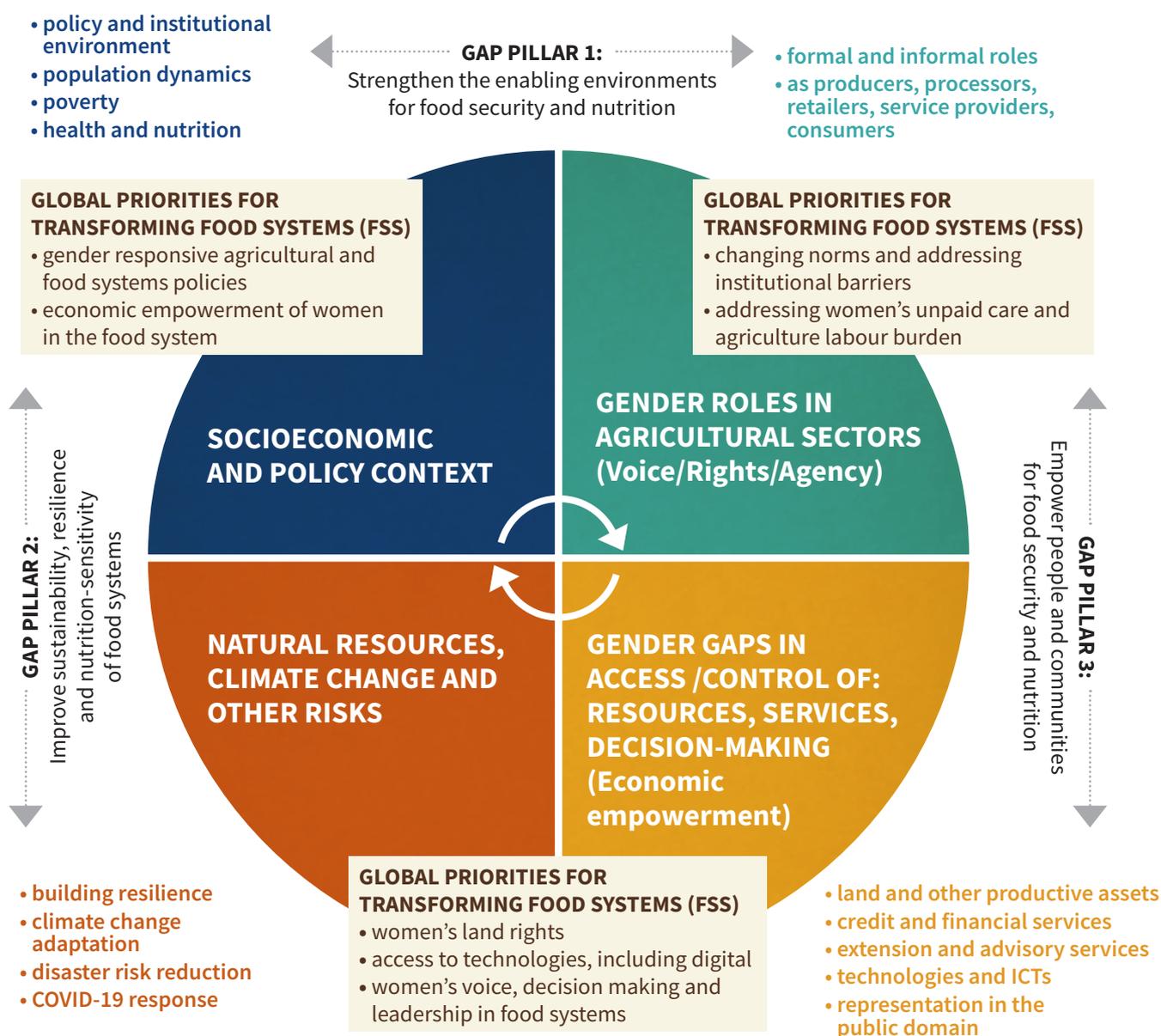
- (a) the socioeconomic and policy context;
- (b) gender roles in agricultural sectors, which link to issues of voice, rights and agency;
- (c) gender gaps in accessing and controlling resources and services and in participating in decision-making, which links to women's economic empowerment; and
- (d) natural resources, climate change and other risks.

These four dimensions align with the seven global priorities (European Commission, 2021)³ identified for the UN food systems dialogue, Gender Equality and Women's Empowerment in Rapidly Transforming Food Systems. They also align with the three pillars of the Global Action Programme (GAP) on Food Security and Nutrition in Small Island Developing States.

² Sao Tome and Principe was originally included in the FMM subprogramme as a target country. However, activities in that country could not be implemented, due to the COVID-19 pandemic.

³ As stated in the European Commission document, Gender Equality and Women's Empowerment in Rapidly Transforming Food Systems (2021), the seven global priorities are: (1) women's land rights; (2) economic empowerment of women in the food system; (3) addressing women's unpaid care and agriculture labour burden; (4) women's voice, decision-making and leadership in food systems; (5) access to technologies, including digital technologies; (6) changing norms and addressing institutional barriers; and (7) gender-responsive agricultural and food systems policies.

Figure 1. Dimensions influencing gender equality and climate resilience in SIDS agrifood value chains



Source: Developed by authors, 2021.

The content of this publication is structured around the above analytical framework. **Chapter 1** provides a general overview of agrifood systems and gender equality in SIDS. This is followed by an analysis of each of the seven focus countries, under three regions: Barbados and Saint Lucia, in the Caribbean region (**Chapter 2**); Cabo Verde, Comoros (the), and Sao Tome and Principe, in the AIS region (**Chapter 3**); and Palau and Samoa, in the Pacific region (**Chapter 4**). Chapters 2, 3 and 4 begin with a discussion of common characteristics

and issues at the regional level, followed by a country-level analysis of the socioeconomic and policy context; gender roles in agricultural sectors; gender gaps in access to and control over productive resources, power and agency; and climate risks and climate-resilient practices. **Chapter 5** presents the conclusions that emerge from the analysis, focusing on commonalities across countries and regions and identifying shared challenges to be addressed. It also provides recommendations for consideration by SIDS, going forward.



1. Overview of Agrifood Systems, Resilience and Gender Equality in Small Island Developing States (SIDS)

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1.1 Human development indicators

Although SIDS span several geographic regions (the Caribbean, the Pacific, and the Atlantic, Indian Ocean and South China Sea [AIS]), as indicated by FAO:

SIDS share a number of common challenges that make them uniquely vulnerable to food insecurity, including: limited land mass and population; fragile natural environments and lack of arable land; high vulnerability to climate change, external shocks and natural disasters; typically high dependence on food imports; dependence on a limited number of economic sectors; and distance from global markets (2017).

Furthermore, SIDS commonly experience high energy and transportation costs and inconsistent access to information and communication technologies (ICTs).⁴

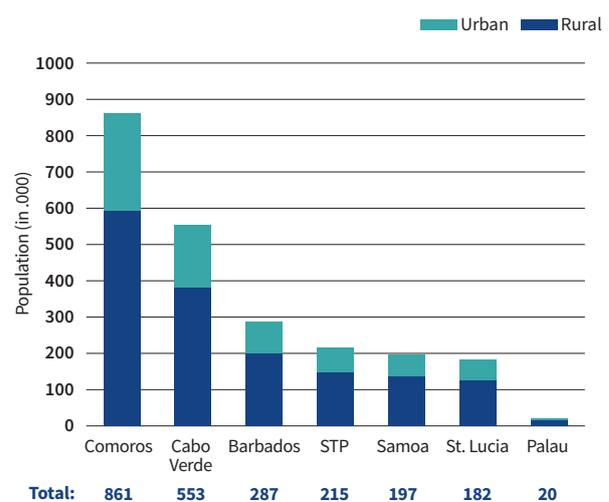
As shown in **Figure 2**, the population in all focus countries is very small, ranging from 20 000 in Palau to 861 000 in Comoros (the). Populations are largely rural, except in Palau (FAO STATS, 2018), however given the small land area in some SIDS, urban-rural distinctions are not as clear-cut.

In terms of overall human development, the focus countries fall into three categories, from *very high* through *medium*, with Comoros (the) having recently graduated from *high* to *medium* in 2020 (UNDP, 2020).

Figure 3 (p. 5) shows the human development index (HDI) scores and rankings of the focus countries,

together with the gender inequality index (GII) scores and rankings, where data is available. The HDI score is calculated using data in three dimensions: a long and healthy life, schooling and standard of living. HDI values closer to 1 indicate a higher level of development. The GII score “shows the loss in potential human development due to disparity between female and male achievements in three dimensions: reproductive health, empowerment and the labour market” (UNDP, n.d.a). In contrast to the HDI, a higher GII score (closest to 1) reflects a loss to human development due to greater inequalities between women and men. Barbados for example, has a GII score of 0.252, reflecting a percentage loss in human development due to gender inequality, compared to the world average of 49.2 percent and the European average of 31 percent (UNDP, 2020).⁵

Figure 2. Populations of focus countries

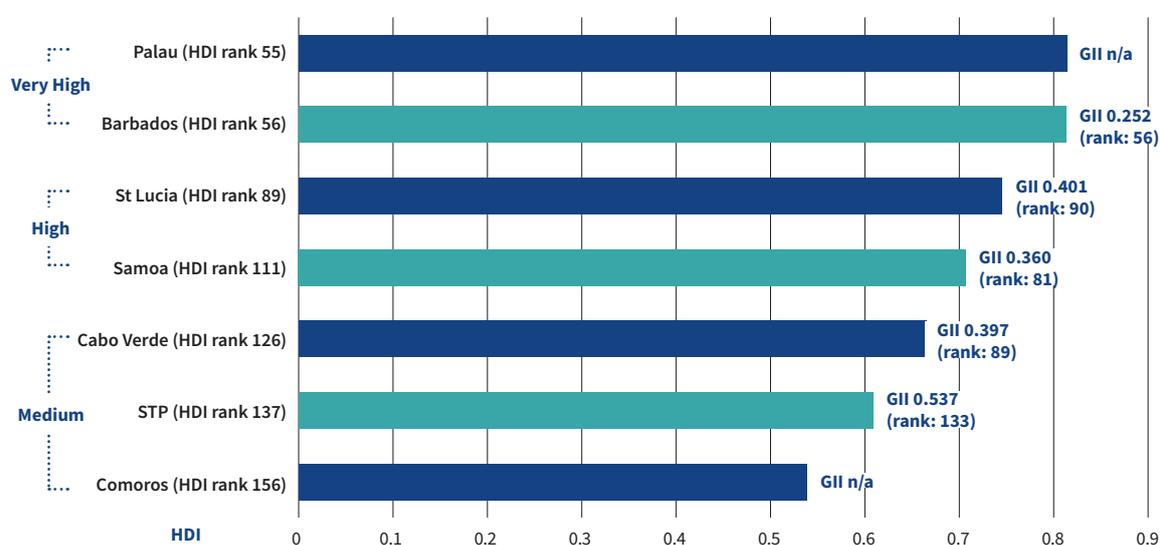


Source: World Bank, 2019.

⁴ According to the Internet Society (2017), “Many SIDS face challenges in internet connectivity due to their remoteness and the high cost of crossing the open sea, combined with their small populations, low population density and consequent low economies of scale which often lead to higher connectivity costs.”

⁵ For a more detailed explanation of the calculation of the HDI, see: http://hdr.undp.org/sites/default/files/hdr2020_technical_notes.pdf

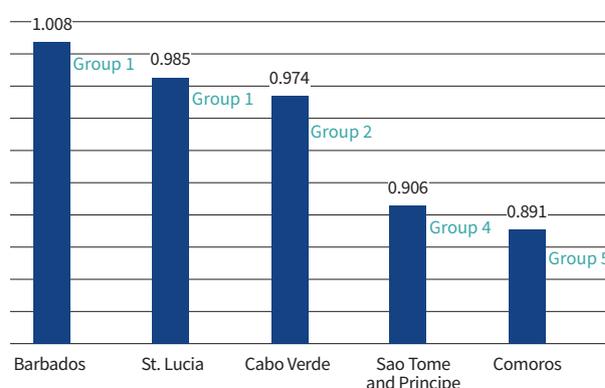
Figure 3. Human development and gender inequality indices (HDI and GII)



Source: United Nations, 2020.⁶

Figure 4 shows the gender development index (GDI) of five focus SIDS, where data are available. As explained by the UNDP (n.d.b), the GDI is “a direct measure of gender gap, showing the female HDI as a percentage of the male HDI,” with countries categorized into one of five groups, from Group 1 (those countries having high HDI equality between women and men) to Group 5 (those having low HDI equality between women and men). As shown, Barbados and Saint Lucia have high GDIs and are in Group 1, while Comoros (the) is in the last category. It is interesting to note that Barbados has a positive GDI, indicating that the gender gap in human development achievements is in favour of women, with men lagging slightly behind. It should be noted that, while this provides an indication of the average gender equality in the country, it does not necessarily reflect the conditions in rural areas, where people depend largely on agriculture for their livelihoods. No GDI data are available for Palau and Samoa.

Figure 4. Gender development index, 2019



Source: UNDP, 2020.⁷

Emigration from SIDS is high and remittances sent back by emigrants are an important component of informal social protection. Considering migration and remittances across the seven SIDS, Samoa has the highest level of net emigration, at 54.7 percent, compared to 24.2 percent for Barbados and 24.3 percent for Saint Lucia; down to

⁶ HDI rankings cover 189 participating countries, while GII rankings are over 162 countries.

⁷ GDI rankings are calculated over 167 participating countries. For more information, see: <http://hdr.undp.org/en/content/gender-development-index-gdi>

the lowest level of 13.1 percent in Comoros(the).⁸ Cabo Verde has the highest level of net inward remittances, over USD 200 million (IMF, 2019), followed by Samoa at USD 129 million (in 2014), and the Comoros (the) at USD 109 million (in 2012). Palau, with a high immigrant population has more outgoing than incoming remittances, with a deficit of USD 88 million (in 2014).⁹

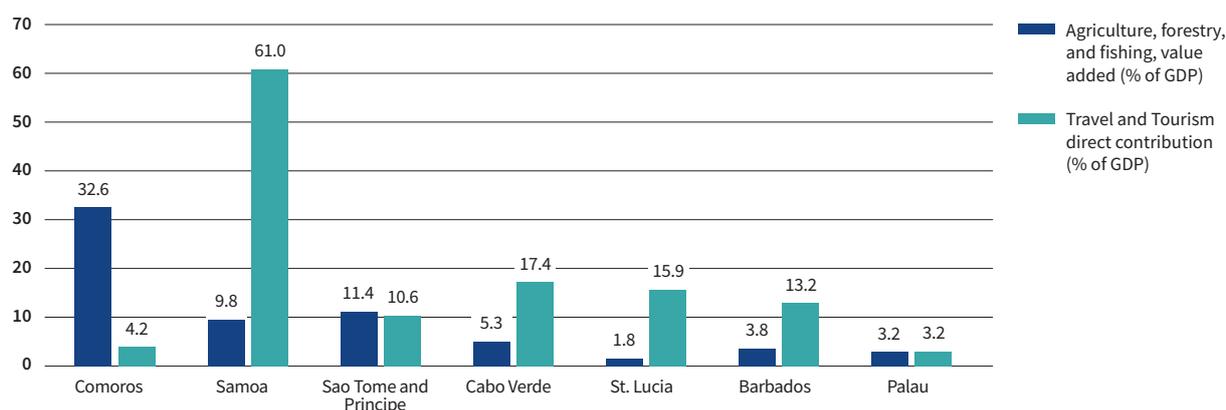
1.2 Food security and nutrition

The importance of the agriculture sector in the national economies of the focus countries varies considerably, with the economy of Comoros (the)

being highly reliant on agriculture (32.6 percent of gross domestic product [GDP] value added) while those of Barbados, Saint Lucia and Cabo Verde rely more on tourism (see **Figure 5**). The share of employment in the agriculture sector is 34.4 percent of total employment in the Comoros (the), and only 2.7 percent in Barbados. No comparable employment data are available for Samoa and Palau (see **Figure 6**).

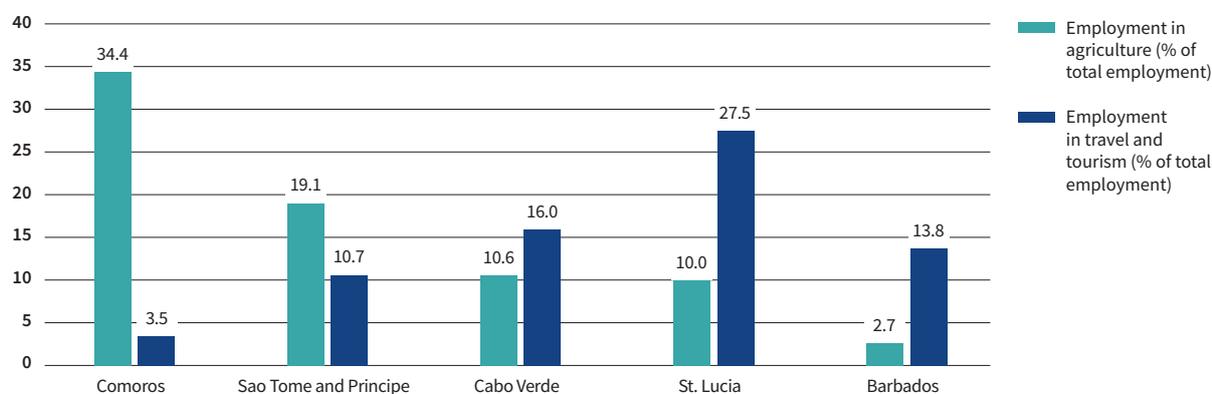
In terms of diversification in domestic and imported foods, SIDS face challenges in ensuring the availability of sufficient food for a nutritious diet, as defined by FAO. **Table 1** (p. 7) shows the

Figure 5. Importance of agriculture in the economy, compared to travel and tourism (2019)



Source: World Bank, WTO, Pacific Community, 2019.

Figure 6. Employment in agriculture, compared to travel and tourism (2019)



Source: ILO, 2019.

⁸ Drawn from World Bank (2016) and calculated by taking the total percentage of the population that are immigrants from the total percentage of the population that are emigrants, to obtain a net emigration figure.

⁹ The net remittances for Barbados totalled USD 62 million in 2013, USD 27 million for Saint Lucia in 2013 and USD 26 million for Sao Tome and Principe in 2014 (World Bank, 2016).

dietary sourcing flexibility index (DSFI)¹⁰ of the focus countries with available data (no data is available from Samoa), indicating a lack of diversity in domestic production for the domestic market, exports, and stocks, in kilocalories of all foods (2016–2018). In the case of Comoros (the), a very low diversity is noted overall, including imports and trade.

Most SIDS face a **triple burden of malnutrition**, which includes undernutrition, micronutrient deficiencies, and overweight and obesity.

Non-communicable diseases (NCDs), including diabetes and heart disease, are linked to obesity and have a relatively high prevalence in SIDS, partially due to a move away from locally produced foods to imported, processed foods high in fat and sugar.

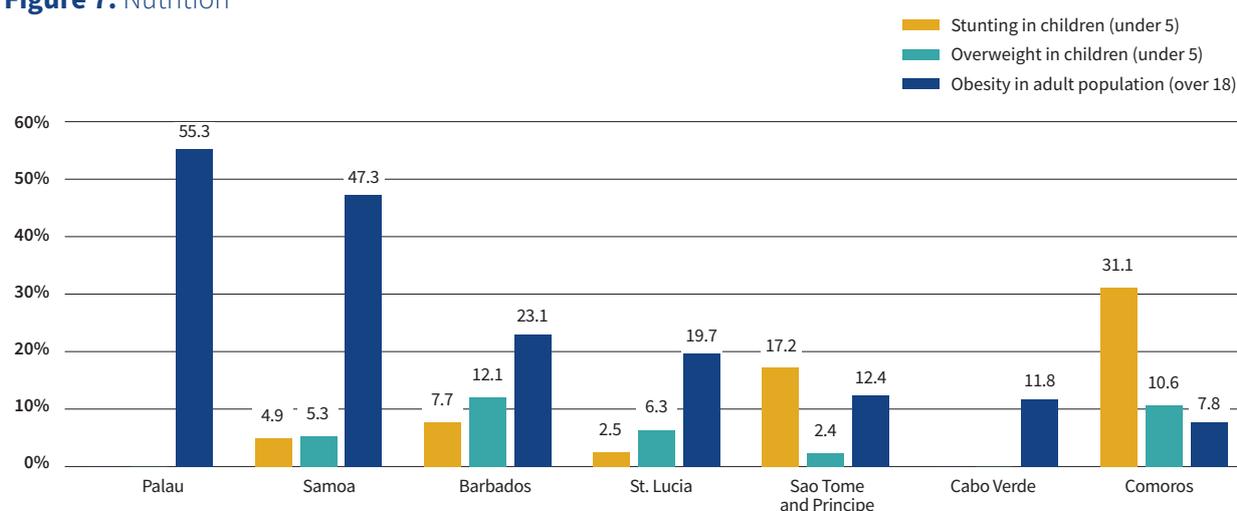
Figure 7 shows the incidence of stunting among children under 5, compared with that of overweight in children and adult obesity.¹¹ There is presently a renewed interest and push towards local production and healthy eating habits across a number of SIDS in the Caribbean, due to the higher impact of COVID-19 on those suffering from NCDs.

Table 1. Dietary source flexibility index (DSFI) of the focus countries

Kilocalories of all foods	Barbados	Cabo Verde	Camoros	Saint Lucia	Sao Tome and Principe
Total Value of the Dietary Sourcing Flexibility Index (DSFI)	0.76	0.76	0.14	0.82	0.67
Diversity in domestic production for domestic markets	0.04	0.06	0.06	0.04	0.1
Diversity in back up exports	0.03	0.01	0	0.02	0.03
Diversity in back up stock	0.13	0.13	0	0.15	0.23
Diversity in imports and trade connectivity	0.43	0.44	0.01	0.48	0.19
Diversity in sourcing	0.13	0.13	0.07	0.13	0.12

Source: FAO, 2021.

Figure 7. Nutrition



Source: FAOSTAT and UNDP, 2019.

¹⁰ The DSFI is a measure of flexibility in sourcing a specific food unit. A high value indicates multiple possible sourcing pathways for the supply of a given unit of food. National agrifood systems that supply food from different sources are considered to be more flexible and more capable of absorbing supply shocks.

¹¹ No data is available on stunting and overweight in children in Cabo Verde and Palau.

1.3 Natural resources and climate risks

SIDS are especially vulnerable to climate variability and change, in addition to facing a crisis in managing their limited and degraded natural resources, including biodiversity, forestry, mangroves, fresh-water, and marine and coral reef resources (FAO 2014c). Rising sea levels threaten populations, agricultural land, fishery industries and infrastructure, which in most SIDS are concentrated in coastal zones (CTA, 2012). The high level UN meeting to review the SAMOA Pathway (2019), highlighted the concern regarding “the devastating impacts of climate change, such as extreme weather events, slow-onset events and the increasing frequency, scale and intensity of disasters” such as cyclones, hurricanes, tsunamis (United Nations General Assembly, 2019).

