windward

HELEN'S Daughters

Sustainable Agriculture in the Caribbean Gender Responsive Market Analysis Final Report

Windward Commodities
and Helen's Daughters
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Sustainable Agriculture in the Caribbean (SAC) Project

WUSC CARIBBEAN

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1. Context
Low and inequitable market participation

Low and inequitable market participation of women and youth in agriculture is an overarching problem across the SAC countries. Underlying causes include traditional gender roles including childcare and unpaid labour, barriers to land ownership (only 11-30% of agricultural land belongs to women) and limited access to financial support (89.7% of all agricultural loans In Dominica were made to men compared to 10.3% to women).

Research has shown that interest in agriculture is waning. The majority of women and youth remain at the base of the value chain production with less than 7% in processing or other value-add activities. Youth view agriculture as labour intensive with low returns and 24% women surveyed said they would leave agriculture if they could.

There is strong evidence of significant household distress with 76% concerned about healthcare and 74% struggling with household bills. Personal safety concerns, including GBV, is also an issue for 88% women surveyed.

Whilst 62% women and youth said getting enough food for their family was not a problem, COVID and the recent Hurricane Elsa and extreme flooding in Guyana continue to test the **vulnerability of the sector and the implications for national food security**.

1. Context
Recommendations informed by women and youth

However, research highlights that **women and youth have strong interest improving the status quo.** This is reflected in recommendations including access to **new markets** (91% interested), **comprehensive technical training** (91% interested), access to **relevant insurance and finance products** (81% insurance, 80% cheap loans), and targeted incubators to **strengthen existing value-chains.**

At a regional level, to add structure and leverage to local interventions, recommendations include facilitating and supporting existing organisations and groups to ensure a **gender equality perspective at all stages and levels of policies**, programmes and projects (eg agriculture, land, climate, health, education, trade), and to influence **suppliers to transform products, pricing and distribution** for women and youth, and to create a **framework to encourage participation in agriculture** using technology, role communications, and reframing agriculture as an exciting opportunity for youth.

The principles of the recommendations include:

- **Co-design of engagement by women, men and youth:** context sensitive interventions
- **Do No Harm:** mitigate negative affects on the fabric of society and relationships
- **Sustainable interventions** that do not stop when the programme ends

2. Regional root cause analysis

The root causes of inequity

EFFECTS

Youth lack interest in agriculture

Women remain at the base of value chain

Limited access to financial support systems and loans

Youth remain at the base of value chain

63% work as a producer, labourer or harvester at the base of the chain

80% would like access to cheap loans

22% would leave agriculture if they had the opportunity

PROBLEM

Low & inequitable market participation of women and youth

Agriculture is viewed as labour intensive with low returns

Traditional gender norms

Barriers to land ownership for women and youth

Only **20%** have their own land

Limited long-term support mechanisms targeting women and youth

Informal status of women farmers

Women take on a larger share of unpaid labour

ROOT CAUSES

55% want assistance with childcare

2. Regional root cause analysis

The root causes of inequity

Root Causes	Context	Effects
Traditional gender norms	Traditional gender norms have shaped the role that women play in the agricultural sector and the resources (or lack thereof) that they can access from lack of access to and ownership of land, lack of access to financial support and limited support mechanisms that target women and youth.	**Women & youth remain at the base of value chain**
Informal status of women farmers	• Women not usually counted in official statistics, as their work might be unpaid on family farms. In Jamaica, 30% of women are registered farmers, which does not reflect their actual participation • Gender-based inequality in accessing land, labour, finance, technology & market information are partly to blame. Women are less equipped to transition from subsistence to commercial farming.	
Limited long-term support mechanisms for women & youth	• Halts in funding and programmes targeting women & youth and an overall lack of strategy in ensuring their inclusion limit long-term support for mechanisms targeting women and youth. • In cases such as Suriname, female & youth farmers are dependent on NGOs for technical assistance & funding. However, halts in funding impact the economic activities of these farmers.	
Barriers to land ownership for women & youth	• 11-30% of agricultural land belongs to women and is even lower for persons under the age of 35 • Lack of land ownership impedes women and youth from gaining access to financial support in the form of loans (as most financial institutions have stringent and risk averse collateral requirements)	**Ltd access to financial support systems and loans**
Agriculture is seen as labour intensive with low returns	• Agriculture is characterized by “muddy boots” and “hard labour in the sun” • Lack of exposure to agricultural innovations, agriculture in the school curriculum and local success stories	**Youth lack interest in agriculture**
Women take on a larger share of unpaid labor	Women take on the largest share of unpaid work- caring for children, the elderly, persons with disabilities or impairments or sick. This responsibility has created more difficulties in balancing household responsibilities and farm work, forcing many to remain in the informal or subsistence sector.	**Women remain at the base of value chain**

3. Methodology

A highly participatory women & youth-lead approach

Part I a) Rapid selection methodology

Windward and Helen's Daughters: input data and case studies and support, ensure consistency across countries
Playback and engagement with SAC team: for additional inputs and support

1. Rapid Sub-Sector Screening (Many to 10 sectors)
High level data, production, market and gender feasibility review (tab 3)
- High level data review
- Local Knowledge
- Case studies/ Common sense

2. Further sub-sector selection (10 to 4 sectors)
Weighted matrix criteria with focus on gender and climate WUSC Grid (tab 4):
- More data
- Local Knowledge
- Inputs from some stakeholders

3. Final sub sector selection (4 to 2 sectors)
Expanded weighted considerations probing deeper into all criteria Expanded Grid (tab 5)
- Inputs from organisations
- Inputs from value-chain actors
- Regional synergies (if any)

Desktop data analysis and engagement with key stakeholders for initial gender and climate scores

Part I b) Expanded matrix & farmer surveys

Economic Development Principles		
Area:	**Area Weighting:**	
1.Scale	10%	1.1 Potential to involve large numbers of women and youth farmers
		1.2 Percentage of total target population likely to or already participating/ generating income
2. Impact	10%	2.1 Potential for income growth within the subsector
		2.2 Potential for productivity improvement within the subsector
		2.3 Potential for expansion in production and/or access to higher value market in sub-sector
3. Sustainability	10%	3.1 Opportunities to leverage existing initiatives, investments (private, government)
		3.2 Opportunities to leverage planned initiatives by government, NGOs, and private sector
		3.3 Volatility in the subsector is limited or mitigated
4.Feasibility	10%	4.1 Existence of key sector actors (eg. large processors, specialized traders, distributors with warehousing capacity) to be leveraged that can drive industry change and create linkages
		4.2 Relatively fewer and smaller constraints to overcome to achieve quick increases in income generation/employment
5. Business Case (see Product Criteria Tab for expanded considerations)	15%	5.1 Evidence of unmet domestic market demand (particularly local)
		5.2 Import substitution opportunities
		5.3 Regional market potential
		5.4 Regional and international competitiveness (i.e. price of end product relative to potential / existing competition)
Project Priorities and Cross-Cutting Considerations		
6. Gender and Social Inclusion	30%	6.1 Potential to engage women and youth in sub sector
		6.2 Interest in the sector by women and youth
		6.3 Potential to increase income/upgrading in the sub sector for women and youth
		6.4 Risk of GBV in the sub sector as compared to other agricultural sub sectors (1=high, 5=low)
		6.5 Potential to address gender equality issues
7. Environment and Climate Change	15%	7.1 Sub sector vulnerability to climate change (1 = high, 5 = low)
		7.2 Opportunity to introduce climate smart approaches to the sub sector
		7.3 Potential to improve environmental practices

Comprehensive weighted scale for gender, youth & climate factors

Part II Research

Sustainable Agriculture in the Caribbean (SAC)
Dominica questionnaire June 2021

SCREENING QUESTIONS

INTRODUCTION: Good Afternoon/evening. My name is _____ from a research company located in Dominica. We are currently conducting a research survey on women and youth in agriculture for the World University Service of Canada's new Sustainable Agriculture in the Caribbean programme. We would like 10 minutes of your time to ask you some questions. Please note all information you provide will be kept strictly confidential. Are you happy to proceed?

S1. Do you, or anyone in your household, work in any of the following industries?

Market research or Advertising	1	THANK AND TERMINATE
International development organisation	2	
Agricultural development consulting	3	
No	4	CONTINUE

S2. Record gender by observation/ What is your sex at birth?

Female	01	CONTINUE
Male	02	THANK AND TERMINATE

S3. Do you currently grow, process or sell agricultural products?

Yes	1	CONTINUE
No	2	THANK AND TERMINATE

Including questionnaires and analysis across with 500 responses across all 5 SAC countries understanding what women want

Part II Methodology

Including a variety of tools and workshops to evaluate power relations and informal/ formal rules, ecosystems and value chain mapping, end market analysis, climate change risks and GBV triggers and referral services

Research Elements	Data Sources					Output
Methods:	Desktop research	Mapping	Case Studies	Quantative Questionnaire	Interviews	
1. Ecosystem, Stakeholder and Disaggregated Market Mapping: Visual representation of the sub-sector combining disaggregated market mapping, ecosystem support network, key stakeholders, and enablers/ constraints						
1.1 Disaggregated Market Mapping	X	X		X	X	Visual market map, ecosystem and stakeholder mapping with all key information per sub-sector, per country
1.2 Ecosystem and Stakeholder mapping	X	X		X	X	
1.3 Supporting functions	X	X		X	X	
1.4 COVID-19					X	
2. Root Cause analysis	X	X		X	X	Priorities and recommendations for programme to overcome constraints for women and youth
3. Power Relations and Formal/ Informal rules				X	X	Analysis of Quant and Qual analysis to inform analysis and recommendations
4. Climate change risks	X		X		X	Practical recommendations for each sub-sector
5. End market Opportunity Review	X	X			X	Pricing, volumes, value-add)
6. GBV Strategy	X			X	X	Triggers, organisations and policies
7. Sustainable Recommendations	X	X	X	X	X	Targeted, timebound recommendations

3. Methodology

Product selection

The final sub-sector selection involved the creation of baskets of products where this provided stronger potential to balance risk and raise income levels for women and youth and lead to a portfolio with some commonalities across the region:

Dominica			St Lucia			Jamaica			Guyana			Suriname		
Top 10	Top 4	Final 2	Top 10	Top 4	Final 2	Top 10	Top 4	Final 2	Top 10	Top 4	Final 2	Top 10	Top 4	Final 3
Vegetables			Watermelon	Fruits		Herbs & Spices			Fruits			Cassava		
Herb & Spices			Pineapples	Vegetables		Ruminants			Vegetables			Acai		
Essential oils			Lettuce	Roots& Tubers		Roots & Tubers			Feed			Vegetables*		
Cassava & Toloma			Cabbage	Poultry & Eggs		Castor Bean			Beans			Pineapples		
Ginger & Tumeric			Bell pepper			Poultry & Eggs			Spices			Coconuts		
Irish Potatoes			Tomatoes			Ackee			Manicole			Orange		
Cocoa			Sweet Potatoes			Maize			Cassava			Grapefruit		
Roots & Tubers			Dasheen			Fruits			Coconut			Bananas		
Seamoss			Poultry			Vegetables			Coffee			Smoked fish		
Coconut			Eggs			Hot pepper			Cocoa			Pigs		

*Added following discussion with SAC

Country	St Lucia	
Sub-sector 1	Vegetables	4.22 score
Sub-sector 2	Roots & Tubers	4.21 score

Country	Dominica	
Sub-sector 1	Vegetables	3.82 score
Sub-sector 2	Herbs & Spices	3.95 score

Country	Guyana	
Sub-sector 1	Fruit	4.23 score
Sub-sector 2	Vegetables	3.68 score

Country	Suriname	
Sub-sector 1	Cassava	3.53 score
Sub-sector 2	Acai	3.36 score
Sub-sector 3	Vegetables*	N/A

Country	Jamaica	
Sub-sector 1	Herbs & Spices	3.88 score
Sub-sector 2	Goats	3.59 score

See Rapid Review files by country for weighted selection criteria and detailed scoring **eg GUY SAC Rapid Review.xlsx**

3. Methodology

Opportunities and Challenges in sub-sector selection

A rigorous product selection process focused on the needs and wants of women and youth in agriculture identified **a portfolio with strong potential to drive incomes**. There were also a number of common issues and opportunities identified across the region:

- **A basket of crops provides resilience and diversified income**
  High-value vegetables (primarily fresh produce) for import substitution and Roots & Tubers (for domestic consumption) are common to most markets. Herbs & Spices also have regional applicability due to the potential for export, added-value processing and import substitution.
- **Baseline data is extremely limited and not disaggregated**
  In particular, almost no data exists on incomes and roles of women in current value chains. This makes estimating incremental income extremely difficult.
- **Costs and pricing are volatile and highly dependent on circumstance**
  Yields and costs of production depend on location, size of operations, seasonality of crops, climatic conditions etc. so a large number of assumptions are required to generate averages. In addition, pricing is a snapshot in time and highly dependent on circumstance, supply chain and end-customers.
- **Due to these limitations, the focus has been on primary production**
  This impacts most farmers and, while issues of access to finance and land are a major barrier, costs and pricing are less dependent on investment and facilities than value-add processing which is highly specific to the supply chain in question, size, product being produced and investment.

4. Research
Consulting 500 women & youth across the Caribbean

Quantitative research was carried out with **500 women & youth** across five countries to provide a **beneficiary-lead**, statistically significant backbone for recommendations. 24% of the 500 interviews (120 farmers) were with youth. This complemented qualitative research with **120 women** and **over 60 organisations**.

Objectives

- Sample a representative cross-section of farmers in each market for regional comparisons
- Ensure questions are actionable, practical and robust as input to recommendations
- Establish a clear baseline in terms of what women & youth in agriculture actually want

Process

- Quant. research to provide solid basis for recommendation within Covid context
- Inclusive questionnaire development with local teams, stakeholders and SAC
- Representative list women in agriculture in each country to provide basis for interviews

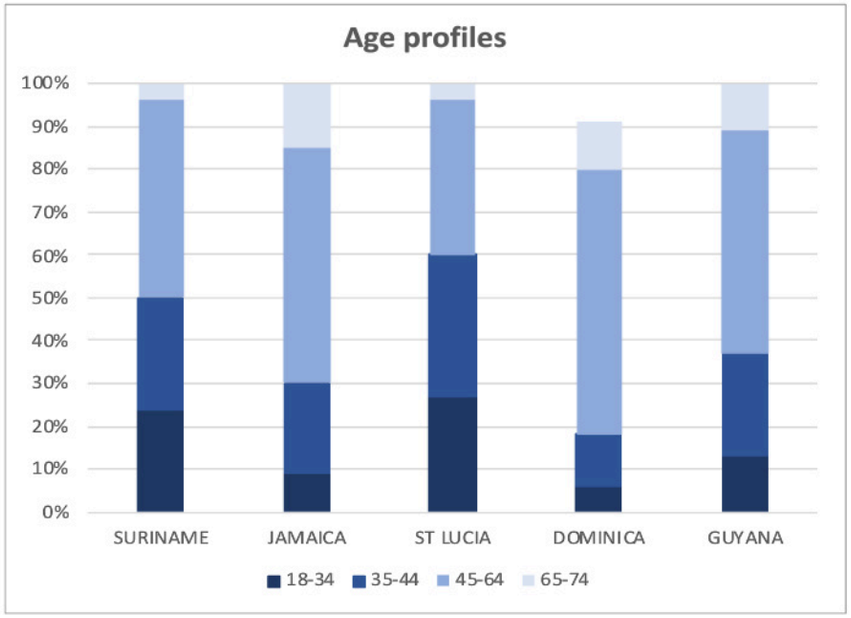
Output

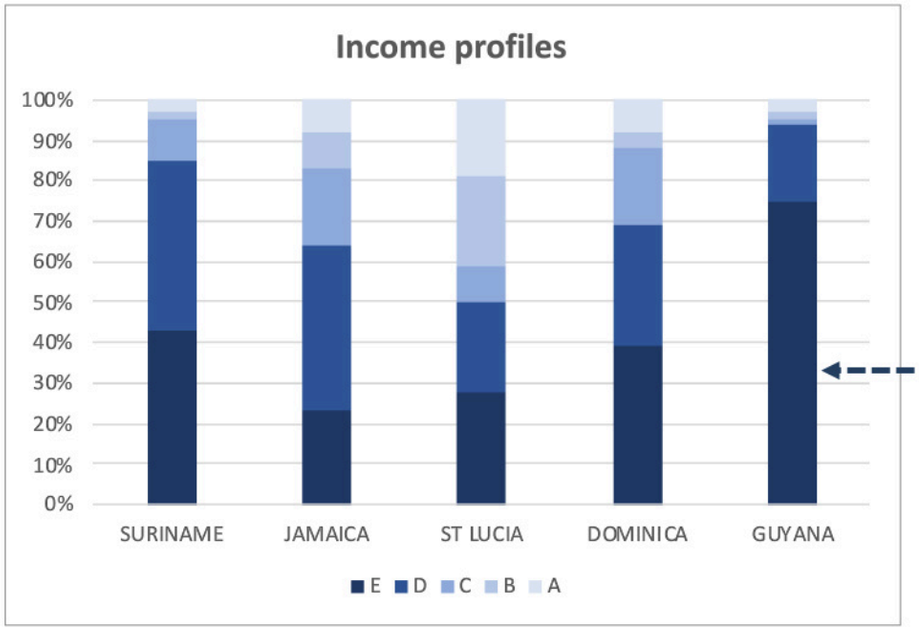
- Household structure, income and power dynamics for each market
- Supply chain roles, product acceptance, motivations and activity
- Women and youth requirements across Access, Markets and Resilience including GBV

4. Research

Demographics – income, age and ethnicity

While age & income of those interviewed vary significantly by market, (lower income ranges in Suriname, Dominica & Guyana, lower youth participation in Jamaica and Dominica) household makeup is consistent, 72% have 2-5 people and ethnicity is closely related to country averages





Income profile in Guyana trends lower than other markets at <GYD75,000 per month

Q1 Household size	SURINAME	JAMAICA	ST LUCIA	DOMINICA	GUYANA	REGIONAL
4-5 persons	35%	36%	33%	33%	44%	**36%**
2-3 persons	34%	31%	37%	49%	31%	**36%**
6-7 persons	16%	22%	17%	8%	15%	**16%**
>8 persons	15%	8%	7%	2%	6%	**8%**
1 person	0%	3%	6%	8%	4%	**4%**

S7 Ethnicity	SURINAME	JAMAICA	ST LUCIA	DOMINICA	GUYANA
African	12%	82%	94%	71%	25%
Indian	14%	2%	1%	8%	49%
Mixed race	15%	16%	5%	21%	20%
Other	28%				6%
Maroon	37%				

4. Research
Household – power dynamics and expenditure

Regionally, stated head of household is split relatively evenly between men and women with the exception of Suriname and Guyana where men are more dominant at a household level.

Q5 Head of household	SURINAME	JAMAICA	ST LUCIA	DOMINICA	GUYANA	**REGIONAL**
Myself	38%	52%	42%	55%	40%	**45%**
Male partner	51%	41%	40%	34%	49%	**43%**
Male relative	4%	4%	11%	4%	6%	**6%**
Female relative	0%	3%	7%	2%	2%	**3%**
Both	7%	0%	0%	5%	3%	**3%**

This is further reflected by decisions on a woman's agricultural income being made predominantly by the woman (in 67% of cases) or jointly 13% of the time with markedly more control of income and expenditure by women in Jamaica, St Lucia and Dominica.

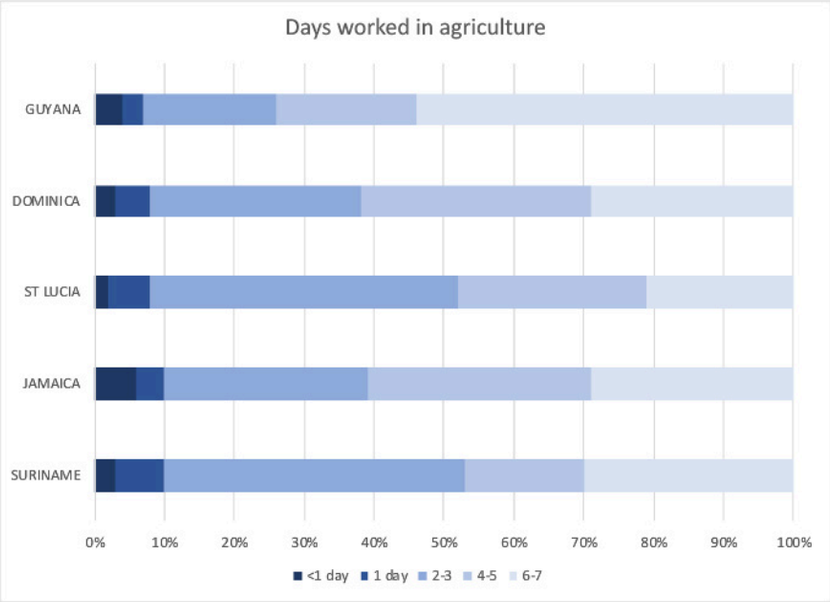
Q13 Decisions on spending income	SURINAME	JAMAICA	ST LUCIA	DOMINICA	GUYANA	**REGIONAL**
Myself	60%	70%	80%	63%	60%	67%
Joint	35%	7%	19%	33%	2%	19%
Partner	3%	23%	1%	3%	35%	13%
Relatives	2%	0%	0%	1%	3%	1%

4. Research
Household - land and working patterns

While there are significant local variations, 80% of women have access to personal (28%), household (30%) or home garden (22%) land across the Caribbean.

Q10 Land ownership	SURINAME	JAMAICA	ST LUCIA	DOMINICA	GUYANA	REGIONAL
Family/ Household land	23%	45%	31%	36%	15%	**30%**
On personally owned land	23%	21%	16%	51%	30%	**28%**
On garden plot at home	30%	9%	36%	2%	33%	**22%**
On leased land	5%	39%	16%	9%	20%	**18%**
Community/ Government land	5%	2%	0%	2%	2%	**2%**
None - In an office or house	8%	0%	1%	0%	0%	**2%**
At the market	6%	0%	0%	0%	0%	**1%**

Except in Jamaica, and to a lesser extent Guyana, leasing is rare and use of community or government land almost non-existent



Fully 42% of women regionally work in agriculture on a part time (1-3 days per week) basis. This is particularly true in Suriname where 53% of women work part time in the sector. Income is also predominantly in cash (65%) with 26% paid in kind or both and only 9% not paid at all.

4. Research
Gender – roles, attitudes and priorities

While a large majority of women in agriculture enjoy the outside work and over three quarters are happy working with family, there is **strong evidence of significant household distress** with 76% regionally concerned about healthcare and 74% struggling with household bills.

Q16 Gender roles and Attitudes	SURINAME	JAMAICA	ST LUCIA	DOMINICA	GUYANA	AVERAGE
I enjoy outside work that involves physical labour	75%	87%	98%	91%	94%	**89%**
Access to good healthcare for my family is a real concern	70%	75%	86%	65%	84%	**76%**
I struggle to find enough money for household bills	78%	75%	63%	67%	87%	**74%**
I feel comfortable with my family's access to education	60%	73%	55%	58%	88%	**67%**
Getting enough food for my family is never a problem	43%	61%	61%	72%	75%	**62%**
I spend most of my time caring for children or relatives	36%	63%	49%	41%	75%	**53%**
I don't like working with members of my family	32%	29%	6%	20%	22%	**22%**

Q16 Priorities for the next year	SURINAME	JAMAICA	ST LUCIA	DOMINICA	GUYANA	AVERAGE
I would like to increase my income	100%	99%	100%	100%	100%	**100%**
I would like to feel safer than I do now	84%	88%	93%	90%	94%	**90%**
I would like to get training or education	85%	83%	94%	89%	89%	**88%**
I would like more spare time	56%	56%	53%	48%	75%	**58%**
I would like to change the type of work I do	32%	19%	19%	12%	35%	**23%**

There is also strong evidence that safety is a real concern with **90% wanting to feel safer.**

4. Research
Product acceptance

Based on detailed market mapping, stakeholder input and a data-based process, the final portfolio of selected products is listed below for each market. In each case, women farmers were asked whether they would be interested in participating in the supply chain. Across the board, acceptance was high. 83% of the selected products were attractive to >60% of farmers.

JAMAICA		ST LUCIA		SURINAME		DOMINICA		GUYANA	
Product	Acceptance	Product	Acceptance	Product	Acceptance	Product	Acceptance	Product	Acceptance
Hot pepper (SB)	81%	Bell Pepper	93%	Pepper	82%	Ginger	90%	Pepper	96%
Ginger	65%	Lettuce	84%	Fresh cassava	80%	Parsley	90%	Cucumber	85%
Hot pepper (WIR)	63%	Sweet Potato	81%	String beans	79%	Celery	88%	Passion fruit	83%
Goat	61%	Dasheen	80%	Okra	78%	Chives	87%	Cherry	80%
Tumeric	54%	Tomato	76%	Eggplant	76%	Turmeric	78%	Citrus	79%
		Cabbage	69%	Kokori	58%	Tomato	77%	Sweetcorn	73%
				Acai	57%	Hot pepper	74%	Sorrel	70%
						Onion	66%	Carambola	67%
						Irish potato	61%	Cabbage	62%
								Cauliflower	58%
								Guava	58%
								Mangoes	56%
								Pineapples	49%

Poor existing product knowledge a key driver of rejection.

Positive for indigenous areas. Limited product knowledge outside these.

Access to sufficient land is a key barrier to fruit planting.

4. Research
Roles across the supply chain

In line with the wider channel mapping work, women mainly participate at either end of the supply chain – in production (38% of women regionally) and sales (24% of women regionally) with very limited participation in processing or as input suppliers other than in Suriname.

Q7 Agricultural roles	SURINAME	JAMAICA	ST LUCIA	DOMINICA	GUYANA	REGIONAL
Producer	16%	50%	28%	49%	48%	**38%**
Vendor or Seller	29%	24%	19%	21%	28%	**24%**
Harvester	24%	12%	24%	10%	10%	**16%**
Labourer	1%	7%	23%	7%	4%	**8%**
Processor	18%	1%	1%	8%	4%	**7%**
Input Supplier	8%	3%	4%	1%	3%	**4%**
Transporter	3%	3%	2%	5%	2%	**3%**

Q7 Agricultural roles	SURINAME	JAMAICA	ST LUCIA	DOMINICA	GUYANA	REGIONAL
Three Roles	33%	20%	19%	25%	30%	**25%**
Two roles	19%	34%	10%	24%	35%	**24%**
Four roles	19%	10%	37%	16%	8%	**18%**
Single Role	13%	16%	1%	22%	19%	**14%**
Five roles	14%	8%	11%	8%	2%	**9%**
Six Roles	2%	3%	3%	3%	4%	**3%**
Seven Roles	0%	3%	2%	2%	2%	**2%**

However, participation by women is striking in that it is typically not restricted to one part of the supply chain. On average women participate in three (2.84) roles with 67% working in between 2 and 4 roles and a small number (14%) working in between 5 and 6 roles across the agricultural value chain.

4. Research

Services and Support – what women want

Women & youth are clear about the support that they want to grow in agriculture and, while there are clear differences by country, there is surprising regional consistency. Market assistance is a priority across the board as is help with inputs, logistics, financial services and security. In terms of land, **ownership rather than access** is key which follows through to an ability to secure loans and insurance:

Q21 What would help your work in agriculture most?	SURINAME	JAMAICA	ST LUCIA	DOMINICA	GUYANA	**REGIONAL**	
Good technical training	86%	94%	97%	93%	87%	**91%**	**MARKETS**
Help to access new markets	72%	95%	98%	94%	96%	**91%**	
Assistance with tools, machinery or inputs	76%	90%	99%	94%	86%	**89%**	
Help to improve personal safety	75%	88%	97%	87%	91%	**88%**	**RESILIENCE**
Help to reduce theft	72%	83%	97%	84%	89%	**85%**	
Help with transportation	72%	79%	88%	87%	85%	**82%**	
Access to affordable insurance	95%	80%	89%	64%	76%	**81%**	**ACCESS**
Access to cheap loans	88%	69%	98%	61%	82%	**80%**	
Help to own my own land	73%	88%	86%	56%	88%	**78%**	
Access to easy banking services	61%	76%	92%	67%	86%	**76%**	
Access to more land or facilities	82%	72%	88%	53%	77%	**74%**	
Assistance with childcare or elderly	39%	64%	62%	39%	71%	**55%**	

4. Research

Who women trust – Private sector low on the list

SURINAME		JAMAICA		ST LUCIA		DOMINICA		GUYANA	
Partner	Net Trust	Partner	Net Trust	Partner	Net Trust	Partner	Net Trust	Partner	Net Trust
Ministry of Agriculture	56%	RADA	85%	Helen's Daughters	85%	Ministry of Agriculture	62%	Ministry of Agriculture	86%
Other farmers groups	52%	Ministry of Agriculture	76%	Massy Supermarkets	81%	Farmers groups	55%	NAREI	75%
Suriname network of rural women producers	41%	Farmers groups	56%	St Lucia Network of Rural Women	80%	Small Business Support Agency	45%	New Guyana Marketing Corporation	52%
Community leaders	33%	NCB (National Commercial Bank)	41%	Ministry of Agriculture	75%	Dominica National Council of Women	38%	Women Agro-Processors Development Network (WADN)	48%
De Surinaamsche Bank	22%	Grace Kennedy	40%	Sir Arthur Lewis Community College	69%	DEXIA	36%	Guyana Bank for Trade & Industry	48%
Digicel	13%	Agro Investment Corporation	30%	BelFund	61%	Dominica Huxters Association	28%	TOPCO	39%
Pater Ahlbrinck Stichting (PAS)	8%	Jamaica network of rural women farmers	23%	CIBC First Caribbean	33%	Dominica National Bank	22%	Massy supermarkets	33%
De Molen	5%	Municipal abatoirs	3%	Digicel	20%	CIBC First Caribbean	4%	Digicel	22%

Beneficiary trust is critical to designing effective programmes. Part of ensuring agency for farmers was to establish Net Trust (% positive - % negative perceptions) for a range of organisations in each country. This provides a good lead-indicator for potential partnerships.

A net trust of **>50%** is highlighted here for potential development. However, where net trust is below 25%, due diligence is strongly recommended prior to investing limited resources.

4. Research

How concerns about GBV and security vary by country

Personal safety for women, including concerns about GBV, is a major issue across the Caribbean with **88% of women in agriculture wanting to improve their personal safety**. And while this is higher in St Lucia and Guyana (97% and 91%) and lower (75%) in Suriname, it illustrates the scale of the problem.

GBV statements	SURINAME	JAMAICA	ST LUCIA	DOMINICA	GUYANA	REGIONAL
Q21. I want help to improve personal safety	75%	88%	97%	87%	91%	**88%**
Q21. I want help to reduce theft	72%	83%	97%	84%	89%	**85%**
Q19. I worry about how I would be treated by my family or community if I earned a higher income	13%	40%	8%	20%	41%	**24%**

However, responses to whether women are concerned about how they would be treated if their income increased appears to be a major issue in Jamaica and Guyana with **over 40% of respondents expressing concern**. This is reflected by higher rates of GBV in both, the context-specific triggers of which are dealt with in the next section.

5. Gender-based Violence
Overview and Statistics

Within the Caribbean, **violence against women is pervasive**. The 2001 Caribbean Regional Tribunal on Violence against Women Report observes that far from being a haven, the home for many women is a dangerous place. Women unlike men are more likely to be beaten and sometimes killed, not by a stranger but [by someone they know intimately] by a husband, a boyfriend, a partner. Gender-based violence affects a cross- section of women. It is not confined to specific groups of women in society and must be placed within the larger context of gender-inequality. [1]

- **Prevalent Forms of Gender-based Violence**
  In the Caribbean, the most common forms include; intimate partner violence and sexual violence; economic exploitation of girls and women; child, marriage. [2]

- **Prevalence Data**
  Three of the top ten recorded rape rates in the world occur in the Caribbean. While the worldwide average for rape was 15 per 100,000, The Bahamas had an average of 133, St. Vincent and the Grenadines 112, Jamaica 51, Dominica 34, Barbados 25 and Trinidad and Tobago 18. [3]

- **Vulnerable Groups**
  Women with either no or low education, women who have been pregnant and women who began cohabiting with a male partner when they were minors. [4]

* Footnotes references see Additional Information slide 120

5. Gender-based Violence
Context-specific triggers

There is no simple explanation. The pervasiveness of domestic violence suggests that it is neither random nor isolated, nor can it be explained by abnormal characteristics of the abuser or the victim. Rather, it has been described as "systemic and structural, a mechanism of patriarchal control of women that is built on male superiority and female inferiority, sex-stereotyped roles and expectations, and economic, social, and political predominance of men and dependency of women." [5]

Dominica: causes of violence include impacts of loss of employment on the household, shelters that are not designed with gender considerations, and an increase in drug and alcohol use

St Lucia: harmful gender stereotypes identify specific, rigid roles for women in the society. Domestic violence in Saint Lucia "is exacerbated by the severely depressed state of the economy where victims are economically dependent on their abusers."

Jamaica: In Jamaica approximately 80% of violent acts occurred between intimate partners with predictors being childhood experience of violence, controlling behaviour of husband/partner and alcohol use by perpetrators. Source: Domestic Violence and Its Profile by Sewell, Martin, Abel

Guyana: high correlation between drugs and/or alcohol abuse and violence against women. Other common situations in which violence takes place are where the man is under financial pressure or other stress, where the woman is educated and/or in paid employment

Suriname: In some interior areas, women have faced violence and family discussion following the increase of their income due to agricultural activities.

6. Sustainable Agriculture
Overview

- **To build sustainable resilience for the livelihoods for women and youth** it is critical that sustainable agricultural practices pervade all elements of crop or animal selection, growing, harvesting and selling.
- **Solutions are dependent on a mix** of cultural, economic, geographic, historical, political, and social-structural factors
- **The Caribbean will be impacted by a progressively drier and warmer climate**
  This will reduce crop productivity and increase instances of crop failure. Similarly, increased rainfall and storms and rising sea levels are affecting soil erosion and suitability, increasing susceptibility of crops to disease and pests. Climate variability is making it difficult for farmers to plan and discouraging participation in agriculture. See SAC Sustainable Agriculture Report for specific details per country.
- **Women and youth will be disproportionately affected**
  This is due to their un-equal assets and informal roles and rules that favour men. These include small plots more vulnerable to flooding and limited information and finance for investment in resilient crops and practices
- **Sustainable agriculture practices have the potential to positively impact incomes**
  But only with the right engagement with women and youth to address critical needs such as time saving, family health, food and personal security. Sustainable practices can also re-ignite interest in agriculture, particularly from youth.

6. Sustainable Agriculture
Context for agricultural adaptation to 2050

Country	Population (m/f)	Area of country	Cultivated Land	% farmers (total)	% female farmers	Climate Projections by 2050
St Lucia	F: 93,207 M: 90,422	616km^2	106 km^2	15.3% [1]	2.89%	• ↑ 1.7° C mean annual temperature • ↑ 1 hour sunshine hours per day • ↑/↓ -19 to 4 mm annual rainfall • ↑ sea level rise and storm surge
Dominica	F: 35,387 M: 36,738	751km^2	250km^2	12.4%	3.4%	• ↑ 1- 4°C mean temperature • ↑ 5-15% wind speed • Rainfall extremities (high intensity rainfall and droughts) • Increase in category 5 storms
Jamaica	F: 1,491,520 M: 1,469,641	10,991km^2	4,440km^2	18.6%	8.22%	• ↑ 2-2.1°C mean temperature • ↑ 2.1 – 2.2° C minimum temperatures (warmest month) • ↑ 1.8-1.9°C mean temperatures (coldest month) • ↑/↓ -44% to +18% rainfall • ↓ 700mm - 800mm annual rainfall • Higher variability in frequency and magnitude of drought or heavy rains

6. Sustainable Agriculture
Context for agricultural adaptation to 2050

Country	Population (m/f)	Area of country	Cultivated Land	% farmers (total)	% female farmers	Climate Projections by 2050
Suriname	F: 291,812 M: 294,822	163,820km^2	840km^2	16%	24%	• ↑ rainfall variabilities with flooding, but decreased rainfall overall • ↑ sea level by 20-51cm
Guyana	F: 391,010 M: 395,549	214,969km^2	12,513km^2	13.4%%	7.88%	• ↑ 2.5ºC mean temperature • ↓ Annual precipitation by -31.94mm (-362.05mm to 330.11mm) in 2040-2059

Relevant Government Climate Change Strategies:

St Lucia: National Adaptation Plan with associated sector adaptation plans 2018 - 2028

Dominica: National Resiliency Development Strategy Dominica 2030

Jamaica: National Adaptation Plan being drafted, The State of the Jamaica Climate 2015

Suriname: National Adaptation Plan 2019 - 2029

Guyana: Draft National Adaptation Plan, Draft Climate Resilience Strategy and Action Plan for Guyana 2015

6. Sustainable Agriculture
Policy context and opportunities

Actions to be implemented	Potential alignment/Benefits to Project
Guyana	
Crop risk mapping based on projected spatial and temporal changes	Sub-sectors risk information for adaptation
Irrigation Systems Assessment (decentralization and empowerment strategy).	Improved drainage and irrigation for sub-sectors
Species monitoring for climate change impacts	Nuanced and detailed sub-sectors climate change impacts information
St. Lucia	
"Enhanced-Value Chain Business Development Centre" for Climate Resilient Agriculture (CRA)	Sub-sector value chains benefit from promotion and enhancement
Awareness raising campaigns on agro-biodiversity	Communication sub-sector products developed
Research on integrated pest/disease management	Non-chemical pest management methods
Sustainably cultivate and conserve heirloom species	Climate Resilient seeds and plants
Suriname	
Strengthen participation in agriculture among women	Participation of project beneficiaries
Increased adoption of techniques such as appropriate greenhouses and hydroponic gardens	Uptake of greenhouse and hydroponic technologies
Dominica	
Attracting young professionals to actively participate in agricultural	Youth mainstreaming in sub-sectors
Mainstreaming the disaster risk reduction in agriculture	Disaster resilient sub-sectors information
Jamaica	
Develop modern and efficient farming systems	Climate resilient sub-sectors
Agricultural best practices development	Case studies on sub-sectors of best practice

6. Sustainable Agriculture
Key stakeholders and funds to drive adaptation

Collaborations with organisations and funds to support women and youth	
Research and Tech Assistance	Regional: CARDI, IICA, FAO Ministry of Agriculture agencies and extension officers (see country Stakeholder maps in this pack)
Climate Smart Expertise	• International Centre for Tropical Agriculture (CIAT) • Agricultural Research Centre for International Cooperation (CIRAD): Elisabeth Claverie (CEO)
Potential Collaborations	World Wildlife Fund and International Union for Conservation of Nature (IUCN): agroforestry Partnerships for Forests (P4F): Acai development in Colombia (Luis Rios)
Farmer Groups	WINFA, farmer/ community groups for resilience and post shock 'bounce back' (eg Dominica)
University/ College	Eg. University of the West Indies, Eg. Sir Arthur Lewis Community College (St Lucia) Centre of Agriculture research of the Anton de Kom University of Suriname (CELOS) eg cassava
Private Sector	Explore potential investments in sustainable supply chains: TOPCO, De Molen, Grace Foods etc
Funds:	• Local funds eg Environmental Foundation of Jamaica, Suriname SCSD (see stakeholder maps) • UNDP GEF Small Grants Programme: climate change adaption grants • Green Climate Fund (GCF), United Nations Convention on Climate Change (UNCC) REDD+ programme, Inter-American Development Bank and Caribbean Climate-Smart Accelerator
Insurance	• Influence accessibility and gender responsiveness of insurance products eg Livelihoods Protection Policy (LPP), a parametric index-based micro insurance product available in St Lucia and Jamaica from Caribbean Policy Centre and Munich Climate Insurance • Currently distributed through social aggregators like credit unions, farmers cooperatives etc

6. Sustainable Agriculture
Climate resilient varietals and expanding women's roles

Climate resilient varietals/ breeds and expanding the role of women and youth in supply eg:	
Establishing climate smart varietal of crop/ livestock	• Collaborate to expand existing resilient varieties in circulation eg Cox Farms St Lucia SSLYY Dasheen (resilient to fungal infections), Jamaica ginger • Reduce time to crop maturity to reduce exposure and speed up recovery from shocks (eg CIAT's system for rapid multiplication of genetically superior cassava) • Make endemic crops resilient if possible (eg Dominic ginger) and use of clean planting materials (eg FAO ginger value chain project in Jamaica) • Work with CARDI and IICCA to secure breeding stocks of goats that are more resistant to increasing temperature eg Anglo-Nubians, Alpine, and Saanan • Work with relevant Government and national research agencies and regional organisations such as CARDI (eg in conjunction with Centre of Pacific Crops and Trees), IICA,FAO on specific varietals for sub-sectors and countries, CELOS (Suriname) for cassava plant breeding, greenhouses, animal fodder
Nurseries and seed banks	• Engage women and youth to establish nurseries with disease free material working with key organisations and seed banks
Fodder production	• Encourage forage production, and the promotion of silvopastoral systems combining forestry, forage plants and livestock • Sun drying of high protein plants for use during the wet / hurricane season

6. Sustainable Agriculture
Soil and water management

Expanding local crop and land management practices that work for women and youth eg.	
Soil Management (conserving and preventing erosion)	• Explore techniques of tillage developed by Windward Islands Farmers Association (WINFA) • Use of vetiver grass to prevent landslides and natural erosion. This can be obtained from Dominica, St. Vincent and the Grenadines, Guyana, and Jamaica if not available locally • Windbreaks using vetiver grass and other economical crops such as mango, soursop, and cocoa (higher resilience to climate change)
Water Management:	Water harvesting and storage including: • Indigenous practices including digging of ponds to catch and hold water • Low-cost solar water pumps and drip irrigation systems • Drainage and irrigation to control water flow • Drain clearance to reduce flooding • Engage Water Users Associations (WUA) to manage local water sources • Low water use solutions such as sprinkler system and gravity water systems

6. Sustainable Agriculture
Introducing local crop and land management process

Expanding local crop and land management practices that work for women and youth eg.	
Seedlings v seeds	Produce/ secure seedlings rather than germinating plants from seeds: • reduces time exposed to climate variabilities in the open • reduces the need for tillage of the soil which fractures the soil, disturbs soil composition, removes soil cover, causing ↑ run off and erosion
Organic practices	• Avoid handling and digesting chemicals (eg Dominica)
Integrated Pest Management	• Establishing environmentally sustainable, effective Integrated Pest Management approaches • Prevent overuse of pesticides eg in Guyana
Intercropping	• Enable pollinators, natural predators to pests and other ecosystem services • Reduce issue of land availability eg acai and cassava, fruit and vegetables
Cover Crops	Such as planting nitrogen-fixing legumes to benefit fruit, cassava etc
Agroforestry	Collaborate with eg. World Wildlife Fund and International Union for the Conservation of Nature on best practices for ecosystem management of Acai forests and the establishment of Acai plantations

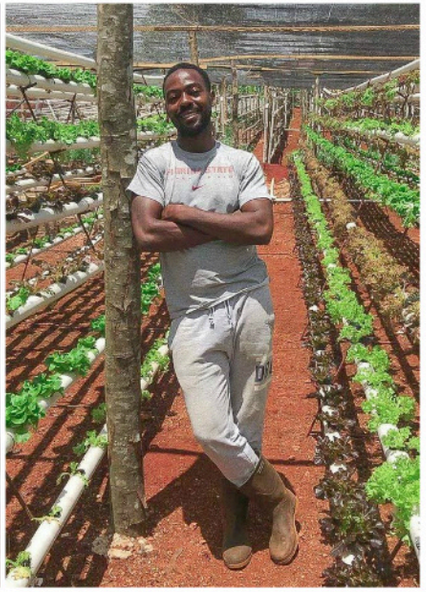
6. Sustainable Agriculture
Introducing shelters, shade houses and greenhouses

Expanding relevant local crop and land management practices that work for women and youth eg.	

Shade houses and Greenhouses	Engage women and youth in development of prototypes of shade houses and greenhouses to mitigate exposure to climate change in open fields:
	• Produce low cost shade houses using local materials eg
	  • indigenous materials of bamboo and straw, or coconut leaves
	  • hybrid houses using indigenous materials and imported plastic
	• Eg 70% bell pepper production in Brazil is in shade houses

Pens and shelters	• Engage women and youth in using local materials to build pens and shelters to house goats
Solar	• solar pumps, for using and obtaining water especially during drought periods
Hydroponics	• Explore low-cost hydroponics options for women and youth for climate resilience, cultivation in yards close to home, maximise space through elevated production

6. Sustainable Agriculture
Communications and technology to inspire and drive change

Data and Communications eg weather, mobile comms, radio etc	
Information	Establish effective ways to disseminate knowledge on climate practices such as: • Explore mobile communications and a collaboration with Digicel or Flow such as the Ecofarmer platform in Zimbabwe: https://www.ecofarmer.co.zw
Communications	• Work with local role models and social media agencies to attract women and youth to agriculture with climate smart technology and interest eg: **Inspiration:** Former Olympian Ricardo Chambers has established a vertical aquaponics farm in Spur Tree, Manchester, Jamaica, and has ambitions to revolutionise farming in Jamaica and across the Caribbean. He could be a strong role model for youth and for technology for the SAC programme. 

7. Recommendations

Ensuring interventions are co-designed with women & youth based on local needs and context

a. Engagement of women, youth and men in sub-sector value chains for co-design of interventions, 3rd party products and support services, and identifying key priorities for policy change. Monitor **Do No Harm** principle through ongoing evaluation

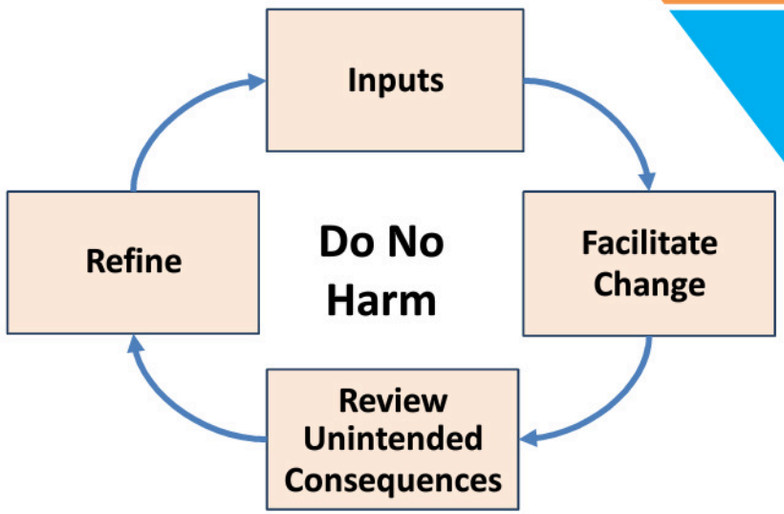
b. SAC to represent women and youth requirements with a consortium of established organisations to select / develop regional products and services to increase access, participation and growth in value chains

c. Facilitate a sustainable model to deliver products and services to women and youth such as a targeted agri-incubator model

d. Create a framework to benchmark and influence policies and prioritise change for women and youth

e. Overarching communications framework

f. Execute locally



7. Recommendations

Ensuring interventions are co-designed with women & youth based on local needs and context

ENGAGE	**Co-design long-term solutions with women and youth:** (6-12 months) Full data-based engagement of women & youth for sustainable interventions including Do No Harm Principle
Drivers	• **22% of women & youth** would leave agriculture if they could, more (29%) in Jamaica and Guyana. Participation is already low and falling across all markets. • ENGAGE will ensure beneficiaries and stakeholders design what works in the long-term
Description	• Design a process for community engagement with women, youth and men with local context, socio-economic, cultural and geographical factors to inform wants and needs eg household and community dynamics and power relations, main activities, expenditure, asset ownership, profitability, major challenges, constraints, etc • Identify farmer groups, NGOs and organisations to input into process design • Finalise approach and including workshops and questionnaires eg building out **CIAT Rapid Assessment manual.pdf** (see link in appendices) • Evaluation process – do no harm
Potential Partners	• **CIAT** (potentially to support workshops and climate smart facilitation) • **Government:** Ministries of Agriculture and Gender Affairs • **NGOs with networks and experience:** eg CARDI, IICA, • **Regional Women's Groups:** eg Caribbean Network of Rural Producers
Long-term motivation	Everyone benefits in long run as they have shaped the interventions accordingly
SAC role	Facilitate agreement of common process and lead execution locally

7. Recommendations

Developing regional policies based on local needs & delivery

Approach	**An inclusive, needs-based, data-driven approach** across communities and value-chains using quantitative and qualitative research and stakeholder engagement to inform products, services and policy. Development of **regional frameworks for regional issues** for adaptation and local delivery. Engagement of key organizations for policy review, benchmarking and strategy. **Ongoing Do No Harm evaluations.**	**Branded Product and Services Packages**
Policy	Agriculture; Health; Finance; Policy Levers eg procurement; GBV; Climate Plans; Education; Land & Assets; Social Services	**'UNITE'**
Delivery	Regional frameworks, product & service packages – Local adaptation & delivery	
Access	Insurance & Finance; Capacity; Land	**'BUILD'**; **'BOOST'**; **'INFORM'**
Engagement	Communications; Education; Data & Technology	**'ROOTS'**; **'INSPIRE'**
Markets	Inputs; Equipment; Logistics; Quality; Commercial; Information	**'GROW'**; **'STEP-UP'**
Resilience	Climate; GBV; Safety	**'SMART'**; **'SAFE'**

7. Recommendations
Branding to drive programmes, participation and income

Farming in the Caribbean has an external image problem and an internal communications issue. Trust in NGO's and the private sector is typically low and almost a quarter of women & youth would leave farming if they could. Effective branding and marketing of propositions can therefore make a fundamental difference to the uptake of programmes & the scale of impact.

- **Branding to farmers**
  Each programmatic recommendation has been positioned as a 'package' for branding and communication to farmers, the private sector and stakeholders to raise participation, engagement and impact.
- **Branding for farmers**
  There is also the opportunity to raise the profile of women's products and groups through product certification, branding and occasion-based marketing.