In terms of food production, the most recent (2021) IPCC report highlights the impacts of climate change on food production as a result of drought, changing

rainfall patterns, disease outbreaks and storms, posing a significant threat to coastal resources, people and infrastructure. This, in turn, affects key economic sectors, including tourism and agriculture, as well as water supplies, human health, coastal resources, fisheries and insurance. Adaptation requires both economy-wide and sector-specific efforts to alleviate these impacts and strengthen the adaptive capacity of vulnerable key sectors. Further, climate change impacts vulnerable groups disproportionately, including youth and women, as well as lower income communities (IPCC, 2021).

Although each region is being affected differently, there are common trends. For example, both in the Caribbean and the Pacific, “...there is a declining trend in rainfall during June–July–August and will continue in coming decades, [and]... there is higher evapotranspiration under a warming climate which will result in increased aridity and more severe agricultural and ecological droughts” (IPCC, 2021).

Box 1. Common regional climate-related changes in SIDS

- Observed warming (high confidence) in the small islands has been attributed to human influence (medium confidence). Warming will continue in the twenty-first century for all global warming levels and future emissions scenarios, further increasing heat extremes and heat stress (high confidence).
- Ocean acidification has increased globally as have the frequency and intensity of marine heatwaves in some areas of the Indian, Atlantic and Pacific oceans, except for a decrease over the eastern Pacific Ocean. Marine heatwaves and ocean acidification will increase further with 1.5°C of global warming (high confidence) and with larger increases at 2°C and higher.
- Sea levels will very likely continue to rise around small islands, more so with higher emissions and over longer time periods (high confidence).
- Sea level rise, coupled with storm surges and waves, will exacerbate coastal inundation and the potential for increased saltwater intrusion into aquifers (high confidence).
- Sea level rise will cause shorelines to retreat along sandy coasts of most small islands.
- Small islands will face more intense but generally fewer tropical cyclones, except in the central north Pacific, where frequency will increase (medium confidence at a global warming level of 2°C and above).

Source: IPCC, 2021.



The SAMOA Pathway and the IPCC Report urge action to implement nationally appropriate adaptation and resilience measures, as well as social protection systems and measures for the poor and the vulnerable. However, some SIDS suffer annual losses resulting from disasters that equal over 100 percent of the amount the countries are able or willing to allocate to education, health and social protection (FAO, UN-OHRLS and UNDESA, 2017), including specific items such as social assistance, insurance, or livelihood enhancement measures.

In terms of adaptation, many SIDS have a strong bio-cultural heritage, connecting people, culture, knowledge and the natural environment (FAO, UN-OHRLS and UNDESA, 2017). Indigenous and local knowledge of the environment and ecosystems have helped SIDS societies survive and adapt to change over the centuries (UNEP, 2014; FAO, 2014c). However, new more extreme threats are challenging their continued capacity to respond on the basis of traditional knowledge and experience. The availability of ICTs is growing rapidly in SIDS, helping disaster risk reduction and mitigation.

A number of SIDS lack well-established land administration systems, leading to insecure land tenure on the part of men and women, limiting their ability to obtain credit from financial institutions and invest in productive activities and in measures to reduce their vulnerability to disasters and increase their resilience. As explained in the following sections, women have less access than men to land and other productive assets.

1.4 COVID-19 risks and impacts

The negative effects of the COVID-19 pandemic revealed the strong connectivity between development, public health, nutrition security, education, tourism and climate resilience (FAO, 2020b; IPCC, 2021). Issues impacting these areas are exacerbated by the added challenges in SIDS of high transportation costs, dependence on imported foods, high levels of NCDs and the importance of tourism to many SIDS economies. Measures taken to contain the spread of COVID-19, including halting international flights and shipments, affected the tourism sector, disrupted trade and restricted workers' movement (FAO, 2020). They also reduced access to fresh and non-perishable produce, thus increasing reliance on unhealthy processed foods.

COVID-19-related income reductions also seriously impacted the affordability of healthy diets in some SIDS. The State of Food and Agriculture (SOFA) 2021 indicates that a striking 87 percent of people in Sao Tome and Principe, and 80 percent in Comoros (the), reported that they were unable to afford a healthy diet in 2019, while the percentages for Cabo Verde and Saint Lucia were lower, at 32 percent and 18 percent respectively (FAO, 2021). Where NCDs are particularly prevalent, unhealthy diets increased people's risk of becoming seriously ill from COVID-19, a risk that was further exacerbated where lockdowns and curfews were in place and people became less physically active (Win Tin, 2020).

Box 2. Information and communication technologies (ICTs) in SIDS

Despite the challenges of their remoteness, SIDS have made good progress in establishing universal and affordable ICT networks. Between 2014 and 2019, mobile broadband coverage increased from 50 percent to 85 percent of the population, and the percentage of people using the internet rose from 40 percent to 56 percent. Remote sensing, geographic information systems, social media and drones are just some of the tools used in SIDS for assessing hazards and monitoring the impacts of climate change.

Source: ITU, 2019.



The impacts of the COVID-19 pandemic on rural livelihoods affected women in particular, given that rural women in SIDS (and beyond), are largely employed in the informal and hardest-hit sectors, and are therefore less able to absorb economic shocks, in addition to having greater care demands at home due to the pandemic and being more exposed to gender-based violence in the home. Women's greater vulnerability during the pandemic and similar crises is largely rooted in discriminatory social norms that have been present since long before the pandemic. In order to overcome these challenges, it is necessary to address gender inequalities, which could lead to longer-term effects for women's economic empowerment (United Nations, 2020).

1.5 Political commitments to gender equality

In terms of global commitments, all SIDS have signed the Convention on the Elimination of all forms of Discrimination Against Women (CEDAW), although two (Palau and Tonga) have not ratified it. By signing the CEDAW, countries commit to establishing institutions in charge of implementing the commitments and periodically reporting on progress achieved. All seven SIDS covered in this publication have a women's or gender affairs ministry or institute responsible for gender policies and programmes targeting women. The extent to which these policies are being implemented with impact on the ground, however, is variable (Pacific Peoples' Partnership, 2017). Furthermore, gender-based violence presently remains relatively high in SIDS, particularly in the Pacific (UNESCO, 2014), an issue that was raised in the high level review of progress of the SAMOA Pathway (United Nations, 2019).

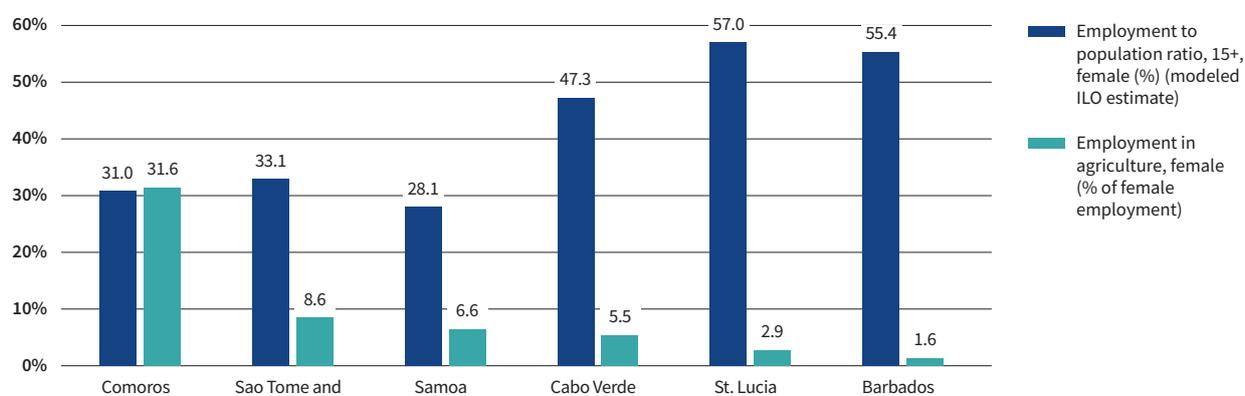
1.6 Gender equality in the agrifood sector

In most SIDS, women play a significant role in food systems and in the agricultural work force, comprising 52 percent of the agricultural labour force in SIDS (FAO, UN-OHRLLS and UN DESA, 2017). Women are also considered key agents of change to bring about a shift to more efficient and climate-resilient food systems. Women also play

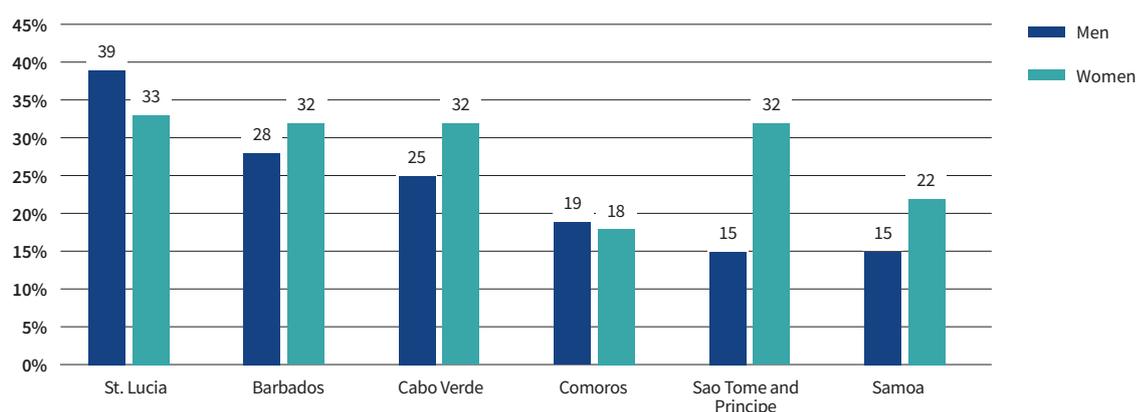
active roles as members (and leaders) of a variety of women's groups, community groups, cooperatives and producer organizations that are important in shaping local development. Despite their important contribution to the agriculture sector, women most often participate in the informal sector (e.g. unpaid family labour and selling home-processed products to neighbours) and, as such, their contribution is unrecognized and invisible in national statistics. Evidence also shows that working-age women in SIDS are 22 percent more likely to live in extreme poverty than men (UN Dispatch, 2018).

In all focus countries, men's share of employment in the agriculture sector is much higher than that of women, with the exception of Comoros (the), where women's share of total employment in agriculture is 55.7 percent (ILO, 2019). **Figure 8** (p. 11) shows the share of female to total employment in all sectors, and the share of female employment in agriculture, as a percentage of total female employment. Saint Lucia and Barbados show a dominance of women in all employment sectors with 57 percent and 55.4 percent of total employment, respectively. However, only 2.9 percent and 1.6 percent, respectively, of all employed women in these countries work in agriculture. In comparison, 31.6 percent of employed women in Comoros (the) work in agriculture.

As to youth employment, data show that unemployment in SIDS is high among young men and women and that youth constitute a significant portion of the poor and vulnerable populations, across regions. Youth unemployment in all sectors is considerably higher among women than among men in four of the six focus countries with available data. **Figure 9** (p. 11) shows that in Sao Tome and Principe, female unemployment in the 15-to-25 age bracket stands at 32 percent, compared to a male unemployment of 15 percent. In contrast, unemployment among young men is higher than among young women in Saint Lucia (39 percent against 33 percent) for a series of reasons that could be related to high rates of crime and illegal activity affecting male youth. In Comoros (the), female and male youth unemployment is almost at par. (Note that these figures are not specific to the rural economy).

Figure 8. Female employment in agriculture and elsewhere (%)

Source: ILO, 2019.

Figure 9. Youth unemployment (% of labour force, ages 15–24)

Source: ILO, 2019.

Women in SIDS have less access than men to agricultural assets, financial services, extension advice and ICTs (FAO, 2014a; FAO, 2019a; FAO, UN-OHRLS and UN DESA, 2017). As such, their full entrepreneurial potential often remains untapped. Limited and insecure access to land is of particular importance as it directly impacts women's ability to invest in farming and in disaster risk and resilience measures. The SIDS in this study have many different land tenure systems. Informal tenure is common, including the illegal occupation of private and state land, but also including the rightful, but unregistered, possession of family or communal land. In the Caribbean, women rarely own land and when they

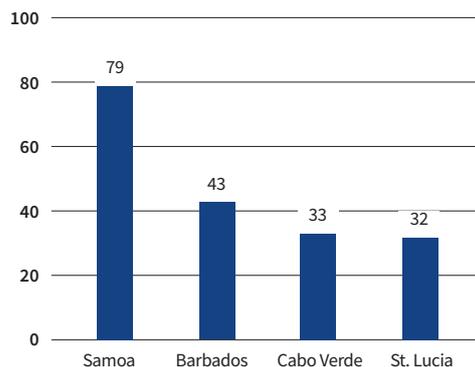
do, they often lack legal titles to their land (Huggins, 2016 and Peebles, 2012). Although they participate in production activities, their contributions are not recognized, as national statistics only capture the activities of the "principal farmers", who are normally the men. In the matrilineal societies of Palau and the Comoros (the), on the other hand, women have access to formal land tenure rights though inheritance from their mothers, while in Samoa they have customary land rights. Land reforms, such as the one in Sao Tome and Principe (1992) through which a third of the country's small farmers acquired deeds to their land, have made provisions for land rights to female-headed households (World Bank, 2004a).

In terms of business ownership, data from four of the focus countries show that female participation in the ownership of registered firms in all sectors varies from a low of 32 percent of all registered firms in Saint Lucia, to a high of 79 percent in Samoa (see **Figure 10**). It should be noted that these figures are not specific to the agribusiness sector, where many women are involved in informal activities for which data is not available.

Women are also at a disadvantage in terms of climate change impacts and mitigation. They are less involved than men in decision-making processes around climate change, risk management and adaptation. This leads to inadequate attention to the particular needs of female farmers in hazard-prone farming communities and, hence, to poor targeting of adaptation measures for resilience, which tend to focus on men. This also represents a missed opportunity to capitalize on the valuable traditional knowledge women have gained over generations in this area (UNESCO, 2014; Tandon, 2013b; McLeod *et al.*, 2018).

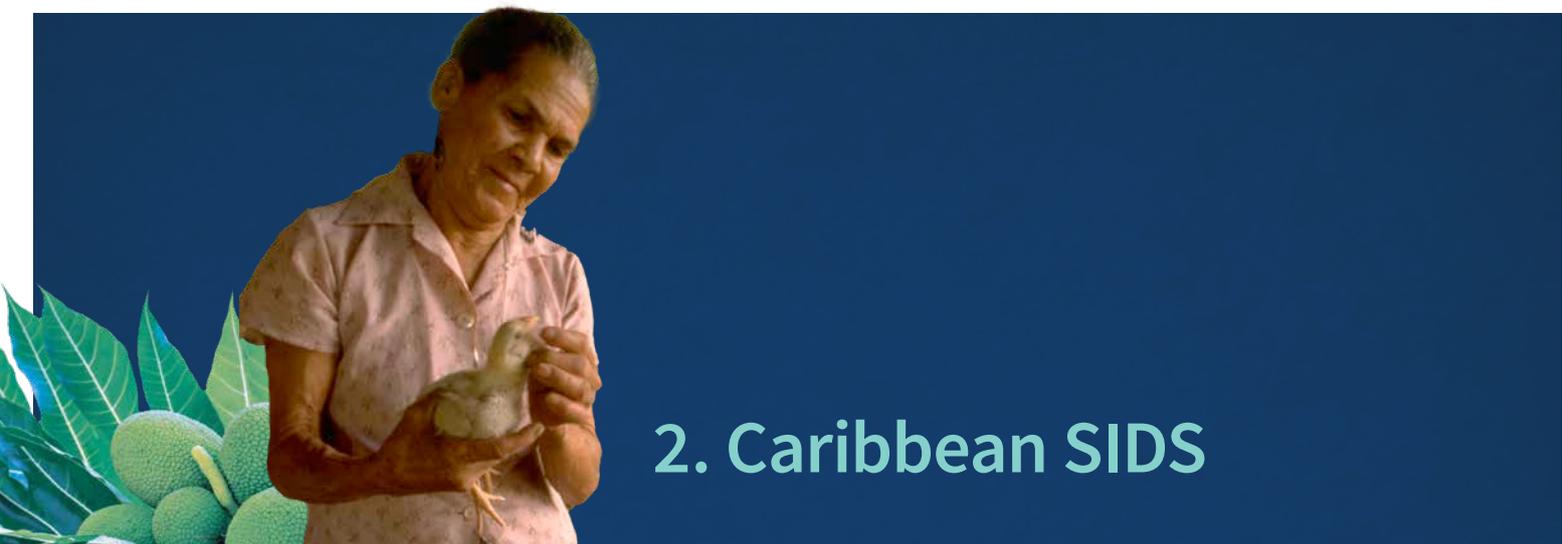
Gender roles¹² vary across SIDS depending on each individual sociocultural context. As explained in the country sections below, some prevailing sociocultural norms limit women’s ability to exercise power and decision-making, perpetuating their disadvantaged access to productive resources, innovative technologies, market information, financial services, education and training. In all SIDS, women carry more of the burden of reproductive work, while also engaging in productive activities and community management work. As to food consumption, women play key roles in the dietary choices and nutrition of households, as well as in food management, meal preparation and food waste prevention.

Figure 10. Percentage of female participation in ownership of registered firms (% of total firms, 2010)



Source: World Bank, 2019.

¹² According to FAO (2018), gender roles are the activities “ascribed to women and men in a given society according to their sex.” Gender roles can be understood to fall in the productive domain (food production and income generation), in the reproductive domain (care of the family and household) and in the community management domain.



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2. Caribbean SIDS

2.1 Common characteristics in Caribbean SIDS

Challenges in the agrifood sector

In recent decades, Caribbean SIDS have undergone a significant structural transformation that has led to agriculture becoming a less important component of GDP and employment (FAO and CDB, 2019). Following the World Trade Organization's dismantling of preferential trade arrangements for Caribbean countries, export promotion, import liberalization and market access negotiations have been pursued to ensure economic diversification. Common challenges in the Caribbean SIDS include a lack of competitiveness; an ageing agricultural population; inadequate investment by both the public and private sectors; limited productive sectors; small labour markets, compounded by limited skilled labour and high unemployment; and significant susceptibility to economic and environmental shocks, especially natural disasters (FAO 2014; World Bank, 2013). The fisheries sector, in particular, is under serious threat due to overfishing and natural resource degradation. The sector also faces labour-related challenges such as informality, seasonality, remoteness, hazardous working conditions and value chain complexity (FAO and CDB, 2019).

Climate change and natural hazards are affecting Caribbean agriculture, in particular, "increasing temperature, changing rainfall patterns, rising sea levels, increased saltwater intrusion, more frequent and intense storms and cyclones as well as shifting agricultural seasonality" (FAO and CDB, 2019). Furthermore, half the population of the Caribbean SIDS lives within 1.5 km of the shoreline (UNDP, n.d.c), making sea level rise a particular concern. Governments in the region are committed to

addressing the needs of their vulnerable populations, as evidenced by public spending on social protection and safety net programmes, which can help farmers recover from the crisis brought about by the COVID-19 pandemic. Despite these efforts, however, as indicated by World Bank Group (2013), "gaps remain, as many vulnerable groups are underserved and the systems show limited responsiveness to shocks." A further issue is the duplication of efforts, which limits the efficiency of interventions.

In terms of paid employment, services account for a greater proportion of employment compared to manufacturing and agriculture (ILO, 2018). Women often work in the services sector, with many jobs linked to tourism, while manufacturing and agriculture attract more men. The tourism sector is a driving force of the economy of many Caribbean SIDS (World Bank, 2013; FAO, 2019a). This is closely linked to a heavy reliance on food imports to meet the needs of the industry. Imported cheap meats and processed foods undercut locally grown (often more expensive) foods and diminish the consumption of local produce (Tandon, 2013a). This has a detrimental impact on the quality of diets consumed by Caribbean populations, as evidenced by the levels of adult obesity in the subregion, which averaged 25 percent in 2019, up from 6 percent in 1975, with at least twice as many obese women than men (FAO, 2019a; FAO, OPS, WFP and UNICEF, 2019). As to economic conditions in rural areas, according to a Caribbean Development Bank (CDB) study on poverty and inequality in the Caribbean (2016), rural areas suffer from higher levels of poverty and vulnerability, coupled with poor infrastructure and services. Poor rural families generally sell goods, services and labour, and their livelihoods are constrained and impacted by challenging geography, environmental shocks and seasonal exposure.

With regard to the policy and institutional environment, the Caribbean Community (CARICOM) and the Organisation of Eastern Caribbean States (OECS) support an integrated approach to agriculture in the region through a range of frameworks, policies and action plans (FAO and CDB, 2019; FAO, 2014a; FAO, UN-OHRLS and UN DESA 2017). The COVID-19 pandemic, with subsequent lockdowns and the loss of national income sources, such as in the tourism sector, revealed a number of vulnerabilities in local economies (Bailey *et al.*, 2020). The pandemic highlighted the need for CARICOM governments to focus on food security and build more robust agriculture sectors in order to sustain livelihoods and generate employment at the national level. With closed borders and isolation, populations were required to rely on stocks of food imports and domestic production; an experience that drew much attention to the risks of food insecurity.

Gender equality in the agrifood sector

While Caribbean men operate more in the formal agriculture sector, in cash and high-value crop production (such as sugar, bananas and high-value vegetables), women traditionally manage family farms, producing for family consumption and selling the surplus in local communities and to tourists. Women generally grow crops, including Irish potatoes, organic mushrooms, strawberries and vegetables, as well as fruits and vegetables for making juices, pepper sauces and dried fruits (UN Women, 2014). They are also active in the agroprocessing and marketing end of value chains (Tandon, 2013a; FAO and CDB, 2019), through small home-based or micro- to medium-sized businesses. Women participate in cooperatives and producer associations, mostly through the support of NGOs aiming to empower women. Two such organizations are the Caribbean Network of Rural Women Producers (CANROP)¹³ and the Caribbean

Network of Fisherfolk Organisations (CNFO), through which women are involved in community organization and in which they hold leadership roles. Women are also active in the marketing of crops, whether their own or purchased from third parties, and they engage as entrepreneurs (known as *hucksters* or *higglers*) in interisland trade of agricultural products (ECLAC, 2005).

Women are increasingly involved in the fisheries sector, not only in purchasing fish from mostly male fishermen, but also practicing shallow-water fishing and providing waged labour in the commercial fisheries sector. Further, some women buy fishing boats to support their sons' livelihoods, and invest in the fishing industry by providing collateral for the purchase of fishing vessels (Tandon, 2013a). In the Caribbean SIDS, 95 percent of fisheries is artisanal, 1.5 percent is semi-industrial and 3 percent is industrial (FAO and CDB, 2019).