7. Policy recommendations

'UNITE' - developing regional policies for local execution

'UNITE'	Promoting key policy positions and change through a regional framework
Drivers	• Consistency across key issues facing women & youth in agriculture and the assistance they have requested **(+/-16% between countries**) shows a need for regional leverage to key policy areas • 'UNITE' will centralise, collate & develop policy best practice for engagement across the Caribbean
Description	• **Identify and quantify existing inequalities** and discrimination and economic impact • **Catalogue** country, regional (e.g. CARICOM) and international (e.g. UN) policy positions • **Review with regional organisations and experts** and prioritise for impact • **Establish a framework and case for change** of existing and draft policies, benchmarks • **Build institutional capacity** building knowledge and networks of influencers and decision makers • **Agree best practices and approach** to support governments e.g. - *Land:* low cost access to land banks, agro-parks, changes to land ownership laws - *Health:* universal and reproductive health - *Market Systems* including Export: proactively promote and support women - *Climate plans:* ensure women and youth leading key initiatives - *Social Services* including GBV policy: prevention and service provision
Potential Partners	Regional institutions: CARICOM/ CARDI International institutions: IICA/ FAO/ ITC/ UNCTAD/ UN WOMEN/ GAC/ USAID/ DIFD etc. Regional experts and NGOs: Wise Women of the West Indies, Helen's Daughters
SAC role	• **Funding:** Invest in experts as needed to create practical, consistent regional policy framework • **Co-ordination:** Facilitate ongoing discussions with multiple stakeholders on policies and plans • **Implementation:** Ongoing discussions at a country level

7. Access recommendations
'BUILD' – affordable insurance & finance for growth

'BUILD'	Insurance and finance packages for women & youth
Drivers	• Research shows **81% women regionally want access to affordable insurance**, with **95% in Suriname** and **80% would like access to affordable loans, 98% in St Lucia.** • 'BUILD' will package financial services in a way that is targeted, accessible and affordable
Description	• **Establish best practice regional requirements** for 'fair', 'affordable' and effective finance products including loans, insurance and grants. • **Create a regional "good practice coalition"** with key private sector finance partners to identify innovation in this space in the region and amplify existing initiatives or establish new ones • **Represent women & youth** in the evolution & design of products (e.g. 'loans, pro-poor non-trad finance (eg mobile) and cross-sector partnerships such as insurance and savings/ pensions • **Package and tailor at a local level** through marketing & distribution of products to women & youth
Potential Partners	• **Insurance and finance:** Sagicor, CIBC, Credit Unions, Development Banks (IADB, CDB), Livelihood Protection Policy (LPP) Climate Risk and Insurance in the Caribbean (CRAIC) • **Intermediaries:** trusted co-operatives, NGOs, input suppliers • **Governments:** relevant stakeholders and Ministries in SAC country government • **Other potential innovators:** Telcos, Producers/ Offtakers, Supermarkets
Motivations	**Insurance and Finance:** product penetration, market share, revenue and replicability. Build reputation as champion of women and attractive employer for women and youth **Intermediaries:** potential to expand income and women's involvement in distribution **Governments:** remove policy constraints, expand social security and poverty alleviation **Development Cooperation Agencies:** gender equality and financial sector development
SAC role	• Represent women and youth, motivate industry players, fund experts and marketing

7. Access recommendations
'BUILD' – affordable insurance & finance for growth

'BUILD'	Insurance and finance packages for women & youth
Details	A Mainstreaming Gender and Targeting Women in Inclusive Insurance'[1] report highlights the following: • **Significant market opportunity:** annual global women's market value between US$1.45tn to US$ 1.7tn by 2030 • **Women will spend between 10-15 percent of income** on insurance, especially on health insurance, want peace of mind, have higher loan repayments, lower default rates and are better at saving • **Women have different needs to men** including longer life-expectancy, specific health risks (pregnancy, childbirth), limited discretionary spending and fluctuating cash flows and fewer assets • **However, evidence shows women are better credit risks than men**, have higher loan repayments, lower default rates and are better at saving, and need peace of mind concerning their children. • There is a real market opportunity to create basic, affordable, relevant products such as **life insurance**, **multi-risk products and family covers etc** and **protect assets** including houses, livestock, or vehicles, against theft, fire, death, loss, or the impacts of natural disaster and climate change • **Sensitive distribution and engagement** using women sales agents, leveraging CBOs and NGOs for wider distribution, providing financial literacy support, simplification of claims processes and using mobile technology can increase access and success in the market

[1]' Mainstreaming Gender and Targeting Women in Inclusive Insurance: Perspectives and Emerging Lessons' https://www.ifc.org/wps/wcm/connect/4dbd983e-2ecd-4cde-b63e-191ffb2d48e6/Full+Women+%26+Inclusive+Insurance+BMZ_Web.pdf?MOD=AJPERES&CVID=lK1xhtq

7. Access recommendations

'BOOST' - incubator to support organisational effectiveness

'BOOST'	Incubator to strengthen existing women & youth organisations
Drivers	• **35% of women** across the SAC focus markets are members of a co-operative or farmers group. This ranges from 16% (Suriname) to 64% (Jamaica), illustrating the importance of these groups. • BOOST will facilitate the support required to grow these organisations internally and externally
Description	Established a targeted, well supported incubator model that will be implemented locally: • **Direct support** for registered cooperatives, community groups, other value-chain players to strengthen linkages and scale up change impacting women and youth • **Simple selection processes** eg potential for scale, inclusion, change, magnification of impact through wider community engagement activities etc • **Clear and approachable consultation** process through to recommendations and support • **Engage few, dynamic and motivated institutions** to support eg finance, equipment • **Clear targets:** impact measurement, monitoring, evaluation • **Story-telling** and social media engagement to capture processes, impact and feedback
Potential Partners	**Private Sector:** organizational change and capacity consultancies, financial services (accounting) and BSO's in each country. Financial institutions with existing interests in the sector (banks, insurance) **NGO and Charitable:** partnerships with existing foundations, funds and micro-finance
SAC role	• **Funding:** Seed funding for programme development and launch • **Co-ordination:** Facilitate focused group of partners to support women and youth. • **Implementation:** Ensure country-led self-sustaining model

Access recommendations
'INFORM' – online educational and skills platform

'INFORM'	Online education and skills platform for women & youth
Drivers	• "Good technical training" is highlighted by women & youth across the region as **the single most important** type of assistance they need in order to succeed in agriculture. • 'INFORM' will provide a central hub and delivery mechanism for effective capacity building.
Description	While there is a training component to many elements of these recommendation,. SKILLS looks to establish a generic framework and criteria for design and delivery of multi-functional training eg: • **Constraints:** eg literacy and education levels, time-poverty, access to devices/ internet, low interest and perception of labour intensive, low tech, low returns (youth) • **Content:** eg relevant sustainable agriculture practices, quality standards, governance, business management, securing ownership/access to land, value-add (eg seedlings, processing), access to markets, GBV avoidance (eg couple-based programmes) • **Delivery:** new/ on-line/ apps access to training for flexibility in access to courses, family-centred approaches to training (mobility constraints, male dominant cultures) • **Content and distribution:** engage key organisations across the region to support women and youth access to training such as NGOs, private sector (eg input suppliers) etc
Potential Partners	**Content and training providers:** IICA, CARDI, UWI, Helen's Daughters **Product suppliers:** input suppliers, finance companies, offtakers, Telcos, app designers, suppliers, **Government:** MoA, extension officers, bureau of standards.
Motivations	• Expand training footprints and impacts • Establish trusted reputation for sale of related products eg inputs, financial products
SAC role	• Facilitate framework, fund experts as needed, marketing support as required • Represent women and youth on in the design/ refinement of training products and

Engagement recommendations
5. 'ROOTS' – putting data at the heart of agriculture

'ROOTS'	Using data to inform policy, implementation, funding, farming & safety
Drivers	• In the Caribbean, there is **almost no disaggregated agricultural market or production data** by gender or product and limited use of tech or data to assist with pricing, sales or safety. • 'ROOTS' will establish a data platform and tech to manage programmes & support farmers
Description	• **Audit:** Establish current information sources, databases, gaps and requirements. The minimum realistic information required to effectively run programmes. • **Programme design:** Dispersed ledger (e.g. blockchain) vs centralised database and collaborative vs centralised approach to information. Critical focus on long-term provision. • **Farmers design:** Identify needs and develop bundled mobile data, apps and tech for farmers • **Inputs:** Automating information gathering and dissemination where possible from existing sources and work-arounds where not. • **Research:** Quantitative research from traditional surveys but also regular cheap online/ social media datasets and use of non-traditional (e.g. 'exhaust data') as inputs. • **Technical:** Off the shelf database design and analytics to reduce costs.
Partners	• **Institutional:** existing sources (e.g. FAOSTAT, Ministry of Agriculture, WTO, CARDI, ILO) **Private sector**: Telcos, Research agencies, analytic and database cloud computing solutions. • **Government & NGO's:** Partnerships with those who need data the most
SAC role	• **Funding:** Development of requirements, database and technology solution • **Co-ordination:** To engage those with an interest in data-based decision making • **Adaptation:** in-country teams modifying and implementing sourcing & analysis locally.

Engagement recommendations

6. 'INSPIRE' – reframing agriculture for women & youth

'INSPIRE'	A regional platform to reframe agriculture for women & youth
Drivers	• **22% of women & youth** would leave agriculture if they could, more (29%) in Jamaica and Guyana. Participation is already low and falling across all markets. • INSPIRE will start to reverse this trend with clear messages and practical educational tools.
Description	Centrally developed platform to focus resources with adaption locally: • **Communication:** Single message, branding agriculture as *innovative, profitable and exciting*. • **Education:** positioning sector as a business – professional, high-value undertaking • **Influencers**: high profile private sector and individuals – local and regional • **Gamification:** engagement with youth through agricultural scenarios and gaming • **Community:** common approach to selling message through youth clubs, women's groups etc • **Regional exchange:** Farmer Exchange programmes (regional, local) • **Social media:** investment in key messages for Women, Youth and Men.
Partners	• **Private sector**: major businesses in agriculture with focus on recruitment & sector growth • **Government & NGO's:** for common messaging and implementation
SAC role	• **Funding:** relatively small investment in brand, comms platform and messaging • **Co-ordination:** to bring in regional influencers, private sector funding and • **Adaptation:** in-country teams modifying and implementing platform locally.

Market recommendations

'GROW' – simplifying growing crops and profits

'GROW'	A regional package of inputs, advice and tools to help farmers thrive
Drivers	• **89% of farmers want assistance with inputs** (e.g. seeds, equipment), **82% with logistics** and **91% with technical training**. • GROW will package this simply to encourage as many farmers as possible to participate.
Description	Centrally-developed design, approach and engagement with regional/ international suppliers. Locally-developed crop-specific GROW packs to include: • **Production:** Seeds, fertiliser, pesticide etc. package developed with local input suppliers for selected sub-sectors. Equipment add-ons (e.g. irrigation) to improve planting & yields through local suppliers in pack. Simple, scalable kit for farmers to get started with new crops. • **Logistics:** Storage (e.g. through refrigerated warehousing providers), packing and transportation (e.g. shared services) add-ons where possible to reduce costs, facilitate access to markets and minimise post-harvest losses. • **Knowledge:** Online technical assistance platform with repository of best practice and crop-specific how-to guides and links to support functions locally. • **Implementation:** Pack sales through local suppliers, regional execution of online platform
Partners	• **Private sector**: Regional and local input/ equipment/ logistics suppliers • **Government & NGO's:** For funding, specific technical support
SAC role	• **Funding:** development of packs and knowledge base with regional/ local suppliers. No direct involvement in subsidy (other than possibly initial launch) or sales of products. • **Co-ordination:** to ensure value for money and appropriate tech support & varietals. • **Adaptation:** in-country teams modifying and implementing platform locally.

Market recommendations
'STEP UP' – from good to great

'STEP UP'	Producing, marketing and selling to high-value markets
Drivers	• **91% of women in agriculture** want assistance to **access new markets**. However, penetrating new markets sustainably and profitably is both risky and complicated. • STEP UP will provide the commercial, marketing & quality tools for farmers to take this step.
Description	Toolkits developed regionally and adapted and implemented with the private sector and business support organisations locally: • **Quality:** GLOBAL GAP, HACCP, SQF packages for implementation as required through a portfolio of selected quality consultants/ partners/ government institutions, and collaboration with local Bureaus of Standards for existing quality standards • **Marketing:** Common approach to marketing including Social Media best practice and co-operative platforms to reduce costs. Regional women-sourced certification and branding. • **Production:** Identification of potential outsourced models for processing • **Sales:** Regional and local identification of potential buyers and construction of database of requirements, links and potential for co-operative access • **Implementation:** Through local country teams and business support organisations.
Partners	• **Private sector**: Quality consulting, Social media (e.g. FB), Larger buyers • **Government & NGO's:** Bureau of Standards, Business support programmes as appropriate
SAC role	• **Funding:** Development of toolkits with regional and local private sector experts/ suppliers. Branding and certification regionally where it shows potential positive ROI. • **Co-ordination:** To ensure local suppliers and BSO's are selected carefully. • **Adaptation:** in-country teams modifying and implementing platform locally.

Sustainable Agriculture recommendations
'SMART' – sustainable climate activities in agriculture

SMART	Frame Sustainable Agriculture practices that work for women and youth
Drivers	• **Women and youth are much more vulnerable to crop failure** and **reduced income** from the impact of climate change due to smaller plots vulnerable to flooding, and limited information and finance
Description	See Sustainable Agriculture in the Caribbean report for full background and details. Create overarching regional plan for sustainable agriculture with local execution. Recommendations will intersect a number of SAC programmatic areas. • Engagement with women and youth to understand current and suitable sustainable practices (ENGAGE) • Regional review, benchmarking and plans to influence Climate Plans and Policies (UNITE) • Support women and youth crop, water and land management production and practices (slides 27-30) • Farmer Field School approach for women and youth for successful adoption and use • Use of climate resilient varietals/ breeds and expanding the role of women and youth in supply (GROW) • Leveraging existing resources, organisations and funds and local execution) (see next slide) • Explore use of data and communications apps and tools (INSPIRE)
Partners and Funds	• See next slide
SAC role	• Ensure focus on sustainable agriculture and realizing the benefits for women and girls including • Fund experts as needed and demo plots/ materials to kick-start activities

Sustainable Agriculture recommendations
'SMART' – sustainable climate activities in agriculture

SMART: collaborations with organisations and funds	
Research and Tech Assistance	Regional: CARDI, IICA, FAO Ministry of Agriculture agencies and extension officers (see Stakeholder map per country)
Climate Smart Expertise	• International Centre for Tropical Agriculture (CIAT) • Agricultural Research Centre for International Cooperation (CIRAD): Elisabeth Claverie (CEO)
Potential Collaborations	World Wildlife Fund and International Union for Conservation of Nature (IUCN): agroforestry Partnerships for Forests (P4F): Acai development in Colombia (Luis Rios)
Farmer Groups	WINFA, farmer/ community groups for resilience and post shock 'bounce back' (eg Dominica)
University/ College	Eg. University of the West Indies, Eg. Sir Arthur Lewis Community College (St Lucia) Centre of Agriculture research of the Anton de Kom University of Suriname (CELOS) eg cassava
Private Sector	Explore potential investments in sustainable supply chains: TOPCO, De Molen, Grace Foods etc
Funds:	• Local funds eg Environmental Foundation of Jamaica, Suriname SCSD (see stakeholder maps) • UNDP GEF Small Grants Programme: climate change adaption grants • Green Climate Fund (GEF), United Nations Convention on Climate Change (UNCC) REDD+ programme, Inter-American Development Bank and Caribbean Climate-Smart Accelerator
Insurance	• Influence accessibility and gender responsiveness of insurance products eg Livelihoods Protection Policy (LPP), a parametric index-based micro insurance product available in St Lucia and Jamaica from Caribbean Policy Centre and Munich Climate Insurance • Currently distributed through social aggregators like credit unions, farmers cooperatives etc

GBV Recommendations

'SAFE' – integrated wellbeing for women & youth

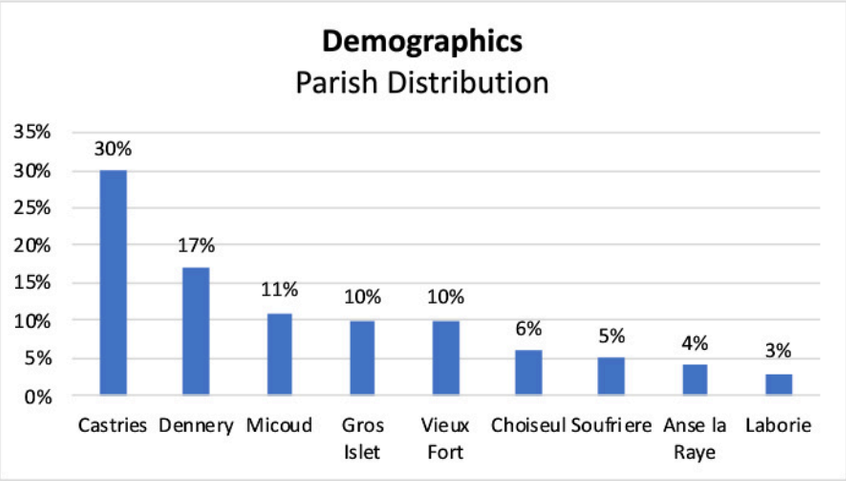
SAFE	Integrating the wellbeing of women and youth into all activities
Drivers	• **88% women want to improve their safety** (including concerns about GBV) • St Lucia and Guyana (97% and 91%) and lower in Suriname (75%) illustrates clear problem • **>40% women in Guyana and Jamaica** concerned how they would be with increased income
Description	Safety and wellbeing against GBV are incorporated into other recommendations (to mainstream thinking into policy, programmes and products. These include: • Develop a proactive **Do No Harm mechanism including conducting focus groups with women and youth** to explore unintended health consequences and solutions (ENGAGE) • Review of policies that protect against gender-based violence and sexual harassment (UNITE) • Integrate couple-based programmes into agricultural trainings that aim to shift intra-household dynamics and teach communication, negotiation and conflict management skills (BUILD and BOOST) • Engage men and boys in education and communications to counter GBV as an acceptable norm • Establish proposed approach to GBV referral pathways and partner with local, experienced Violence Against Women and Girls (VAW) service providers to refine in local context
Partners	• **Private sector**: • **Government:** Ministries of Gender Affairs, Caricom Gender Equality Strategy • **Regional/ influential NGOs:** Women's outreach organisations • **Referral services:** See list of referral services by country in Appendices Folder
SAC role	• Represent the wellbeing of women and youth across multiple, intersecting interventions • Facilitate engagement with regional and local VAW agencies • Fund appropriate communication campaigns to support to address social norms

St Lucia
Vegetables and Roots & Tubers

Country	St Lucia	
Sub-sector 1	Vegetables	4.22 score
Sub-sector 2	Roots & Tubers	4.21 score

1. Research
Key findings

St Lucia farming is spread across rural parishes and the population centre around Castries. Assistance with inputs and financial services is key in St Lucia and this drives high acceptance of mobile money and services. Few are concerned about negative implications from earning a higher income.



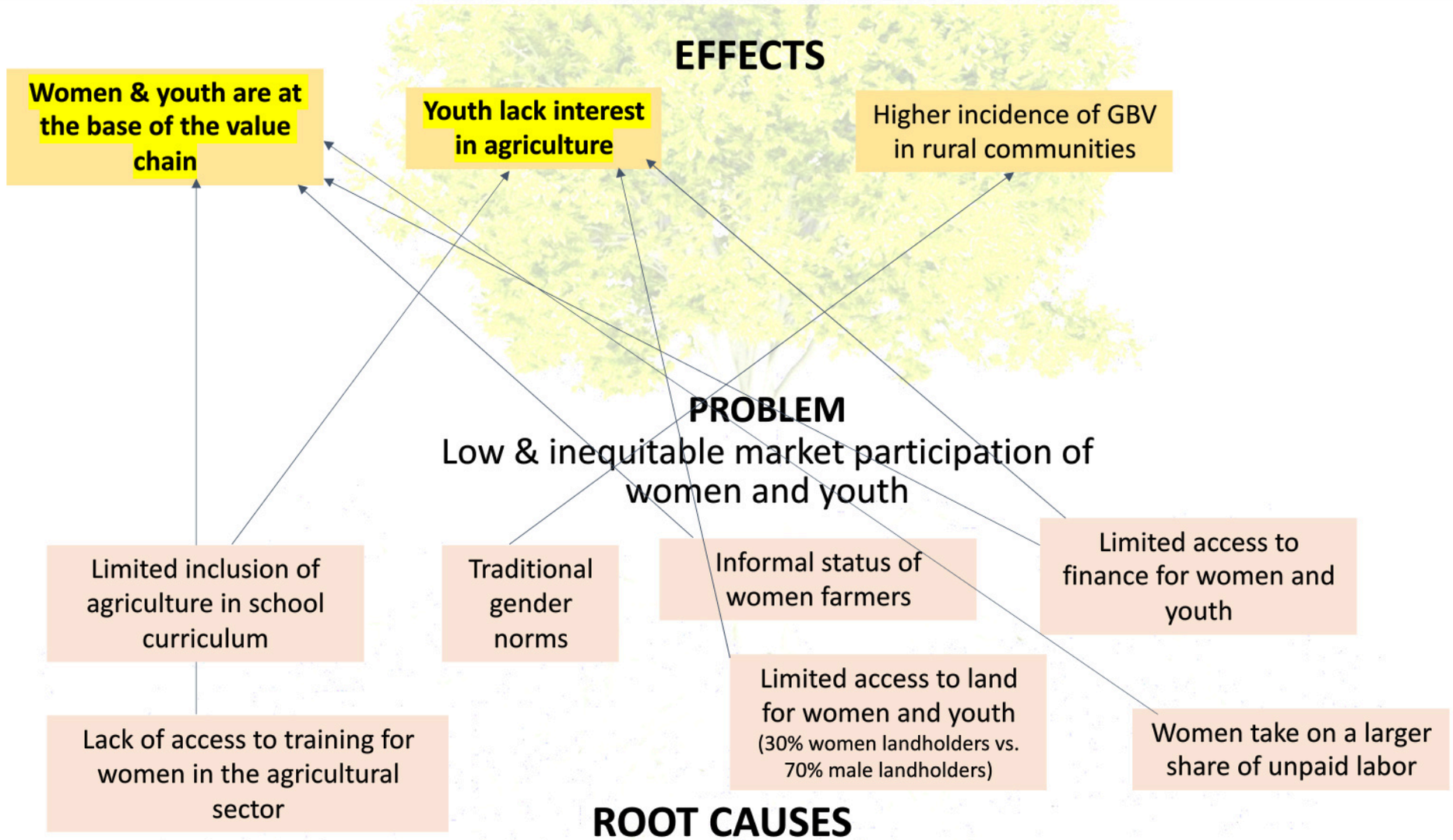
Q19 Work in agriculture	
I would use my mobile for payments, pricing etc if it was simple and cheap	95%
I worry about how I would be treated if I earned a higher income	8%

Q21 What would help your work in agriculture most?	ST LUCIA	
Assistance with tools, machinery or inputs	99%	MARKETS
Help to access new markets	98%	
Access to cheap loans	98%	ACCESS
Good technical training	97%	MARKETS
Help to improve personal safety	97%	RESILIENCE
Help to reduce theft	97%	
Access to easy banking services	92%	ACCESS
Access to affordable insurance	89%	
Help with transportation	88%	
Access to more land or facilities	88%	
Help to own my own land	86%	
Assistance with childcare or elderly	62%	

Assistance with inputs and markets key to farmers

Access to easy banking and insurance more important in St Lucia than the region highlighting issues with financial services

2. Root cause analysis
Low & inequitable participation in agriculture



Common Effects across all SAC countries

2. Root cause analysis

Understanding root causes in more detail

Root Causes	Context	Effects
Lack of access to training for women in the agricultural sector	According to the 2016 Report on National Living Conditions in St. Lucia, agriculture remains an important part of the productive sector, 21% of the labour force participates in this sector but disaggregated data shows that 9.7% of women are employed in the sector vs. 19% of men. In terms of skilled workers, 2% of women are categorized as skilled vs. 8% of men	**Women & youth are at the base of the value chain**
Traditional gender norms	• Traditional gender roles leave women largely responsible for 'reproductive' work, which allows them less time to pursue 'productive' employment and business opportunities. • At the root of GBV are harmful gender stereotypes that identify specific, rigid roles for men and women in the society resulting in barring participation in certain economic or professional areas	**Higher incidence of GBV in rural communities**
Informal status of women farmers	There are about twice as many male farmers as female farmers, as women are often not counted in official statistics as their work might be unpaid on family farms or subsistence agriculture	**Women & youth are at the base of the value chain** **Youth lack interest in Agriculture**
Limited access to land for women and youth (30% women landholders vs. 70% male landholders)	The majority of both female and male holders were over the age of 35, with a significant proportion over the age of 65. In addition, while there is no institutionalized gender inequality in relation to land tenure, female holders had more restricted access to land than male holders, and male holders had more access to and use of agricultural machinery than their female counterparts	
Women take on a larger share of unpaid labor	Engagement in unpaid care of children and persons with disabilities disabled, ill and elderly family members are barriers to employment for women in the agricultural the workforce	
Limited access to finance for women and youth	Lack of female and youth land ownership and tenancy becomes important in matters of accessing credit and finance as more women lack the necessary documentation (land deed/title) that is needed by many lending institutions to facilitate needed loans. In this regard, more men own more agricultural equipment, inclusive of trucks/vans, water tanks, pumps and sprinklers etc. than their female counterparts	

3. Markets

Mapping the St Lucia Vegetable and Roots & Tubers markets

Increasing involvement in nurseries and seedling production

- Women often on family farm not lead
- Ageing farmers

- Some washing, chopping and packing of vegetables
- Flours (dasheen, sweet potato)

- Women vendors/ middlemen but limited by access to finance and transport

Older women vendors selling produce particularly in Castries markets

Suppliers → **Farmers** → **Processors** → **Distributors** → **Buyers**

Suppliers

- CARIMEX St. Lucia
- CaribSeed Ltd.
- Groo Centree
- WIZO
- Tropical Farm Supplies
- Renwick & Co.
- M&C Home Depot
- Cox Farms (Crystal Cox) – resilient dasheen