Land tenure in many Caribbean countries is complex, with a mix of formal and informal tenure arrangements, as land administration systems are not sufficiently comprehensive to support formal security of tenure (FAO and CDB, 2019; Griffith-Charles *et al.*, 2015). Women are less likely to own land than men (ILO, 2018a) and generally have access to poorer quality land. Their lack of land titles and ownership of agricultural property (FAO and CDB, 2019) restricts women's ability to access credit, given that land is an important collateral to secure loans (FAO and CDB, 2019). Evidence suggests that women's applications for loans are turned down more often than men's (ILO, 2018a) leading them to turn to friends and family for loans. Where women do access credit, it is usually for lower values compared to men, and many prefer informal financing mechanisms, such as the *sou sou* in Trinidad and Saint Lucia (ECLAC, 2005).

¹³ The Caribbean Network of Rural Women Producers (CANROP): <https://canrop.com/jamaica-network-of-rural-women-producers-jnrwp/> operates in Guyana, Grenada and Jamaica. The members of the network produce a variety of crops and value-added products, including vegetables, roots, tubers, herbs, spices, jams, cassava bummy, dried fruit and flour (from breadfruit, cassava and plantain) as well as straw handicrafts.

Box 3. Gender in fisheries team (GIFT) of CERMES supports Caribbean women in small scale fisheries

In 2016, the Centre for Resource Management and Environmental Studies in the Caribbean (CERMES) established a Gender in fisheries team (GIFT), with a global network, to promote gender equality in responsible fisheries and sustainable development. GIFT applies an ecosystem approach to fisheries, focusing on climate, disasters, social protection, poverty, food security and decent work, among other issues included in the Voluntary Guidelines on Small Scale Fisheries (Subsection 8 of the Guidelines). It works with members of the Caribbean Network of Fisherfolk Organisations (CNFO) and provides a range of support services including: research and scoping of gender in Caribbean fisheries; capacity development and implementation of gender analyses, policy development and mainstreaming; project proposals for resource mobilization; implementation support for fisheries projects; and communication to promote gender mainstreaming and gender equality in the fisheries sector. This initiative continues with renewed funding, through new projects, such as the Implementing Gender Aspects within the Small-Scale Fisheries (SSF) Guidelines and the Protocol to the Caribbean Community Common Fisheries Policy (CCCFP) for Securing SSF (The University of the West Indies, 2021b).

Source: The University of the West Indies, 2021a.



Since women have the main responsibility for backyard farming, producing staples, grains and vegetables and raising small animals,¹⁴ they have greater knowledge of local food crops and traditional varieties that are less susceptible to climate change and more nutritious than imported foods (Tandon, 2013a). They are more likely to act as custodians of traditional seeds, saving and using them, and may be the first to notice and respond to changes in the natural resources upon which they depend (CANARI, 2015; Tandon, 2013a). While women farmers may be stewards of traditional knowledge regarding local varieties and natural resource management, the fact that they do not participate adequately in policy-making with regard to climate change, means that they are under-equipped to respond

to the growing climate change challenges that the Caribbean SIDS face (CANARI, 2015). Awareness around the importance of gender-equitable service provision is rather low among Caribbean agricultural extension service providers and the services tend to target heads of households (whether male or female). Furthermore, there are few female extension workers, which, in some cases, limits interactions between women farmers and the extension workers.

In some Caribbean countries, close to half the households (40 percent) are female-headed households, with the highest rates being in rural areas. These households are often poor, particularly if the head of the household is unmarried (CDB, 2016).

¹⁴ FAO and CDB (2019) note that smallholder livestock farmers in the Caribbean are characterised by low innovation potential, having less access to technology and international best practices. SIDS are disadvantaged as they cannot achieve economies of scale.

2.2 Barbados¹⁵

Table 2. Key indicators, Barbados

Key indicators	M	W	Source
Population Global (thousands)	287		FAOSTAT, 2018.
Population by sex (thousands)	138.8	148.2	
Rural population	68.9%		
Urban population	31.1%		
Human development index (HDI), out of 189 countries	0.813 (56/189)		UNDP, 2019.
Inequality-adjusted HDI (IHDI), out of 152 countries	17.0%		
Gender inequality index (GII), out of 163 countries	0.252		UNDP, 2020.
Poverty headcount ratio (% of the population)	N/A		
Life expectancy at birth, global (years)	79		UNDP, 2019.
Life expectancy at birth, per sex (years)	77.7	80.4	
Mortality rate for under-fives, per 1 000 births	12		
Mortality rate for adults, per 1 000 people	121	72	
Stunting, children under 5	7.7%		
Overweight, children under 5	12.1%		FAOSTAT, 2018.
Obesity, adults over 18	23.1%		FAOSTAT, 2018.
Expected years of schooling	13.8	16.6	UNDP, 2020.
Labour force participation (2016)	69.1%	61.7%	ILO STAT.
Share of employment in agriculture (2016)	3.7%	1.6%	ILO STAT.
Unemployment (% of labour force ages 15-24)	28.43%	32.13%	ILO, 2019.

Source: Developed by the authors, 2021.

A. Socioeconomic and policy context

The key socioeconomic indicators for Barbados are summarized in **Table 2**. As shown, Barbados is ranked in the very high human development category in the 2019 Human Development Report, at 0.813, which is above the average HDI of 0.723 for SIDS (ranking 56th out of 189 countries and territories).

The average income level and GDP per capita is among the highest in Latin America and the Caribbean region (IDB, 2019). Women are engaged more than men in the informal sector, which is not reflected in the statistics presented in the table. The CBD's Country Gender Assessment of Barbados (Allen and Maughan, 2016) indicates that: "The largest

¹⁵ Note that sources and dates of statistical data provided for Barbados (in the text and in the fact sheet) are the same for the other SIDS unless otherwise specified, namely: <https://ilostat.ilo.org/data/country-profiles/>; <http://www.fao.org/faostat/en/#country/14> and [https://databank.worldbank.org/embed-int/CountryProfile/id/b450fd57%20\(2018\)](https://databank.worldbank.org/embed-int/CountryProfile/id/b450fd57%20(2018)). Online data sources for all seven SIDS are also detailed in the reference list.

numbers of male employees are in construction, mining and quarrying; wholesale and retail; transportation and storage; and public administration and defence. The largest numbers of female employees are in wholesale and retail; accommodation and food services (tourism).” The percentage share of employment in the agriculture sector is very low, at 3.7 percent for men and 1.6 percent for women (ILO 2019 estimate). The Inter-American Development Bank (IDB) 2019 Analysis of Agricultural Policies in Barbados notes that the country’s agrifood exports’ share of total exports is about 33 percent, consisting mainly of spirits (rum) and processed food. Primary agriculture’s share of total exports was under 2 percent in 2014.

In terms of gender inequality, Barbados has a GII of 0.256, reflecting a percentage loss in human development due to gender inequality of only 25.2 percent, considerably lower than the other SIDS, the world average of 49.2 percent and the European average of 31 percent. The percentage of women’s seats in parliament, at 16.7 percent in the lower house and 28.6 percent in the upper house, indicates relatively good representation in the public domain (UNESCO, 2014). Barbados has a Bureau of Gender Affairs that follows up on the commitments of the CEDAW.

B. Gender roles in agricultural sectors

Binary gender norms still prevail in Barbados, with men being associated with the public and professional spheres, while women are associated with the private and domestic spheres. Women do most or all of the domestic and childcare work, growing food for the family if they have a plot, and engaging in the informal economy. Mainstream education reinforces these roles, as does the prevailing gender-neutral stance of government ministries (Allen and Maughan, 2016).

The Association of Women in Agriculture (AWIA) in Barbados notes that female food producers operate about 39 percent of the country’s total agricultural holdings. The acreage occupied by these holdings, however, is small, comprising only 6 percent of the total agricultural area.

Most women who engage in agriculture do so through the informal sector. They market and distribute a significant volume of the fresh food produced and consumed nationally, while men engage in cash crop production (CDB, 2016). An important issue regarding the sale of fresh food in Barbados, which is largely in the hands of women, is the lack of adequate facilities and conditions at markets, which compromise food safety. Women are also involved in fisheries and are increasingly participating in beekeeping to produce honey for sale for general consumption and for medicinal and other purposes.

A study in the fishing community of Oistins is an example of the gendered division of labour in the country. A greater proportion of men are fishermen and go out to sea, or are devoted to raising their own livestock; whereas a greater proportion of women are engaged in fish vending, processing and cooking and in the sale of crafts and other items (Caribsave, 2012).

AWIA also notes that there is a high demand for female labour in tourism and manufacturing, making it increasingly unlikely that younger women would opt to enter the agriculture sector, especially considering the expanded educational opportunities, security, prestige, mobility and higher salaries offered in those sectors (Taste of Barbados Food Festival, n.d.).

C. Gender gaps in access to and control of resources, in service provision and in decision-making

Land management policies in Barbados do not discriminate against women. The Town and Country Planning Act of 1968 (amended in 2003), the Succession Act of 1975, the Property Act of 1979, and the Family Law Act of 1981 allow legal security of land tenure for all individuals, irrespective of gender (ECLAC, 2005; CDB, 2016). However, men still own the bulk of the land and other productive resources in the country. For instance, 80 percent of all farms are owned by men (CDB, 2016). The acreage of farms operated by women comprise just 6 percent of the total area under agricultural production and 25 percent of women farmers do not own the land they farm.

As noted in CDB (2016), women's low control over resources constrains their access to finance, insurance, extension services and subsidies and prevents them from holding community leadership positions. In order to access credit, women sometimes arrange for their husbands or male relatives to apply for agricultural loans on their behalf, as credit providers are reluctant to consider the women creditworthy. Women are also generally more risk averse with regard to taking loans, due to fears of poor quality inputs or climatic events that affect their businesses. With regard to technical assistance, AWIA notes that there is no organised or systematic approach to providing small farmers with technical assistance, despite the great need for it. Governmental extension and advisory services, provided through the Extension Services Unit of the Ministry of Agriculture and Food Security, are constrained by insufficient staff and resources.

In 2017, there were 115 subscriptions of mobile phone per 100 inhabitants (ITU, 2019). Given the small gender gap in mobile phone ownership (1 percent, in favor of men), it is likely that women have almost equal access to ICTs as men, although, like women in other parts of the world, they use a smaller range of mobile services (GSMA, 2019).

D. Natural resources and climate change

Barbados is experiencing the effects of climate change, as evidenced by severe weather systems and other extreme events. Climate modelling predicts that

average atmospheric and sea surface temperatures in the country will rise, average rainfall will decline, and tropical storms may increase in intensity. In agriculture, the rising frequency and length of dry spells and the increasing atmospheric and soil temperatures impact crop growth and yield, as well as impacting livestock rearing and production, including the loss of small livestock due to heat-related illnesses.

Further impacting the agriculture sector is the change of land use, from agriculture to residential and commercial use, including the construction of hotels and golf courses. In addition to reducing available agricultural land, this change in land use leads to land degradation, resulting in an increase of surface run-off and flash flooding (Caribsave, 2012). This is exacerbated by inappropriate agricultural practices such as the use of agrochemicals and planting systems that limit water retention in the topsoil and in aquifers. In addition, chemical-laden agricultural run-off (along with sewage discharge) is responsible for much of the coral reef loss in Barbados (Caribsave, 2012). To address the issue of land degradation, farmers have begun soil testing to strategically and systematically replace nutrients. In terms of social vulnerability factors for agricultural communities in Barbados, the above-mentioned changes in agricultural lands adversely affect their role in preserving their environment and their livelihoods (Caribsave, 2012).

2.3 Saint Lucia

Table 3. Key indicators, Saint Lucia

Key indicators	M	W	Source
Population global (thousands)	182		FAOSTAT, 2018.
Population by sex (thousands)	92.8	90	
Rural population	81.3%		
Urban population	18.7%		
Human development index (HDI), out of 189 countries	0.745 (89/189)		UNDP, 2019.
Inequality-adjusted HDI (IHDI), out of 152 countries	17.2%		
Gender inequality index (GII), out of 163 countries	0.401		UNDP, 2020.
Poverty headcount ratio (% of the population)	\$1.90 a day is 4.7%		
Life expectancy at birth, global (years)	76		UNDP, 2019.
Life expectancy at birth, per sex (years)	74.7	77.4	
Mortality rate for under-fives, per 1 000 births	17		
Mortality rate for adults, per 1 000 people	161	105	
Stunting, children under 5	2.5%		
Overweight, children under 5	6.3%		FAOSTAT, 2018.
Obesity, adults over 18	19.7%		FAOSTAT, 2018.
Expected years of schooling	13.6	14.2	UNDP, 2020.
Labour force participation (2019)	75.0%	59.5%	ILO STAT.
Share of employment in agriculture (2019)	21.8%	11.4%	ILO STAT.
Unemployment (% of labour force ages 15-24)	38.81%	33.08%	ILO, 2019.

Source: Developed by the authors, 2021.

A. Socioeconomic and policy context

The key socioeconomic indicators for Saint Lucia are summarized in **Table 3**. Saint Lucia is ranked in the high human development category in the 2019 Human Development Report, at 0.745 (89 out of 189 countries and territories) (UNDP, 2019). This is slightly above the average HDI for SIDS as a whole, which is 0.723. Its Inequality-adjusted Human Development Index (IHDI) is 0.617, a loss of 17.2 percent (lower than the 24 percent loss for SIDS overall), due to inequality in the distribution of the HDI dimension indices.

The percentage share of employment in the agriculture sector is significantly higher than in Barbados, at 21.8 percent for men and 11.4 percent for women. Women are engaged far more in the services sector than in the formal agriculture sector. As noted in ILO (2018b), “Agriculture and industry employ mostly men; however, small proportions of the working population are employed in these sectors. On the other hand, most employees in the growing service industries are women. Over time, agriculture has declined in its share of male and female employment.” Saint Lucia counts on the

Ministry of Education, Innovation, Gender Relations and Sustainable Development as a mechanism for the advancement of women and to follow up on the CEDAW commitments.

B. Gender roles in agricultural sectors

Women in Saint Lucia engage actively in productive work, although they are culturally responsible for (and spend more time than men on) reproductive tasks (ILO, 2018b). The share of female to total employment in all sectors in Saint Lucia is very high (57 percent). Only 2.9 percent of employed women are in the agriculture sector, while the majority are in the services sector, including tourism. Similar to Barbados, women's level of public decision-making is high. Women constitute the most highly skilled employees and the majority of managers in a number of sectors including agriculture, forestry and fisheries. They also constitute the majority of business owners in the country. Interestingly, many of the female-owned businesses are sole enterprises, allowing for better management of household tasks and childcare around the business. About 40 percent of households in the country are headed by women (Government of Saint Lucia, 2018).

Women play a dominant role in agroprocessing in Saint Lucia. Many rural women are engaged in making jams; jellies; mango and guava cheeses; canned fruit; chocolate, peanut and ginger fudge and a variety of pepper-based sauces. Such products are typically prepared at the household level. However, food safety control is poor and the products, which are sold within local communities, would likely fail to meet Hazard Analysis and Critical Control Points (HACCP) standards (Ranjitsingh, A. 2016). About 90 percent of vendors of agricultural produce in the largest market (Castries) are women, many of whom control both the production and distribution value chain nodes (StartSomeGood, 2019 and Helen's Daughters, n.d.).

Despite the above, there is still a perception that farming is male-dominated and that women play an insignificant role in the sector. In response, the National Agriculture Policy Brief 2015–2019 notes that “Government is cognizant of the contribution of both men and women to food production. It recognises that each of these groups is affected differently by policy decisions and experiences. Government will seek to address the factors that cause gender inequality in agriculture and promote equity in the execution of all policies and programmes” (ICCA, 2010).

Box 4. Supporting women's rural enterprises through tech services in Saint Lucia

About 99 percent of Saint Lucians had mobile phone subscriptions in 2017 (ITU, 2019). Access to technology services continue to broaden with the establishment of community ICT centres in all districts of Saint Lucia in the last two years. During 2019 alone five ICT centres were opened in the town of Gros Islet (Government of Saint Lucia, 2019).

One organization that is leveraging technological tools to support women farmers is the NGO Helen's Daughters, whose primary aim is to bring about women's economic empowerment, supporting women both individually and in groups. It supports rural women in the application of adaptive agricultural technologies, builds their capacities and improves their market access. The NGO launched an online platform at the end of 2019, which allows hotel owners and others to order fresh produce produced by the rural women the NGO supports. Helen's Daughters is also providing women with soil sensors which transmit data to an online dashboard which monitors their plots and allows the organization to provide individualized agronomic recommendations translated into Creole. This advice is delivered through a dial-in integrated voice response (IVR) system.

Source: Helen's Daughters website, 2021.



C. Gender gaps in access to and control of resources, in service provision and in decision-making

Much family land in Saint Lucia is titled as communal holdings¹⁶ with an undefined number of owners (Griffith-Charles et al., 2015). This tenure system provides a buffer for lower income family members during difficult times, but it does not provide documented evidence of land rights, nor secure tenure. Lack of evidence of formal land tenure limits the ability of both men and women to access finance, insurance, extension services and subsidies, as well as limiting their participation in community leadership, as it is conditioned on land ownership. While there is no institutionalized gender inequality in relation to land tenure, the latest agriculture census (2007) showed that only 29 percent of legal landholders are women and that they have less access to and use of agricultural machinery (Ranjitsingh, 2016).

Agriculture in Saint Lucia is small scale (the average farm size being 3 acres) and mostly rainfed, with limited use of modern technologies (Government of Saint Lucia, 2018). There is an untapped potential for the sale of local produce to hotels. Presently, much of Saint Lucia's imported food is for the tourism industry, even though many imported fruits and vegetables could be grown domestically. The Ministry of Agriculture's Extension and Advisory Services Division (EASD) seeks to raise the standard of living of smallholders and poor households, especially women-headed households, to "allow them to broaden their income base and reduce risk through a wide range of productive activities, agricultural extension and advisory services" (Government of Saint Lucia, 2013). The Network for Rural Women's Producers and the Small Enterprise Development Unit, both government entities, promote the development of commercial activities among women, the latter providing training opportunities for female small-business owners (Government of Saint Lucia, 2019).

Box 5. A surge in demand for sea moss opens opportunities for women and youth in Saint Lucia

When sea moss cultivation was introduced in Saint Lucia in 1998, there was tremendous interest due to its potential for economic empowerment of communities. Against the backdrop of a declining banana industry, farmers saw sea moss as an opportunity to diversify and generate jobs and income. However, with low market demand and lack of information on market requirements and penetration, an initial cluster of 150 farmers rapidly declined to less than 20 active farmers by 2017. A recent surge in demand, however, has created a resurgence of interest among farmers in this industry, with over 200 farmers producing sea moss, which is increasing employment opportunities, especially for vulnerable youth and women. Approximately 45 percent of new farmers in the sector are women, who receive targeted capacity development programmes for unemployed women, delivered by farmer cooperatives. Skills training is also being extended to youth, as 77 percent of new farmers are under the age of 35.

Source: FAO, 2020c.



¹⁶ In the 1980s there was a land administration intervention which successfully titled 33 000 parcels.

Box 6. The “bean-to-bar” chocolate industry: a major income earner for female entrepreneurs in Saint Lucia

The Micoud cluster of the Saint Lucia Network of Rural Women Producers processes and manufactures chocolates and cocoa sticks, primarily for local consumption. The 60-, 70- and 80 percent dark chocolate is produced in a processing plant in Micoud and is marketed under the brand name Micoud. Created in 2011, the cluster pulled together rural women producers/processors from four geographical clusters in the communities of Babobbeau in the north, Micoud in the southeast, Anse Kawet in the southwest and Canaries in the west. The idea was to offer unemployed women in these communities the opportunity to engage in gainful employment to sustain themselves and their families. Other chocolate manufacturers on the island are Paradise Foods, Cocoa Ste. Lucie, Beausoleil Company and Fudgies. A recent FAO study recommended improving service provision and support to cocoa farmers and processors through improved national trade and agricultural growth policies.

Source: FAO, 2020c.



D. Natural resources and climate change

Saint Lucia’s agriculture sector is being impacted by extreme events, which have led some to abandon their farms and migrate to towns in search of work in the tourism and construction sectors. The country experienced hurricanes in 1980, 1994, 1999, 2007 and 2010. The hurricanes cause landslides, storm surges and flooding. The 2010 hurricane, Hurricane Tomas, caused agricultural losses of around USD 54.9 million, which the sector is yet to fully recover from (Griffiths-Charles *et al.*, 2015; Government of Saint Lucia, 2018). In December 2013, the country experienced an unseasonal low-level trough system that also caused severe floods and landslides. Saint Lucia has also experienced drought conditions every year since 2012 (Government of Saint Lucia, 2018). A number of studies have developed climate change projections for Saint Lucia indicating general trends of increasing mean annual temperatures and decreasing precipitation (Government of Saint Lucia, 2018).

Despite longstanding experience among farmers in adapting to adverse weather conditions, the increasing changes in climate are proving challenging. The Belle Vue Farmers Cooperative found that their main high-value cash crop yields were greatly affected by heavy rains over short periods of time, combined with extended periods of drought and warmer temperatures, leading to the spread of yellow leaf curl virus in vegetable crops (IICA, 2017b). The cooperative, with 30 percent female members, turned to the successful use of a range of climate-smart agriculture practices, reducing risk, cutting costs, improving income, increasing productivity and reducing the use of chemicals (pesticides and fertilisers). Such initiatives are important given the climate risks the nation faces.



3. SIDS in the Atlantic, Indian Ocean and South China Sea (AIS) Region

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3.1 Common characteristics in the AIS SIDS

As noted in FAO (2014a), AIS SIDS do not belong to one geographic region. Rather, they include countries scattered across the Atlantic, Indian Ocean, Mediterranean and South China Sea, making it difficult to discuss common characteristics. Very few statistics relate to AIS SIDS as a distinct entity.

Challenges in the agrifood sector

Some of the common challenges faced by AIS SIDS are climate change, natural hazards and freshwater scarcity. According to FAO (2014c), the continued reduction of freshwater resources is a result of variability in rainfall, high levels of runoff, soil porosity and poor management of watersheds. This is experienced mostly in Cabo Verde and Sao Tome and Principe, which already suffer from drought. Given the geographical dispersion of AIS SIDS, traditional knowledge and practices related to climate-smart agriculture and disaster risk reduction differ considerably. Finally, in both Comoros (the) and Sao Tome and Principe, although legal and policy frameworks exist for social protection, social protection programmes are poorly developed (Union des Comoros (the), 2014; ISPA, 2018).