Farmers

Farmer groups including:

St. Lucia Network of Rural Women (RP and AP) **100**

Ladelin Women's Farmers (RP) **20**

Belle Vue Farmer's Cooperative (RP) mainly men **300**

Black Bay Farmers Cooperative (RP) **40** mainly ageing men

Helen's Daughters (RP and AP) **120**

Grace Farmer's Cooperative (RP) **TBC**

Ti Colon/Barre St Joseph Women Farmers (RP) **50**

St. Lucia Network of Rural Women (Micoud and Babonneau)

Roots & Tubers only: Emerald Foods Cox Farm

Farmer Groups (cont.):

Association of Market Vendors and Agricultural Producers. (V, RP) Mainly women vendors **TBC**

Youth Agricultural Entrepreneurship Project: m/f between 18-35 years (RP) **150**

Roadside Vendors (RP) **TBC**

St. Lucia Agriculture Forum For Youth (SLAFY) **TBC**

Processors

St. Lucia Network of Rural Women (Micoud and Babonneau)

Roots & Tubers only: Emerald Foods Cox Farm

Distributors

St Lucia Marketing Board

Trans Caribbean (Suzy's)

Massy Distribution (through Massy Stores – early stages)

Goddards Enterprise Distribution (GEL)

Peter's & Co

Buyers

Local Markets:
Castries market
Farmers markets

Food Service:

- Hotels
- Restaurants
- Catering Companies

Supermarkets:

- Massy Stores (*Dunstan Demille)
- Trans Caribbean (Suzy's)
- Glace Supermarket
- Dilly's Supermarket
- Eroline's Supermarket

Exports:

- Export St Lucia
- Perineau Exports

Key:

- Size of arrow represents relative involvement of women at different stages in the value chain.
- Information is from internal mapping workshop, not formal survey

Potential partner to kick start initial collaborations

RP = Raw Production, **AP** = Agro-Processing, **V**= Vendors, TBC/ Number = members in group, * = key stakeholder and supporter of women and youth

3. Markets

General background to market pricing and variables

Examples of variables that can assist women and youth/ farmers:

- ↓ cost of land
- ↓ input prices
- ↑ climate resilience
- ↑ efficient planting
- ↓ cost packaging
- ↓ cost storage
- ↑ business training

- Market intelligence
- ↑ Quality
- ↑ Quantity
- ↑ Standards
- Offtake Contracts
- Seasonality (Glut/ Scarcity
- Import price

Ability to **minimise input costs**, labour and all growing and post-harvest costs, and **secure highest possible pricing**

- Distance to market
- Vehicle ownership
- Shared vehicles
- Improved infrastructure
- Fuel costs

- Market Intelligence
- Buyer requirements
- Local v municipal pricing
- Curfews and restricted selling (COVID)

Key cost and pricing elements for smallholder farmers:

Production Cost =

All costs associated with the primary product:

- Inputs
- Labour
- Storage
- Packing/ crates

Farm Gate Price =

Price charged to customer who buys from the farm :

- Non-contract (spot price)
- Contract price
- Channel pricing (eg retail, hotel)

Farmer Cash Margin =

Cash received from farm gate sale less cost of production

Farmer % Margin =

Cash margin as a % of farm gate price

Distribution Costs =

Cost of transportation to market/ customer (bus, van hire, fuel etc)

Wholesale Price =

Price charged in local markets and/ or **lowest price delivered to channel customer (retail, food service etc) in bulk**

3. Markets

St Lucia production costs & market pricing

Production & Pricing USD/KG	Vegetables				Roots & Tubers	
	Lettuce	Cabbage	Tomatoes	Bell Peppers	Sweet Potato	Dasheen
Production cost						
farm costs	$ 1.30	$ 0.56	$ 0.51	$ 1.34	$ 0.40	$ 0.31
Local Market channel						
cash margin (av)	$ 0.58	$ 0.11	$ 0.83	$ 0.35	$ 0.37	$ 0.45
% margin (av)	**31%**	**17%**	**62%**	**21%**	**48%**	**59%**
farm gate price	$ 1.88	$ 0.67	$ 1.34	$ 1.69	$ 0.77	$ 0.77
distribution	$ 0.34	$ 0.34	$ 0.34	$ 0.34	$ 0.20	$ 0.20
market price	$ 2.22	$ 1.01	$ 1.69	$ 2.04	$ 0.96	$ 0.96
Retail channel						
cash margin (av)	$ 0.76	$ 0.77	$ 1.94	$ 1.42	$ 1.07	$ 0.81
% margin (av)	**37%**	**58%**	**79%**	**51%**	**73%**	**72%**
farm gate price	$ 2.06	$ 1.33	$ 2.45	$ 2.76	$ 1.47	$ 1.12
distribution	$ 0.34	$ 0.34	$ 0.34	$ 0.34	$ 0.20	$ 0.20
retail price	$ 2.40	$ 1.67	$ 2.80	$ 3.10	$ 1.67	$ 1.32
Hotel channel						
cash margin (av)	$ 1.50	$ 0.95	$ 2.82	$ 2.15	$ 1.39	$ 1.47
% margin (av)	**54%**	**63%**	**85%**	**62%**	**78%**	**82%**
farm gate price	$ 2.80	$ 1.51	$ 3.34	$ 3.49	$ 1.79	$ 1.79
distribution	$ 0.34	$ 0.37	$ 0.34	$ 0.34	$ 0.20	$ 0.20
hotel price	$ 3.14	$ 1.85	$ 3.68	$ 3.83	$ 1.99	$ 1.98
Restaurant channel						
cash margin (av)	$ 2.84	$ 0.65	$ 3.22	$ 3.21	$ 1.04	$ 1.49
% margin (av)	**69%**	**54%**	**86%**	**71%**	**72%**	**83%**
farm gate price	$ 4.14	$ 1.21	$ 3.73	$ 4.55	$ 1.43	$ 1.80
distribution	$ 0.34	$ 0.34	$ 0.34	$ 0.34	$ 0.20	$ 0.20
restaurant price	$ 4.48	$ 1.55	$ 4.07	$ 4.89	$ 1.63	$ 2.00
Processing channel					**sweet potato fries**	**sweet potato flour**
cash margin (av)					$ 1.38	$ 0.80
% margin (av)					**78%**	**72%**
farm gate price					$ 1.78	$ 1.11
manufacturing cost					$ 2.67	$ 1.67
distributor @15%					$ 1.33	$ 0.83
retail margin @35%					$ 3.11	$ 1.94
processed goods price					$ 8.89	$ 5.56

This details the average production cost and pricing in the current market:

- **Production costs** are based primarily on CARDI, FAOSTAT and Caribbean data.
- **Local market pricing** is based on average delivered prices into local food vendors.
- **Retail pricing** is based on the average delivered price paid by MASSY Stores
- **Hotel & Restaurant pricing** is based on delivered prices paid by the food service sector
- **Processing prices** for added-value products such as sweet potato fries and flour are based on retail shelf prices less retail margins, average manufacturing costs and distribution.

3. Markets
St Lucia income opportunity

This table illustrates the key incremental income opportunities with the shortlist of products for St Lucia:

- Key opportunities are summarized (primarily 'import substitution' but also 'value-add' for sweet potato)
- The potential value of domestic production to meet demand is illustrated as 'domestic potential' and 'value'
- Based on average yields and acreage this translates to 'income' and 'profit potential' per farmer each year.

Women & Youth Income opportunity (USD)	Vegetables				Roots & Tubers	
	Lettuce	Cabbage	Tomatoes	Bell Peppers	Sweet Potato	Dasheen
income potential						
Key opportunity	import substitution	import substitution	import substitution	import substitution	domestic & value add	domestic & value add
import volume (MT)	112	552	102	135	807	733
import value (USD)	$ 211,270	$ 670,440	$ 235,690	$ 350,760	$ 1,380,059	$ 966,474
import value CIF (USD/kg)	$ 1.89	$ 1.21	$ 2.31	$ 2.60	$ 1.71	$ 1.32
domestic value (USD/kg)	$ 2.06	$ 1.33	$ 2.45	$ 2.76	$ 4.44	$ 1.12
total domestic potential (MT)	112	552	102	135	42	16
total domestic value (USD)	$ 230,471	$ 733,138	$ 250,316	$ 372,800	$ 186,667	$ 17,967
acreage per farmer (Acre)	0.50	1	0.5	1	1	1
yield per acre (kg)	5,720	8,139	12,366	3,620	9,326	10,117
yield (Kg p.a.) @10/20% wastage	2,288	6,511	4,946	2,896	8,393	9,106
Av Income potential per farmer p.a.	**$ 5,084**	**$ 6,583**	**$ 8,335**	**$ 5,899**	**$ 8,082**	**$ 8,768**
Av Profit potential per farmer p.a.	**$ 1,335**	**$ 738**	**$ 4,115**	**$ 1,025**	**$ 3,115**	**$ 4,137**
Farmer acceptance %	**84%**	69%	**76%**	**93%**	**81%**	**80%**

This suggests a focus on a number of key crops to maximise income potential per farmer:

- **Vegetables:** Tomatoes represent the obvious crop due to high profitability, possibly with lettuce
- **Roots & Tubers:** Both sweet potato and Dasheen represent traditional, high-profit crops

3. Markets
St Lucia channel mapping

Within this picture, segmentation shows that annual profit potential (in USD per acre) ranges very widely by channel with **restaurants hotels** and **processing** showing the strongest opportunities for women and youth:

Women & Youth Profit opportunity by channel (USD/ acre)	Vegetables				Roots & Tubers	
	Lettuce	Cabbage	Tomatoes	Bell Peppers	Sweet Potato	Dasheen
Market	$ 3,339	$ 922	$ 10,286	$ 1,282	$ 3,461	$ 4,597
Retail	$ 4,355	$ 6,288	$ 24,026	$ 5,143	$ 10,023	$ 8,194
Restaurant	**$ 16,261**	$ 5,323	**$ 39,827**	**$ 11,605**	**$ 9,678**	**$ 15,089**
Hotel					**$ 12,994**	**$ 14,901**
Processing					**$ 12,883**	$ 8,074

However, quality requirements and logistics (e.g. transport, storage or packing) costs vary widely by channel and customer and volumes (sales) and price volatility are equally variable by channel & individual customer:

Women & Youth Channel constraints	QUALITY	LOGISTICS	VOLUME	VOLATILITY
Market	L	L	H	L
Retail	M	M	H	L
Restaurant	H	M	L	M
Hotel	H	M	L	M
Processing	M	H	M	L

- **Local market** pricing is often lower than other channels but volumes are significant and costs to serve are low.
- **Retail** brings a level of quality expectation but volumes are also significant given the dominance of Massy.
- **Hotels & Restaurants** show much higher pricing than other channels but quality requirements and costs are high
- **Processing** (fries and flour) represents a real opportunity but requires significant investment in equipment and facilities

Interventions and will be dependent on the appetite for risk, cost and investment from partners and the farmers themselves. In St Lucia, a combination of higher value **vegetable** and **roots & tuber** sales into **hotels & restaurants** with longer term, lower value **retail sales** into Massy would make sense as a portfolio approach.

4. Engagement
St Lucia Stakeholder and Supporting Functions

Supporting Functions:

Land Use & Ownership
Land ownership sis still predominantly male.
2007 Ministry of Agriculture Census:
9,972 holders legal land holders
6,894 were males
2,906 were females.

Infrastructure:
Agro-processing plant in Babonneau (vegetables, citrus, mangoes and root crops) 2011 HACCP certified

Finance & Control:
CDB assessment:
Men use loans more than women for farming
Massy Supermarkets
XCD 5K loans for suppliers
Vieux-Fort Credit Union
Less stringent loans to farmers
St Lucia Development Bank
Up to XCD 50K YEEF grant

Stakeholders:

Investors

Global Environment Facility Small Grants Programme United Nations Development Programmes
Climate change adaption grants
US$5K – US$150K

Research and Capacity Building

CARDI
R&D, tech assistance and post harvest support
Drought resistant crops (inc dasheen)

St Lucia Development Bank
Youth Enterprise Equity Fund
Up to ECX 50K grant funding

IICA
Support St Lucia Network of Women's Producers (agri-processing cassava and sweet potato)

Education and Community Groups

Sir Arthur Lewis Community College (SALCC)
Agricultural entrepreneurship and Climate Smart Farm demonstration sites and land

James Belgrave Microenterprise Fund (Belfund)
Administered by Ministry of Equity, Social Justice, Youth Development, Sports and Local Government
59% female clients
Up to XCD 30K
Low rate loans
Cross-sector investments

Ministry of Agriculture, Fisheries, Planning, Natural Resources and Cooperatives
Capacity building, production technologies etc

St Lucia Boys Training Centre
50 juvenile boys and agriculture land

Government Ministries

Ministry of Agriculture
Extension officers (training and support)
Draft Agricultural Policy Framework

St Lucia Crisis Centre
Agricultural programme (2020) for 20 victims of domestic abuse

Helen's Daughters
120 farmers, 300 affiliates
Sustainable ag and business

St. Lucia Hotel & Tourism Association (SLHTA)
Financial support, and connections to hotels

Women and Youth Farmers
- Groups
- Registered/ unregistered

Sage x National Skills x SALCC
Youth and smart agriculture skills

Upton Girls Centre
25 girls (11 – 18 years)

Export St Lucia
CEO Sunita Daniel (Key Stakeholder)

Taiwan Technical Assistance Mission
Seven crops project

Junior Achievement
Youth in Agriculture

Climate Smart Agriculture
Eg shade houses, mulching, hydroponics, climate resilient seedlings, natural soil conservation, insurance

Technology
Guru Market Place
i-Farm app
Penny Pinch (mobile payments service)

Inputs/ Machinery eg
- CARIMEX St. Lucia
- CaribSeed Ltd.
- Groo Centree
- WIZO
- Tropical Farm Supplie
- Renwick & Co.
- M&C Home Depot

COVID 19
UN partnered with Government to provide support to those on welfare (end Nov 2020)

Childcare:
Limited facilities and a barrier to participation particularly for younger women

***Details of key contacts in Mapping excel files**

5. Sustainable Agriculture
Climate impact on crops

	↑ or ↓ rainfall	↑ temperatures	High humidity	↑ sea levels and salinity in soil
Lettuce (St Lucia)	• ↑ destruction of crop in open fields • soil erosion and landslides on elevated areas	• Wilting and heat stress • Early maturation and ↓ crop duration • Unusable crops: due to bolting, loss of colour and bitterness	• Rapid growth rates • Tip burn • Calcium deficiencies	
Cabbage (St Lucia)	As above	• Decline in seed production • Lower dry matter content • Lower yields	↑ Pests: cabbage budworm, cabbage looper, cabbage wh ite butterfly, diamond back moth, fall armyworm and leaf miners	
Bell Peppers (St Lucia)	As above	• Vulnerable to pest infestations due to high transpiration rates in germination and transplanting	Late Blight, Fusarium Wi Bacterial Wilt	Crop does not perform well in saline conditions
Tomato (St Lucia)	• Impacted by drought conditions • Risk of flooding	• Require high lands that are lower in temperature		
Sweet Potato (St Lucia)	• Less impacted by hurricanes (underground) • Can be grown on marginal ground • Increases potato weevil will impact yields particularly in droughts	Positive change: • Increased biomass (32-37%) with 2.8% increase in temperature • Increased yields (2050 and 2070 St Lucia CARIBSAVE climate model		
Dasheen (St Lucia)	• High moisture plant will not tolerate drought well (high stress)			Negative impact

6. Recommendations

Detailed recommendations for women and youth

Suppliers → Farmers → Processors → Distributors → Buyers

			POTENTIAL PARTNERS
ACCESS	FINANCE ('BUILD')	• Support finance and insurance companies to design and offer relevant, accessible low cost products to connect with the women and youth that need them. This should include access to non-traditional finance, and avoid existing barriers to borrowing such as lack of land or collateral eg mobile lending T • Tailored training for women and youth to include in financial literacy and business development and be linked to climate resilient farming practices and secure finance and insurance products	• St Lucia Development Bank • Vieux-Fort Credit Union (lower rates) • Massy (loans to farmers) • IICA/ IUCN (micro finance) • FAST • LPP Insurance (tbc) • Export St Lucia • MoA and National Agricultural Policy • Helen's Daughters
	INCUBATOR ('BOOST')	Implement a dynamic, focused Public Private 'incubator model' with to support existing organizations and value-chains to scale, strengthen and engage new farmers: • Access to finance, tools, inputs, training and land • Influence access to land through land banks or agro-parks to lease crown or unutilized land at affordable rates and enable women and youth to scale/ diversify	
	TRAINING ('INFORM')	Included in Finance, Climate and Quality and Quantity sections including Farmer Field Schools	
ENGAGEMENT	PARTICIPATE ('INSPIRE')	• National campaign to interest women and youth in agriculture as a profession (multi-media) • Engagement activities such as Farmer Exchange ('experience life on a farm') and Lead Farmer/ Mentorship programmes in the relevant value-chain. Demonstration plots for community engagement • Reframe agricultural work as a professional undertaking to increase youth involvement through revision of school curriculums, training, social media strategies, school gardens and agricultural youth clubs	• MOA • SLU Hotel & Tourism Ltd • Co-operatives • St. Lucia Network of Rural Women • Branding/ marketing agencies • SAC Gender Experts
	DATA ('ROOTS')	Explore market pricing & buyer access through the Market Intelligence platform Guru, and Virtual Ag Clearing House (SLU Hotel and Tourism), and MoA to collect and publish current cost and price data	
	POLICY ('UNITE')	Detailed review of content and budgets of existing policies including agriculture, employment and labour as well as gender-based violence, formulate detailed recommendations and benefits of changes to incorporate women and youth. Engage key government decision makers and support of Gender Affairs	

6. Recommendations

Detailed recommendations for women and youth

		Suppliers	Farmers	Processors	Distributors	Buyers	POTENTIAL PARTNERS
REDUCE COSTS ('GROW')	INPUTS	• Encourage deals with input suppliers • Organise design and distribution of input starter pack with key suppliers • Explore expansion into seedling production					• Eg Cox Farms (Crystal Cox) • IICA • St Lucia Network of Rural Women
	EQUIPMENT	• Explore community leasing/ use of assets such as machinery eg solar tractors, agro-processing eg Babonneau • Local production of eg shade houses, hydroponic equipment					
	LOGISTICS	• Explore cost-effective storage and transportation to market such as van hire, deals with bus companies or empty trucks on routes through growing to Castries/ other markets. • Explore potential for agro-tourism for cooperatives/ areas for women and youth (bring market to farmers)					• Transport Ministry • Bureau of Standards • Massy • Helen's Daughters
INCREASE INCOME ('STEP UP')	QUALITY	• Publish minimum quality standards and pricing required for channels to support farmer planning • Farmer Field Schools to build strong relationships and engagement with farmers • Strengthen collaboration with Massy for forecasting, value-add and loans to 'Massy Farmers'					

	COMMERCIAL	• Facilitate mutually beneficial trust and agreements with off takers with for women & youth
		• Explore Women's Sustainable Export Training packaging and labelling fund for local market development
		• Explore value-add opportunities depending on context, wants and needs eg:
		  • Pre-prepared vegetables eg washing, cutting, selection bags, labelling etc for Massy Gourmet
		  • Evaluate case for processing sweet potato fries by community groups for sale in supermarkets
		  • Potential for Dasheen exports to high-end markets (restaurants, hotels) across the region (tbc)
							• Massy Gourmet & Love St Lucia
							• Consolildated
							• St Lucia Export Agency (Sunita)
							• Emerald Farms

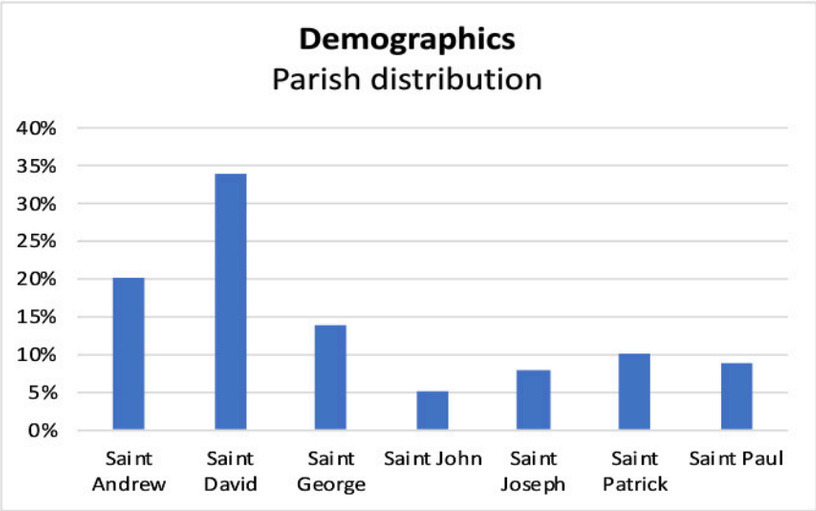
RESILIENCE	CLIMATE ('SMART')	Engage with women and youth to assess most suitable sustainable practices eg : • Cox Farms resilient St Lucia SSLYY Dasheen • Hydroponics to attract youth, support local small-scale production for women • Work with SALCC for engagement of youth and use of demonstration plots/ land					• CIAT assessment • SALCC demo plots • MoA, IICA, FAO • Cox Farms • Local techniques/ approaches
	SECURITY ('SAFE')	• Include GBV and psychosocial support referral information in all project activities thereby increasing access to services (available services, how to access, and where to go) – see detailed referral services doc					

Dominica:
Vegetables and Herbs and Spices

Country	Dominica	
Sub-sector 1	Vegetables	3.82 score
Sub-sector 2	Herbs & Spices	3.95 score

1. Research
Key findings

Dominica varies from the rest of the Caribbean with a larger portion of farmers paid in kind or not paid at all, concentrated in rural parishes including St Andrew and Saint David. This drives a need for assistance with inputs, training and transport and help to improve safety & security.