Gender equality in the agrifood sector

Cabo Verde, Comoros (the), and Sao Tome and Principe are part of sub-Saharan Africa, where according to FAO and the African Union (2018):



Women contribute to the family farm and they have their own activities to generate income and meet household food needs. Women tend to dominate subsistence agriculture, non-timber forest products enterprises, small ruminant livestock raising and livestock feeding, and fish processing, amongst others. Women also dominate the transformation, conservation and marketing of agrifood products, mostly in the informal sector, including informal transborder trade.

In sub-Saharan Africa as a whole, women have less access to and control over land, technology (ICTs), equipment and inputs (such as fertiliser) than men, and the land they own or can access is often of lower quality. Women also have less access to extension and finance services,¹⁷ and less control over resources and decision-making, both within and beyond the household (FAO and the African Union, 2018). Prevailing sociocultural norms and practices restrain women's economic empowerment at both household and community levels and result in time poverty as women spend much more time than men on reproductive tasks. While women do have more decision-making power over their own activities, they rarely have full control over the income they generate from family farms and from their activities in the informal market. The average GII for sub-Saharan Africa is 0.573, which indicates a greater degree of inequality compared to East Asia and the Pacific (GII 0.310) and Latin America and the Caribbean (GII 0.383).

¹⁷ See AfDB (2016) for a discussion of the role of ICT's in African agriculture.

Box 7. Gender and ICTs in sub-Saharan Africa

Across the region, 67 percent of women own mobile phones, with a gender gap of 15 percent (GSMA, 2019). Comoros (the) falls in the low category of countries in terms of performance across the three dimensions of internet use: access, affordability and skills. Cabo Verde and Sao Tome and Principe fall into the medium category.

Source: ITU, 2019.

3.2 Cabo Verde**Table 4.** Key indicators, Cabo Verde

Key indicators	M	W	Source
Population global (thousands)	543.8		FAOSTAT, 2018.
Population by sex (thousands)	272.8	271	
Rural population	34.3%		
Urban population	65.7%		
Human development index (HDI), out of 189 countries	0.665 (126/189)		UNDP, 2019.
Inequality-adjusted HDI (IHDI), out of 152 countries	N/A		
Gender inequality index (GII), out of 163 countries	0.397		UNDP, 2020.
Poverty headcount ratio (% of the population)	35% (2015)		
Life expectancy at birth, global (years)	73		UNDP, 2019.
Life expectancy at birth, per sex (years)	69.5	76.2	
Mortality rate for under-fives, per 1 000 births	15		
Mortality rate for adults, per 1 000 people	180	84	
Stunting, children under 5	N/A		
Overweight, children under 5	N/A		FAOSTAT, 2018.
Obesity, adults over 18	11.8%		FAOSTAT, 2018.
Expected years of schooling	12.4	13	UNDP, 2020.
Labour force participation (2019)	67.0%	44.2%	ILO STAT.
Share of employment in agriculture (2019)	15%	5%	ILO STAT.
Unemployment (% of labour force ages 15-24)	24.6%	31.95%	ILO, 2019.

Source: Developed by the authors, 2021.

A. Socioeconomic and policy context

The key socioeconomic indicators for Cabo Verde are summarized in **Table 4**. With an HDI of 0.665, Cabo Verde is within the medium human development category, while its GII of 0.397 reflects a percentage loss in human development, due to gender

inequality, of 39.7 percent, higher than Caribbean SIDS, but lower than the 45.3 percent average for SIDS as a whole. Emigration is an important aspect of Cabo Verde's economy. With over 600 000 Cabo Verdeans (more than the domestic population) living and working abroad, according to Cabo Verde

Central Bank, emigrants sent an estimated EUR 180 million (approximately USD 201.5 million) home as remittances in 2019.

Life expectancy at birth is 73 years and the mortality rate for under-fives stands at 15 per thousand, less than a third that for Comoros (the) and half that of Sao Tome and Principe. No data is available on stunting or overweight in children, but obesity levels are rather low compared to other SIDS, at 11.8 percent. Expected years of schooling for men and women is similar, but labour force participation is considerably higher for men (67 percent) than for women (44.2 percent). Gender inequality is also evident in the percentage share of employment in the agriculture sector, which is 15 percent for men, and only 5 percent for women. Women's issues in Cabo Verde are addressed by the Ministry for Education, Family and Social Inclusion. In terms of follow up on the country's CEDAW commitments, thanks to the newly approved law on gender parity in governance, women occupy 36.11 percent of seats in parliament (April 2021 election).

B. Gender roles in agricultural sectors

According to a value chains study carried out by UN Women and FAO (2012) in some parts of the country,¹⁸ women practice agriculture mainly as a subsistence activity and as a source of additional income. Both men and women are involved in rainfed agriculture, but women do less technical and more labourious force than men, and often without appropriate equipment. About 95.4 percent of farms in the country are completely reliant on unpaid family labour, much of which is performed by women, alongside their reproductive tasks. Specifically, men typically perform tasks that require higher technical expertise (e.g. spraying and managing irrigation systems), while women are mainly responsible for weeding and harvesting, as family unpaid or salaried labour. Irrigation is used mostly in market-oriented production which is mainly dominated by men, except in some main agricultural areas, like the island of Santiago, where women are also active as

agri-entrepreneurs, producing and selling vegetables and some fruits such as papaya, bananas and, recently, strawberries (UN Women and FAO, 2012). Women's work is mostly concentrated in rainfed agriculture, due to their limited access to arable land and water, and they generally grow crops for home consumption, such as corn, beans, roots and tubers, pumpkin and peanuts.

Women also participate, albeit much less than men, in temporary and permanent wage work, both in dryland and irrigated land. Women are often engaged in post-harvest product selection and packaging – a low-paid activity. As to roles in marketing, women are generally involved in small and medium-sized transactions, while men are in charge of larger businesses (FAO, forthcoming). Women are also active in the fisheries sector, which is primarily artisanal and targets local markets, restaurants and hotels. Gender roles in the fishing sector are clearly defined: men work on fishing boats, while women sell the fish in local markets or as mobile vendors.

C. Gender gaps in access to and control of resources, in service provision and in decision-making

As per the last agricultural census, conducted in 2004, (Government of Cabo Verde, 2004), 99.9 percent of farms are family-owned, half of which (50.5 percent) are headed by women, who control smaller average land areas (9 acres, compared to 12 for men). Women mostly practice rainfed farming, which is less profitable. Less than 29.9 percent of irrigated lands are farmed by women. On some islands and councils, such as Santo Antão and Fogo, this share is less 20 percent.

Although the law protects women's land rights in Cabo Verde, a recent social and gender diagnostic (FAO and European Union, 2020) implemented in 26 communities on three islands, revealed several gender biases due to social norms resulting in less access for women to agricultural land (particularly in Fogo Island), less productive farm practices employed

¹⁸ Santo Antão and the island of Fogo

by women, (Santiago and Fogo); less control over land by women and, consequently, lower incomes derived from farming. Gender biases are also noted in land titling and documentation of long-term agreements (Santiago), which impacts the investments women are able to make in farming.

Since 2015, Cabo Verde has had a law that regulates the finance sector in the country. Currently there are seven microfinance institutions operating in Cabo Verde. Eighty percent of microcredit clients are women. For instance, the Caixa Económica de Cabo Verde (CECV), in Praia City, provides microcredit using group collateral (groups of three to five people) to mostly female clients who invest primarily in small-scale production and processing (in agriculture, forestry and fisheries) and in service businesses. With a 96 percent repayment rate, and with evident contribution to improving clients' living conditions, the success of such schemes is undeniable, and could be expanded to rural areas.

Rural women in Cabo Verde have higher illiteracy rates than men and limited access to natural resources, especially land and water. They also have limited access to new technologies, microcredit, support services, productive resources and economic opportunities. A high percentage of women work in precarious employment, including seasonal labour, and as unpaid family labour. They have a

high burden of reproductive work and, thus, suffer from time poverty. They also suffer high rates of gender violence.

Despite steady reduction in poverty levels, absolute poverty in Cabo Verde continues to affect more than one-third of the population (35.2 percent in 2015, down from 56.8 percent in 2001), and in particular women, who make up 52.9 percent of the population living in poverty (INCV & IDRF, 2015). Poor households are often headed by women (61 percent), whose average age is 48.6 years and who have low levels of education (average of 3.8 years of study). About 84.8 percent of poor households have at least one child under the age of 15 and almost half (44.9 percent) are single-parent households (INECV, 2017).

Political participation and public decision-making among women in Cabo Verde has improved considerably since independence in 1975. In 2019, a historic affirmative action law, the Parity Law in Politics (2019), was passed, which is based on the constitutional recognition of: (i) equality of rights and duties between men and women; (ii) the importance of their balanced participation to consolidate representative democracy; and (iii) the defence of equal opportunities for men and women in the justice system, recognizing the direct and indirect forms of discrimination that exist based on gender.

Box 8. Enhancing women's livelihoods and resilience in Cabo Verde: group credit and savings

FAMI-Picos is a federation of associations operating in the field of group savings and credit, established in 2003 by three associations of female heads of household. It currently has a credit portfolio of CVE 30 million, and more than two thousand members. The federation has granted almost two thousand loans so far. Of these, 65 percent went to low-income female heads of households, who would not otherwise have access to credit, to support income-generating activities in various sectors. The maximum amount of loans is set to CVE 500 000, the interest is 3 percent and the repayment rate is 93 percent. The initiative is supported by the Programa de Promoção de Oportunidades Socioeconómicas Rurais (Program to Promote Socioeconomic Opportunities in Rural Areas, or POSER) and other projects of the Ministry of Agriculture.

Sources: Appui au Développement Autonome (ADA), 2020a; ADA, 2020b.



D. Natural resources and climate change

The country is characterized by the scarcity of soils and land tenure insecurity, which constitute a major constraint in the agriculture sector. The arable surface is estimated at 10 percent of the total area, concentrated essentially on the islands with the greatest agricultural tradition: Santiago, Fogo, Santo Antão and Sao Nicolau. Only 9 percent of the land under cultivation is irrigated. Of the rainfed area, 19 percent is wetlands, 42 percent is in subhumid regions and 39 percent is in semiarid regions (FAO, forthcoming). Access to water is a major challenge. This affects

women in particular as they are usually responsible for collecting water, and can result in households having less and poorer quality water when water sources are far from the home. Women-headed households are hardest hit by poverty. As reported by the National Statistics Institute of Cabo Verde (INE, 2017), women make up 53 percent of the poor population in the country and have less access to water and sanitation. They also have limited adaptive capacities, arising from prevailing social inequalities (UNDP, n.d.d).

Box 9. Strengthening women's performance in the salted grouper value chain in Cabo Verde

FAO and the Coastal Fisheries Initiative (CFI), together with national institutions and associations, are implementing a project in Cabo Verde under the subprogram Empowering Women in Food Systems and Strengthening the Local Capacities and Resilience of SIDS in the Agri-food Sector. The project focuses on two levels:

At the community level, the project targets women engaged in the salted grouper value chain in Sao Vicente Island. Salting is the only form of artisanal fish processing on the island, carried out traditionally by women and sold in the municipal market, mostly in unhygienic conditions and, often, with significant loss of value due to women's inability to obtain sufficient salt for proper preservation of the fish. To address these issues, the project is conducting a participatory gender analysis of the value chain to identify critical areas for improvement and to explore options for minimizing post-harvest losses and providing a good quality product to consumers and for improving the living conditions of women sellers. The project also provides technical support and training to strengthen value chain organizations in assessing demand and accessing markets.

At the national level, the project supports efforts to mainstream gender in the fishery sector, by carrying out a policy review and assisting the government in designing and implementing relevant national fishery policies, strategies and legal frameworks. The ultimate goal is for the Ministry of the Sea to elaborate and endorse the country's first Fishery Sector Gender Equality Strategy.

Source: FAO Cabo Verde Country Office, 2021.



3.3 Comoros (the)

 **Table 5.** Key indicators, Comoros (the)

Key indicators	M	W	Source
Population global (thousands)	860.9		FAOSTAT, 2018.
Population by sex (thousands)	439.2	421.7	
Rural population	71.0%		
Urban population	29.0%		
Human development index (HDI), out of 189 countries	0.538 (156/189)		UNDP, 2019.
Inequality-adjusted HDI (IHDI), out of 152 countries	45.3%		UNDP, 2020.
Gender inequality index (GII), out of 163 countries	N/A		
Poverty headcount ratio (% of the population)	N/A		
Life expectancy at birth, global (years)	64		UNDP, 2019.
Life expectancy at birth, per sex (years)	62.4	65.9	
Mortality rate for under-fives, per 1 000 births	68		
Mortality rate for adults, per 1 000 people	248	197	
Stunting, children under 5	0.311		
Overweight, children under 5	0.106		FAOSTAT, 2018.
Obesity, adults over 18	0.078		FAOSTAT, 2018.
Expected years of schooling	11.4	11.1	UNDP, 2020.
Labour force participation (2014)	49.9%	36.6%	ILO STAT.
Share of employment in agriculture (2014)	46.5%	55.7%	ILO STAT.
Unemployment (% of labour force ages 15-24)	18.5%	17.97%	ILO, 2019.

Source: Developed by the authors, 2021.

A. Socioeconomic and policy context

The key socioeconomic indicators for Comoros (the) are summarized in **Table 5**. Comoros (the) has a much higher population than the other SIDS covered in this study, concentrated mostly in rural areas. Its IHDI reflects a loss in human development due to inequality of 45.3 percent, which is considerably higher than the SIDS average of 24 percent.

Adult obesity, however, is lower than in the other SIDS (just 7.8 percent), while 31.1 percent of children under five are stunted, and 10.6 percent are overweight. The country relies on high levels of inward remittances, which stood at USD 109 million in 2012 (World Bank, 2016).

Unlike most SIDS, the agriculture sector in Comoros (the) is the largest employer, and the second largest sector (after trade and services), accounting for 90 percent of export income (World Bank, 2017). The share of employment in the agricultural sector is relatively high, (46.5 percent for men and 55.7 percent for women).

In terms of public decision-making and representation, women in Comoros (the) are under-represented, including in parliament (see GDI and GII in Chapter 1). Progress has certainly been made since 2003, when women held just 3 percent of the unicameral seats – they now hold 16.6 percent of the seats (IPU Parline, 2020) – but the measures

enshrined in modern law are not sufficient to reduce the gender disparity present in customary rules and Islamic law (UNESCO, 2014). Comoros (the) has established the Ministry of Population and Women's Affairs to follow up on the CEDAW commitments.

B. Gender roles in agricultural sectors

Agriculture plays a major role in the labour force, exports and GDP of Comoros (the). The fishery subsector provides resource-poor families in coastal areas with employment, subsistence livelihoods and animal protein, contributing around 10 percent to the country's GDP in 2009 and employing around 13.5 percent of the work force (World Bank, 2017). Subsistence agriculture dominates, with 80 percent of agricultural production intended for self-consumption. Crops include maize, cassava, bananas, taro, sweet potato and coconut (World Bank, 2019d).

Women are heavily involved in food and market garden production (AfDB, 2009), operating a third of all farming units in Comoros (the) (World Bank, 2017). The women sell their products either directly, indirectly through intermediary saleswomen, or through limited bartering of upland foods (such as bananas, yams and sweet potatoes) for coconuts or fish at the coast (World Bank, 2017). Commercial agriculture focuses on just three non-timber forest products: vanilla, ylang ylang and cloves. The production system for these is through contract farming, with well-developed value chain linkages (World Bank, 2017). Women provide a high share of labour in the production of ylang ylang and vanilla. Women entrepreneurs are key players in intensive poultry production, managing most small-scale poultry businesses (less than 100 animals) and 30 percent of the medium-scale poultry businesses (100 to 1 000 animals). Women buy chicks, feed and inputs collectively and market eggs and culled hens in their villages, directly to end customers, often in local shops (World Bank, 2017).

Despite the high engagement of the population, particularly women, in the production of staple food crops for subsistence and sale, the country imports roughly 70 percent of its food. Food imports,

including rice, the main staple food in the country, account for nearly 40 percent of all imports (World Bank, 2019b). Other foodstuffs imported are those considered suitable for the hospitality sector, substitutes for fresh and perishable goods that are difficult to store and transport. Although these foods were initially imported for the hospitality sector, they are now commonly consumed by the population in general. Thus, dried, frozen, powdered, processed and packaged goods are consumed in place of fresh equivalents, contributing to rising rates of obesity and diabetes amongst adults and adolescents (though to a lower extent than in the Caribbean and Pacific SIDS).

In terms of community-level decision-making, the matriarchal system in the country predates the introduction of Islam and colonization and is therefore mixed with Islamic and Western norms and values. In practice, decision-making is reserved for male notables who make community decisions in mosques or in village meetings, without consulting women. There are, however, women's associations that are building up women's leadership capacities and self-confidence, and women are gradually starting to play an active role in politics and decision-making bodies (AfDB, 2009), primarily at the local level, but slowly increasing at higher levels as well.

C. Gender gaps in access to and control of resources, in service provision and in decision-making

A significant constraint for both subsistence farming and commercial agriculture in Comoros (the) is the insecurity of land tenure resulting from competing tenure systems: customary, Islamic and colonial (World Bank, 2017). Customary law, as practised especially in Ngazidja Island, is based on a matrilineal system that privileges girls in inheritance of both land and housing and does not allow land to be divided or shared. Islamic law, however, dictates that boys can obtain two-thirds of family inheritance. Land governance is weak and there are few legal rural land titles. As of 2018, the country has no land-use planning and management policy and its land administration services lack resources (African Development Bank, 2009; UNESCO, 2014; World Bank, 2017).

Agricultural lending is limited by stringent collateral requirements which, in practice, exclude women and producer associations. Lending is also limited by a low appraisal capacity among finance institutions (UNESCO, 2014; World Bank, 2017). UN Women (n.d.) indicates there is a significant gap in women's access to assets, including land, and in key labour market indicators, such as the gender pay gap and women's access to social protection and employment, which limit their economic empowerment.

The government has recently established agricultural extension institutions, however they do not have sufficient financial or human resources (World Bank,

2017). There are several initiatives, led by a mix of private sector, UN and NGO bodies, working with the government, to support women's participation in the ylang ylang and vanilla value chains at both the picking, distilling (in the case of ylang ylang) and marketing nodes of the value chain.¹⁹ Unlike the Caribbean, in Comoros (the), there are village development associations (VDA) and farmers' and women's associations or groups in most villages, which are active in promoting local development. In terms of access to mobile phones, just 58 percent of the population has a mobile phone subscription, the lowest among the seven focus SIDS (ITU, 2019).

Box 10. Transforming flowers into essential oils for the international market: an example of female entrepreneurship in Comoros (the)

After studying agronomy at the University of Madagascar, Ibrahima returned to Comoros (the) and created her biocosmetics company, which produces essential oils scented with ylang ylang, clove and vanilla, her country's specialty export crops. Five years later, she has become an expert and an innovator in the process of distilling the flowers grown on her family plantation and in selling essential oils, with high value added, to an intermediary who resells them to a French perfumery.

With support provided by the Enhanced Integrated Framework (EIC) for the acquisition of distilling and packaging equipment and materials and the development of a brand strategy, Ibrahima hopes to be able to boost her business and its brand. She also hopes to gain direct access to international markets, without depending on an intermediary, which requires meeting high requirements for export certifications.

In a bid to combat deforestation, Ibrahima is turning from wood to solar power for distillation, which requires investment capital that she cannot access alone. Her solution is to mobilize the community to buy solar panels collectively, which will benefit the whole village, producing enough electricity for all.

As the Government of the Comoros (the) intensifies its efforts to develop the country's high-potential and high-value-added resources of ylang ylang, vanilla and cloves, it looks to Ibrahima as an example of entrepreneurship and community planning that can enable the country's trade and economy to flourish.

Source: Ramsay, 2018.



¹⁹ For more information on these initiatives, see [https://trade4devnews.enhancedif.org/en/impact-story/Comoros \(the\)-bloom](https://trade4devnews.enhancedif.org/en/impact-story/Comoros%20(the)-bloom); [https://www.africa.undp.org/content/rba/en/home/presscenter/articles/2017/09/18/securing-vanilla-for-farmers-and-development-in-Comoros \(the\)/](https://www.africa.undp.org/content/rba/en/home/presscenter/articles/2017/09/18/securing-vanilla-for-farmers-and-development-in-Comoros%20(the)/) and <https://www.unilever.com/sustainable-living/enhancing-livelihoods/inclusive-business/connecting-with-smallholder-farmers-to-enhance-livelihoods/mapping-our-farmers-programmes/enhancing-the-livelihoods-of-women-smallholder-farmers.html>

D. Natural resources and climate change

The 2019 World Bank Country Diagnostic of Comoros (the) discusses the environmental risks the country faces. These include tropical storms, floods, sea-level rise, earthquakes, volcanic eruptions and landslides. Since 2005, nearly half the population has been affected by a natural disaster. One such disaster was the 2012 floods in which Comoros (the) farmers lost almost 80 percent of their crops. In addition, the country suffers from a great deal of environmental degradation due partly to its population density, which has led to much exploitation of natural resources. High levels of deforestation have led to erosion, increased run-off and flooding. The agriculture sector in particular is extremely vulnerable

to climate change, with rising temperatures and increased salinity of groundwater adversely affecting crop production.

Evidence suggests that indigenous agricultural knowledge of past generations may no longer be relevant or useful, given the current extent of deforestation and land degradation in the country (UNEP, 2018). To respond to the needs, several organizations, including UNEP (n.d.) and FAO (2019b), are collaborating with the government to build local communities' capacities to manage and protect their land and watersheds, while also providing training to government staff on improved ecosystem-based land-use planning, climate-resilient agriculture and water resource management.

3.4 Sao Tome and Principe

 **Table 6.** Key indicators, Sao Tome & Principe

Key indicators	M	W	Source
Population global (thousands)	215		FAOSTAT, 2018.
Population by sex (thousands)	107.6	107.4	
Rural population	27.2%		
Urban population	72.8%		
Human development index (HDI), out of 189 countries	0.609 (137/189)		UNDP, 2019.
Inequality-adjusted HDI (IHDI), out of 152 countries	16.7%		
Gender inequality index (GII), out of 163 countries	0.537		UNDP, 2020.
Poverty headcount ratio % of the population	32.3%		
Life expectancy at birth, global (years)	70		UNDP, 2019.
Life expectancy at birth, per sex (years)	67.8	72.6	
Mortality rate for under-fives, per 1 000 births	31		
Mortality rate for adults, per 1 000 people	217	161	
Stunting, children under 5	17.2%		
Overweight, children under 5	2.4%		FAOSTAT, 2018.
Obesity, adults over 18	12.4%		FAOSTAT, 2018.
Expected years of schooling	12.6	12.8	UNDP, 2020.
Labour force participation (2019)	74.4%	41.4%	ILO STAT.
Share of employment in agriculture (2019)	24.1%	8.8%	ILO STAT.
Unemployment (% of labour force ages 15-24)	14.79%	31.92%	ILO, 2019.

Source: Developed by the authors, 2021.

A. Socioeconomic and policy context

The key socioeconomic indicators for Sao Tome and Principe are summarized in **Table 6** (p.31). In contrast with Comoros (the), the country's population is largely urban (72.8 percent) with an HDI that places it in the medium human development category. The country's GII score of 53.7 percent reflects a loss in human development due to gender inequality that is well above the average for SIDS (45.3 percent) and higher than the world average (49.2 percent). In terms of mobile phone access, about 85 percent of the population had mobile phone subscriptions as of 2017 (ITU, 2019).

The mortality rate for under-fives (31 per thousand) is less than half that of Comoros (the) but almost double the rate in the Pacific and Caribbean SIDS. A relatively low percentage of adults are obese (12.4 percent), but a large share of women between the ages of 15 and 49 (46.1 percent) suffer from anaemia.

Agricultural products make up almost 100 percent of the country's exports, with cocoa amounting to 89 percent of total national exports. Agroforestry, combining cocoa for export with bananas and legumes for local consumption, is the dominant farming system (IFAD 2019, 2020), though the versatile topography and climate allows for varied production systems (IFAD 2019, 2020). In 2017, agriculture contributed 11.5 percent of the GDP, fisheries contributed 7.2 percent and tourism contributed 14 percent (IFAD, 2020). The informal sector accounts for 60 percent of GDP and employs 60 percent of the country's labour force.

Gender inequality in the labour force participation rate is high, at 74.4 percent for men and 41.4 percent for women. Women are also underrepresented in public decision-making roles. According to the Human Development Report (HDR) for Sao Tome and Principe, 14.5 percent of parliamentary seats were held by women in 2019. The Government has established the Office of Women's Affairs to follow up on the CEDAW commitments.

B. Gender roles in agricultural sectors

Recent studies reported in World Bank (2019c) show that women in Sao Tome and Principe spend 8 hours a day on unpaid work, and just 2 hours on paid work. Women's domestic role is seen as their primary responsibility, and their participation in agricultural activities is viewed as "help", more than as real work. Despite this perception, women contribute to agricultural production in several ways. While men are more engaged in the production of cash crops (e.g. cocoa, coffee and pepper), women raise pigs and poultry and sell or barter surplus meat, chicken or eggs. They are also responsible for growing bananas and indigenous crops (The Borgen Project, 2018). Women also play an important role in the fisheries sector. While men fish and fix fishing gear and boats, fish saleswomen, known locally as *palayes*, unload the boats, buy the produce directly from fishermen, transport it to the market for sale and process it into dried and salted fish (The Borgen Project, 2018). (*Palayes* are often wives of fishermen and can be quite powerful). Gender gaps in access to and control of resources and in service provision and decision-making persist.

During colonial times, about 90 percent of the country's agricultural land belonged to companies producing coffee and cocoa. This land was transferred to the state after independence (in 1975), until the 1990s when a land reform led to the distribution of around half of the country's agricultural land, benefitting half the rural population. Of the small farmers who obtained deeds, one-third were women heads-of-household, having the same rights and privileges as men (World Bank, 2004).

As to access to credit, there is high demand for credit among women, despite the fact that many of their market transactions are based on bartering (World Bank 2004). Yet women have less than half the chance that men have of obtaining agricultural loans, unless they apply jointly with their husbands (Arias, Horton and Valdivia, 2019).

Women today lag behind men in public decision-making power, especially at the local level (see GDI and GII in Chapter 1). This is partly due to social customs and practices that still attribute superiority to men in male-headed households

(World Bank, 2004b). Such practices are perpetuated by school curricula and by certain potentially discriminatory norms contained in national laws, which prevent women from working in certain positions and during night-time hours (World Bank, 2019c). Women are expected to carry out all reproductive tasks, which are unpaid and restrict their time and mobility. These constraints reduce women's ability to participate in economic initiatives and make choices about their future (World Bank, 2019c).

C. Natural resources and climate change

Decreasing rainfall, the lengthening of the dry season and rising temperatures are threatening food systems in Sao Tome and Principe. In 1983 the country suffered a drought that affected 93 000 people. Increasing heavy rainfall events, storms and floods cause soil erosion and landslides and decrease agricultural production. According to climate change projections, climate conditions will not be conducive to long-term returns on agricultural investments as plant pests and disease outbreaks are expected to increase, along with the frequency of disasters (Arias, Horton and Valdivia, 2019).

There is little evidence in the country of traditional community-level knowledge and practices related to climate-smart agriculture and disaster risk reduction. This is due to the way in which land was allocated between 1993 and 2003, where land rights were awarded to former African contract workers and their descendants and to local merchants and politicians, none of whom had prior agricultural knowledge. The new owners were constrained by lack of training, credit and access to markets (Seibert, 2016). Meanwhile, the Creole population in Sao Tome and Principe never had a tradition of, or inclination to, work in plantations.

However, women engaged in production of local food crops are likely to have some traditional knowledge, although it is not documented. A number of donors and financing institutions (such as the African Development Bank, AfDB) have been supporting Sao Tome and Principe in developing more sustainable agricultural practices²⁰ and climate-resilient family farming (IFAD, 2020).

Box 11. Organic cacao production in Sao Tome and Principe

Both women and men have benefitted from the Government's decision to shift from conventional to organic cacao production. With the International Fund for Agricultural Organization (IFAD) support, two cacao farming cooperatives (CECAB and CECAQ11) received extension and training support in production and quality control processes. As a result, both cooperatives are internationally certified as organic as well as meeting fair trade, social and environmental standards. The cooperatives now negotiate contracts directly with international producers of fine chocolates.

An impact assessment from IFAD found qualitative evidence that women members of producer organizations appreciated the gender egalitarian approach of the project. Women reported having enhanced their professional skills and their voice, as well as their ability to compete for leadership positions in producer associations in the future.

Source: Garbero et al., 2019.



²⁰ For example, see <https://www.afdb.org/en/documents/document/sao-tome-and-principe-infrastructure-rehabilitation-for-food-security-support-project-priasa-pcr-99824>



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4. Pacific SIDS

4.1 Common characteristics in Pacific SIDS

Challenges in the agrifood sector

As with other SIDS, Pacific SIDS face challenges related to climate change, natural disasters, high transportation costs, reliance on imports, remoteness from markets and vulnerability to external shocks (FAO, UN-OHRLLS and UN DESA, 2017; SPC, 2017). The COVID-19 pandemic led to border closures and flight cancellations, disrupting imports, exports and food supply chains and harming the tourism industry, employment and income (FAO, 2020b).

The Pacific region is one of the most disaster-prone regions in the world, with the SIDS experiencing a range of natural hazards including back-to-back unforeseen events (such as cyclones) and cumulative events (such as drought). Between 1990 and 2016, the Pacific subregion (excluding Australia and New Zealand) recorded 193 disasters, which resulted in substantive agricultural income loss for the affected countries. Climate projections for the Pacific SIDS include more frequent floods, more intense (although less frequent) droughts and tropical cyclones, sea-level rise, higher atmospheric and sea temperatures, and increased rainfall variability (UN ESCAP, 2017).

Adaptation to change is guided by traditional knowledge, values and practices that underpin Pacific community lifestyles (Bell and Taylor, 2015; UNESCO/

ICHAP, 2013). Wide recognition of the importance of traditional knowledge in the Pacific is evidenced by the model law on the Protection of Traditional Knowledge and Expressions of Culture (TKEC), endorsed in 2002, and the Traditional Biological Knowledge, Innovations and Practices Act, endorsed in 2006 (Jaenicke, 2011). The Pacific SIDS have good mechanisms for disaster risk reduction and vulnerability assessments which can benefit from gendered traditional knowledge at the community level.²¹ In terms of social protection, similarly to the Caribbean, Pacific SIDS have made significant progress, but need to further expand coverage and make social protection systems more inclusive and gender-sensitive (Asian Development Bank, 2020). Informal social protection – traditional safety nets – is particularly important in Pacific SIDS and remittances make significant contributions to this (see Chapter 1).²²

Diet-related health issues are of particular concern in Pacific SIDS, which include ten of the world's most obese countries,²³ seven of which also have the world's highest prevalence of diabetes. In some Pacific SIDS, obesity coexists with high child stunting rates as well as a prevalence of anaemia (FAO, 2014a). About 77 percent of deaths are attributable to NCDs (FAO, 2019a) which is largely, but not only, explained by a generalized food consumption pattern of highly processed imported foods with high fat and sugar content. This situation is leading to women spending more time caring for ill family members.

²¹ See Nalau *et al.* (2018) for a detailed review of the Role of Indigenous and Traditional Knowledge in Ecosystem-Based Adaptation in the Pacific Islands.

²² For more information, see <https://www.dfat.gov.au/about-us/publications/Pages/pacific-social-protection-series>

²³ For more information, see <https://www.cia.gov/library/publications/the-world-factbook/rankorder/2228rank.html>. The highest level of obesity amongst adults is found in Nuaru, at 61 percent. This is followed by Cook Islands, Palau, Marshall Islands, Tuvalu, Niue, Tonga, Samoa and Kiribati, with the tenth being the Federated States of Micronesia, where obesity stands at 45.80 percent.

With regard to the policy and institutional environment, the Secretariat of the Pacific Community (SPC) is the main organization supporting regional mechanisms and national capacities to address critical development challenges. The global policy environment in which it operates includes the United Nations Framework Convention on Climate Change (UNFCCC), CEDAW commitments and the Pacific Platform for Action for Gender Equality and Women's Human Rights 2018–2030 (PPA).

Gender equality in the agrifood sector

Pacific women make an active contribution to the region's economy (SPC, 2017a). In Papua New Guinea and in Melanesia, food production is largely the responsibility of women, while in the Solomon Islands women carry out 90 percent of the marketing activity in the Honiara Central Market, selling their own produce and that of others (SPC, 2017a). In Samoa and Tonga, women are less active

in production, but play a much greater role in food preparation, storage, value addition and marketing²⁴ (SPC and FAO, forthcoming). Women in the Pacific SIDS engage in the fisheries sector (more so than in the Caribbean), particularly inshore and, increasingly, offshore as well, buying, selling and producing value-added products (SPC and FAO, forthcoming; Chetty, 2019). Kinship networks, traditional knowledge and cultural norms allow women to pool resources in the fisheries sectors, for example by taking turns marketing their produce, thus freeing up time for them to handle their competing gender roles (Chetty, 2019). The majority of Pacific women work in the informal sector and perform most of the unpaid care work, which is not always captured in labour force statistics.²⁵ Even when captured, more information is needed on these informal economic activities, including the working conditions, and their contribution to household budgets and community service, in order to inform policy-making (SPC, 2017a).

Box 12. Mobile phone-based banking platforms: a solution to women's challenges in accessing finance

In Solomon Islands, the International Finance Corporation (IFC), together with ANZ Bank, rolled out a mobile banking service, called goMoney, to rural households in September 2014, accompanied by the Money Minded financial literacy training program. Merchants and agents were trained on how to effectively market and distribute the product to women and provide the training. Two years later, goMoney had reached nearly 46 000 clients, most of whom were previously unbanked customers and 41 percent of whom were women. ANZ, the Pacific Financial Inclusion Program, and the Australian Government extended goMoney services to Pacific coconut farmers and buyers.

An evaluation of the initiative found that female customers preferred the mobile banking platform to traditional banking channels (particularly for savings) and indicated that it provided greater control over family finances and better capacity to cope with emergency situations. Access to a steady income stream was generally correlated with more active and consistent use of mobile banking services. Around 59 percent of surveyed female customers were employed in full-time paid jobs or self-employed, while 38 percent were subsistence farmers.

Source: World Bank and Australian Aid, 2018.²⁶

²⁴ In Melanesia, traditional food crop production for household consumption and marketing are primarily the responsibility of women (except in the Lau group of islands of Fiji). This is also the case in some countries in Micronesia: Palau and Yap State (one of the Federated States of Micronesia). In contrast, most Polynesian societies and some Micronesian societies regard traditional food and cash crop production and most forms of fishing and caring for pigs and cattle to be men's work. (Lam, F., personal communication).

²⁵ Many SIDS include unpaid subsistence work in labour force statistics. In Solomon Islands, for instance, in 2009, women's participation in the labour force was 68 percent. Of that 68 percent, however, 85 percent worked in unpaid work, while only 15 percent worked for wages, salary or profit. Similarly, labour force statistics may include the unemployed, where the unemployed are defined as being part of the work force. In Kiribati, in 2015, the labour force participation rate for women was 60 percent but almost half of these women were unemployed (SPC, 2017a).

²⁶ World Bank, Australian Aid (2018) Gender Inclusive Value Chains: Improving Women's participation in Solomon Islands

Customary tenure is the predominant tenure system in the Pacific Islands. In 22 countries and territories of the Pacific Islands, over 90 percent of the land is held or occupied under customary tenure, the highest share in the world. With the exception of Palau and Vanuatu, which are matrilineal societies, inheritance rights to customary land are reserved for men. Women can usually only be granted land rights by male members of their family. Pressures to register customary land for private sector use or resource extraction has worsened women's existing disadvantages (UN WOMEN, 2012). Without land, women are unable to satisfy the collateral requirements of banks and other formal finance institutions and thus are unable to access loans (SPC 2017a).

As to extension services, these are generally weak in the region. There is an average of one extension officer per 10 000 farmers and the total budget allocation for extension services is less than 0.5 percent of the total budget of most Pacific SIDS (SPC, 2015b). Furthermore, such services do not take into account women's specific needs and constraints. As such, women have less access than men to such services (UN Women, 2012). The Pacific Islands Rural Advisory Services (PIRAS, n.d.) has developed an extension strategy with a number of e-agriculture initiatives that are underway, though it is not known how accessible these are to women farmers.

Several sociocultural norms related to access to and control over productive assets and gender stereotypes regarding the roles of men and women (reinforced in the education system), as well as the employment options available to women, act as barriers to women's empowerment in the Pacific (SPC, 2017a). Pacific Islander women are responsible for most of the reproductive tasks around the home and garden, while also engaging in productive and community management activities (Chetty, 2019). Women work more hours than men (twice as many hours in Papua New Guinea [SPC, 2017]), and their participation in public decision-making is lower than in the AIS and Caribbean SIDS (UNESCO, 2014). This is partly explained by the fact that, added to their reproductive and productive responsibilities, Pacific women have important traditional community roles that are extensive and time-demanding. While these triple gender roles can be seen as a burden, they are linked to a "complex web of kinship, social and cultural norms in rural and remote areas of the Pacific (that) offer more in the way of opportunities for women's economic empowerment" (Chetty, 2019). Women's affiliation to traditional kinship networks is important, and goes hand in hand with their engagement with formal producer organizations and women's groups.

Box 13. Gender and ICTs in the Pacific and East Asia



Across the subregion, 93 percent of women own mobile phones, with a 1 percent gender gap; and 64 percent of women use mobile internet, with a gender gap of just 4 percent (GSMA, 2019). Palau and Samoa fall into the medium category of countries in terms of performance across the three dimensions of internet use: access, affordability and skills.

Source: ITU, 2019.

4.2 Palau

Table 7. Key indicators, Palau

Key indicators	M	W	Source
Population global (thousands)	20		FAOSTAT, 2018.
Population by sex (thousands)	N/A	N/A	
Rural population	20.1%		
Urban population	78.9%		
Human development index (HDI), out of 189 countries	0.814 (55/189)		UNDP, 2019.
Inequality-adjusted HDI (IHDI), out of 152 countries	N/A		UNDP, 2020.
Gender inequality index (GII), out of 163 countries	N/A		
Poverty headcount ratio (% of the population)	N/A		
Life expectancy at birth, global (years)	73.7		UNDP, 2019.
Life expectancy at birth, per sex (years)	N/A	N/A	
Mortality rate for under-fives, per 1 000 births	18		
Mortality rate for adults, per 1 000 people	N/A	N/A	
Stunting, children under 5	N/A		
Overweight, children under 5	N/A		FAOSTAT, 2018.
Obesity, adults over 18	55.3%		FAOSTAT, 2018.
Expected years of schooling	15	16.3	UNDP, 2020.
Labour force participation (2014)	73.3%	55.6%	ILO STAT.
Share of employment in agriculture (2014)	3.4%	1.8%	ILO STAT.
Unemployment (% of labour force ages 15-24)	N/A	N/A	ILO, 2019.

Source: Developed by the authors, 2021.

A. Socioeconomic and policy context

The key socioeconomic indicators for Palau are summarized in **Table 7**. Palau has by far the smallest population of the seven SIDS that are the focus of this paper. With a HDI of 0.814 (similar to Barbados), the country is in the very high human development category. While no data are available on IHDI, GII, stunting or overweight in children, adult obesity in Palau is clearly the highest among all seven SIDS reviewed in this paper, and indeed among the highest in the world.

Although the percentage share of employment in the agriculture sector is low, both fishing and crop production are important to the economy, in addition

to tourism. Women have limited participation in national-level decision-making and are under-represented in both branches of government (legislative and executive) (SPC, 2016).

Although Palau has signed the CEDAW, it has not ratified it. The government has established a Gender Division in the Ministry of Community and Cultural Affairs to follow up on these commitments.

B. Gender roles in agricultural sectors

Gender roles in agriculture and fisheries are very clearly defined in Palau's matrilineal society, giving the female sphere of influence considerable

importance. Women are landowners and traditional decision-makers at the community level (SPC, 2016), and their role in selecting traditional leaders and participating in local political decisions is appreciated. Women in Palau are referred to as “walking libraries of family food production” (Bishop, 2013). They are responsible for preserving traditional knowledge and skills related to the sustainable production and management of taro (taro gardens hold great cultural significance in Palau [SPC, 2016]), and other crops, as well as the sustainable harvesting of clams and sea cucumber. Most women (both rural and urban) produce some taro, cassava and a range of other crops for household needs. Such crops are generally used in customary exchange, with only small amounts reaching the market. Men are responsible for sustainably managing, conserving and preserving coastal marine species, including fish, mangrove crabs, and turtles, as well as clams (FAO, undated). Where women manage or own larger, semi-commercial farms, they employ foreign male labour (mostly from Philippines and Bangladesh) to assist, particularly with taro production (FAO, 2008; Bishop, 2013).

As in the Caribbean SIDS, most women in Palau are employed in the services and tourism sector. Agriculture is declining due to increasing urbanisation, a shortage of labour in rural areas, and the high cost of producing locally compared to importing food (Global Islands Network, n.d.). Imported foods constitute 90 percent of the average household diet in Palau (Bishop, 2013).

C. Gender gaps in access to and control of resources, in service provision and in decision-making

Inheritance rights in Palau remain strongly matrilineal, with rights to customary land titles being passed down from mothers to daughters or to other female relatives (SPC, 2016). About 65 percent of all farm owners in the country are female and agricultural loans are available through the National Development Bank of Palau. However, there is a move towards a more patriarchal system (SPC, 2016). For instance, while no legal restrictions are in place regarding women owning land, there is

discrimination in women’s inheritance since, in an absence of a will, land is inherited by the deceased owner’s oldest legitimate male child. In case of no male children, land goes to the oldest daughter of the marriage in which such lands were acquired (FAO & STI, 2021).

Rural advisory services are provided through the Bureau of Agriculture within the Ministry of Natural Resources, Environment and Tourism, although farmer organizations are most active in extending training, running demonstration gardens and supplying services, including planting materials, market access and value-added processes. Women hold leadership positions in the three main farmer organizations in the country. As of 2013, the Palau Taiwan Farmers’ Association had mostly female membership, the Organization for Industrial, Spiritual and Cultural Advancement had 40 percent female members and the Palau Organic Growers Association had 30 percent female members (Bishop, 2013). These organizations seek to popularise traditional dishes within society, through calendars which promote seasonal local products and through farmer-chef alliances. This is particularly important given the high level of consumption of unhealthy imported foods which has contributed to the very high levels of obesity in the country (see Chapter 1).

The gender gap in access to ICTs in Palau is minimal, although it appears that women use a smaller range of mobile services (GSMA, 2019). About 112 percent of the population overall owns mobile phone subscriptions (ITU, 2019). Although women are very active and influential in community-level political decisions, their participation at the national level is more limited, as evidenced by the under-representation of women in the legislative and executive branches of government (SPC, 2016).

D. Natural resources and climate change

Though Palau is fairly protected by its extensive coral reefs, the Palau Disaster Management Handbook (2020) notes that the country is still susceptible to natural hazards such as typhoons and droughts, as well as a depletion of its freshwater resources and the spread of invasive species. Relatively recent natural disasters include a drought in March 2016, which

affected 80 percent of the country, and typhoons in December 2012 and November 2013. According to climate projections, El Niño/La Niña effects will continue to occur and annual mean temperatures and extremely high daily temperatures will increase, along with an increase in average rainfall and extreme rain events. Typhoons will be less frequent but more intense. Furthermore, there will be a reduction in the frequency of droughts, a continuous increase in sea levels and an increase in the risk of coral bleaching (Pacific-Australia Climate Change Science and Adaptation Planning Program, 2015a).

As noted, women in Palau have strong traditional knowledge in agroforestry, mixed ecosystems and the production of a wide variety of local food crops. There is an appreciation of traditional forms of agriculture to preserve the island's culture, with several farmer organizations seeking to “preserve the best and adopt the new” (Bishop, 2013). One example is the work done by the Palau Community College to help local women identify more salt-tolerant species of taro due to seawater intrusion and the flooding of taro gardens (Global Islands Network, n.d.).

Box 14. Promoting a gender-sensitive and carbon-neutral tourism value chain in Palau

Tourism in Palau represents 31 percent of its total GDP. With climate change threats and COVID-19 creating major environmental and economic impacts, the country is working towards recovering its tourism industry, through the Palau's Carbon Neutral Master Plan and other national policies, such as the [Responsible Tourism Policy Framework 2017-2021](#).

The FAO Sustainable Tourism Value Chain program²⁷ focuses on gender equality, women's socioeconomic empowerment, biodiversity conservation and the protection of natural and cultural heritage. Working with local governments, male and female producers, tourism stakeholders and consumers, it aims to improve the livelihoods and resilience of communities and ecosystems. The program is implemented by Sustainable Travel International, Slow Food and the Palau Bureau of Tourism. It focuses on two components: (a) gender-sensitive tourism value chain analysis and carbon calculation, examining tourism flows and dynamics, to enable the assessment of a tourists' carbon footprint, and exploring food system vulnerabilities as they relate to CO₂ emissions; and (b) Km0 Food initiative, increasing diversification and productivity, and enhancing producer groups' access to the tourism supply chain, while promoting local food culture and traditions.