Q12 Are you paid for your work in agriculture?	
Yes, in cash	55%
Yes, in kind	25%
No, not paid	20%

Q21 What would help your work in agriculture most?	DOMINICA
Help to access new markets	94%
Assistance with tools, machinery or inputs	94%
Good technical training	93%
Help to improve personal safety	87%
Help with transportation	87%
Help to reduce theft	84%
Access to easy banking services	67%
Access to affordable insurance	64%
Access to cheap loans	61%
Help to own my own land	56%
Access to more land or facilities	53%
Assistance with childcare or elderly	39%

Market and production support critical

Less emphasis on financial services in Dominica

2. Root cause analysis
Low & inequitable participation in agriculture

EFFECTS

Youth lack interest in agriculture

Women remain at the base of value chain (engaged in small-scale production/subsistence farming)

Rural to urban migration of youth

Limited access to finance for women (89.7% to men vs. 10.3% to women)

PROBLEM
Low & inequitable market participation of women and youth

Vulnerability to natural disasters such as hurricanes

Loss of livelihoods because of disasters and pandemic

Limited inclusion of agriculture in school curriculum

Women charged with most unpaid (care) work, particularly older women (avg. 18 hrs per wk)

Limited support mechanisms for women and youth (incubators, new technologies)

Barriers to land ownership for women and youth

Agriculture is viewed as labour intensive with low returns

ROOT CAUSES

Common Effects across all SAC countries

2. Root cause analysis
Understanding root causes and effects in detail

Root Causes	Context	Effects
Limited support mechanisms for women and youth (incubators, new technologies)	Poor governance at communities and farmer organization level. Limited infrastructure to support investment and innovation. Poor structures and platforms for training and technology transfer. Women and youth indicated that barriers to full involvement in the sector include lack of mechanization which makes agricultural work extremely labor intensive and lack of access to credit to adequately develop agri-businesses.	**Youth lack interest in agriculture** **Limited access to finance for women (89.7% to men vs. 10.3% to women)**
Barriers to land ownership for women and youth	Women and youth in many circumstances do not own the land, they usually farm on crown land, lease land or make arrangements with landowners. Some barriers to land ownership include the cost of agricultural land, lack of finance to transfer respective lands in their own names and limited access especially for women.	**Youth lack interest in agriculture** **Women remain at the base of value chain**
Limited inclusion of agriculture in school curriculum	Research indicates that due to the absence of agriculture in the school curriculum, boys/young men and girls/young women are not exposed to the agricultural field and further, to possible employment opportunities.	**Youth lack interest in agriculture**
Agriculture is viewed as labour intensive with low returns	Negative misconceptions of agricultural work as labour-intensive, especially in youth.	
Women charged with most unpaid (care) work	Women farmers confirmed that they tend to work more unpaid hours than men (at least 18 hours per week). As a result, women tend to prefer subsistence farming in order to balance unpaid care work and other duties.	**Women remain at the base of value chain**

3. Markets

Mapping the Dominica Vegetable market

Suppliers

- Women in sales roles in input suppliers
- Not many women in seedling production
- Organic inputs present an opportunity

Farmers

- Women in family farming
- Women go unnoticed if not in family farms
- Professionals entering farming post Maria and back garden schemes

Processors

- Women repackage and sell wholesale produce
- Most vegetables consumed fresh

Distributors

- Many women hucksters (pay well, small volumes)
- DEXIA higher volumes lower prices (Dexia CEO Paula Platsko)

Buyers

- Women vendors dominate Portsmouth and Roseau markets
- Women set up regular stalls near supermarkets

- Ministry of Agriculture
- Agri Sales
- 4D/4All
- Buzz Enterprises
- Do It Centre
- Astaphans

Farmer groups including:

- Morne Prosper Women in Agriculture (30 f/40)
- Penville Young Farmers' Group
- North East Women's Farmer Group
- Salisbury Women Farmers' Group
- Bellevue Chopin Organic Farmers Movement Inc.
- Rock Vegetable Farmers Group Bellevue Chopin Organic Farmers Movement Inc.
- Warner Farmers Group
- Warner Farmers' Group
- UNDP/JCCCP Farmers' Group

Hot pepper producers such as:

- Big G
- Sweet Rose Seasoning Pepper Sauce
- Karl's hot sauce

- Farmers
- DEXIA
- Dominica Hucksters Association
- Fine Foods Inc

National Markets

- Portsmouth, Roseau
- Other community markets)

Supermarkets

- Fresh Market
- Whitchurch
- S-SMART
- Greens
- Astaphans
- Lindo Mart
- Miniya's
- ACS

Hotels

- Kempinski
- Jungle Bay
- Fort Young etc

Restaurants (various)

National bodies:
Hospitals
Schools
Dominica State Prison

Exporters:
DEXIA
Dominica Huckster Association
Private Hucksters

Key:

- Size of arrow represents relative involvement of women at different stages in the value chain.
- Information is from internal mapping workshop, not formal survey

Potential partner to kick start initial collaborations – interest in engagement of women and youth

3. Markets

Mapping the Dominica Herbs and Spices market

Suppliers

- Women in sales roles in input suppliers
- Not many women in seedling production
- Organic inputs present an opportunity

Farmers

- Women in family farming
- Women go unnoticed if not in family farms
- Professionals entering farming post Maria and back garden schemes

Processors

Women drying produce and using as an ingredient in other products (eg skin care, teas)

Distributors

- Many women hucksters (pay well, small volumes)
- DEXIA higher volumes lower prices (Dexia CEO Paula Platsko)

Buyers

- Women vendors dominate Portsmouth and Roseau markets
- Women set up regular stalls near supermarkets

- Ministry of Agriculture
- Agri Sales
- 4D/4All
- Buzz Enterprises
- Do It Centre
- Astaphans

Farmer groups including:

- Grandbay Producers Cooperative
- Morne Juan / Grand Fond Organic Farmers group (@ 50% female)
- Bellevue Chopin Organic Farmers Movement
- Morne ProsperUNDP/JCC CP Farmers Group
- Warner Farmers Group

Seasonings eg:

- Jaydees Naturals
- Taste of Eden (green seasoning)
- KV Green Seasoning

Beauty, Health, Nutraceuticals:

- Dr Gail Defoe
- SURE
- Dominica essential oils and Spices Cooperative
- Heaven Scents
- Coal Pot
- Dominica Coconut Producers

- Farmers
- DEXIA
- Dominica Hucksters Association

National Markets

- Portsmouth, Roseau
- Other community markets)

Supermarkets

- Fresh Market
- Whitchurch
- S-SMART
- Greens
- Astaphans
- Lindo Mart
- Miniya's
- ACS

Hotels

- Kempinski
- Jungle Bay
- Fort Young etc

Restaurants (various)

National bodies:
Hospitals
Schools
Dominica State Prison

Exporters:
DEXIA
Dominica Huckster Association
Private Hucksters

Key:

- Size of arrow represents relative involvement of women at different stages in the value chain.
- Information is from internal mapping workshop, not formal survey

Potential partner to kick start initial collaborations – interest in engagement of women and youth

3. Markets

General background to market pricing and variables

Examples of variables that can assist women and youth/ farmers:

- ↓ cost of land
- ↓ input prices
- ↑ climate resilience
- ↑ efficient planting
- ↓ cost packaging
- ↓ cost storage
- ↑ business training

- Market intelligence
- ↑ Quality
- ↑ Quantity
- ↑ Standards
- Offtake Contracts
- Seasonality (Glut/ Scarcity
- Import price

Ability to **minimise input costs**, labour and all growing and post-harvest costs, and **secure highest possible pricing**

- Distance to market
- Vehicle ownership
- Shared vehicles
- Improved infrastructure
- Fuel costs

- Market Intelligence
- Buyer requirements
- Local v municipal pricing
- Curfews and restricted selling (COVID)

Key cost and pricing elements for smallholder farmers:

Production Cost →

=

All costs associated with the primary product:

- Inputs
- Labour
- Storage
- Packing/ crates

Farm Gate Price →

=

Price charged to customer who buys from the farm :

- Non-contract (spot price)
- Contract price
- Channel pricing (eg retail, hotel)

Farmer Cash Margin →

=

Cash received from farm gate sale less cost of production

Farmer % Margin →

=

Cash margin as a % of farm gate price

Distribution Costs →

=

Cost of transportation to market/ customer (bus, van hire, fuel etc)

Wholesale Price

=

Price charged in local markets and/ or **lowest price delivered to channel customer (retail, food service etc) in bulk**

3. Markets

Dominica production costs & market pricing

This details the average production cost and pricing in the current market:

- **Production costs** are based primarily on Dominica Ministry of Agriculture price build-ups
- **Contract/ Non-contract pricing** is farm-gate pricing from hucksters, wholesalers and middle-men.
- **Retail pricing** is based on the average delivered price paid by supermarkets in Roseau
- **Export pricing** is based on delivered prices paid by DEXIA for export

Production & Pricing USD/KG	Vegetables				Herbs & Spices				
	Onion	Tomato	Hot pepper	Irish potato	Ginger	Tumeric	Celery	Chives	Parsley
Production cost									
farm costs	$ 0.48	$ 0.76	$ 0.33	$ 0.83	$ 0.36	$ 0.36	$ 0.16	$ 0.30	$ 0.16
Contract sales									
cash margin	$ 0.95	$ 1.89	$ 0.41	$ 0.21	$ 1.48	$ 0.97	$ 1.67	$ 1.54	$ 1.27
% margin	**66%**	**71%**	**56%**	**20%**	**80%**	**73%**	**91%**	**84%**	**89%**
farm gate price	**$ 1.43**	**$ 2.65**	**$ 0.73**	**$ 1.04**	**$ 1.84**	**$ 1.33**	**$ 1.84**	**$ 1.84**	**$ 1.43**
Non-contract sales									
cash margin	$ 0.95	$ 1.89	$ 0.49	$ 0.29	$ 1.58	$ 0.97	$ 1.67	$ 1.54	$ 1.27
% margin	**66%**	**71%**	**60%**	**26%**	**81%**	**73%**	**91%**	**84%**	**89%**
farm gate price	**$ 1.43**	**$ 2.65**	**$ 0.82**	**$ 1.12**	**$ 1.94**	**$ 1.33**	**$ 1.84**	**$ 1.84**	**$ 1.43**
Retail channel									
cash margin	$ 1.63	$ 2.78	$ 0.56	$ 1.01	$ 1.89	$ 1.34	$ 2.35	$ 2.21	$ 1.94
% margin	**66%**	**72%**	**45%**	**50%**	**77%**	**66%**	**82%**	**77%**	**79%**
transportation	$ 0.34	$ 0.34	$ 0.34	$ 0.20	$ 0.20	$ 0.34	$ 0.34	$ 0.34	$ 0.34
retail price	**$ 2.45**	**$ 3.88**	**$ 1.22**	**$ 2.04**	**$ 2.45**	**$ 2.04**	**$ 2.86**	**$ 2.86**	**$ 2.45**
Export channel									
cash margin	$ 2.03	$ 2.98	$ 0.56	$ 1.01	$ 2.30	$ 1.34	$ 2.76	$ 2.62	$ 2.35
% margin	**71%**	**73%**	**45%**	**50%**	**81%**	**66%**	**85%**	**80%**	**82%**
transportation	$ 0.34	$ 0.34	$ 0.34	$ 0.20	$ 0.20	$ 0.34	$ 0.34	$ 0.34	$ 0.34
export price	**$ 2.86**	**$ 4.08**	**$ 1.22**	**$ 2.04**	**$ 2.86**	**$ 2.04**	**$ 3.27**	**$ 3.27**	**$ 2.86**

3. Markets
Dominica income opportunity

This table illustrates the key incremental income opportunities with the shortlist of products for Dominica:

- Key opportunities are summarized (primarily 'import substitution' but also 'export' for ginger and tumeric)
- The potential value of domestic production to meet demand is illustrated as 'domestic potential' and 'value'
- Based on average yields and acreage this translates to 'income' and 'profit potential' per farmer each year.

Women & Youth Income opportunity (USD)	Vegetables				Herbs & Spices		
	Onion	Tomato	Hot pepper	Irish potato	Ginger	Tumeric	Celery
income potential							
Key opportunity	**import substitution**	**import substitution**	**import substitution**	**import substitution**	**import & export**	**import & export**	**domestic**
import volume (MT)	254	12	22	132	232	29	28
import value (USD)	$ 343,006	$ 20,283	$ 22,719	$ 479,137	$ 629,630	$ 44,781	$ 60,169
import value CIF (USD/kg)	$ 1.35	$ 1.69	$ 1.03	$ 3.62	$ 2.71	$ 1.57	$ 2.15
domestic value (USD/kg)	$ 1.43	$ 2.65	$ 0.73	$ 1.04	$ 1.84	$ 1.33	$ 1.84
total domestic potential (MT)	254	12	22	132	116	29	28
total domestic value (USD)	$ 362,946	$ 31,845	$ 16,167	$ 137,771	$ 213,113	$ 37,948	$ 51,441
acreage per farmer (Acre)	1	0.25	0.25	2	0.25	0.25	0.25
yield per acre (kg)	8,094	12,366	8,499	9,326	4,599	4,139	4,231
yield (Kg p.a.) @10/20% wastage	6,475	2,473	1,700	14,921	1,035	931	846
Av Income potential per farmer p.a.	**$ 9,252**	**$ 6,563**	**$ 1,388**	**$ 16,752**	**$ 2,007**	**$ 1,236**	**$ 1,555**
Av Profit potential per farmer p.a.	**$ 6,133**	**$ 4,685**	**$ 833**	**$ 4,325**	**$ 1,635**	**$ 901**	**$ 1,416**
Farmer acceptance %	66%	**77%**	**74%**	61%	**90%**	**78%**	**88%**

This suggests a focus on a number of key crops to maximise income potential per farmer:

- **Vegetables:** Onions, Tomatoes and Irish Potatoes.
- **Herbs & Spices:** Ginger for export & Celery for the domestic market

3. Markets
Dominica channel profitability mapping

Within this broad picture, segmentation shows that annual profit potential (in USD per acre) ranges very widely by channel with **retail** and **export** showing the strongest opportunities for women and youth:

Women & Youth Profit opportunity by channel (USD/ acre)	Vegetables				Herbs & Spices		
	Onion	Tomato	Hot pepper	Irish potato	Ginger	Tumeric	Celery
Contract	$ 7,666	$ 23,425	$ 3,470	$ 1,942	$ 6,797	$ 4,005	$ 7,082
Non-Contract	$ 7,666	$ 23,425	$ 4,164	$ 2,703	$ 7,266	$ 4,005	$ 7,082
Retail	**$ 13,157**	**$ 34,338**	$ 4,725	**$ 9,446**	**$ 8,714**	$ 5,545	**$ 9,952**
Export	**$ 16,462**	**$ 36,863**	$ 4,725	**$ 9,446**	**$ 10,591**	$ 5,545	**$ 11,680**

However, quality requirements and logistics (e.g. transport, storage or packing) costs vary widely by channel and customer and volumes (sales) and price volatility are equally variable by channel & individual customer:

Women & Youth Channel constraints	QUALITY	LOGISTICS	VOLUME	VOLATILITY
Contract	L	L	H	L
Non-Contract	L	L	H	M
Retail	M	M	L	M
Export	H	M	H	H

- **Contracted** pricing is often lower than non-contracted but pricing and volumes are guaranteed
- **Retail** quality expectations are significantly higher than farm-gate or vendor requirements but pricing is much higher
- **Export** volumes are higher than in retail but standards can be much higher and, as such, pricing is generally superior.

Interventions and will be dependent on the appetite for risk, cost and investment from partners and the farmers themselves. In Dominica, a combination of higher value **vegetable** and **herbs & spices** sales into **retail** and **export** with longer term, lower value **contracted** sales would make sense as a portfolio approach.

4. Engagement
Dominica Stakeholder and Supporting Functions

Supporting Functions:

Land Use & Ownership
Women generally have access but rarely own the smaller plots of land. Men own larger plots and farms and are more involved in export
Kalinago Territory is 3,700 acres of land and passed down through families or special arrangements with other Kalinagoes

Infrastructure:
- **Limited community infrastructure** for women and youth
- **Limited feeder roads** post Maria
- Examples of infrastructure eg DEXIA:
- Roseau Packhouse
- Portsmouth Packhouse
- Oversight of main markets

Finance & Control
- **Fewer women apply for finance** eg only **775 females out of 3,345** applicants for World Bank funding
- Women and youth lack land and collateral to secure finance. Also shy away from additional commitments (AID Bank)
- Commercial bank reluctance to invest in agriculture due to the relatively high risk
- AID Bank, NDFD and Credit Union League able to provide some small loans and credit to farmers **BUT low uptake by women and youth** (AID bank interview)

***Details of key contacts in Mapping excel files**

Stakeholders:

Investors

Research, Development and Capacity Building

GEF Small Grants
Small grants for individuals and groups, grant writing workshops

University of the West Indies
Formal Research and Training in Agriculture

CIRAD
Agricultural research and experiments

Agriculture and Development Bank
financial support including loans for women in agriculture, up to XCD 35k with limited collateral, There is also a loan facility of XCD 10 min for loans to farmers

Dominica State College
Formal Research and Training in Agriculture

FAO:
Technical cooperation projects eg disaster management and climate smart agriculture

National Development Foundation of Dominica
Small loans and credit to farmers and agro-processors

CARDI
Agricultural Research, Experiments and Development

Credit Union League
Small loans and credit to farmers and agro-processors

IICA
Technology, innovation and support to farmers

National Bank of Dominica
Large loans to agriculture

Key Government Ministries and Agencies including:

Youth Development and Empowerment, Youth at Risk, Gender Affairs,
- Facilitates skills training, school agricultural programmes and support for youth entrepreneurs
- GBV advocacy, small loans for women in Agriculture

Community Development
Village councils house meetings, storage and advocate for more support

Education
Potential to link to school feeding programme and curriculum

Tourism
Linkages to agro-tourism and markets, linkages to hotels

Business and Export Development
Dominica Import Export Agency (DEXIA) provides training, input support and procurement of produce, grading, processing, reselling. Sell to local supermarkets, hotels and other customers.
Bureau of Standards technical support packaging, labelling, certification

Health
Eg Hospital feeding programme

Agriculture eg
Dominica Emergency Agriculture Livelihoods Resilient Programme supported by the World Bank
Extension technical assistance support programme

Climate Resilience Executing Agency of Dominica
Resilience training and support

Planning, Telecommunications and Broadcasting
Awareness and communications
Inclusion of agriculture and gender in policy making

Dominica Hucksters Association
Provide services to packaging material and facilitate packaging of fresh produce

Women and Youth Farmers
- Groups
- Registered/ unregistered

Climate Smart Agriculture eg
Indigenous techniques: drought tolerant crops, short harvest intervals, tolerant to flooding and pests

Technology
- National Bank of Dominica MoBanking
- Youth interested eg hydroponics, smart phones, rainwater harvesting

Inputs/ machinery e.g
- Agri Sales
- 4D/4All
- Buzz Enterprises
- Do It Centre
- Astaphans
- Ministry of Agriculture

COVID 19
- Limited access to markets (curfews)
- Women had to choose 'farm or home'
- Limited access to farms
- Opportunity to use on-line markets

Childcare:
- Ad hoc, expensive facilities
- Extended family key support
- Post Maria data shows 18 hours per week unpaid childcare

5. Sustainable Agriculture
Climate impact on crops

	↑ or ↓ rainfall	↑ temperatures	High humidity
Onion (Dominica)	Negatively impacted by drought	• speeding up bulbing • bolting and lower yields	
Irish Potato (Dominica)	• Crop decay: fluctuations in yield quality and quantity • Reduction in tubers per plant with low water in growing season	• Increased pest and diseases • Foliar development and delayed tuberization • ↑ Nos of smaller tubers per plant	
Celery, Chive and Parsley (Dominica)	• Parsley thrives in rich, well watered soils, and yields will decrease even in elevated areas of Dominica • Parsley should be shaded in tropical areas • Celery and Chives will react as above, with chives being slightly more tolerant of high temperatures		
Hot Pepper (Dominica)	• Droughts reduce nutritional uptake, infertility and reduced productivity • Dry periods cause fungi growth and stems to dry, wilt, and affect fruit production	• Increased susceptibility to diseases related to insects, fungi, bacteria and pest/nematodes	• Scotch bonnet susceptible to viruses, nematodes, fungi, bacterial wilt

6. Recommendations

Detailed recommendations for women and youth

Suppliers → Farmers → Processors → Distributors → Buyers

			POTENTIAL PARTNERS
ACCESS	FINANCE ('**BUILD**')	• Support finance and insurance companies to design and offer relevant, accessible low cost products to connect with the women and youth that need them. This should include access to non-traditional finance, and avoid existing barriers to borrowing such as lack of land or collateral eg mobile lending T • Tailored training for women and youth to include in financial literacy and business development and be linked to climate resilient farming practices and secure finance and insurance products	• Credit Unions • NDFD • GEF small grants • IICA/ FAO/ UNDP (microfinance and technical assist) • Dominica AID Bank • Insurance providers • Dominica Manufacturers Association (DMA) • MoA • DEXIA
	INCUBATOR ('**BOOST**')	Implement a dynamic, focused Public Private 'incubator model' with to support existing organizations and value-chains to scale, strengthen and engage new farmers: • Access to finance, tools, inputs, training and land • Influence access to land through land banks or agro-parks to lease crown or unutilized land at affordable rates and enable women and youth to scale/ diversify	
	TRAINING ('**INFORM**')	Included in Finance, Climate and Quality and Quantity sections including Field Schools	
ENGAGEMENT	PARTICIPATE ('**INSPIRE**')	• Reframe agricultural work as a professional undertaking to increase youth involvement through revision of school curriculums, training, social media strategies, school gardens and agricultural youth clubs • National campaign to interest women and youth in agriculture as a profession (multi-media) • Activities such as Farmer Exchange ('experience life on a farm') and Lead Farmer/ Mentorship programmes in the relevant value-chain. Demonstration plots for community engagement	• Ministries (Youth Dvp, Education, Agriculture) • 4H • UWI • DMA • Private sponsors eg Fine Foods? • Comms agencies • FAO, DEXIA
	DATA ('**ROOTS**')	Advocacy – think more broadly about wider engagement (local quality and pricing information)	
	POLICY ('**UNITE**')	Detailed review of content and budgets of existing policies including agriculture, employment, land and labour as well as gender-based violence, formulate detailed recommendations and benefits of changes to incorporate women and youth. Engage key government decision makers and support of Gender Affairs	

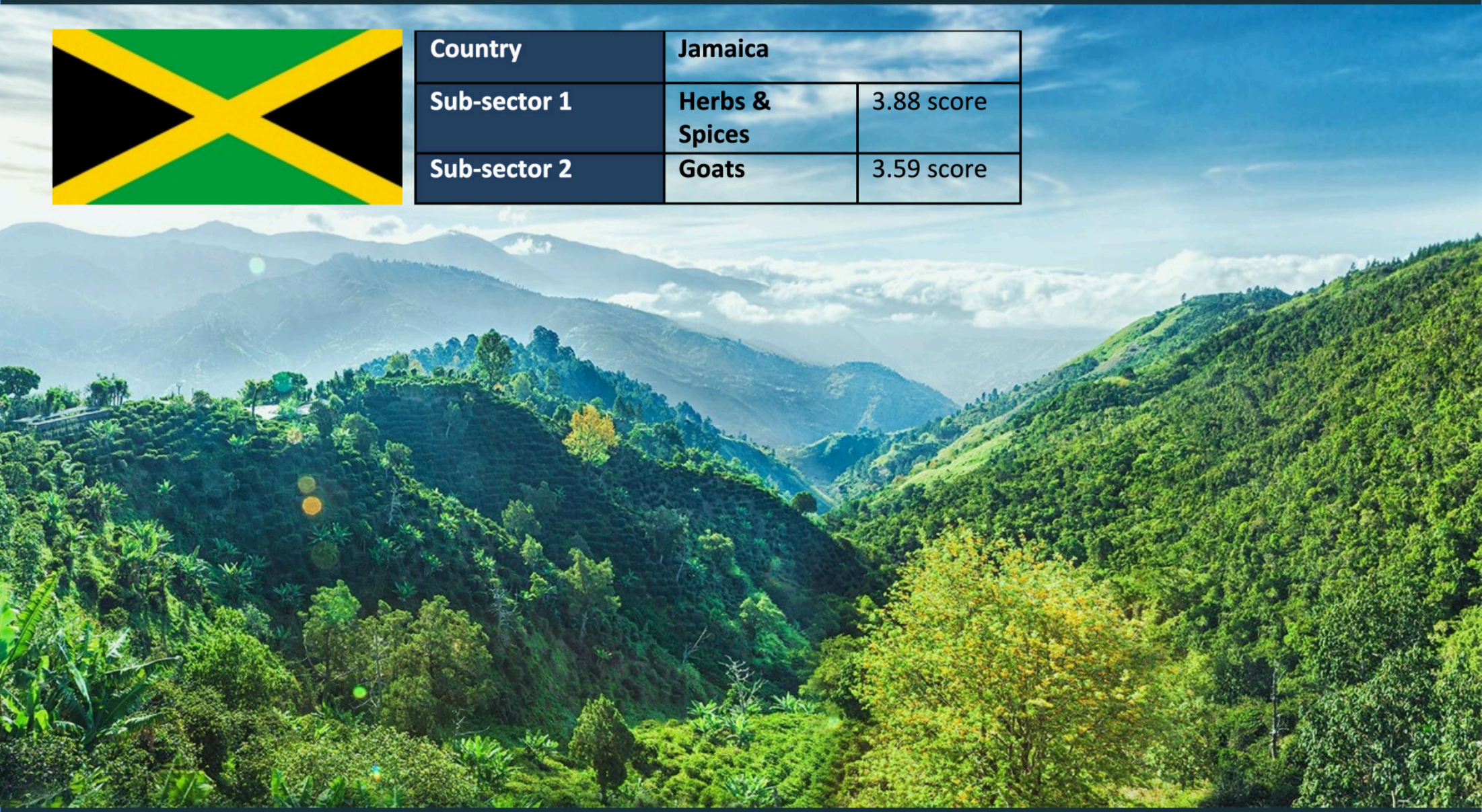
6. Recommendations

Detailed recommendations for women and youth

		Suppliers	Farmers	Processors	Distributors	Buyers	POTENTIAL PARTNERS
REDUCE COSTS ('GROW')	INPUTS	• Encourage deals with input suppliers • Organise design and distribution of input starter pack with key suppliers • Explore expansion into seedling production					• Eg Astaphans • IICA/ CARDI/ FAO • DEXIA • Ministry of Transport • Ministry of Tourism committee (farm visit and cooking)
	EQUIPMENT	• Explore community leasing/ use of assets such as machinery eg solar tractors, agro-processing eg DEXIA • Local production of eg shade houses, hydroponic equipment					
	LOGISTICS	• Explore cost-effective storage and transportation to market such as van hire, deals with bus companies or empty trucks on routes through growing to Roseau/ other markets. • Explore agro-tourism to bring customers to farmers					
INCREASE INCOME ('STEP UP')	QUALITY	• Offer DOM GAP training to all women and youth through extension services, to support shift in practices • Farmer Field Schools to build strong relationships and engagement with farmers • Strengthen collaboration with Massy for forecasting, value-add and loans to 'Massy Farmers'					• Collaborate with MoA for varietals and standards • Bureau of Standards • DEXIA, Hucksters Association, Fine Foods • Hotel • Women leadership eg Gail Defoe
	COMMERCIAL	• Facilitate mutually beneficial agreements with companies and food service sector for women & youth • Access to DEXIA facilities to encourage value-add activities, and turmeric and ginger exports to US • Explore value-add opportunities depending on context, wants and needs eg - Pre-prepared vegetables eg washing, cutting, selection bags, labelling etc to supermarkets, public sector - Engage successful women in herbs and spices processing (and Executive Member of Dominica Manufacturers Association) eg Gail Defoe to explore replicating/ franchising processing operation - Explore collaboration with Fine Foods for cold chain supply of vegetables and herbs as needed					
RESILIENCE	CLIMATE ('SMART')	Engage with women and youth to assess most suitable sustainable practices and attract new interest eg : • Organic farming, hydroponics, and climate resistant seedling production, • Work with 4H for engagement of youth and use of demonstration plots/ land					• MOA • IICA • CARDI • Astaphans
	SECURITY ('SAFE')	• Include GBV and psychosocial support referral information in all project activities thereby increasing access to services (available services, how to access, and where to go) – see detailed referral services doc					

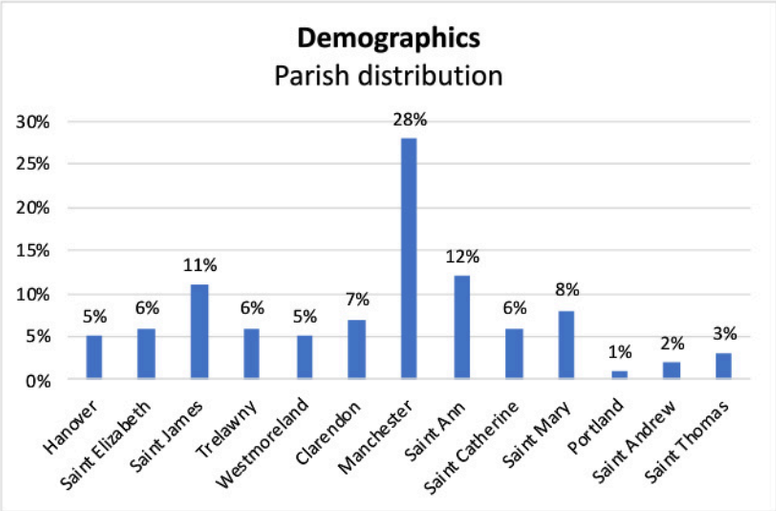
Jamaica:
Herbs and Spices and Goats

Country	Jamaica	
Sub-sector 1	Herbs & Spices	3.88 score
Sub-sector 2	Goats	3.59 score



1. Research
Key findings

Women are spread across agricultural parishes such as St James, St Elizabeth and St Ann but with a large number in Manchester in livestock. Land ownership is limited with 39% leasing and there is strong interest in markets, limiting praedial larceny and improving personal safety.