Focusing on women producers and their role in protecting Palau's heritage, the project developed an initial database of heritage foods and processing practices that will be enriched with a deeper mapping exercise and an inventory of agrobiodiversity and traditional agricultural practices linked to food and identity. At least two products with marketing potential were identified to be promoted. The project also conducted a number of needs assessment surveys to identify areas of improvement in channelling local products to the tourism value chain. The results were shared in producer group training workshops in April 2021. The next steps of this innovative program will involve gender-sensitive capacity development activities for local producers and gender-sensitive post-COVID-19 tourism marketing research, targeting key visitor markets in order to link their motivations for travel to destinations that are inclusive, sustainable and eco-friendly.

This program is generating evidence around good practices in building resilience for economic, social and environmental sustainability, that have a high potential of adaptation and/or replication in other SIDS.

Source: FAO, 2021.



²⁷ Launched in June 2020 by FAO through the FMM Subprogramme on Empowering women in SIDS, the Mountain Partnerships and the Coalition of Fragile Ecosystems

4.3 Samoa

 **Table 8.** Key indicators, Samoa

Key indicators	M	W	Source
Population global (thousands)	197.1		FAOSTAT, 2018.
Population by sex (thousands)	102	95.1	
Rural population	82%		
Urban population	18%		
Human development index (HDI), out of 189 countries	0.707 (111/189)		UNDP, 2019.
Inequality-adjusted HDI (IHDI), out of 152 countries	N/A		
Gender inequality index (GII), out of 163 countries	0.36		UNDP, 2020.
Poverty headcount ratio (% of the population)	1.1%		
Life expectancy at birth, global (years)	73		UNDP, 2019.
Life expectancy at birth, per sex (years)	71.2	75.3	
Mortality rate for under-fives, per 1 000 births	16		
Mortality rate for adults, per 1 000 people	134	79	
Stunting, children under 5	4.9%		
Overweight, children under 5	5.3%		FAOSTAT, 2018.
Obesity, adults over 18	47.3%		FAOSTAT, 2018.
Expected years of schooling	12.1	12.9	UNDP, 2020.
Labour force participation (2017)	55.5%	31.1%	ILO STAT.
Share of employment in agriculture (2017)	46.2%	6.6%	ILO STAT.
Unemployment (% of labour force ages 15-24)	15%	22.29%	ILO, 2019.

Source: Developed by the authors, 2021.

A. Socioeconomic and policy context

The key socioeconomic indicators for Samoa, summarized in **Table 8**, show a largely rural population (82 percent) and a very low poverty headcount.

Samoa has very high net emigration rates and the highest amount of incoming remittances of all seven countries. Labour force participation is 55.5 percent for men and 31.1 percent for women.

The overall contribution of agriculture to the country's economy is low and declining. In 2012, agriculture and fisheries contributed 12 percent of

GDP, whereas industry contributed 28 percent, and services, including tourism, contributed 61 percent (Amosa, 2012; FAO and the Pacific Community, 2019). However, of the seven SIDS covered in this paper the share of employment in the agriculture sector (particularly for men) is second highest, after Comoros (the), and approximately 97 percent of all households in the country are engaged in some form of farming (FAO and SPC, 2019). The percentage share of employment in agriculture is higher than in Palau, standing at 46.2 percent for men and 6.6 percent for women, not accounting for women's unpaid work in the informal sector (FAO and SPC, 2019). Both rural and urban

women are mostly employed in sales and services, professional, technical or managerial positions and clerical positions.

Samoa has a 2019 GII score of 0.360, reflecting a percentage loss in human development due to gender inequality of 36 percent. This is higher than the AIS SIDS, but lower than the 45.3 percent average for SIDS as a whole. Women's representation in the public domain and public decision-making is low, with women holding only 10 percent of seats in parliament.²⁸ The Ministry of Women, Community and Social Development has the mandate to follow up on the CEDAW commitments.

B. Gender roles in agricultural sectors

As stated in FAO and SPC (2019), in accordance with gendered social norms, men generally work in strenuous occupations, including clearing land, planting taro, deep sea fishing and cleaning fish reserves. Women, on the other hand, are primarily engaged in backyard gardening, selling vegetables locally, raising chickens, feeding tilapia, coastal foraging and cleaning the foreshore. Within commercial agriculture, women with their families contribute to planting, weeding and harvesting cocoa and they do more work than men in cocoa-processing. Some women manage and even own cocoa farms and, as with taro in Palau, they employ male workers to assist in peak labour seasons. Virgin coconut oil production is also primarily the role of women (FAO and SPC, 2019).

Samoa agriculture is slowly shifting from mainly subsistence farming for local consumption, to commercial farming for export (New Agriculturist, n.d.). In line with the government's Agricultural Sector Plan, the Ministry of Agriculture and Fisheries (MAF) sees large potential in the commercial export sector and encourages women and men to move in this direction through training in the production of livestock and cash crops, including virgin coconut oil,

cocoa, banana and noni, breadfruit and taro chips, coffee and turmeric. More women and indeed entire families are turning to such cash crops. Their opportunities to connect to markets have been further enhanced by the activities of the organization Women in Business Development Incorporated (WIBDI) and the Trade Sector Support Programme (TSSP).²⁹

The shift to cash crops for export is a profitable option for small farmers, including women, but it contributes to land clearing at a large scale, with priorities shifting away from producing nutritious food for the household. As in other Pacific and Caribbean SIDS, many households are relying more on cheaper and less nutritious imported food, exacerbating the burden of obesity and diet-related NCDs. About 83 percent of Samoan women between the ages of 15 and 49 are now overweight or obese (FAO and SPC, 2019).

C. Gender gaps in access to and control of resources, in service provision and in decision-making

According to FAO and SPC (2019), "Samoans traditionally have rights to the use of customary land through both their paternal and maternal lineages". In a system of chiefly customary tenure, women can acquire rights to customary, freehold and leasehold land. The Ministry of Agriculture and Fisheries (MAF) recognises women in their own villages as land-owners, even when their husband does most of the plantation work. As such, women in Samoa have access to finance, and women make up 80 percent of rural clients seeking support from the Samoa Business Enterprise Centre (SBEC). Women have a better track record than men of repaying small loans to commercial banks (FAO and SPC, 2019). As there is a strong family farm approach in Samoa, it is also common for husbands and wives to apply for joint loans.

²⁸ In 2013, legislation was passed in Samoa permitting special measures to be instituted to increase the number of women members of parliament to 10 percent (FAO and SPC, 2019)

²⁹ For more information, see <https://www.enhancedif.org/en/publication/2016-10/samoa-harnessing-economic-power-women-villages-and-traditional-cultures-access> and <https://www.cta.int/en/gender/article/women-led-agribusiness-in-samoa-reaches-global-markets-sid070a725d0-2d29-4a8f-9f23-d3710bf47e3e>

Samoa society is structured around deeply defined gender roles, and traditional systems in families, communities and the government persist. Although Samoan women are assured equality in the country's legal frameworks (Amosa, 2012), in practice, their participation in public decision-making is low. Women are poorly represented in parliament, in village-level leadership and in the private sector (SPC, 2015). Villages are organized into tight-knit communities with clear, patriarchal gender roles (FAO and SPC, 2019), with the *matais* (chiefs/village council members) being predominately male. As noted in SPC (2015) "at the community level, due to traditional stereotypes and cultural attitudes, women lack confidence and self-esteem to assume decision-making responsibilities, and community attitudes may constrain women from participating". In 2006, an estimated 20 percent of *matais* were women, but there is evidence that the numbers are increasing.

One way in which women are active at the village level is through village women's committees (FAO and SPC, 2019). These can have group holdings, managed through a village association, for collective crop, livestock and poultry production. The committees are a good entry point for the MAF when seeking to support women's engagement in agriculture. In addition, there are a number of organizations in which women engage actively and hold leadership positions. These include the WIBDI, the Samoa Women's Association of Growers (SWAG) and the Savai'i Coconut Farmers Association (SCFA), which has good female representation in its leadership team.

D. Natural resources and climate change

Samoa has experienced a series of natural disasters in recent years, with a major flood in 2001, an earthquake and tsunami in 2009, and tropical cyclones in 2012 and 2018. Climate change is evidenced by an increased frequency of extreme weather, rising sea levels, declining marine resources and loss of biodiversity (FAO and SPC, 2019). Climate change projections for Samoa are that El Niño/La Niña events will continue and annual mean temperatures and extremely high daily temperatures will continue to rise. Furthermore, an increase is expected in extreme rain events, while drought levels may decline. Sea-level rise will continue, as will ocean acidification, along with an increase in the risk of coral bleaching. Finally, tropical cyclones will be less frequent but more intense (Pacific-Australia Climate Change Science and Adaptation Planning Program, 2015b).

Samoa has one of the most diverse ecosystems in Polynesia (ABS Sustainable Development, 2018). As in the wider Pacific SIDS, the government of Samoa is interested in ensuring that existing traditional knowledge contributes positively to agriculture, fishery, healthcare and climate change mitigation and adaptation. However, in the agriculture sector, due to the country's cash-oriented production system, it is mostly the older generation that remembers and practices traditional farming practices. In order to preserve and disseminate this knowledge, the Samoan Farmers Association is organising training courses on some of the traditional methods, using older farmers as resource persons (Jaenicke, 2011).

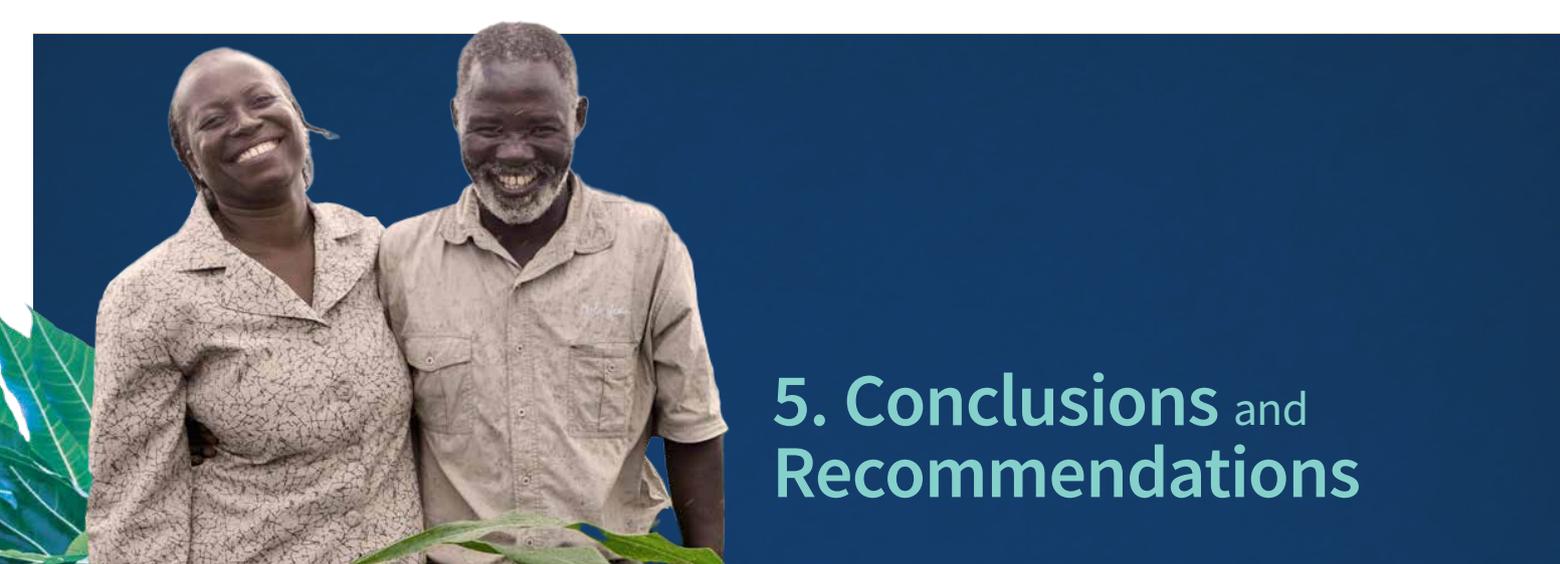
Box 15. Supporting women's engagement in cash crop value chains for export in Samoa

Through the Women in Business Development Incorporated (WIBDI) and the Trade Sector Support Programme (TSSP), Samoan women can access inputs, warehousing and markets for a range of cash crops, including for virgin organic coconut oil, which is considered to be the domain of women and is exported to The Body Shop worldwide. WIBDI has also set up a farm-to-table app that enables farmers to link directly to the market and vice-versa. The app allows for better production planning and marketing, ensuring that supply meets demand and product consistency is maintained. Hotels, restaurants, organizations and individuals can place orders through the app and relevant data is collected by WIBDI to populate a digital database.

As of 2017, 63 percent of Samoa's population held mobile phone subscriptions.

Source: Women In Business Development Inc., 2018.





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5. Conclusions and Recommendations

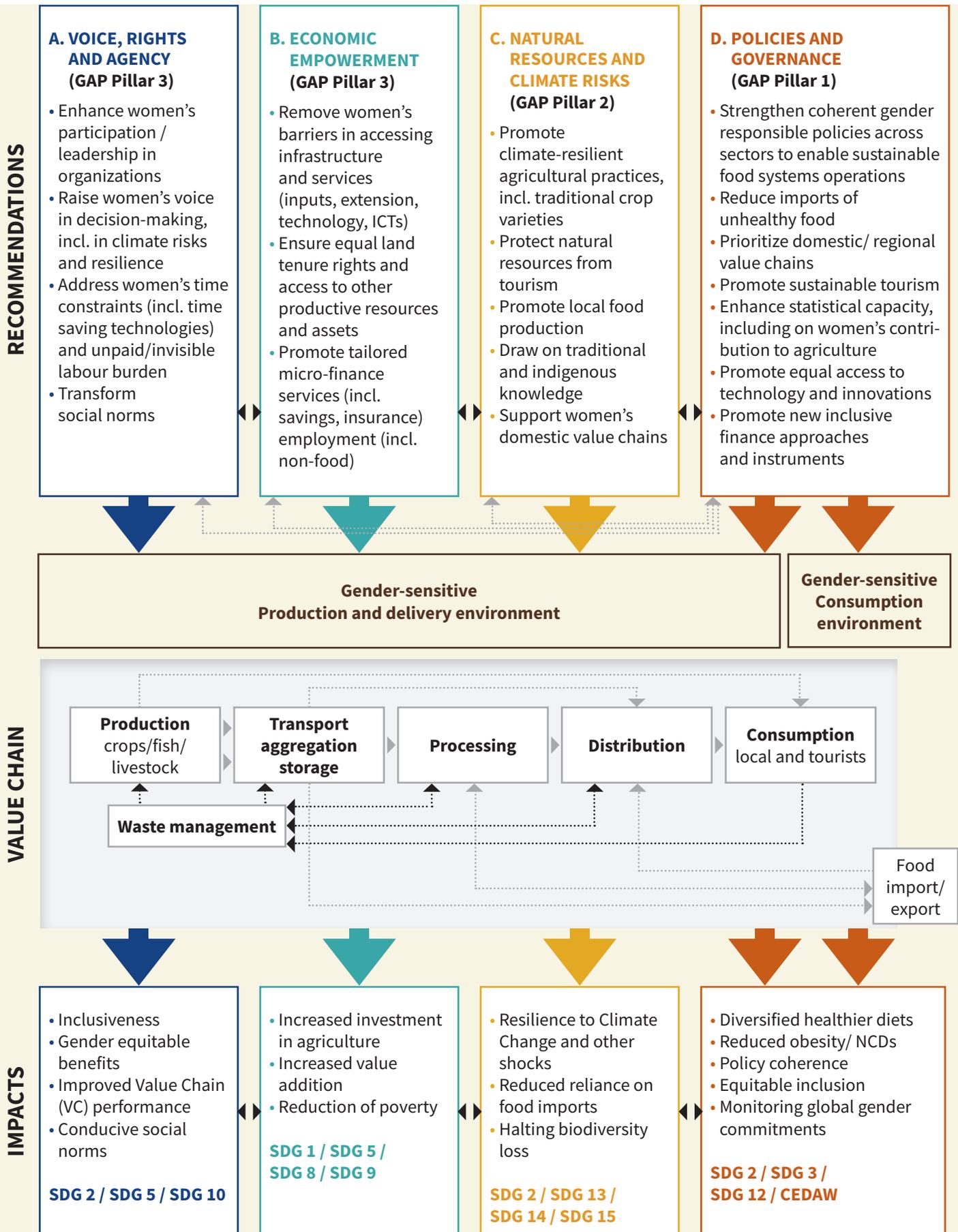


The analysis in the previous chapters has used a food systems approach to examine gender inequalities in the context of a broad range of interconnected actors and activities involved in food value chains in SIDS, including production, marketing, imports/exports and consumption of agrifood products (crops, livestock, poultry and fish).

As explained in Chapter 1, the analysis focused on four interconnected dimensions that influence gender equality and resilience in agrifood value chains: (a) gender roles in agricultural sectors, which link to issues of **voice, rights and agency**; (b) gender gaps in accessing and controlling resources, in service provision and in participation in decision-making, which link to **women's economic empowerment**; (c) **natural resources, climate change and other risks**; and (d) the socioeconomic and policy context, as determined by country **policies and governance**.

This chapter presents the conclusions and recommendations drawn from this analysis. As shown in **Figure 11** (p. 44), the summary recommendations are structured around the four dimensions described above, with a view to contributing to outcomes and longer-term impacts that can help shape the pathways towards more sustainable, gender-sensitive and climate-resilient agrifood value chains in SIDS, as aspired to by the SDGs and the GAP.

Figure 11. Integrated, gender-sensitive and climate-resilient value chains in SIDS



Source: Developed by authors, 2021.

A. Gender roles: voice, rights and agency

Conclusions

Women participate less in decision-making than men at the community and household levels across all SIDS. This impacts value chain operations and hinders the adoption of appropriate measures to enable women to prepare for and respond to climate change events and natural disasters. At the root of this situation are the prevailing patriarchal perceptions about women's roles, which constrain their voice at household, community and wider societal levels. (This is also noted in Comoros (the), where a matrilineal system coexists with Islamic law and traditions). Of the three regions studied, women in Caribbean SIDS have considerably more decision-making power compared with other SIDS.

In most of the SIDS studied, however, women do have a voice, and sometimes hold leadership positions, in producer organizations and associations, both women-only and mixed. There is clear evidence that women's engagement in such associations can increase their confidence and empowerment and help them gain more control over new value chain nodes and markets, and reduce gender-based segregation. Increased awareness on the part of both men and women regarding gender equality can pave the way to enhanced participation, voice and leadership by women's organizations, for example in value chain development and climate change and disaster risk management, including the present COVID-19 pandemic.

Recommendations

SIDS should support women's participation and leadership in rural organizations and continue to build awareness and strengthen capacities around gender equality and women's empowerment, especially among key institutions and service providers, by:

- promoting women's participation and leadership in organizations and governance structures that improve equitable access to decision-making, through inclusive membership policies, realistic

quotas for women's participation at all levels, support for women's leadership, and meeting times, locations and agendas tailored to increase women's involvement so they can raise their needs and interests;

- strengthening the capacities of institutions and service providers to develop efficient, gender-sensitive and climate-resilient agri-food value chains at regional and national levels, recognizing the importance of women's active involvement to ensure that policies and programmes respond to their needs and concerns;
- reducing women's work burden and time constraints to enable their involvement in women's producer, processing or marketing organizations along value chains, by facilitating their access to technology, providing targeted technical support and services, and enabling women to benefit from group credit opportunities, input provision, veterinary services, post-harvest infrastructure and affordable transport services and by promoting specific products produced by women (including through branding);
- engaging with both men and women at the community level to encourage the transformation of detrimental attitudes and behaviours stemming from traditional, gender-biased norms, using a range of gender-transformative approaches, including gender-sensitive value chain development and farmer field schools. These approaches employ participatory and hands-on methods, enabling men and women to raise their concerns about their involvement in value chain operations and, thus, facilitate positive change in the reproductive and productive spheres.

B. Gender gaps: economic empowerment

Conclusions

Women in SIDS engage actively in a range of crop, livestock and fisheries value chains, but have generally less access to resources and services, which holds back their economic growth. The extent of women's engagement in each node of the

value chain varies per commodity and per country. Commonly, women control small-scale production, and the processing and distribution of surplus food. As entrepreneurs, women commonly control small-sized farm activities, but there are plenty of examples of women engaging in medium-sized businesses, such as poultry operations in the Comoros (the) and domestic as well as interisland trade in the Caribbean. Across all the SIDS studied, women were found to have less access to productive resources and services than men, although there are some examples of women having sufficient access to finance and services to enable them to conduct highly profitable activities and assume positions of power, even providing employment and loans to male partners and labourers. The fisheries sectors of Samoa, Palau and Sao Tome and Principe are examples of this.

A number of key challenges were identified in the study, which prevent women from participating fully and gainfully in agrifood value chains:

- women's limited and/or insecure land tenure, particularly in the Caribbean SIDS, means they engage in informal farming activities around the house or on available communal land. This limitation and the concentration of women in the informal sector, means they are unable to provide collateral and access loans in order to invest in farming and in the necessary disaster risk and resilience measures;
- financial institutions are reluctant to provide loans to women or they set higher interest rates to compensate for lack of collateral. They also have weak technical capacity to administer finance for agriculture and manage associated risks;
- in AIS SIDS, women have significantly less access than men to ICTs and mechanization for agricultural production and agroprocessing, limiting their access to market information, extension advice and weather-related warnings, and increasing their work burden and time poverty;
- countries prioritize resources, finance and services for high-value value chains for export, which are commonly male-dominated, formal and reflected in national labour statistics. As such, resources

and services for women have, historically, been a lower priority in most countries. As a result, women lack access to agricultural services, including the critical aspect of extension services, and countries lacking information and data about women's agricultural knowledge, roles and contribution to the economy.

Recommendations

SIDS should proactively address gender gaps in access to agricultural resources and services in the crop, livestock and fisheries subsectors, through a stocktaking exercise assessing strengths, weaknesses and gaps in provision both generally, and gender-related. Findings of these studies could be addressed by governments, in partnership with NGOs, donors and the private sector, identifying actions to:

- enhance women's access to productive assets and address land tenure issues in those SIDS that do not have equal land rights for men and women;
- enhance women's access to infrastructure and services, as well as on farm and off-farm decent employment opportunities;
- enhance market access for women using technological means, such as electronic systems for the sale of local products (e.g. online farm gate markets);
- raise awareness on the part of governmental institutions and service providers around women's roles and economic potential, to facilitate their access to resources and services;
- facilitate/enhance gender-sensitive service provision close to the communities (through structures such as hubs, business services centres, incubators, etc.), in order to provide services in ways that respond to women's time and mobility constraints;
- develop financing options targeted to women, including products and delivery mechanisms, that reduce the entry barriers women face in the agribusiness sector, including supporting banks in the areas of: agricultural lending and developing

more financial products and services tailored to women farmers and entrepreneurs, introducing de-risking strategies, reconsidering the conditions for loan approval, exploring group lending mechanisms and considering crop insurance modalities to protect against risks, especially unpredictable weather events.