Q10 Land ownership	JAMAICA
Family/ Household land	45%
On leased land	39%
On personally owned land	21%
On garden plot at home	9%
Community/ Government land	2%

Q21 What would help your work in agriculture most?	JAMAICA	
Help to access new markets	95%	MARKETS
Good technical training	94%	
Assistance with tools, machinery or inputs	90%	
Help to improve personal safety	88%	RESILIENCE
Help to own my own land	88%	ACCESS
Help to reduce theft	83%	RESILIENCE
Access to affordable insurance	80%	ACCESS
Help with transportation	79%	
Access to easy banking services	76%	
Access to more land or facilities	72%	
Access to cheap loans	69%	
Assistance with childcare or elderly	64%	

Assistance with inputs, training & Markets key to farmers

Prevalence of GBV and crop/ livestock theft critical issues to address

2. Root cause analysis
Low & inequitable participation in agriculture

EFFECTS

Women not being adequately supported through programming

High incidences of GBV (increased during pandemic)

Challenges to access finance without collateral

Women lack access to opportunities (i.e. training)

PROBLEM

Low & inequitable market participation of women and youth

Traditional gender norms in household

Women viewed as commodity or property

Slow process of gender mainstreaming in designing and implementing agricultural policies

Informal status of women farmers (30% registered women vs. 70% men)

Limited access to land for women (89% male vs. 11% female-owned)

ROOT CAUSES

Common Effects across all SAC countries

2. Root cause analysis

Understanding root causes and effects in detail

Root Causes	Context	Effects
Slow process of gender mainstreaming in designing and implementing agricultural policies	The approaches adopted have not been gender-sensitive and as a result many programmes are not meeting the needs of women entrepreneurs including farmers. "Among the main challenges that women encounter are lack of an enabling environment that supports their need to balance business-related work and family caregiving responsibilities; limited access to affordable and gender-sensitive financial and non-financial services; markets and technology; and little time to participate in business networks."	**Women lack access and support to resources (i.e. training)**
Traditional gender norms in household	The country is characterized by harmful gender norms that often encourage violence as an acceptable way of solving problems. Approximately 1 in 4 women or 25.2% has experienced physical violence at the hand of a partner. Women in agriculture are more vulnerable and have experienced gender-based violence at the hand of praedial thieves. Female farmers expressed that the thieves are more likely to prey on them because they are deemed to be the weaker sex and usually do not have adequate security or weaponry to defend themselves.	**High incidences of GBV**
Informal status of women farmers (30% registered women vs. 70% men)	Most women are sole traders in microenterprises in the informal sector. Few women are involved in business networks that would provide much needed mentorship and support to access knowledge, skills and markets.	**Women lack access and support to resources (i.e. training)**
Limited access to land for women (89% male vs. 11% female-owned)	According to Jamaica's Rural Agricultural Development Authority (RADA), only 11% of agricultural land is owned by women. Legal titles to land or other property are required by most banks as collateral to approve agricultural credit, because of this, women receive fewer loans compared to men, despite their stronger track record of loan repayment.	**Challenges to access finance without collateral**

3. Markets

Mapping the Jamaica Herbs and Spices market

Suppliers

- Little involvement in seedlings
- Seed banks good opportunity

RADA
Agro-Grace
Bodles Research Station
Newport Fersan
T Geddes Grant

Farmers

- Women involved in family farms not head or registered farmer
- Larger scale on agro-farms

Farmer groups including:

Hot Pepper Farmers (RADA ABIS data) **291 women**

500 farmers of Ginger and Tumeric **125 women**

Jamaica Network of Rural Women Farmers **600 women members**

St Mary's Jeffery Town Farmer: @ 40 members, **20 women**

Guys Hill Group: @ **18 women**

Grace Kennedy Contract Farmers

Imagination Farms

A1 Farms

Other independent farmers

Processors

- Lots of local hot sauces and teas produced
- Limited scale due to lack of finance and buildings
- Women employed in larger processors

Large Firms:

- Grace Kennedy
- Walkers Wood
- Gray's Pepper
- King Pepper

Medium/ Small Firms:

- Spur Tree Spices
- Ashman Food Products
- Double Deuce Limited
- Stanmark Processors
- Tops Teas
- Linstead Market
- Carita (Rita Simes)
- Canco
- Central Food Packers Limited

Distributors

Higglers are mainly buying locally and selling in municipal markets (not farmers)

Ginger and Turmeric:

- Authentic Teas
- A1 Farm Production
- Top Rod Marketing

Buyers

- Women selling family farm produce in markets
- Women on agro-parks sell under contract. Relatively few due to higher leases.

Local Markets:

- Coronation Market
- Municipal Markets
- Airport Outlet
- Supermarkets

Companies including:

- Grace Kennedy (Maureen Denton)
- Spanish Grain Limited
- Glastonbury Purveyor Limited

Export:

- JACRA/ Export Division (main trader)
- Processors exporting (Grace etc)

Key:

- Size of arrow represents relative involvement of women at different stages in the value chain.
- Information is from internal mapping workshop, not formal survey

Potential partner to kick start initial collaborations – interest in engagement of women and youth

3. Markets
Mapping the Jamaica Goat Market

Some women in fodder production

- 18,203 women goat farmers (RADA)
- Mainly landless or smallholders

- Limited knowledge and finance for abattoir/ value-add meat activities
- Some bi-products (milk, cheeses)

Access limited by lack of knowledge, transport, finance

- Direct sales (local)
- Sales to local butchers
- Market meat stalls dominated by men

Suppliers → **Farmers** → **Processors** → **Distributors** → **Buyers**

Suppliers

RADA
Bodels
Hipro Genetics
Nutramix

Farmers

18,203 women goat farmers (out of 52,011 registered farmers)

Sheep and Goat Farmer Association

Jamaica Livestock Association

Unregistered small and medium farmers

St Catherine's Women Group

Processors

- Municipal Abattoir (all parishes)
- Grace Kennedy Abattoir (Westmoreland)
- Farmers' backyards
- Private Abattoirs

Distributors

- Meat markets
- Supermarket
- Loushushan Supermarket

Buyers

Municipal markets

Butchers

Supermarkets
Eg Loushushan Supermarket (meat and bi-products)

Other channels:
- Hotels
- Restaurants

Event Management Companies

Key:

- Size of arrow represents relative involvement of women at different stages in the value chain.
- Information is from internal mapping workshop, not formal survey

Potential partner to kick start initial collaborations – interest in engagement of women and youth

3. Markets

General background to market pricing and variables

Examples of variables that can assist women and youth/ farmers:

- ↓ cost of land
- ↓ input prices
- ↑ climate resilience
- ↑ efficient planting
- ↓ cost packaging
- ↓ cost storage
- ↑ business training

- Market intelligence
- ↑ Quality
- ↑ Quantity
- ↑ Standards
- Offtake Contracts
- Seasonality (Glut/ Scarcity
- Import price

Ability to **minimise input costs**, labour and all growing and post-harvest costs, and **secure highest possible pricing**

- Distance to market
- Vehicle ownership
- Shared vehicles
- Improved infrastructure
- Fuel costs

- Market Intelligence
- Buyer requirements
- Local v municipal pricing
- Curfews and restricted selling (COVID)

Key cost and pricing elements for smallholder farmers:

Production Cost =

All costs associated with the primary product:

- Inputs
- Labour
- Storage
- Packing/ crates

Farm Gate Price =

Price charged to customer who buys from the farm :

- Non-contract (spot price)
- Contract price
- Channel pricing (eg retail, hotel)

Farmer Cash Margin =

Cash received from farm gate sale less cost of production

Farmer % Margin =

Cash margin as a % of farm gate price

Distribution Costs =

Cost of transportation to market/ customer (bus, van hire, fuel etc)

Wholesale Price =

Price charged in local markets and/ or **lowest price delivered to channel customer (retail, food service etc) in bulk**

3. Markets

Jamaica production costs & market pricing

Production & Pricing USD/KG	Ruminants	Herbs & Spices			
	Goats	Hot pepper		Tumeric	Ginger
Variety		West Indies Red	Scotch Bonnet		
Production cost					
farm costs	$ 2.81	$ 0.78	$ 0.74	$ 0.40	$ 0.85
Farm gate channel					
cash margin	$ 1.08	$ 1.04	$ 1.51	$ 0.18	$ 1.83
% margin	**28%**	**57%**	**67%**	**0%**	**68%**
farm gate price	**$ 3.89**	**$ 1.81**	**$ 2.25**	**$ 0.58**	**$ 2.69**
Municipal market channel					
cash margin	$ 3.08	$ 2.26	$ 2.44		$ 4.08
% margin	**51%**	**74%**	**77%**		**83%**
distribution	$ 0.16	$ 0.16	$ 0.16		$ 0.16
municipal market price	**$ 6.05**	**$ 3.04**	**$ 3.18**		**$ 4.94**
Wholesale channel					
cash margin		$ 1.40	$ 2.16		$ 3.14
% margin		**64%**	**75%**		**79%**
distribution		$ 0.16	$ 0.16		$ 0.16
wholesale price		**$ 2.18**	**$ 2.90**		**$ 3.99**
Retail channel					
cash margin	$ 9.05	$ 1.18	$ 3.40	$ 0.46	$ 2.14
% margin	**75%**	**48%**	**72%**	**43%**	**57%**
processing	$ 2.81	$ 0.33	$ 0.44	$ 0.05	$ 0.60
distribution	$ 0.16	$ 0.16	$ 0.16	$ 0.16	$ 0.16
retail margin	$ 4.00	$ 0.81	$ 1.58	$ 0.35	$ 1.25
retail price	**$ 16.02**	**$ 3.26**	**$ 6.31**	**$ 1.42**	**$ 5.00**
Processing channel	Goat cheese	Jamaica Joe Sauce	Grace Sauce	Tumeric Tea	Ginger Tea
unit	250g	250g	250g	36g (24)	36g (24)
cash margin	$ 1.85	$ 1.33	$ 2.02	$ 26.81	$ 29.31
% margin	**38%**	**28%**	**38%**	**79%**	**76%**
product	$ 1.82	$ 0.05	$ 0.05	$ 0.01	$ 0.01
other materials	$ 0.10	$ 0.97	$ 0.92	$ 1.22	$ 1.87
processing	$ 0.98	$ 1.95	$ 1.85	$ 2.45	$ 3.73
transport/ distributor @10%	$ 0.16	$ 0.48	$ 0.54	$ 3.39	$ 3.88
retail margin @25%	$ 1.64	$ 1.59	$ 1.79	$ 14.52	$ 16.63
processed goods price	**$ 6.55**	**$ 6.37**	**$ 7.17**	**$ 48.39**	**$ 55.43**

This details the average production cost and pricing in the current market:

- **Production costs** are based primarily on RADA and the Jamaica Agro-Investment Corp.
- **Farm gate pricing** is based on average prices from wholesalers or middle-men at farm gate.
- **Municipal market pricing** is based on the average delivered price paid by vendors in local authority food markets
- **Wholesale pricing** is based on delivered prices paid by food wholesalers
- **Retail pricing** is based on retail shelf prices less retail margins, average processing costs and distribution in Kingston supermarkets.
- **Processing pricing** is based on the retail price of processed goods less retail margins, transportation, manufacturing costs and materials. The raw agricultural product is often a relatively small portion of the value.

3. Markets
Jamaica income opportunity

This table illustrates the key incremental income opportunities with the shortlist of products for Jamaica:

- Key opportunities are summarized (primarily 'import substitution' but also to fulfil 'domestic demand')
- The potential value of domestic production to meet demand is illustrated as 'domestic potential' and 'value'
- Based on average yields and acreage this translates to 'income' and 'profit potential' per farmer each year.

Women & Youth Income opportunity (USD)	Ruminants		Herbs & Spices			
	Goat meat	Goat milk	Hot pepper		Tumeric	Ginger
income potential			West Indies Red	Scotch Bonnet		
Key opportunity	domestic demand	domestic demand	import substitution	import substitution	import substitution	import substitution
import volume (MT)	524		61	61	64	119
import value (USD)	$ 1,686,965		$ 116,400	$ 174,600	$ 749,000	$ 578,000
import value CIF (USD/kg)	$ 3,219		$ 1,924	$ 2,886	$ 11,703	$ 4,857
domestic value (USD/kg)	$ 3,893		$ 1,815	$ 2,250	$ 581	$ 2,686
total domestic potential (MT)	524		61	61	64	119
total domestic value (USD)	$ 2,039,987		$ 109,782	$ 136,130	$ 37,163	$ 319,584
acreage per farmer (Acre)	4	4	0.5	0.5	0.5	0.5
yield per acre (kg)	74	290	5,668	5,668	8,000	5,061
yield (Kg p.a.) @10/20% wastage	266	111	2,834	2,834	4,000	2,531
Av Income potential per farmer p.a.	$ 6,442	**$ 2,184.82**	$ 5,143	$ 6,377	$ 2,323	$ 6,796
Av Profit potential per farmer p.a.	$ 3,281	**$ 823.93**	$ 2,936	$ 4,280	$ 703	$ 4,642
Farmer acceptance %	61%		63%	**81%**	**54%**	**65%**

This suggests a focus on a number of key crops to maximise income potential per farmer:

- **Ruminants:** Goat milk and cheese represents a very significant profit opportunity
- **Herbs & Spices:** Both core varieties of hot pepper and Ginger represent highly profitable crops

3. Markets
Jamaica channel mapping

Within this picture, segmentation shows that annual profit potential (in USD per acre) ranges very widely by channel with **municipal markets** and **retail** showing the strongest opportunities for women and youth:

Women & Youth Profit opportunity by channel	Ruminants		Herbs & Spices			
	Goat meat	Goat milk	Hot pepper		Tumeric	Ginger
Farm gate	$ 321		$ 4,413	$ 4,193	$ 3,239	$ 4,308
Municipal market	**$ 911**		**$ 12,791**	**$ 13,834**		**$ 20,671**
Wholesale			$ 7,929	$ 12,264		$ 15,896
Retail	**$ 2,678**		**$ 6,707**	**$ 19,298**	$ 3,661	**$ 10,831**
Processing		**$ 71,624**	**$ 30,246**	**$ 45,805**	**$ 595,688**	**$ 412,029**

However, quality requirements and logistics (e.g. transport, storage or packing) costs vary widely by channel and customer and volumes (sales) and price volatility are equally variable by channel & individual customer:

Women & Youth Channel constraints	QUALITY	LOGISTICS	VOLUME	VOLATILITY
Farm gate	L	L	H	M
Municipal market	L	L	H	M
Wholesale	M	M	M	M
Retail	H	M	M	L
Processing	H	H	L	L

- **Farm gate** sales are a low-price, low-cost model
- **Municipal markets** have a similar level of quality expectation but higher pricing and limited price volatility.
- **Wholesale** has a range of requirements depending on the customer but lower profitability per farmer due to intermediaries.
- **Retail** has higher quality expectations but excellent pricing
- **Processing** through goat milk and cheese or ginger and turmeric teas has huge profit potential but requires investment

Interventions and will be dependent on the appetite for risk, cost and investment from partners and the farmers themselves. In Jamaica, a combination of higher value **hot pepper, goat** and **ginger** sales into **municipal markets** with smaller volumes highly profitable sales as processed products makes sense within a portfolio.

4. Engagement
Jamaica Stakeholder and Supporting Functions

Supporting Functions:

Land Use & Ownership
Agro-Investment Corporation:
Agro-Park Programme for leasing land
Ministry of Agriculture and Fisheries
2021 land assessment plans for youth to receive land for agriculture
National Land Agency
Potential to create land bank

Infrastructure:
- Municipal Corporation
Management of infrastructure (roads, water supply, drains etc)
- Jamaica Marketing and Information System
Compiles and disseminates market information eg prices

Finance & Control:
- 60% population are unbanked
- No finance without collateral
- Potential for mobile money
eg GKM Pay (First Global Bank) and CONCEC (Credit Unions)
- Potential to expand insurance products **(eg Grace Kennedy Insurance)**

Stakeholders:

Investors
Development Bank of Jamaica
Loans through finance institutions (high interest)

Capacity Building
Jamaica National Small Loan
Loans to SMEs including agriculture
More easily accessible
RADA
Provides training to registered farmers.
Head Livestock Officer that co-ordinates with Parish Officers

Grace Kennedy
Purchases large volumes of peppers

Jamaica Network of Rural Women Producers
Fully engaged in communities helping women with training, advocacy and linkages

Universities and Research Organisations
Scientific Research Council
Research, adaptation of technologies, technical assistance, product development (MOU required)

Bodles Research Station
Ministry of Industry, Commerce, Agriculture and Fisheries

Innovation Farms
Large farms producing peppers and onions

Veterinary Services Division Ministry of Agriculture and Fisheries
Artificial Insemination Programme (small ruminant)

University of the West Indies
Department of Life Science

College of Agricultural Science and Education
Jamaica's premier Agricultural Education Institutions

Jamaica 4H Clubs
Rural Youth Empowerment Programme (RYEEPP) targeting 500 youth in agriculture

IICA
Extensive previous experience with goats and women farmers

FAO
Ginger Value Chain project for clean planting materials

CARDI
Strong history of supporting women and youth

Government
Ministry of Agriculture
FACE J$1bn incentives for registered farmers
Dermon Spence (Permanent Secretary)

Rural Agricultural Development Authority (RADA)
Training, planting materials, support for registered farmers

National Environment and Planning Agency (NEPA)
Attracts majority of Jamaica's funding from GEF, IDB, WB and other multilaterals for biodiversity, watershed management and resilience

Ministry of Culture, Gender, Entertainment and Sport
Dialogue to support women farmers started

Ministry of Housing, Urban Renewal and Climate Change
Climate Change Division

Jamaica Promotions Agency (JAMPRO)
Facilitates investment

Jamaica Manufacturers and Exporters Association (JMEA) Supports export (members)

Women and Youth Farmers
- Groups
- Registered/ unregistered

Climate Smart Agriculture
Goats eg breeding stock, feed substitutes, silvopastural systems
Herbs & Spices eg heirloom seedbanks, intercropping, pest management, irrigation, mulching etc

Technology
Potential to explore mobile solutions for women and youth
eg Digicel and Digicel Foundation

Inputs/ Machinery
Eg Goats
Hipro Genetics
Nutramix
Eg Herbs & Spices
RADA
Agro-Grace
T Geddes Grant

COVID 19
- Resulted in food insecurity for 400,000 Jamaicans
- Homeschooling limited women's ability to participate in agriculture

Childcare:
- Some childcare facilities across parishes.
- Many children stay with family or go to fields

***Details of key contacts in Mapping excel files**

5. Sustainable Agriculture
Climate impact on crops

	↑ or ↓ rainfall	↑ temperatures	High humidity
Ginger (Jamaica)	• Soft rot/rhizome rot and collapsed stems caused by heavy rain after planting • Other diseases are caused by and spread through flooded, poorly drained soil and high temperatures including bacterial wilt, leaf spot, storage rot		
Tumeric (Jamaica)	• As above including leaf blotch • Drought will decrease chlorophyl content and reduce the size of leaves and roots.		
Goats (Jamaica)	• Increased spread of disease and parasites ↑ mortality and ↓ productivity in lactating goats • Confined goats at risk of drowning	• Impacting growth, milk and meat production • Solar radiation impacts quality of milk	

6. Recommendations

Detailed recommendations for women and youth

		Suppliers	Farmers	Processors	Distributors	Buyers	POTENTIAL PARTNERS
ACCESS	FINANCE ('BUILD')	• Support finance and insurance companies to design and offer relevant, accessible low cost products to connect with the women and youth that need them. This should include access to non-traditional finance, and avoid existing barriers to borrowing such as lack of land or collateral eg mobile lending • Tailored training for women and youth to include in financial literacy and business development and be linked to climate resilient farming practices and secure finance and insurance products					• Jamaica National Small Loans • National People's Cooperative Bank • Development Bank of Jamaica • IICA/ FAO/ UNDP (microfinance and technical assist) • Dominica AID Bank • LPP insurance (tbc) • National Land Agency • Agro-Invest (AIC)
	INCUBATOR ('BOOST')	Implement a dynamic, focused Public Private 'incubator model' with to support existing organizations and value-chains to scale, strengthen and engage new farmers: • Access to finance, tools, inputs, training and land • Influence greater access to very low cost land through land banks or revised agro-park policy to lease crown or unutilized land at affordable rates and enable women and youth to scale/ diversify					
	TRAINING ('INFORM')	Included in Finance, Climate and Quality and Quantity sections including Field Schools					• Marketing/ social media campaign • Role models • SAC / incubators • JAMPRO • JAMSIS for data availability and collation
ENGAGEMENT	PARTICIPATE ('INSPIRE')	• Targeted campaign/ multi-media to build interest and engagement eg Ricardo Chambers (hydroponics) • Activities such as Farmer Exchange ('experience life on a farm') and Lead Farmer/ Mentorship programmes. Demonstration plots for community engagement. Encourage farmer registration					
	DATA ('ROOTS')	Cost benchmarking, Market pricing & Buyer access from ABIS and JAMIS. Work to motivate up to date information and wider sharing, and educate farmers on how to best use the data					
	POLICY ('UNITE')	Detailed review of content and budgets of existing policies including agriculture, employment, land and labour as well as gender-based violence, formulate detailed recommendations and benefits of changes to incorporate women and youth. Engage key government decision makers and support of Gender Affairs					

6. Recommendations

Detailed recommendations for women and youth

		Suppliers	Farmers	Processors	Distributors	Buyers	POTENTIAL PARTNERS
REDUCE COSTS ('GROW')	INPUTS	• Organise input starter pack with regional local suppliers • Local fodder production for goats • Expansion into seedling production (Herbs & Spices), forage production (Goats)					• Eg Agro-Grace • Eg Nutramix • Newport Farson • Bodles • IICA • RADA • Equipment suppliers • CARDI/ IICA • Incubator partners
	EQUIPMENT	• Explore leasing/ community assets for mechanisation • Explore expansion into production of sustainable solutions eg. shade houses, irrigation, goat pens using local materials					
	LOGISTICS	• Explore cost-effective storage and transportation to market such as van hire, deals with bus companies or empty trucks on routes through growing to Kingston/ other markets					
INCREASE INCOME ('STEP UP')	QUALITY	• Publish minimum quality standards and pricing required for channels to support farmer planning • Encourage registration of farmers (for RADA assistance). Address concerns over tax/ other implications. • Current assessment and Farmer Field Schools to build strong relationships and engagement with farmers • Strengthen relationships and outreach of offtakers such as Grace eg forecasting, processing support etc • Explore relationships with local abattoirs and butchers to increase quality cuts of meat for local sale					• Jamaica Bureau of Standards/ SRC • Collaborate with RADA, CARDI and/ or IICA for varietals and standards • Grace, Walkers Wood • Loushushan Supermarket (bi-products)

	COMMERCIAL	• Facilitate mutually beneficial agreements with off takers with fair and motivating terms for women & youth
		• Commercial training for women and youth in farm management, sales and marketing (eg gamification)
		• Explore value-add opportunities depending on context, wants and needs eg:
		  • Explore interest and potential to expand goat bi-products into supermarket eg Loushushan
		  • Explore production of chilli mash, sauces, dried herbs and spices for teas, cosmetics etc					

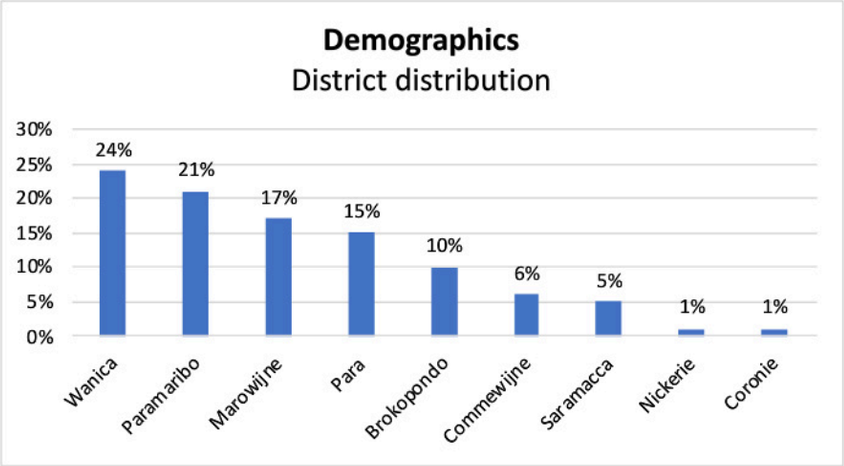
RESILIENCE	CLIMATE ('SMART')	Engage with women and youth to understand existing and sustainable practices eg : • Local production of pens and fodder for goats to control and manage close to home • Water and soil management for herbs and spices • Climate resilient varietals eg ginger and breeding stock eg Anglo-Nubian					• CIAT (rapid) • MoA, IICA, FAO • Local techniques • Eg. Gender Focal Points. Ministry of Agriculture/ RADA
	SECURITY ('SAFE')	• Include GBV and psychosocial support referral information in all project activities (see referral services doc) • Considerations around goat pens, tagging, intensive feeding and/ or community schemes to prevent theft					

Suriname:
Cassava, Acai and Vegatables

Country	Suriname	
Sub-sector 1	Cassava	3.53 score
Sub-sector 2	Acai	3.36 score
Sub-sector 3	Vegetables*	N/A

1. Research
Key findings

Women in agriculture are concentrated around the two main population centres as well as traditional indigenous areas. Unlike the rest of the Caribbean, financial services and particularly insurance are by far the most important areas for assistance followed by access to land & inputs.