C. Natural resources and climate change risks

There is evidence of increasing negative impacts of climate change on agriculture and livelihoods in SIDS, and the urgent need for countries to implement nationally appropriate adaptation and resilience measures and to establish social protection systems and measures for the poor and the vulnerable, who are disproportionately affected. (See subsection D for policy recommendations regarding addressing climate change). In addition to the direct impacts on agricultural production and livelihoods, SIDS face two additional risks related to natural resources and climate change: the threat to food systems posed by a continued growth of conventional tourism and the risk of losing traditional knowledge on agriculture and natural resource management.

Conclusion 1

The service and tourism sectors in SIDS are becoming more attractive to women, providing a better and more economically viable alternative to the agriculture sector. Women work in the tourism sectors more than men across most of the countries, especially those with very high HDI rankings (Barbados and Palau). The continued growth of **conventional tourism, however, is posing environmental and health risks**, contributing significantly to: (a) a move away from food crop production; (b) an increase in imports of unhealthy, processed foods to cater to tourists, which become popularized among local communities and cause long-term health issues; and (c) a loss of agricultural land to tourism-driven infrastructure and environmental damage to the very attractions (such as coastlines) that bring tourists to the islands in the first place.

Recommendations

SIDS should take a risk-sensitive, gender-sensitive and cross-sectoral approach in planning the development of their food systems, taking into account the interconnectedness of the various economic sectors and the impacts that one can have on the another, especially in terms of employment, the environment and human health. Specifically, SIDS should:

- drive a switch to more sustainable tourism that boosts local production; values agroecological and cultural diversity, linked to food and identity; and increases the added value of healthy food for tourists and locals alike (also potentially leading to improved management of natural resources and environmental risks);
- increase the capacity of value chain actors across the food system to recover from disasters and crises and withstand future shocks (considering, for example, the COVID-19 pandemic which led to the sudden closure of the tourism industry and the sectors supporting it), by instituting or strengthening mechanisms such as social protection and cash transfers programmes, as well as mechanisms which promote productive investments, including investment in agricultural inputs.

Conclusion 2

Rural women in SIDS are knowledgeable about sustainable production of traditional food varieties, largely due to their roles in primary production and reproductive activities. However, women are increasingly engaging in cash crop production for export, moving into other sectors of work (beyond agriculture) and (together with men) are being affected by natural disasters. While in the Pacific there is evidence of the recognition of the value of indigenous knowledge both at the cultural and organizational levels, in other SIDS such evidence was weak or lacking. The scarcity of information about women's (and often elderly men's) traditional and indigenous agricultural knowledge carries a **risk of losing such knowledge on farming local food varieties**, which, in the long term, could result in the loss of biodiversity and in environmental risks.

Recommendations

SIDS should research and draw on women's (and men's) traditional knowledge related to agriculture, livestock, fisheries and natural resource management, through:

- building knowledge about crop and livestock varieties that are more resilient to drought and floods, and about managing climate shocks;
- ensuring that women are included in community-based early warning and disaster risk management efforts and post-recovery strategies, not only in assessing climate vulnerability but also in influencing relevant policy development;
- gathering evidence on women's traditional knowledge, thereby increasing women's visibility and contribution;
- exploring, documenting and sharing traditional and indigenous agricultural knowledge and drawing on it to enhance climate resilience and climate-smart agriculture practices; and
- sharing knowledge and experience across SIDS in the Pacific, the Caribbean and the AIS region.

D. Policies and governance

The SAMOA Pathway and the 2021 IPCC Report call for national development plans to address the negative effects of climate change and its linkages with key economic sectors, including agriculture and tourism, as well as its linkages with health, education and social risks impacting women and youth. The negative impacts of the COVID-19 pandemic on rural livelihoods demonstrated the need to address structural gender inequalities, given that women in SIDS are largely employed in the informal and hardest-hit sectors and are therefore less able to absorb economic shocks, while having greater care demands at home and being more exposed to increased gender-based violence (United Nations, 2020). Three broad conclusions can be drawn in this regard. The first refers to the need to enhance the policy environment for more gender-sensitive and resilient food

systems, the second refers to food imports and the ensuing shifts in food consumption and the third relates to the insufficient statistical information and data about women's roles and their contribution to value chain development in SIDS.

Conclusion 1

Given that climate change is having significant negative impacts on food production throughout the SIDS and that women are key actors in food production, governments should develop gender-sensitive policy environments that protect food systems from climate impacts while enabling women to participate more fully and equally in agricultural production and in climate-related decision-making and action.

Recommendations

- Implement a long-term, systemic approach to planning and policy-making, based on cross-sectoral, gender-disaggregated data, and considering climate-change and risk projections (including health risks), particularly in planning for the agriculture and tourism sectors.
- In designing policy, consider women's specific needs and the key roles they play in agrifood systems and household food security and nutrition, as food producers, farm managers, processors, traders, wage workers and entrepreneurs, as well as taking into account the particular needs, preferences and knowledge of specific groups such as rural women, youth and Indigenous women, among others. To be effective in the long term, these plans must consider the interconnected nature of social categorizations other than gender – age, class, race, ethnicity, disability, etc. – to tackle existing and overlapping systems of discrimination or disadvantage.
- Develop policy response to climate change and disaster risk reduction through national development plans and adaptation and mitigation policies that promote the role of local communities, including women.

Conclusion 2

SIDS import a large proportion of the food consumed domestically, whether by tourists or by the local community. Much of this food is processed, high in fats and sugar and of low nutritional value, but it is cheap and more convenient (quick preparation) compared to traditional food from local farms. The study showed that in most SIDS, NGOs and private sector actors and donors support women's engagement in particular value chains, exploiting the potential that the tourism market offers as a buyer of local goods. However, **the shift away from consuming locally produced food is leading to rapidly rising overweight and obesity** rates among children, and to high levels of anaemia, obesity and diet-related NCDs among adults, mostly in the Pacific but also increasingly in the Caribbean. In some of the SIDS, obesity affects women much more than men, both directly and indirectly, as women provide care for family members suffering from NCDs. Additionally, the high prevalence of NCDs constitutes a heavy burden on national health budgets and is a recognised factor of disability, while also leading to increased susceptibility to COVID-19 and other diseases.

Recommendations

SIDS should adjust and strengthen cross-sectoral policies that coherently and effectively break the vicious cycle of: (a) unhealthy food imports, (b) foreign currency deficit, (c) reduction in local food production and biodiversity loss, and (d) rapid deterioration of human and environmental health. Specifically:

- reduce imports of unhealthy food and re-invigorate and popularize local production, value-added and marketing of staples, fruits, vegetables and livestock (prioritizing those produced by women), so as to reduce the need for food imports, improve the availability of fresh foods and, thus, improve the diets of the local population, and exploit the market opportunity for such goods in the tourism sector;

- shift from conventional to sustainable tourism, which promotes responsible production and consumption while protecting natural and cultural heritage, conserving biodiversity and generating sustainable livelihoods. Existing food events, such as those referred to in Palau and Barbados, are a good way to celebrate and promote the value of local foodstuffs;
- carry out continued research and innovation so as to develop technology to reduce the time needed for processing and preparing some of the traditional staple foods.

Conclusion 3

There is insufficient statistical information and data about women's roles and their contribution to value chain development in SIDS (especially sex- and age-disaggregated data) to support gender analysis and for informing policy design and monitoring gender-related impacts. Most women working in agriculture and value chains in SIDS must (to a greater or lesser degree) fit their productive work around their reproductive work. As such, they tend to concentrate in the informal sector, for instance in agrifood processing and marketing, drawing on their existing (reproductive) activities to grow food for the household. This modality of working can involve quite extensive processing and trading activities beyond the home, and contributes significantly to rural economies – a contribution that is rarely registered, measured or recognized in national labour force statistics. Unpaid care work at home is also unrecognized. The shocks caused by COVID-19 revealed how risky the invisibility of the informal sector can be to women's livelihoods, leaving them unable to benefit from social protection and rescue packages in times of crisis. Additionally, the scarcity of information about women's roles in food systems and their contribution to SIDS' economies, means women not targeted in programs and services or, if they are, the interventions are not tailored to their needs and interests, as this information is lacking.

Recommendations

- In order to develop evidence-based policy and facilitate sound decision-making that support women in their care and productive activities and that address the differentiated needs and priorities of rural women and men, enhance government's capacity to collect and analyse sex-disaggregated data and generate evidence, including on women's contribution to agriculture.
- SIDS should consider ways to formalize and reflect in national labour statistics the work of men and women in the informal sector. This would enable governments to better address women's specific needs in terms of inputs, resources, finance and extension services, thus supporting women in improving the quality and value of their services or products.
- SIDS should develop policies that promote a more equitable balance of workloads at the household level, through awareness raising and by incentivizing all family members (including men and boys) to assume domestic and care responsibilities, and by improving services and promoting labour-saving technologies and practices. In order to be transformative, these recommendations should be holistic and systemic, and should be implemented at a scale that is adequate to deal effectively with the challenges they address. As previously indicated, there are strong linkages between gender, social inclusion, climate change adaptation and resilience, and healthy economies. Addressing these issues in an integrated manner will provide the pathway to leave no one behind.
- This will require channelling financial and technical resources, which, in turn, will require additional public and private funding to increase the flows of finance towards inclusive and sustainable investment.

REFERENCES

- ABS Sustainable Development.** 2018. Samoa presents draft report of traditional knowledge and guidelines on ABS. In: *ABS Sustainable Development* [online]. [Cited 15 October 2021]. <https://abs-sustainabledevelopment.net/story/samoa-presents-report-on-traditional-knowledge-and-abs-implementation/>
- Appui au Développement Autonome (ADA).** 2020a. Déployer et professionnaliser la finance inclusive au Cabo Verde. In: ADA [online]. [Cited 15 October 2021]. <https://www.ada-microfinance.org/nos-projets/conseiller-les-institutions-publiques/cabo-verde>
- ADA.** 2020b. *FAMI-PICOS, Association pour le Soutien aux Initiatives d'Autopromotion des familles.* [video]. [Cited 15 October 2021]. <https://www.youtube.com/watch?v=k-NUkV6anrc>
- African Development Bank (AfDB).** 2009. *Gender Profile of the Union of the Comoros* [online]. [Cited 15 October 2021]. <https://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/Comoros%20-%20Country%20Gender%20Profile.pdf>
- Allen, C. & Maughan, J.** 2016. *Country Gender Assessment (CGA) Barbados* [online]. Caribbean Development Bank. [online]. [Cited 15 October 2021]. https://www.caribank.org/sites/default/files/publication-resources/CountryGenderAssessment_Barbados.pdf
- Alliance of Small Island States (AOSIS).** 2018. *Samoa Declaration on Climate Change in the Context of Sustainable Development for SIDS* [online]. [Cited 15 October 2021]. https://sustainabledevelopment.un.org/content/documents/21091CC_Declaration.pdf
- Amosa, D. & Samson, M.** 2012. *Samoa Country Case Study. Pacific Social Protection Series; poverty, vulnerability, social protection in the Pacific.* Canberra, AusAID.
- Arias, D., Horton, J. & Valdivia, P.** 2019. Country Economic Memorandum for Sao Tome and Principe. Background Notes. Note #10 – What are the obstacles to agricultural development in STP? A review of current agriculture production structure and potential. World Bank.
- Arias, P. A., N. Bellouin, E. Coppola, R. G. Jones, G. Krinner, J. Marotzke, V. Naik, M. D., et al.** 2021. Technical Summary. In: *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [Masson-Delmotte, V., P. Zhai, A. Pirani, S. L. Connors, C. Péan, S. Berger, N. Caud, et al. (eds.)]. Cambridge University Press. (also available at https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Full_Report.pdf).
- Asian Development Bank.** 2019. *The Social Protection Indicator for the Pacific. Assessing progress.* Manila. (also available at <https://www.adb.org/sites/default/files/publication/513481/spi-pacific-2019.pdf>).
- Asian Development Bank.** 2020. Expanding Social Protection in the Pacific. In: *Development Asia* [online]. [Cited 15 October 2021]. <https://development.asia/insight/expanding-social-protection-pacific>

- AusAID.** 2012. *Social Protection and Economic Growth in Pacific Island countries*. AusAID Pacific social protection series: poverty, vulnerability and social protection in the Pacific. Canberra. (also available at <https://www.dfat.gov.au/sites/default/files/economic-growth.pdf>).
- Bailey, C., Lashley, J., Lazarus, L. & Marshall, D.** (forthcoming). *Analysis of Poverty and Inequalities in the Caribbean and Linkages with Food Security, Agriculture and the Environment*. APIC-FAE.
- Bell, J. & Taylor, M.** 2015. *Building climate-resilient food systems for Pacific Islands*. Penang, Malaysia, WorldFish. Program Report: 2015-15. (also available at https://www.researchgate.net/publication/277598448_Building_climate-resilient_food_systems_for_Pacific_Islands).
- Bishop, R.** 2013. The mother of our breath. In: *Farming Matters. Family Farming: A way of life*. ILEIA.
- The Borgen Project.** 2018. Women's Empowerment in Sao Tome and Principe. In: *The Borgen Project* [online]. [Cited 15 October 2021]. <https://borgenproject.org/womens-empowerment-in-sao-tome-and-principe/>
- Bortolato, A.** 2014. *Gender Equality in Small Island Developing States*. UNESCO Working Papers on Gender Equality. Paris, UNESCO (also available at <http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/BSP/GENDER/PDF/SIDS.pdf>).
- CANARI.** 2015. *Empowering rural women entrepreneurs in Trinidad and Tobago*. CANARI Policy Brief no. 21. [online]. [Cited 15 October 2021] <https://canari.org/publications/empowering-rural-women-entrepreneurs-in-trinidad-and-tobago-canari-policy-brief-no-21/>
- Caribbean Development Bank (CDB).** 2016. *The Changing Nature of Poverty and Inequality in the Caribbean: New Issues, New Solutions*. St. Michael. (also available at <https://www.caribank.org/publications-and-resources/resource-library/thematic-papers/changing-nature-poverty-and-inequality-caribbean-new-issues-new-solutions#:~:text=May%2019%2C%202016-,The%20Changing%20Nature%20of%20Poverty%20and%20Inequality%20in%20the%20Caribbean,to%20expand%20opportunities%20for%20the>).
- Caribsav.** 2012. *Climate Change Risk Profile for Barbados*. Summary Document. Christ Church, Barbados.
- Chetty, T.** 2019. What does economic empowerment look like for women fishers in the Pacific? In: *Pacific Community*. 2019. Women in Fisheries Information Bulletin #30 September 2019 pages 51-52.
- European Commission.** 2021. Gender Equality and Women's Empowerment in Rapidly Transforming Food Systems. In: *Knowledge for Policy* [online]. [Cited 15 October 2021] https://knowledge4policy.ec.europa.eu/publication/gender-equality-women%E2%80%99s-empowerment-rapidly-transforming-food-systems_en
- FAO.** forthcoming. Draft Country Gender Assessment: Cabo Verde.
- FAO. 2019.** *The State of the World's Biodiversity for Food and Agriculture*, J. Bélanger & D. Pilling (eds.). FAO Commission on Genetic Resources for Food and Agriculture Assessments. Rome. 572 pp. (also available at <http://www.fao.org/3/CA3129EN/CA3129EN.pdf>).

- FAO.** 2008. *State of Plant Genetic Resources for Food and Agriculture in the Republic of Palau. Country Report.* Rome.
- FAO.** 2014a. *Food Security and Nutrition in Small Island Developing States (SIDS).* Policy paper. Rome. (also available at <https://sustainabledevelopment.un.org/content/documents/2231Food%20Security%20and%20Nutrition%20in%20SIDS.pdf>).
- FAO.** 2014b. *Global Blue Growth Initiative and Small Island Developing States (SIDS).* Rome. (also available at <https://www.fao.org/3/i3958e/i3958e.pdf>).
- FAO.** 2014c. *Natural Resources Management and the Environment in Small Island Developing States. Policy Paper.* Rome. (also available at <https://www.fao.org/3/l3928E/i3928e.pdf>).
- FAO.** 2016. *Developing gender sensitive value chains. A guiding framework.* Rome. (also available at <https://www.fao.org/3/i6462e/i6462e.pdf>).
- FAO.** 2017. *Global Action Programme on Food Security and Nutrition in Small Island Developing States.* Rome. (also available at <https://www.fao.org/3/i7135e/i7135e.pdf>).
- FAO.** 2018. *FAO Technical Guide 1 – Introduction to gender-sensitive social protection programming to combat rural poverty: Why is it important and what does it mean?* Rome. (also available at <https://www.fao.org/3/ca2026en/CA2026EN.pdf>).
- FAO.** 2019a. *FAO's work with Small Island Developing States. Transforming food systems, sustaining small islands.* Rome. (also available at <https://www.fao.org/3/ca5170en/CA5170EN.pdf>).
- FAO.** 2019b. *Comoros and FAO. Partnering for Sustainable Agricultural Development and Food and Nutrition Security.* [online]. [Cited 15 October 2021] <https://www.fao.org/3/ax422e/AX422E.pdf>
- FAO.** 2019c. *Enhancing Food Security, Nutrition and Livelihoods in Saint Lucia.* [online]. [Cited 15 October 2021] <https://www.fao.org/3/ca5842en/CA5842EN.pdf>
- FAO.** 2020a. *Gendered impacts of COVID-19 and equitable policy responses in agriculture, food security and nutrition.* Rome. (also available at <https://doi.org/10.4060/ca9198en>).
- FAO.** 2020b. *Small Island Developing States Response to COVID-19: Highlighting Food Security, Nutrition and Sustainable Food Systems.* Rome. (also available at <https://www.fao.org/3/ca8994en/CA8994EN.pdf>).
- FAO.** 2021. *Empowering women in food systems and strengthening the local capacities and resilience of Small Island Developing States (SIDS) in the agrifood sector.* FAO internal document. Rome.
- FAO & African Union.** 2018. *Leaving no one behind. Empowering Africa's Rural Women for Zero Hunger and Shared Prosperity.* Rome. (also available at <https://www.fao.org/policy-support/tools-and-publications/resources-details/en/c/1156159/>).
- FAO & CDB.** 2019. *Study on the State of Agriculture in the Caribbean.* Rome. (also available at https://issuu.com/caribank/docs/study_on_the_state_of_agriculture_i).

FAO & European Union. 2020. *Diagnóstico social e de género nas comunidades abrangidas pelo Projeto REFLOR - Reforço da Capacidade de Adaptação e Resiliência do Sector Florestal.*

FAO, OPS, WFP & UNICEF. 2019. *Panorama de la seguridad alimentaria y nutricional en América Latina y el Caribe 2019.* Santiago. (also available at <https://www.fao.org/3/ca6979es/ca6979es.pdf>).

FAO & SPC. 2019. *Country Gender Assessment of Agriculture and the Rural Sector Samoa.* Apia. (also available at <https://www.fao.org/documents/card/en/c/CA6156EN/>).

FAO, UN-OHRLS & UN DESA. 2017. *Global Action Programme on Food and Nutrition Security in Small Island Developing States. Comoros* [online]. [Cited 15 October 2021]. <https://www.fao.org/3/i7135e/i7135e.pdf>

Garbero, A., Improta, M. & Gonçalves, S. 2019. *Impact assessment report: Smallholder Commercial Agriculture Project and Participatory Smallholder Agriculture and Artisanal Fisheries Development Programme, Sao Tome e Principe.* Rome, IFAD. (also available at https://www.ifad.org/documents/38714170/41116204/ST_PAPAFPA+PAPAC_IA+report.pdf/a388494d-8231-a372-ffd7-7925f972f988).

Global Islands Network. n.d. Palau. [online]. [Cited 15 October 2021]. <http://www.globalislands.net/greenislands/index.php?region=9&c=55>

Government of Saint Lucia. 2009. *Policy Brief. National Agricultural Policy 2009-2015.* Ministry of Agriculture, Land, Forestry and Fisheries. Castries. (also available at <http://extwprlegs1.fao.org/docs/pdf/stl146715.pdf>).

Government of Saint Lucia. 2018. *Saint Lucia's Sectoral Adaptation Strategy and Action Plan for the Agriculture Sector (Agriculture SASAP) 2018-2028, under the National Adaptation Planning Process.* Castries, Department of Sustainable Development, Ministry of Education, Innovation, Gender Relations and Sustainable Development and Department of Agriculture, Fisheries, Natural Resources and Cooperatives, Ministry of Agriculture, Fisheries, Physical Planning, Natural Resources and Cooperatives. (also available at <https://www4.unfccc.int/sites/NAPC/Documents/Parties/Saint%20Lucia%E2%80%99s%20Sectoral%20Strategy%20and%20Action%20Plan%20for%20Agriculture.pdf>).

Government of Saint Lucia. 2019. *Beijing +25. Report on the comprehensive national level review of the status of implementation of the Beijing Declaration and Platform for Action.* Castries. (also available at https://www.cepal.org/sites/default/files/events/files/beijing_25_report_2019_saint_lucia.pdf).

Griffith-Charles, C., Spence, B., Bynoe, P., Roberts, D. & Wilson, L. 2015. Land Tenure and Natural Disaster Management in the Caribbean. *Land Tenure Journal*, December 2015: 137–161. Rome. (also available at <http://empres-i.fao.org/nrla/nr/tenure/land-tenure-journal/index.php/LTJ/article/view/94/122>).

Helen's Daughters. n.d. *Helen's Daughters* [online]. [Cited 15 October 2021]. <https://helensdaughters.org/>

Huggins, T. 2016. *Country Gender Assessment (CGA) Belize*. St. Michael, Barbados. Caribbean Development Bank. (also available at: <http://www.caribank.org/wp-content/uploads/2016/05/CountryGenderAssessmentBelize.pdf>).

International Fund for Agricultural Development (IFAD). 2019. *Republic of Sao Tome and Principe, Country Strategy Note 2019-2021*. [online]. [Cited 15 October 2021]. https://www.ifad.org/documents/38711624/40089510/Country+Strategy+Note++2019-2021_1.pdf/66aa9d05-6932-a824-8dd0-90e5234b5405?t=161123450000

IFAD. 2020. *Investing in rural people in Sao Tome and Principe*. [online]. [Cited 15 October 2021]. https://www.ifad.org/documents/38714170/39972302/saotome_2020.pdf/6adf0588-4de0-153a-feba-3e26f71e1d73?t=1588168600000

Inter-American Institute for Cooperation on Agriculture (ICCA). 2010. *Annual Report 2009. Inter-American Institute for Cooperation on Agriculture 2009 annual report: IICA's contribution to the development of agriculture and rural communities in Saint Lucia*. Castries. (also available at <http://orton.catie.ac.cr/REPDOC/A4879I/A4879I.PDF>).

IICA. 2017a. *Country Profile Saint Lucia. Climate Change and Agriculture. Policies, Strategies and Actions*. [online]. [Cited 15 October 2021]. <https://repositorio.iica.int/bitstream/handle/11324/7051/BVE18040211i.pdf;jsessionid=52E2D392EAA8200EC414B23577E0D052?sequence=1>

IICA. 2017b. *Climate smart agriculture in the Eastern Caribbean States: A Compendium of Stories from Farmers: The path to sustainability and stability of growth in a changing climate. Belle Vue Farmers' Cooperative*. [online]. [Cited 15 October 2021]. <http://repositorio.iica.int/handle/11324/2656>

ILO. 2018a. *Gender at Work in the Caribbean. Synthesis report for five countries*. [online]. [Cited 15 October 2021]. https://www.ilo.org/wcmsp5/groups/public/---americas/---ro-lima/---sro-report_of_spain/documents/publication/wcms_651944.pdf

ILO. 2018b. *Gender at Work in the Caribbean. Country Report: Saint Lucia*. [online]. [Cited 15 October 2021]. https://www.ilo.org/caribbean/information-resources/publications/WCMS_651949/lang--en/index.htm

ILOSTAT. 2020. *Country Profiles*. In: *ILOSTAT* [online]. [Cited 15 October 2021]. <https://ilostat.ilo.org/data/country-profiles/>

IMF. 2019. *Cabo Verde: Staff Report for the 2019 Article IV Consultation and Request for an Eighteen-Month Policy Coordination Instrument-Press Release; Staff Report; and Statement by the Executive Director for Cabo Verde*. IMF Staff Country Report No. 19/255. Washington, D.C. (also available at <https://www.elibrary.imf.org/view/journals/002/2019/255/002.2019.issue-255-en.xml>).

IPCC. n.d. *Regional fact sheet - Small Islands*. [online]. [Cited 15 October 2021]. https://www.ipcc.ch/report/ar6/wg1/downloads/factsheets/IPCC_AR6_WGI_Regional_Fact_Sheet_Small_Islands.pdf

- IPCC. 2021.** Summary for Policymakers. In: *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [Masson-Delmotte, V., P. Zhai, A. Pirani, S. L. Connors, C. Péan, S. Berger, N. Caud, et al. (eds.)]. Cambridge University Press. In Press. Available at: https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Full_Report.pdf
- IPU Parline.** 2020. Global data on national parliaments. In: *IPU Parline* [online]. [Cited 15 October 2021]. https://data.ipu.org/content/comoros?chamber_id=13368
- Interagency Social Protection Assessment (ISPA).** 2018. *Social Protection Payments in the Directorate of Social Protection and Solidarity. Sao Tome and Principe.* [online]. [Cited 15 October 2021]. <https://documents1.worldbank.org/curated/en/447851552019438223/pdf/Social-Protection-Payments-in-the-Directorate-of-Social-Protection-and-Solidarity-Sao-Tome-and-Principe.pdf>
- International Telecommunication Union (ITU).** 2019. *Small Island Developing States (SIDS) and ICT: Mid-term review of the Samoa Pathway.* Geneva. (also available at: <https://www.itu.int/en/myitu/Publications/2020/05/08/15/54/Mid-term-review-of-the-Samoa-Pathway>)
- Jaenicke, H.** 2011. *Indigenous Agricultural Knowledge in the Pacific.* Suva, Fiji. **Secretariat of the Pacific Community (SPC).**
- Kirkwood, D.** 2019. *Country Economic Memorandum for Sao Tome and Principe. Note #13 – What do we know about gender in Sao Tome and Principe?* Washington, D.C., World Bank. (also available at <https://openknowledge.worldbank.org/handle/10986/32142>).
- Lu, J.** 2018. The UN Just Released the Most Comprehensive Report on Gender Equality Around the World. UN Dispatch. [online]. [Cited 15 October 2021]. <https://www.undispatch.com/un-just-released-comprehensive-report-gender-equality-around-world/>
- Nagabhatla N., Perera, D., Gheuens, J., Wale, C. & Devlin, M.** 2019. *Managing disaster risk and water security: Strategies for Small Island Developing States.* UNU-INWEH Policy Brief, Issue 6. United Nations University Institute for Water, Environment, and Health. Hamilton, Ontario, Canada. (also available at <https://inweh.unu.edu/managing-disaster-risk-and-water-security-strategies-for-small-island-developing-states/>).
- Nalau, J., Becken, S., Schliephack, J., Parsons, M., Brown, C. & Mackey, B.** 2018. The Role of Indigenous and Traditional Knowledge in Ecosystem-Based Adaptation: A Review of the Literature and Case Studies from the Pacific Islands. *Weather, Climate and Society*, 10(4), 851-865. [online]. [Cited 15 October 2021]. https://journals.ametsoc.org/view/journals/wcas/10/4/wcas-d-18-0032_1.xml
- New Agriculturist.** n.d. Country Profile – Samoa. In: *New Agriculturist* [online]. [Cited 15 October 2021]. <http://www.new-ag.info/en/country/profile.php?a=844>
- Observer.** 2018. FAO addresses gender inequalities in Caribbean farming. [online]. [Cited 15 October 2021]. <https://www.thestkittsnevisobserver.com/fao-addresses-gender-inequalities-in-caribbean-farming/>

Pacific-Australia Climate Change Science and Adaptation Planning Program. 2015a. Current and Future Climate of Palau. In: *Pacific Climate Change Science* [online]. [Cited 15 October 2021]. https://www.pacificclimatechangescience.org/wp-content/uploads/2013/06/2_PACCSAP-Palau-11pp_WEB.pdf

Pacific-Australia Climate Change Science and Adaptation Planning Program. 2015b. Current and Future Climate of Samoa. In: *Pacific Climate Change Science* [online]. [Cited 15 October 2021]. https://www.pacificclimatechangescience.org/wp-content/uploads/2013/06/3_PACCSAP-Samoa-10pp_WEB.pdf

Pacific Community. 2019. *Women in Fisheries Information Bulletin #30* September 2019. New Caledonia, Pacific Community. (also available at <https://coastfish.spc.int/en/publications/bulletins/women-in-fisheries/504>).

Pacific Islands Rural Advisory Services (PIRAS). n.d. Pacific Islands Rural Advisory Services. In: *Pacific Community* [online]. [Cited 15 October 2021]. <https://pafpnet.spc.int/research-and-extension/pacific-island-rural-advisory-services-piras>

Paul, R. 2005. Agricultural Transformation and Gender Considerations in Caribbean Economies. Economic Commission of Latin America and the Caribbean (ECLAC). [online]. [Cited 15 October 2021]. https://www.cepal.org/sites/default/files/publication/files/38823/LCCARR85_en.pdf

Peebles, D. 2012. *Gender and Youth Strategy – PROPEL Project*. Ottawa, Canadian Hunger Foundation.

Ramsay, D. 2018. Ibrahima Sittina Farate: As one woman innovates, a nation's exports set to bloom. In: *Enhanced Integrated Framework*. [online]. [Cited 15 October 2021]. <https://trade4devnews.enhancedif.org/en/impact-story/ibrahima-sittina-farate-one-woman-innovates-nations-exports-set-bloom>

Ranjitsingh, A. 2016. *Country Gender Assessment (CGA) St. Lucia*. St. Michael, Barbados. Caribbean Development Bank. (also available at https://www.caribank.org/sites/default/files/publication-resources/CountryGenderAssessment_StLucia.pdf).

Rowntree, O. 2019. *Connected Women. The Mobile Gender Gap Report 2019*. London, GSM Association. (also available at <https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2019/03/GSMA-Connected-Women-The-Mobile-Gender-Gap-Report-2019.pdf>).

Seibert, G. 2016. Sao Tome and Principe 1975-2015: política e economia numa antiga colônia de plantação. In: *Estudos Ibero-Americanos*, 42(3):987-1012. [online]. [Cited 15 October 2021]. <https://revistaseletronicas.pucrs.br/ojs/index.php/iberoamericana/article/view/22842>

Serkovic, M. & Million, J. 2019. *Country Economic Memorandum for Sao Tome and Principe. Background Note 12 – What is the potential and obstacles for the fisheries sector in Sao Tome and Principe?* Washington, D.C., World Bank. (also available at: <https://openknowledge.worldbank.org/handle/10986/32134>).

Shik, O., Boyce, R. & De Salvo, C. 2019. *Analysis of agricultural policies in Barbados*. Inter-American Development Bank (IDB). [online]. [Cited 15 October 2021]. https://publications.iadb.org/publications/english/document/Analysis_of_Agricultural_Policies_in_Barbados_en_en.pdf

- Secretariat of the Pacific Community (SPC).** 2015a. *Stocktake of the Gender Mainstreaming Capacity of Pacific Island Governments: Samoa*. Noumea. (also available at https://www.spc.int/DigitalLibrary/Doc/HDP/Gender/Stocktake_of_the_gender_mainstreaming_capacity_of_Pacific_Island_governments_Samoa.html).
- SPC.** 2015b. *The Pacific Islands Extension Strategy. Strategic Priorities in Agricultural Extension and Rural Advisory Services 2015-2020*. Noumea. (also available at https://spccfpstore1.blob.core.windows.net/digitallibrary-docs/files/b2/b2d6f48288926b38eea133411135400f.pdf?sv=2015-12-11&sr=b&sig=8omdnsIY4AuF6EWUiyohktLGD8pOA4p-Pq5Gv9o7a%2FNk%3D&se=2022-05-24T03%3A23%3A58Z&sp=r&rsc=public%2C%20max-age%3D864000%2C%20max-stale%3D86400&rsct=application%2Fpdf&rscd=in-line%3B%20filename%3D%2256666_The_Pacific_Islands_Extension_Strategy_2015.pdf%22).
- SPC.** 2016. *Stocktake of the Gender Mainstreaming Capacity of Pacific Island Governments: Republic of Palau*. Noumea. (also available at https://creativedesignpacific.com/spc_hrsd/web/sites/default/files/2021-07/Stocktake%20Report%20Gender%20Mainstreaming%20Palau.pdf).
- SPC.** 2017a. *Women's economic empowerment in the Pacific. Regional Overview*. Available at: <https://www.spc.int/sites/default/files/wordpresscontent/wp-content/uploads/2017/09/Overview-Pacific-Womens-Economic-Empowerment-SPC2.pdf>
- SPC.** 2017b. *The Pacific Islands Extension Strategy. Strategic Priorities in Agricultural Extension and Rural Advisory Services in the Pacific (2017-2027) Summary & Strategy*. Suva. (also available at https://pafpnet.spc.int/attachments/article/828/PIES%20Strategy%20Summary_Final.pdf).
- SPC.** 2018. *Pacific Platform for Action on Gender Equality and Women's Human Rights 2018-2030*. [online]. [Cited 15 October 2021]. <https://www.spc.int/sites/default/files/wordpresscontent/wp-content/uploads/2017/09/PPA-2018-Part-II-EN2.pdf>
- SPC and FAO.** (forthcoming). *Integration of gender equality and women's empowerment into climate-resilient agriculture planning and programming in Pacific countries. Final Report. Annex D Synthesis Report*.
- StartSomeGood.** 2019. *Empowering Rural Women- Helen's Daughters*. In: *StartSomeGood* [online]. [Cited 15 October 2021]. <https://startsomegood.com/helensdaughters>
- Storey, M.** 2017. *Gaps Between Gender Policy & Community Experiences in the South Pacific*. In: *Pacific Peoples' Partnership*. [online]. [Cited 15 October 2021]. <https://pacificpeoplespartnership.org/women-in-the-south-pacific/>
- Tandon, N.** 2013a. *Opportunities for Advancing Women's Sustainable and Green Livelihoods. Food Security, Small-Scale Women Farmers and Climate Change in Caribbean SIDS*. Working Paper number 114, October 2013. Brasilia, IPC-IG UNDP. (also available at https://ipcig.org/publication/26523?language_content_entity=en).
- Tandon, N.** 2013b. *Food Security, Small-scale Women Farmers and Climate Change in Caribbean SIDS*. One pager, No. 220. Brasilia, IPC-IG UNDP. (also available at https://ipcig.org/publication/26522?language_content_entity=en).
- Taste of Barbados Food Festival.** n.d. *The Association of Women in Agriculture*. In: *Taste of Barbados food festival* [online]. [Cited 15 October 2021]. <http://www.acuteinnovation.com/tastebarbados/personalities-farm-awia.html>

The Technical Centre for Agricultural and Rural Cooperation (CTA). 2012. *Building resilience in small island economies: from vulnerabilities to opportunities*. CTA Policy Brief no.8. [online]. [Cited 15 October 2021]. https://publications.cta.int/media/publications/downloads/PB008E_PDF.pdf

UN Data. 2020. Human Development Indices: A statistical update 2019. In: *UN Data* [online]. [Cited 15 October 2021]. <http://data.un.org/DocumentData.aspx?id=415#32>

United Nations (UN). 2020. *Policy Brief: The impact of COVID-19 on Latin America and the Caribbean* (July 2020). Available at: <https://unsdg.un.org/resources/policy-brief-impact-covid-19-latin-america-and-caribbean>

United Nations Development Programme (UNDP). n.d.a. What does the GII measure and how is it calculated? In: *United Nations Development Programme* [online]. [Cited 15 October 2021]. <http://hdr.undp.org/en/content/what-does-gii-measure-and-how-it-calculated>

UNDP. n.d.b. Gender Development Index (GDI). In: *United Nations Development Programme* [online]. [Cited 15 October 2021]. <http://hdr.undp.org/en/content/gender-development-index-gdi>

UNDP. n.d.c. UNDP Support in Caribbean SIDS. In: *United Nations Development Programme* [online]. [Cited 15 October 2021]. <https://www.adaptation-undp.org/projects/undp-caribbean-sids>

UNDP. n.d.d. Building Adaptive Capacity and Resilience to Climate Change in the Water Sector in Cabo Verde. In: *United Nations Development Programme* [online]. [Cited 15 October 2021]. <https://www.adaptation-undp.org/projects/building-adaptive-capacity-and-resilience-climate-change-water-sector-cabo-verde>

UNDP. 2019a. *Human Development Report 2019. Inequalities in Human Development in the twenty-first century. Briefing note for countries on the 2019 Human Development Report: Barbados*.

UNDP. 2019b. *Human Development Report 2019. Inequalities in Human Development in the twenty-first century. Briefing note for countries on the 2019 Human Development Report: Comoros*.

UNDP. 2019c. *Human Development Report 2019. Inequalities in Human Development in the twenty-first century. Briefing note for countries on the 2019 Human Development Report: Palau*.

UNDP. 2019d. *Human Development Report 2019. Inequalities in Human Development in the twenty-first century. Briefing note for countries on the 2019 Human Development Report: Samoa*

UNDP. 2019e. *Human Development Report 2019. Inequalities in Human Development in the twenty-first century. Briefing note for countries on the 2019 Human Development Report: Saint Lucia*.

UNDP. 2019f. *Human Development Report 2019. Inequalities in Human Development in the twenty-first century. Briefing note for countries on the 2019 Human Development Report: Sao Tome and Principe*.

UNDP. 2020. *Human Development Report 2020. The Next Frontier: Human Development and the Anthropocene. Briefing note for countries on the 2020 Human Development Report. Comoros.* Available at: <http://hdr.undp.org/sites/default/files/Country-Profiles/COM.pdf>

United Nations Environment Programme (UNEP). n.d. *Ecosystem-based Adaptation in the Comoros (Project factsheet).* [online]. [Cited 15 October 2021]. <https://www.unep.org/explore-topics/climate-change/what-we-do/climate-adaptation/ecosystem-based-adaptation/ecosystem-17>

UNEP. 2014. *Emerging Issues for Small Island Developing States. Results of the UNEP/UN DESA Foresight Process.* Nairobi. (also available at: <https://reliefweb.int/report/world/emerging-issues-small-island-developing-states-results-unep-foresight-process>).

UNEP. 2018. “Where there used to be so much there is so little”: the challenge of climate change in the Comoros. [online]. [Cited 15 October 2021]. <https://www.unep.org/news-and-stories/story/where-there-used-be-so-much-there-so-little-challenge-climate-change-comoros>

United Nations Economic and Social Commission for Asia and the Pacific (UN ESCAP). 2017. *Integrating Disaster Risk Reduction and Climate Change Adaptation into the Agricultural Sector in Small Island Developing States in the Pacific. A policy note.* [online]. [Cited 15 October 2021]. <https://reliefweb.int/report/world/integrating-disaster-risk-reduction-and-climate-change-adaptation-agriculture-sector>

United Nations Framework Convention on Climate Change (UNFCCC). 2017. *Gender Action Plan.* [online]. [Cited 15 October 2021]. <https://unfccc.int/resource/docs/2017/sbi/eng/l29.pdf>

Union des Comoros. 2014. *Accelerated Growth and Sustainable Development Strategy (SCA2D) 2015-2019.* Available at: <https://www.climate-laws.org/geographies/comoros/policies/accelerated-growth-and-sustainable-development-strategy-2015-2019-sca2d>

United Nations General Assembly. 2019. *Political declaration of the high-level meeting to review progress made in addressing the priorities of Small Island Developing States through the implementation of the SIDS Accelerated Modalities of Action (SAMOA) Pathway.* [online]. [Cited 15 October 2021]. <https://digitallibrary.un.org/record/3834602?ln=en>

The University of the West Indies. n.d.a Gender in fisheries team (GIFT). In: *The University of the West Indies at Cave Hill, Barbados* [online]. [Cited 15 October 2021]. <https://www.cavehill.uwi.edu/cermes/getdoc/5081b05b-4044-4d43-a41b-cf44c145bbd2/overview.aspx>

The University of the West Indies. n.d.b. Small-Scale Fisheries (SSF) Guidelines – Gender. In: *The University of the West Indies at Cave Hill, Barbados* [online]. [Cited 15 October 2021]. <https://www.cavehill.uwi.edu/cermes/projects/ssf-gender/home.aspx>

UN Women. n.d. Comoros. In: *UN Women Women Count* [online]. [Cited 15 October 2021]. <https://data.unwomen.org/country/comoros>

UN Women. 2012. *Rural Pacific Island Women and Agriculture: Literature Review and Annotated Bibliography.* Suva. (also available at: <https://asiapacific.unwomen.org/en/digital-library/publications/2012/3/rural-pacific-island-women-and-agriculture>).

- UN Women.** 2014. *Protecting their crops through green technologies, Caribbean women fend for themselves*. [online]. [Cited 15 October 2021]. <https://www.unwomen.org/en/news/stories/2014/6/caribbean-farmers-use-green-technologies>
- UN Women & FAO Cabo Verde.** 2012. “Relatório da análise de género no sector da agró-negócio & Propostas estratégicas para intervenção” (Internal report.) Cabo Verde.
- Verdier-Chouchane, A. & Karagueuzian, C.** 2016. Moving towards a Green Productive Agriculture in Africa: The Role of ICTs. *Africa Economic Brief*, 7(7). AfDB. [online]. [Cited 15 October 2021]. https://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/AEB_Vol_7_i_7_-_Moving_towards_a_green_productive_agriculture_in_Africa_The_role_of ICTs.pdf
- Williams, A., Cheston, T., Coudouel, A. & Subran, L.** 2013. *Tailoring Social Protection to Small Island Developing States. Social Protection & Labour Discussion Paper 1306*. World Bank Group. (also available at: <https://documents1.worldbank.org/curated/en/286351468290980780/pdf/801050NWP0P117079800B00PUBLIC001306.pdf>).
- Win Tin, S.** 2020. COVID-19 Special Column: The Crisis of Non-Communicable Diseases in the Pacific and the Coronavirus Disease 2019 Pandemic. *Hawai'i Journal of Health and Social Welfare*, May 2020, 79(5). Insights in Public Health. [online]. [Cited 15 October 2021]. https://hawaiijournalhealth.org/past_issues/hjhs7905_0147.pdf
- Women in Business Development Inc.** 2018. *Women in Business Development Inc.* [online]. [Cited 15 October 2021]. <https://www.womeninbusiness.ws/>
- World Bank.** 2004a. *Report No. 29300-STP Sao Tome and Principe. Country Gender Assessment*. Human Development II Country Department 15 Africa Region. Available at: <https://documents1.worldbank.org/curated/en/122741468777890991/pdf/293000STP.pdf>
- World Bank.** 2004b. *Sao Tome and Principe. Country Gender Assessment*. Available at: <https://openknowledge.worldbank.org/handle/10986/15679?locale-attribute=fr>
- World Bank.** 2016. *Migration and Remittances Fact Book*. [online]. [Cited 15 October 2021]. <https://www.worldbank.org/en/research/brief/migration-and-remittances>
- World Bank.** 2017. *The Union of the Comoros (the): Jumpstarting Agricultural Transformation*. Washington D.C. (also available at <https://openknowledge.worldbank.org/handle/10986/32398>).
- World Bank.** 2019a. *Towards a more United and Prosperous Union of Comoros: Systematic Country Diagnostic*. Available at: <https://openknowledge.worldbank.org/handle/10986/31787>
- World Bank.** 2019b. *Advisory Services for Formulation of the National Agricultural Investment Plan. Synthesis Report. The Union of the Comoros*. Available at: <https://documents.vsemirny-jbank.org/ru/publication/documents-reports/documentdetail/405621591360010665/advisory-services-for-formulation-of-the-national-agriculture-investment-plan-synthesis-report-the-union-of-the-comoros>
- World Bank.** 2021. Country profile. In: *Data Bank The World Bank* [online]. [Cited 15 October 2021]. [https://databank.worldbank.org/embed-int/CountryProfile/id/b450fd57%20\(2018\)](https://databank.worldbank.org/embed-int/CountryProfile/id/b450fd57%20(2018))

Key sources of statistical data

<http://www.fao.org/faostat/en/#data>

<http://www.fao.org/faostat/en/#country/>

<https://databank.worldbank.org/embed-int/CountryProfile/id/b450fd57>

<https://ilostat.ilo.org/data/country-profiles/>

<http://hdr.undp.org/en/countries/profiles>

http://uis.unesco.org/en/home#tabs-0-uis_home_top_menus-3

<http://uis.unesco.org/en/country/lc>

In the current context of the climate crises in Small Island Developing States (SIDS), continuing efforts to ensure gender equality can increase people's resilience and promote better food security and nutrition. This document seeks to enrich the knowledge and evidence base on gender, food systems and resilience in the SIDS of the Caribbean, the Pacific, and the Atlantic, Indian Ocean and South China Sea (AIS) region, with examples from Barbados, Cabo Verde, Comoros (the), Palau, Saint Lucia, Samoa and Sao Tome and Principe. The publication illustrates how to promote gender transformative solutions for climate action and sustainable food systems, in particular in the tourism sector. With a critical focus on the role women play in ensuring food security and nutrition in SIDS, the publication also shows how to address the root causes of gender inequalities and how to build the resilience of rural livelihoods in unforeseen events, such as the COVID-19 pandemic.

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