SURINAME	
Partner	Net Trust
De Surinaamsche Bank	22%
Digicel	13%
PAS	8%
De Molen	5%

PAS and De Molen are not well known generally (over 1/3 of farmers were unaware) but those that do have limited trust in either institution. This requires validation.

Q21 What would help your work in agriculture most?	SURINAME	
Access to affordable insurance	95%	ACCESS
Access to cheap loans	88%	
Good technical training	86%	MARKETS
Access to more land or facilities	82%	ACCESS
Assistance with tools, machinery or inputs	76%	MARKETS
Help to improve personal safety	75%	RESILIENCE
Help to own my own land	73%	ACCESS
Help to access new markets	72%	MARKETS
Help to reduce theft	72%	RESILIENCE
Help with transportation	72%	MARKETS
Access to easy banking services	61%	
Assistance with childcare or elderly	39%	

Access to financial services and land a key gap

Theft and personal safety important but less of an issue than in other markets

2. Root cause analysis
Low & inequitable participation in agriculture

EFFECTS

Youth lack interest in agriculture

Lack of capacity and dependence from inconsistent third parties for technical assistance or access to funding

Higher incidences of GBV

Women remain at the base of value chain (engaged more in subsistence agriculture/informal work)

Limited access to financial support systems and loans for indigenous women in the Interior

PROBLEM
Low & inequitable market participation of women and youth

Agriculture is viewed as labour intensive with low returns

Access to markets are difficult and limited

Lack of business networks for rural and interior women

Lack of sustainable/long-term support for women/youth organizations

Land title difficult to obtain legally in Interior and corruption issues related to land distribution esp. rural and indigenous women

Limited opportunities in rural areas and Interior (e.g. education, internet)

Women's increased income negatively affects power relations between men and women

Women are responsible for care work in the household

Migration of men in the interior away from agriculture sector to mining and logging sectors

ROOT CAUSES

Common Effects across all SAC countries

2. Root cause analysis
Understanding root causes & effects in detail

Root Causes	Context	Effects
Agriculture is viewed as labour intensive with low returns	In small-scale farming, production is labor-intensive, with a low level of mechanization. This offers little incentive and possibility to invest in new technologies and post-harvest measures, and as a result youth often associate agriculture with hard work and fewer earnings.	**Youth lack interest in agriculture**
Access to markets are difficult and limited	Women farmers do not have access to information about new developments related to market trends, technologies, or best cultivation practices. This causes farmers to use outdated production means and methods leading to low productivity per hectare and limited access to markets.	**Women remain at the base of value chain**
Lack of sustainable/long-term support for women/youth organizations	Often individual female farmers are dependent on NGOs for technical assistance and access to funding. However, after the funding has stopped, many activities of the more than 3000 NGOs had* stopped. Since then, the number of NGOs have decreased significantly. As a result, the CBO's (female organizations) do not have access to financial and technical support and capacity-building	**Lack of capacity and dependability from third parties assistance**
Land title difficult to obtain legally in Interior and corruption issues related to land distribution esp. rural and indigenous women	The Inter-American Court of Human Rights has urged Suriname to legally acknowledge the land rights of the interior population (indigenous and Maroon tribal groups) however, land rights of indigenous people are still not established. This means that the interior population does not possess land titles and therefore cannot get a loan at the commercial banks.	**Limited access to financial support systems and loans for indigenous women in the Interior**
Limited opportunities in rural areas and Interior (e.g. education, internet)	Illiteracy rates (18.7% for females and 14.3% males) in the interior districts are much higher compared to the coastal districts (0.6% males and 2.1 % females).The absence of higher education in these areas means that the opportunities for (personal) development of the traditional community remain limited. Due to the lack of the necessary knowledge, opportunities, particularly for youth, are also limited in the agricultural sector in terms of commercialization.	**Youth lack interest in agriculture**
Women's increased income negatively affects power relations between men and women	In some interior areas, women have faced violence and family disputes following the increase of their income due to agricultural activities.	**Higher incidences of GBV**

3. Market
Suriname Cassava Market Mapping

Increasing involvement in nurseries and seedling production

- Interior: women do farming, processing and selling
- Coastal: men do more of farming activities

Cottage level cassava flour and traditional bread for local vendors and supermarkets

- Access limited by lack of knowledge, transport, finance
- Some distributors are also farmers

Older women selling produce in markets

Suppliers → **Farmers** → **Processors** → **Distributors** → **Buyers**

Suppliers

- Landbouwshop
- Farmer's World
- Van der Jagt NV
- Albatros Trading
- Agriparts/ Meindertsma
- Hatramij NV

Farmers

Large Farms:
- **De Molen** are planting 200 ha of cassava
- VCM Plantation

Women Farmers:
- SUNROP network of women's producers
- Wi! Uma Sranan (40 women)
- The Stuurgroep Ontwikkeling Cassava Sector (**STOPCA**) - Chaired by Sherida Mormon
- **A sa Jeepi Maawina** ('It will help Marowijne'), Tresna Pinas (secretary)

Processors

Other known groups: Cooperation Para Green (grow and slice)

Cassava farmers in:
- Marowijne
- Wanica
- Para
- Saramaca
- Commewijne
- Sipaliwini

(eg **546** registered farmers, **240** cassava)

Large Processors: De Molen Mill

Smaller Processors:
- Marthiland (buying from Coop Para Green, selling to Melk Centrale)
- Wi Uma Fu Sranan (Tania Lieuw-A-Soe)*
- MS Cassava Friet
- Mama's Mr. Binda

Other: Over 20 cassava chip brands in the market (eg Kasan snacks, 8570950, Wanica)

Distributors

- De Molen distribution (exists for wheat flour)
- DTS Distribution (for products of Wi! Uma Sranan)
- Hatramij NV (for products of Marthiland)

Buyers

Companies:
- De Molen buying and outreach services (requires 1,650 ha worth of cassava from smallholders)
- Melk Centrale producing cassava porridge (Parastatal milk products factory buying cassava flour from processor Marthiland)

Municipal markets (all main and local markets)

Supermarkets for frozen and fresh cassava eg.
- Zonnebloem market
- Choi's supermarket
- Tulip supermarket

Exports:
- Wi Uma Fu Sranan (cassava flour)
- Netherlands/ French Guyana of processed cassava and end products

Key:

- Size of arrow represents relative involvement of women at different stages in the value chain.
- Information is from internal mapping workshop, not formal survey

Potential partner to kick start initial collaborations – interest in engagement of women and youth

3. Market

Suriname Acai and Vegetables Market Mapping

- Some expansion into seedlings

- Women harvest orchards, men pick in the wild
- Women grow vegetables for home use and sell remainder on market

- Acai pulping activities
- Juices, icecreams
- Vegetables are bought fresh not processed

- Access limited by lack of knowledge, transport, finance
- Some distributors are also farmers

- Women selling produce in markets
- Women market vendors buying from other women

Suppliers

- Landbouwshop
- Farmer's World
- Van der Jagt NV
- Albatros Trading
- Agriparts/ Meindertsma
- Hatramij NV

* Working with PAS (NGO working in the interior) in acai sector

Farmers

Apodo farmers Association*
Marowijne (men and women)
Tranga wroko
Umang fu
Marwina podosiri (women's group)
Maroon Women Network
Pickers (mainly individual men) in:
Marowijne
Saramacca
Commewijne

Individual men and women in Wanica, Commewijne, Saramacca (combine with cassava plans)

Gopex, Mr. Gopal: 8736865 (member of VEAPS)

Processors

Individual women in Paramaribo, Wanica, Marowijne, Commewijne

Small factories in same areas eg:
- Sun Power Juice Mr. Coats, 539169, Zapatastraat 13
- Linka's podosiri 8775636, Commewijne
- Edson's Podsiri,

Experienced processing and export manager (not currently processing: Cortessa Dapaw +597 883-3573

Little to no processing of vegetables, all bought fresh

Distributors

- Sun Power Juice Mr. Coats, 539169, Zapatastraat 13
- Edson's podosiri, 713275

- Individual farmers
- Middlemen (mainly men) distribute the greater portion of all vegetables and determining the price

Buyers

All main & local markets

Main Supermarkets for bottled Acai berries juice

Chinese supermarkets
- Eg Mimi market,
- Eg Amarello

Brazilian supermarkets eg Fumini

Butchers eg Abdul, Sofia

Small Ice Cream producers eg
- Padre Nostro, Paramaribo

Export: Apodoblends NV

Vegetable Buyers: Private markets eg Zonnebloem market, Choi's vegetable market

Most Chinese supermarkets have a refrigerator with vegetables)

Individual buyers who buy at local markets

Traders

Vegetable Exporters
- Gopex, Mr. Gopal 8736865 (member of VEAPS)
- VEAPS
- (12 members exporting vegetables to Netherlands. The export appr. 65t per week)

Key:

Additions for Vegetables in blue

- Size of arrow represents relative involvement of women at different stages in the value chain.
- Information is from internal mapping workshop, not formal survey

Potential partner to kick start initial collaborations – interest in engagement of women and youth

3. Markets

General background to market pricing and variables

Examples of variables that can assist women and youth/ farmers:

- ↓ cost of land
- ↓ input prices
- ↑ climate resilience
- ↑ efficient planting
- ↓ cost packaging
- ↓ cost storage
- ↑ business training

- Market intelligence
- ↑ Quality
- ↑ Quantity
- ↑ Standards
- Offtake Contracts
- Seasonality (Glut/ Scarcity
- Import price

Ability to **minimise input costs**, labour and all growing and post-harvest costs, and **secure highest possible pricing**

- Distance to market
- Vehicle ownership
- Shared vehicles
- Improved infrastructure
- Fuel costs

- Market Intelligence
- Buyer requirements
- Local v municipal pricing
- Curfews and restricted selling (COVID)

Key cost and pricing elements for smallholder farmers:

Production Cost →

=

All costs associated with the primary product:

- Inputs
- Labour
- Storage
- Packing/ crates

Farm Gate Price →

=

Price charged to customer who buys from the farm :

- Non-contract (spot price)
- Contract price
- Channel pricing (eg retail, hotel)

Farmer Cash Margin →

=

Cash received from farm gate sale less cost of production

Farmer % Margin →

=

Cash margin as a % of farm gate price

Distribution Costs →

=

Cost of transportation to market/ customer (bus, van hire, fuel etc)

Wholesale Price

=

Price charged in local markets and/ or **lowest price delivered to channel customer (retail, food service etc) in bulk**

3. Markets

Suriname production costs & market pricing

This details the average production cost and pricing in the current market:

- **Production costs** are based primarily on data from De Molen, FAO studies and PAS
- **Farm gate pricing** is based on prices from farmers, information on middle-man payments at farm.
- **Wholesale pricing** is based on the average delivered price paid by vendors in markets
- **Retail pricing** is based on delivered prices paid by Supermarkets in Paramaribo

Production & Pricing USD/KG	Roots & Tubers		Fruits	Vegetables			
	Cassava flour industrial De Molen	Kokori cassava flour blocks	Acai	Eggplant	Pepper	String beans	Okra
Production cost	kg	kg	l	kg	kg	kg	kg
farm costs	$ 0.05	$ 0.20	$ 1.12	$ 0.23	$ 0.46	$ 1.36	$ 0.76
Farm gate channel							
cash margin	$ 0.02	$ 0.05		$ 0.15	$ 0.32	$ 0.52	$ 0.24
% margin	**31%**	**20%**		**39%**	**41%**	**28%**	**24%**
farm gate price	**$ 0.07**	**$ 0.25**		**$ 0.38**	**$ 0.78**	**$ 1.88**	**$ 1.00**
Wholesale channel							
cash margin		$ 0.85	$ 0.87	$ 0.54	$ 1.19	$ 1.96	$ 0.84
% margin		38%	39%	59%	60%	51%	46%
processing		$ 1.11	$ 0.17	$ 0.06	$ 0.12	$ 0.34	$ 0.19
distribution		$ 0.05	$ 0.05	$ 0.09	$ 0.20	$ 0.18	$ 0.05
wholesale price		**$ 2.21**	**$ 2.21**	**$ 0.92**	**$ 1.97**	**$ 3.84**	**$ 1.84**
Retail channel							
cash margin		$ 4.80	$ 0.92				
% margin		**58%**	**30%**				
retail margin		$ 2.05	$ 0.75				
Retail price		**$ 8.21**	**$ 3.01**				

3. Markets
Suriname income opportunity

This table illustrates the key incremental income opportunities with the shortlist of products for Suriname:

- Key opportunities are summarized (primarily 'import substitution' but also to fulfil 'domestic demand')
- The potential value of domestic production to meet demand is illustrated as 'domestic potential' and 'value'
- Based on average yields and acreage this translates to 'income' and 'profit potential' per farmer each year.

Women & Youth Income opportunity (USD)	Roots & Tubers		Fruits	Vegetables			
	Cassava flour industrial	Kokori cassava flour blocks	Acai	Eggplant	Pepper	String beans	Okra
income potential							
Key opportunity	import substitution	domestic demand	domestic & export	domestic	domestic	domestic	domestic
import volume (MT)	16,500		200,000	3,032	2,131	2,092	1,816
import value (USD)	$ 4,300,000		$ 441,733	$ 1,152,160	$ 1,662,180	$ 3,932,960	$ 1,816,000
import value CIF (USD/kg)	$ 0.26						
domestic value (USD/kg)	$ 0.07	$ 0.25					
total domestic potential (MT)	4,688	$ 1,210					
total domestic value (USD)	$ 328,160	$ 302,500					
acreage per farmer (Acre)	1	1	0.25	0.25	0.25	1	1
yield per acre (kg)	24,000	21,000	28,800	7,347	3,620	1,822	4,222
yield (Kg p.a.) @10/20% wastage	21,600	18,900	5,760	1,469	724	1,458	3,378
Av Income potential per farmer p.a.	$ 1,512	**$ 4,725**	**$ 12,722**	$ 558	$ 565	$ 2,740	$ 3,378
Av Profit potential per farmer p.a.	$ 475	**$ 945**	**$ 4,998**	$ 220	$ 232	$ 758	$ 811
Farmer acceptance %	**80%**	58%	57%	**76%**	**82%**	**79%**	**78%**

This suggests a focus on a number of key crops to maximise income potential per farmer:

- **Roots & Tubers:** Kokori cassava flour blocks where there is demand (primarily indigenous areas)
- **Fruits & Vegetables:** Acai (also in indigenous areas) with string beans and Okra for high profit potential.

3. Markets
Suriname channel profitability mapping

Within this picture, segmentation shows that annual profit potential (in USD per acre) ranges very widely by channel with **wholesale** and **retail** channels showing the strongest opportunities for women and youth:

Women & Youth	Roots & Tubers		Fruits	Vegetables			
Profit opportunity by channel	Cassava flour	Kokori	Acai	Eggplant	Pepper	String beans	Okra
Farm gate	$ 528	$ 1,050		$ 1,102	$ 1,158	$ 947	$ 1,013
Wholesale		$ 17,829	$ 24,989	$ 3,967	$ 4,308	$ 3,571	$ 3,546
Retail		$ 100,727	$ 26,395				

However, quality requirements and logistics (e.g. transport, storage or packing) costs vary widely by channel and customer and volumes (sales) and price volatility are equally variable by channel & individual customer:

Women & Youth Channel constraints	QUALITY	LOGISTICS	VOLUME	VOLATILITY
Farm gate	L	L	H	M
Wholesale	L	M	M	M
Retail	M	M	L	L

- **Farm gate** has high volumes and lower standards but a lower price, particularly with large contracted volumes (e.g. Cassava for De Molen)
- **Wholesale** costs are low and volumes and volatility reasonably mainstream
- **Retail** volumes are typically lower and quality standards higher than wholesale

Interventions and will be dependent on the appetite for risk, cost and investment from partners and the farmers themselves. In Suriname, a combination of higher value traditional products **(Kokori & Acai)** with smaller volumes of a range of **vegetables** and **cassava** in the wholesale channel makes sense within a portfolio.

4. Engagement
Suriname Stakeholder and Supporting Functions

Supporting Functions:

Land Use & Ownership
Non-transparent land policy has discouraged women to apply for title
- Foundation for Forest Management and Production Control (SBB)
Community forest permits
- Sustainable Forestry Information System Suriname (SFISS)
Small scale ag, NTFP and timber
- Forest People Program in collaboration with the VIDS and VSG land rights for traditional groups

Infrastructure:
- Limited and expensive transport from districts to Paramaribo
- Water taxi provides alternative

Finance & Control:
- Limited opportunities for entrepreneurs to secure loans
- Very hard to open bank account without an employer
- Private banks will not lend without title to land

GODO Bank and Foundation has 'people help people' approach, and has supported entrepreneurs in the past.

***Details of key contacts in Mapping excel files**

Stakeholders:

Investors

GODO Bank
Partnership with Ministry of Economic Affairs
Micro–finance
Soft money
Only bank in interior

Global Environment Facility Small Grants Programme
Small grants
Acai nursery (2012)

De Schakel (credit co-operative)

Capacity Building

Suriname Organization of Rural Women Producers (SUNROP)
Supports member groups in production, processing and marketing activities. Supported by IICA. Cassava key crop.

Women in Business Suriname
Capacity building of female entrepreneurs

Suriname Agricultural Forum for Youth

Stuurgroep Ontwikkeling Cassave Sector Para (STOPCA)
Support for women in the cassava sector (organized fairs)

Universities and Research Organisations

Centre for Agriculture Research in Suriname (CELOS)
Feasibility study in Cassava (Dutch Embassy)

Foundation of Indigenous Village leaders in Suriname (VIDS)
Support engagement with indigenous communities

IICA
Work closely with SUNROP
SAMAP programme (inc Acai support)

Tropenbos Suriname
Community forests

Suriname Business Forum (Public Private Partnership)
2013 engagement in cassava and acai

Anton the Kom University of Suriname/ Technological Department
Eg. 2016 research acai processing and packaging

Government

Ministry of Agriculture, Animal husbandry and Fisheries Suriname Agriculture Market Access Project (SAMAP, ended 2021 providing grants to build capacity)

Amazon Conservation Team

Foundation Planning Bureau Suriname
Policy writing and influence

Ministry of Economic Affairs, Entrepreneurship and Technological Innovation
Suriname Competitiveness and Sector Diversification (SCSD) World Bank project launched May 2021. Includes US$14.5mn for improving Public/ Private value chains

Pater Ahlbririck Stichting Foundation (PAS) and CESO
Acai intervention in Marowijne

Mangrove Forum Suriname
Planting mangrove to avoid land loss

Ministry of Finance and Planning
2016-2022 Agricultural Competitiveness Programme

SOIL Masonkondre
Sustainable co-op
Builds greenhouses

FAO
2015 cassava project
2017-2021 SAMAP (grants between $5000-$40.000 for quality improvement)

Ministry of Regional Development;
Acai planting project in 2017

Women and Youth Farmers
- Groups
- Registered/ unregistered

Ministry of Regional Zoning Policy and Forestry Management
2020-2025 plan for acai berries subject to funding

Foundation 'A sa jeepi Maawina

Caribbean Development Bank
Caribbean Technology Consultancy Programme

Maroon Women Network

VEAPS
Suriname Fruits & Vegetable Exports

Stichting buro NGO'

Climate Smart Agriculture
Eg Nurseries and disease-free materials, selective land clearing, local water management

Technology
Access to internet is expensive
Phone service available everywhere

Inputs/ machinery e.g
- Landbouwshop
- Farmer's World
- Van der Jagt NV
- Albatros Trading
- Agriparts/ Meindertsma Hatramij NV

COVID 19
- Markets closed (people sell on sidewalks)
- Women's time diverted to home schooling
- Potential shift in youth interest to agriculture

Childcare:
Community effort
Childcare is expensive

5. Sustainable Agriculture
Climate impact on crops

	↑ or ↓ rainfall	↑ temperatures	High humidity
Cassava (Suriname)	• Crops will be affected by flooding	• Crop will perform well in ↑ temperature, drought conditions and poor soil • Cassava mosaic disease, whitefly, cassava bacterial blight and mealy bug	
Acai Berries (Suriname)	• Drought resistance, can go without water for 61 days in the Amazon • Negatively impacted by flooding • Clearing of surrounding vegetation and ecosystem impacts plant growth	• Plant yields increase (hot years) • Damage to fruit in drought	

6. Recommendations

Detailed recommendations for women and youth

		Suppliers	Farmers	Processors	Distributors	Buyers	POTENTIAL PARTNERS
ACCESS	FINANCE ('**BUILD**')	• Support finance and insurance companies to design and offer relevant, accessible low cost products to connect with the women and youth that need them. • Provide financial and technical assistance for women through support systems (NGOs, CBOs, etc.) that stakeholders are cognizant of or already working with • Tailored training for women and youth to include in financial literacy and business development and be linked to climate resilient farming practices and secure finance and insurance products					• GODO Bank • CDB • SAMAP FAO • IICA/ FAO/ IUCN • STOPCA (Cassava sector) • VIDS (Village Indigenous Leaders
	INCUBATOR ('**BOOST**')	Create special programs for youth which provide access to farmland, agricultural training, financial support and access to markets and off-takers. Explore a targeted incubator model in Suriname context (culture, geography) to strengthen existing cooperatives and groups					
	TRAINING ('**INFORM**')	Included in Finance, Climate and Quality and Quantity sections including Field Schools					
ENGAGEMENT	PARTICIPATE ('**INSPIRE**')	• Ensure that the social structure is mapped out communities/ethnic groups to which the women and youth belong before any income-enhancing measures. Respect existing social structures in the communities and ensure that interventions take this into account. • Develop programs that inform women and youth on tax systems and access to credit in conjunction with government institutions, commercial banks, private companies engaged in the agriculture sector					Eg CIAT engagement model • Communications & branding support • Wi Uma Srunan
	DATA ('**ROOTS**')	Extremely poor baseline data currently. Cost benchmarking, Market pricing & Buyer access from MoA. Work to motivate up to date information and wider sharing, and educate farmers on best use of the data					
	POLICY ('**UNITE**')	Detailed review of content and budgets of existing policies including agriculture, employment, land and labour as well as gender-based violence, formulate detailed recommendations and benefits of changes to incorporate women and youth. Engage key government decision makers and support of Gender Affairs					

6. Recommendations

Detailed recommendations for women and youth

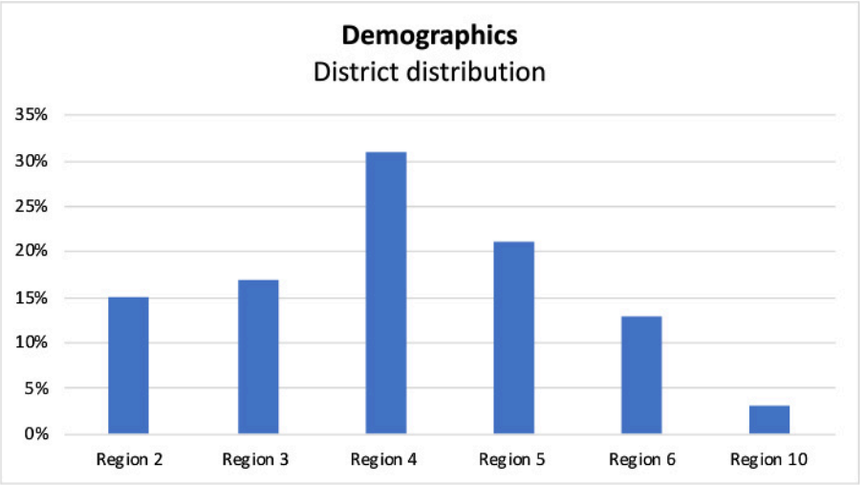
		Suppliers	Farmers	Processors	Distributors	Buyers	POTENTIAL PARTNERS
REDUCE COSTS ('GROW')	INPUTS	• Organise input starter pack with regional local suppliers • Explore nurseries for disease free material (cassava) • Forest management / acai orchard preparation					• Eg Farmers World (inputs) • Eg IICA/ FAO • WWF/ IUCN/ Partnerships for Forests P4F acai projects in Colombia • Equipment suppliers
	EQUIPMENT	• Explore community equip/ assets to reduce cost of product • Set up processing units in locations near women-owned farms so that they can process their products into semi-finished goods. Technical assistance in quality standards					
	LOGISTICS	• Explore cost-effective storage and transportation to market such as van hire, deals with bus companies or empty trucks on routes through growing to Paramaribo/ other markets. • Explore innovative alternatives to acai collection and production (eg boat processing facility in Brazil)					
INCREASE INCOME ('STEP UP')	QUALITY	• Publish minimum quality standards and pricing required for channels to support farmer planning • Encourage registration of farmers for MoA extension assistance. Address concerns over tax • Current assessment and Farmer Field Schools to build strong engagement with farmers • Strengthen relationships with offtakers eg De Molen (cassava) for forecasting, value-add and loans					• Collaborate with MoA, CARDI and/ or IICA for varietals and standards • PAS • De Molen • MOA • Digicel
	COMMERCIAL	• Facilitate mutually beneficial agreements with off takers eg De Molen for women & youth • Commercial training for women and youth in farm management, sales and marketing • Explore value-add opportunities depending on context, wants and needs eg - Explore interest and potential to expand value-add production (eg franchise/ replicate Wi Uma Srunan model for porridge, baby food and flour for local and export market) - Explore potential for exports with experienced exporters Apodoblends NV (Acai) , VEAPS (Vegetables)					
RESILIENCE	CLIMATE ('SMART')	Engage to understand existing and most suitable sustainable practices eg : • Intercropping of cassava and acai for pest and ecosystem preservation • Engage CELOS (Suriname) for cassava plant breeding					• CIAT (rapid assessment) • CELOS • REDD+ • MoA, IICA, FAO • Indigenous techniques • MoA, IICA, FAO
	SECURITY ('SAFE')	• Include GBV and psychosocial support referral information in all project activities thereby increasing access to services (available services, how to access, and where to go)					

Guyana:
Fruit and Vegetables

Country	Guyana	
Sub-sector 1	Fruit	4.23 score
Sub-sector 2	Vegetables	3.68 score

1. Research
Key findings

Women in agriculture are spread across the regions with a large number of respondents in the population centres around region 4. A need to improve personal safety and reduce theft is common to all markets but a particular issue in Guyana with 91% wanting to improve these measures.



Average income for respondents was low at below GYD75,000 per month and ties into evidence of significant economic distress for farmers in Guyana. Over 87% agreed that they 'struggle to find enough money for household bills' each month.

Q21 What would help your work in agriculture most?	GUYANA	
Help to access new markets	96%	MARKETS
Help to improve personal safety	91%	RESILIENCE
Help to reduce theft	89%	
Help to own my own land	88%	ACCESS
Good technical training	87%	MARKETS
Assistance with tools, machinery or inputs	86%	
Access to easy banking services	86%	ACCESS
Help with transportation	85%	MARKETS
Access to cheap loans	82%	ACCESS
Access to more land or facilities	77%	
Access to affordable insurance	76%	
Assistance with childcare or elderly	71%	

Resilience through improved safety & security key

2. Root cause analysis
Low & inequitable participation in agriculture

EFFECTS

Youth lack interest in agriculture

Challenges to access finance without collateral

Women at the base of the value chain

PROBLEM

Low & inequitable market participation of women and youth

Cultural norms dictates the role that women play in agriculture

Land ownership largely based on location, ethnic grouping and/or gender

Agriculture is viewed as labour intensive with low returns

ROOT CAUSES

Common Effects across all SAC countries

2. Root cause analysis

Understanding root causes & effects in detail

Root Causes	Context	Effects
Agriculture is viewed as labour intensive with low returns	Farming has always been "assumed" to be laborious and in the realm of older persons, mostly men heading the enterprise and being supported by their families. In addition, it is perceived to be a low paying job. Thus, not an appealing career choice for youth, as they would have seen their parents struggle and oftentimes wanting to break that cycle and move away from the sector.	**Youth lack interest in agriculture**
Cultural norms dictate the role that women play in agriculture	Cultural norms dictate the role that women play in agriculture. Although many women play a critical role in family farming in Guyana. However, their involvement has been underestimated in statistics. Furthermore, women are more likely to be given unfair market prices in a negotiation compared to their male counterparts because they are still not seen as equal agri-earners and entrepreneurs.	**Women at the base of the value chain**
Land ownership largely based on location, ethnic grouping and/or gender	Women in rural areas have less access than men to resources, particularly to productive assets such as land and water. There are no legal provisions preventing land ownership by any citizen. However, there is no clear land policy and, in practice, men account for the majority of land titles. In indigenous communities, access to lands is passed down from generation to generation but it is communal and cannot be taken to the bank to be used as collateral. Thus, the land is available but the capital to invest to develop the land is lacking.	**Challenges to access finance without collateral**

3. Market

Guyana Fruit & Vegetable Market Mapping

Increasing involvement in nurseries and seedling production

- Women often on family farm not lead
- ↑ urban professionals entering agriculture

- Local jams, preserved fruit, juice
- Scale is limited by lack of knowledge, storage, finance

Women act as middlemen but wider access is limited by lack of finance, knowledge and transport

Middle-aged to older women selling produce in markets

Suppliers

NAREI
Caribbean chemicals
Pop up seedling shops

Farmers

Farmers and Groups (NAREI) information) eg:
(see extensive list in Guyana Mapping excel file)
Laluni Farmers Group
Bendorf Group
Canal #1 and #2
Essequibo Coast farmers (DDL information) eg

- Carambola: 4 lead farmers working x 10-15 farmers each
- Guava: 6 lead farmers x 5 farmers each
- Cherry: 32 lead farmers with many suppliers

Processors

- **DDL/ Topco** Investment in processing facility and increasing demand from 1mn to 4mn pounds per year
- **Banks DIH** Soft drinks, fruit juices
- **Sterling Products** fruit ice creams
- **WADNET Agro- Processing network** 11 groups (9 in hinterland, 1 highway region 4 and other is region 5 on west coast of Berbice)

Distributors

- DDL/ Topco
- Banks DIH
- Sterling Products
- Middlemen

Buyers

Markets (to consumers):

- Stabroek Market
- Bourda Market
- East La Penitence Market
- Kitty Market
- Parika Market,
- Leonora Market, Plaisance

Snackettes:

- M&M
- Maggies
- Beacon
- Oasis

Supermarkets:

- Massy
- Survival
- Bounty
- Mattai's
- Cost Cutters
- Real Value

Export:
Topco
Banks DIH
New GMC

Key:

- Size of arrow represents relative involvement of women at different stages in the value chain.
- Information is from internal mapping workshop, not formal survey

Potential partner to kick start initial collaborations – interest in engagement of women and youth

3. Markets
Background to market pricing and variables

Examples of variables that can assist women and youth/ farmers:

- ↓ cost of land
- ↓ input prices
- ↑ climate resilience
- ↑ efficient planting
- ↓ cost packaging
- ↓ cost storage
- ↑ business training

- Market intelligence
- ↑ Quality
- ↑ Quantity
- ↑ Standards
- Offtake Contracts
- Seasonality (Glut/ Scarcity
- Import price

Ability to **minimise input costs**, labour and all growing and post-harvest costs, and **secure highest possible pricing**

- Distance to market
- Vehicle ownership
- Shared vehicles
- Improved infrastructure
- Fuel costs

- Market Intelligence
- Buyer requirements
- Local v municipal pricing
- Curfews and restricted selling (COVID)

Key cost and pricing elements for smallholder farmers:

Production Cost =

All costs associated with the primary product:
- Inputs
- Labour
- Storage
- Packing/ crates

Farm Gate Price =

Price charged to customer who buys from the farm :
- Non-contract (spot price)
- Contract price
- Channel pricing (eg retail, hotel)

Farmer Cash Margin =

Cash received from farm gate sale less cost of production

Farmer % Margin =

Cash margin as a % of farm gate price

Distribution Costs =

Cost of transportation to market/ customer (bus, van hire, fuel etc)

Wholesale Price =

Price charged in local markets and/ or **lowest price delivered to channel customer (retail, food service etc) in bulk**

3. Markets

Guyana production costs & market pricing

This details the average production cost and pricing in the current market:

- **Production costs** are based primarily on averages from NAREI
- **Wholesale pricing** is based on purchase prices of vendors in Stabroek market
- **Retail pricing** is based on the purchase price (less retail margin) in MASSY supermarkets
- **Manufacturing pricing** is based on delivered prices paid by TopCo (DDL)

Production & Pricing USD/KG	Vegetables					Fruit				
	Cabbage	Cauliflower	Sweet corn	Cucumber	Sweet Pepper	Guava	Passion fruit	Cherry	Mangoes	Pineapples
Production cost										
farm costs	$ 0.28	$ 0.23	$ 0.16	$ 0.12	$ 0.55	$ 0.08	$ 0.35	$ 0.19	$ 0.16	$ 0.18
Wholesale channel										
cash margin (av)	$ 1.08	$ 1.24	$ 0.84	$ 0.07	$ 1.35		$ 1.06	$ 1.37	$ 0.90	$ 0.06
% margin (av)	59%	64%	57%	10%	57%		56%	67%	59%	9%
distribution	$ 0.47	$ 0.47	$ 0.47	$ 0.47	$ 0.47		$ 0.47	$ 0.47	$ 0.47	$ 0.47
wholesale price	**$ 1.83**	**$ 1.94**	**$ 1.47**	**$ 0.66**	**$ 2.37**		**$ 1.88**	**$ 2.03**	**$ 1.54**	**$ 0.72**
Retail channel										
cash margin (av)	$ 1.12	$ 3.36	$ 1.33	$ 0.11	$ 1.57		$ 1.50	$ 1.54	$ 1.11	$ 0.34
cash margin (%)	51%	70%	58%	14%	51%		55%	59%	54%	29%
retail margin	$ 0.33	$ 0.72	$ 0.35	$ 0.12	$ 0.46		$ 0.41	$ 0.39	$ 0.31	$ 0.18
retail price	**$ 2.20**	**$ 4.78**	**$ 2.31**	**$ 0.83**	**$ 3.05**		**$ 2.73**	**$ 2.59**	**$ 2.05**	**$ 1.18**
Manufacturing channel										
cash margin (av)						$ 0.11	$ 0.16	$ 0.19		$ 0.19
% margin (av)						17%	16%	22%		23%
distribution						$ 0.47	$ 0.47	$ 0.47		$ 0.47
wholesale price						**$ 0.66**	**$ 0.98**	**$ 0.85**		**$ 0.85**

3. Markets
Guyana income opportunity

This table illustrates the key incremental income opportunities with the shortlist of products for Guyana:

- Key opportunities are summarized (incremental 'domestic production' but also 'import substitution')
- The potential value of domestic production to meet demand is illustrated as 'domestic potential' and 'value'
- Based on average yields and acreage this translates to 'income' and 'profit potential' per farmer each year.

Women & Youth Income opportunity (USD)	Vegetables					Fruit				
	Cabbage	Cauliflower	Sweetcorn	Cucumber	Sweet Pepper	Guava	Passion fruit	Cherry	Mangoes	Pineapples
income potential										
Key opportunity	Import substitution	Import substitution	Import substitution	Domestic production	Import substitution	Domestic production	Domestic production	Domestic production	Domestic production	Domestic production
import volume (MT)	91	74	1,123	3,440	49	664	6,789	2,700	8,368	29,944
import value (USD)	$ 157,000	$ 176,907	$ 1,398,000	$ 819,048	$ 111,000	$ 488,788	$ 6,313,770	$ 5,206,950	$ 12,242,384	$ 16,123,692
import value CIF (USD/kg)	$ 1.73	$ 2.39	$ 1.24	$ 0.24	$ 2.27	$ 0.74	$ 0.93	$ 1.93	$ 1.46	$ 0.54
domestic value (USD/kg)	$ 1.83	$ 1.94	$ 1.47	$ 0.66	$ 2.37	$ 0.66	$ 1.88	$ 2.03	$ 1.54	$ 0.72
total domestic potential (MT)	91	74	1,123	860	49	166	1,697	675	2,092	2,994
total domestic value (USD)	$ 166,530	$ 143,826	$ 1,650,810	$ 567,600	$ 116,130	$ 109,610	$ 3,190,830	$ 1,370,250	$ 3,221,680	$ 2,155,968
acreage per farmer (Acre)	0.50	0.50	1.00	0.50	0.25	1.00	1.00	1.00	1.00	1.00
yield per acre (kg)	8,139	8,181	7,500	16,754	11,242	26,305	5,565	10,117	7,285	7,790
yield (Kg p.a.) @10/20% wastage	3,662	3,681	6,750	6,702	2,248	18,414	3,895	7,082	5,828	6,232
Av Income potential per farmer p.a.	**$ 6,702**	**$ 7,155**	**$ 9,923**	**$ 4,423**	**$ 5,329**	**$ 12,153**	**$ 7,323**	**$ 14,377**	**$ 8,975**	**$ 4,487**
Av Profit potential per farmer p.a.	**$ 3,951**	**$ 4,566**	**$ 5,661**	**$ 462**	**$ 3,028**	**$ 2,010**	**$ 4,132**	**$ 9,678**	**$ 5,273**	**$ 385**
Farmer acceptance %	**66%**	58%	**73%**	**85%**	**96%**	58%	**83%**	**80%**	58%	**49%**

This suggests a focus on a number of key crops to maximise income potential per farmer:

- **Vegetables:** Cabbage, Cauliflower, Sweetcorn and Sweet Pepper
- **Fruits:** Passion fruit, Cherry, Mango

3. Markets
Guyana channel profitability mapping

Within this broad picture, segmentation shows that annual profit potential (in USD per acre) ranges very widely by channel with **retail** showing the strongest opportunity for women and youth:

Women & Youth Profit opportunity by channel	Vegetables					Fruit				
	Cabbage	Cauliflower	Sweet corn	Cucumber	Sweet	Guava	Passion fruit	Cherry	Mangoes	Pineapples
Wholesale	$ 8,781	$ 10,147	$ 6,290	$ 1,155	$ 15,142		$ 5,903	$ 13,825	$ 6,591	$ 481
Retail	$ 9,106	$ 27,494	$ 9,991	$ 1,918	$ 17,643		$ 8,355	$ 15,560	$ 8,066	$ 2,686
Manufacturing						$ 2,871	$ 895	$ 1,887		$ 1,494

However, quality requirements and logistics (e.g. transport, storage or packing) costs vary widely by channel and customer and volumes (sales) and price volatility are equally variable by channel & individual customer:

Women & Youth Channel constraints	QUALITY	LOGISTICS	VOLUME	VOLATILITY
Wholesale	L	L	M	M
Retail	H	M	L	M
Manufacturing	M	L	H	L

- **Retail** volumes are typically lower and quality standards higher than wholesale
- **Wholesale** costs are low and volumes and volatility reasonably mainstream
- **Manufacturing** has much higher, guaranteed volumes and lower standards but lower prices

A one-size-fits-all approach does not work for interventions and will be dependent on the appetite for risk, cost and investment from partners and the farmers themselves. In Guyana, a combination of higher value **vegetable** sales into **retail** with longer term, lower value **fruit sales** into **manufacturing** should be considered

4. Engagement
Guyana Stakeholder and Supporting Functions

Supporting Functions:

Land Use & Ownership
Land ownership in Guyana is based on location and ethnic grouping (Indo and Afro Guyanese maybe family owned or leased longer term. Indigenous communities is communally owned
Guyana Land and Surveys Commission is responsible for the lease of all government land in Guyana

Infrastructure:
- Limited access to water and irrigation systems
- Lack of farm to market transportation is a big issue

Finance & Control:
- Limited opportunities for entrepreneurs to secure loans
- Very hard to open bank account without an employer
- Private banks will not lend without title to land

***Details of key contacts in Mapping excel files**

Stakeholders:

Investors

Small Business Bureau
Focus on business development and growth, including access to finance
Guaranteeing small business loans with Replublic Bank Guyana and Guyana Bank for Trade and Industry

Capacity Building

IICA
Training in climate smart agriculture

Demerara Distillers Limited / Tropical Orchard Products Company Limited (TOPCO)
G$4 bn investment in a new Tetra Pak packaging plant and fruit processing plant
TOPCO to offer stable pricing to farmers to stimulate supply

New GMC
Training for farmers and agro processors in bookkeeping, marketing, pricing etc
Processing facilities
Packaging facility

Universities and Research Organisations

NAREI
- Main research arm of Ministry of Agriculture
- Good source of information and working partner
- Phytosanitary analysis

CARDI
Collaborates with the Ministry of Agriculture and other key stakeholders and partners to support agriculture

Guyana School of Agriculture
Provide training for farmers as well as short term courses for agro processors

Green Climate Fund- Small Grants
Funds to support climate resilient projects in conjunction with FAO

IICA
Training in climate change, shade houses and hydronics for women and youth

Women Agro-processors Development Network (WADNET)
11 community-based groups of women processing products and assisting farmers

University of Guyana
Institute of Applied Science and Technology. Strong knowledge and processing equipment

Government

Ministry of Agriculture
HESAD programme (regions 1 and 9) focused on women and youth

Ministry of Amerindian Affairs
Presidential grants used for investments including agriculture. 90 % of communities being provided with a tractor to boost agricultural production in the village

National Agricultural Research & Extension Institute (NAREI)
Direct support to farmers across the country through agricultural extension officers
Knowledge of farmer contacts and locations

Ministry of Tourism Industry and Commerce
Link farmers to hotels/ restaurants

New Guyana Marketing Corporation (New GMC)
Local market development
Branding, marketing and sales

Women and Youth Farmers
- Groups
- Registered/ unregistered

FAO
Climate Resilient Projects on Coastal plain to be funded with Green **Climate Funds**.

Go Invest
Contact for investors, strong understanding of value chains

New GMC
Dissemination of information eg pricing, post harvest information

Climate Smart Agriculture
Eg shade houses, local water management, pest management,

Technology
Cellphone is almost universal
Limited signal coverage
Establishing **100 internet hubs**
Potential for **drones** to survey
Online marketplaces **(Gbay and MarketPlace)**

Inputs/ machinery e.g
- NAREI
Caribbean Chemicals
Pop Up seedling shops

COVID 19
- Reduced income due to reduced hours to sell product (or face fines)
- High risk of wastage and selling off cheaply to avoid taking produce home

Childcare:
Rural families take care of children
Or take to the child to the farm for security rather than leave in external care

5. Sustainable Agriculture
Climate impact on crops

	↑ or ↓ rainfall	↑ temperatures	High humidity
Mangoes (Guyana)	• Negative impact impact on tree photosynthesis, vegetative and reproductive development impacting fruit quality and production		
Guava (Guyana)	• Drought conditions will cause flower drop and severe physiological disorders, such as spongy tissue.	• Deterioration in physiological processes • Increased susceptibility to fruit flies	
Carambola, Passion Fruit (Guyana)	• Declining suitable agricultural lands and loss of biodiversity will affect availability of suitable pollinators for passion fruit and threaten reproduction		
Pineapple	• Drought results in early withering of the peduncle leading to corky micro-fissures • Reduction in sugar content (dry conditions), reducing fruit marketability		
Brassicas (Guyana)	• Can be destroyed by flooding • High rainfall impacts sugar content	• Early development of seed pods and crop wane through early expulsion of seeds	
Sweetcorn (Guyana)	• Adversely impacted by flooding, high winds and storms • Rainfall can offset impact of higher temperatures	• Scenarios show increase of 2°C would result in 40% ↓ yield	

6. Recommendations

Detailed recommendations for women and youth

Suppliers → Farmers → Processors → Distributors → Buyers

			POTENTIAL PARTNERS
ACCESS	FINANCE ('**BUILD**')	• Support finance and insurance companies to design and offer relevant, accessible low cost products to connect with the women and youth that need them. • Provide financial and technical assistance for women through support systems (NGOs, CBOs, etc.) that stakeholders are cognizant of or already working with • Tailored training for women and youth to include in financial literacy and business development and be linked to climate resilient farming practices and secure finance and insurance products	• Guyana Land and Surveys Commission • MOA (eg HESAD project) • NAREI • New GMC • Small Business Bureau (equity for grants & loans facilitated through commercial banks) - Guyana Bank for Trade & Industry, (more friendly to female farmers) - Commercial Banks (Republic Bank, Scotia Bank, Citizen's Bank) - - Guyana Public Service co-operative Credit Union limited
	INCUBATOR ('**BOOST**')	Implement a dynamic, focused Public Private 'incubator model' with to support existing organizations and value-chains to scale, strengthen and engage new farmers: • Access to finance, tools, inputs, training and land • Influence greater access to very low cost land through land banks or revised agro-park policy to lease crown or unutilized land at affordable rates and enable women and youth to scale/ diversify	
	TRAINING ('**INFORM**')	• Offer training in new methods and agricultural technology to women and youth and incentivize the process of knowledge sharing within their community	
ENGAGEMENT	PARTICIPATE ('**INSPIRE**')	• National campaign to interest women and youth in agriculture as a profession (multi-media) • Engagement activities such as Farmer Exchange ('experience life on a farm') and Lead Farmer/ Mentorship programmes in the relevant value-chain. Demonstration plots for community engagement	• Communications/ social media • Marketing and distribution MoA publish market pricing online/ eg Digicel SMS
	DATA ('**ROOTS**')	Cost benchmarking, Market pricing & Buyer access through available micro & macro data/ tech platforms	
	POLICY ('**UNITE**')	Detailed review of content and budgets of existing policies including agriculture, employment and labour as well as gender-based violence, formulate detailed recommendations and benefits of changes to incorporate women and youth. Engage key government decision makers and support of Gender Affairs	

6. Recommendations

Detailed recommendations for women and youth

		Suppliers	Farmers	Processors	Distributors	Buyers	POTENTIAL PARTNERS
REDUCE COSTS ('GROW')	INPUTS	• Encourage deals with input suppliers • Design and distribution of input starter pack with suppliers • Explore expansion into seedling production					• Eg Caribbean Chemicals • Eg Digicel to disseminate SMS discount coupons to farmers
	EQUIPMENT	• Explore potential for community collaboration to reduce/ share costs of equipment and labour at low or no investment • Ensure agricultural equipment and facilities are available and accessible to women and youth, such as, shade/green houses, small water pumps & irrigation pipelines					
	LOGISTICS	Explore cost-effective storage and transportation to market (eg to deliver fruit to Topco/ offtakers year 1) such as van hire, leverage bus companies or empty trucks on backhaul routes to Georgetown					
INCREASE INCOME ('STEP UP')	QUALITY	• Agree minimum quality standards required for target market eg Topco (ripe, clean, pest/ disease free, pulp content etc) and target production volumes at highest quality levels • Explore higher price potential for reject fruit such as local juices to other channels, jams, preserves etc • Ensure women and youth are fully supported to grow the varietals that Topco/ other are looking to purchase ie West Indian Cherry), Passion Fruit (Yellow, Purple, Kaveri), Sorrel, Mango (Spice)					• Collaborate with NAREI/ IICA for varietals and standards • Eg Topco expanding farmer engagement with NAREI • WADNET • New GMC
	COMMERCIAL	• Ensure any offtake agreement is clear, fair and accepted by target women and youth farmers • Facilitate price discussion with Topco and Stirling but also focus on persuading them to future-proof their supply chains (climate smart varieties and practices) and fund CSR outreach activities (inputs, training etc) • Commercial training for women and youth in farm management, sales and marketing (eg gamification) • Explore value-add opportunities depending on context, wants and needs eg - Fresh cut fruit for convenience channels (eg Massy, airport) with potential engagement from buyer - Modular approach to leasing juicing equipment, bottles/ labels supermarkets eg Blue Sky model Ghana					
RESILIENCE	CLIMATE ('SMART')	Engage to understand existing and most suitable sustainable practices eg : • Intercropping of fruit and vegetables ensures soil is replenished with nitrogen • Water management to reduce negative impacts of drought on fruit • Planting of seedlings reduces soil erosion, planting of natural windbreaks					• CIAT (rapid assessment – see additional information) • NAREI, IICA, FAO • Local techniques/ approaches
	SECURITY ('SAFE')	• Provide soft skills training for both women and men that aim to address cultural norms and traditions as it concerns GBV. Influence policy and ensure referral services included in all projects and communications					

Accompanying Information

Key reports and detailed information

Information/ report	File Reference
Part 1: Sub Sector Reports:	Sub Sector Reports 30.4.21.pdf
Part 1: Rapid Sub-sector selection scoring by country:	SLU SAC Rapid Review.xlsx DOM SAC Rapid Review.xlsx JAM SAC Rapid Review.xlsx GUY SAC Rapid Review.xlsx SUR SAC Rapid Review.xlsx
Part 1: Consultation list by country	List of key persons consulted Jamaica in Part 1.doc List of key persons consulted Dominica in Part 1.doc List of key persons consulted St Lucia in Part 1.doc List of key persons consulted Suriname in Part 1.doc List of key persons consulted Guyana in Part 1.doc
Part 2: Draft Report	This document
Part 2: Draft GBV mapping	DRAFT GBV Stakeholder Mapping for Referral Services 4.6.21
Part 2: Draft Climate Smart Report	DRAFT Climate Gender and Youth 4.6.21.doc
Part 2: CIAT Rapid Assessment manual	CIAT CSA-RA manual V2.pdf

Key reports and detailed information

Information/ report	File Reference
Part 2: End Market Analysis including cost of production and market pricing	End Market Analysis 6.7.21.xlsx
Part 2: Detailed stakeholder mapping and supporting function files	St Lucia Mapping.xlsx Dominica Mapping.xlsx Jamaica Mapping.xlxs Guyana Mapping.xlsx Suriname Mapping.xlsx
Part 2: Detailed root cause and effect with GBV trigger analysis (more details)	Gender Analysis working doc templates (each country)

GBV References

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