ADAPTATION FUND

# CONCEPT NOTE PROPOSAL FOR SINGLE COUNTRY

## PART I: PROJECT/PROGRAMME INFORMATION

**Title of Project/Programme:** Climate Resilient Food System Transformation in Suriname (CR-FST)

**Country:** Suriname

**Thematic Focal Area:** Food Security

**Type of Implementing Entity:** Regional Implementing Entity

**Implementing Entity:** Caribbean Community Climate Change Centre (CCCCC)

**Executing Entities:** Ministry of Agriculture, Animal Husbandry and Fisheries

**Amount of Financing Requested:** 9,998,839.20 (in U.S Dollars Equivalent)

**Project Formulation Grant Request (available to NIEs only):** Yes ☐ No ☒

**Amount of Requested financing for PFG:** (in U.S Dollars Equivalent)

**Letter of Endorsement (LOE) signed:** Yes ☒ No ☐

*NOTE: LOEs should be signed by the Designated Authority (DA). The signatory DA must be on file with the Adaptation Fund. To find the DA currently on file check this page: https://www.adaptation-fund.org/apply-funding/designated-authorities*

**Stage of Submission:**

☐ This concept has been submitted before

☒ This is the first submission ever of the concept proposal

In case of a resubmission, please indicate the last submission date: Click or tap to enter a date.

**Please note that concept note documents should not exceed 50 pages, including annexes.**

# Table of Contents



# List of Figures

## List of Abbreviations

| | |
|---|---|
| ABS | *Algemeen Bureau voor de Statistiek* – General Bureau of Statistics |
| AdeKUS | Anton de Kom University of Suriname |
| Af | Equatorial climate |
| Am | Monsoon climate |
| BGA | *Bureau Genderaangelegenheden* - Bureau of Gender Affairs |
| BIZA | Ministry of Home Affairs |
| CAHFSA | Caribbean Agricultural Health and Food Agency |
| CARICOM | Caribbean Community |
| CBD | Convention on Biological Diversity |
| CBOs | Community Based Organizations |
| CC | Climate change |
| CCCCC | Caribbean Community Climate Change Centre |
| CCU | Climate Change Unit of LVV |
| CEDAW | Convention on the Elimination of All Forms of Discrimination Against Women |
| CELOS | Center for Agricultural Research in Suriname |
| CR-FST | Climate resilient Food Systems Transformation |
| DAOB | *Directoraat Agrarische Ontwikkeling Binnenland* - directorate of agricultural development in the hinterland |
| EbA | Ecosystem-based Adaptation |
| EIA | Environmental Impact Assessment |
| EnGenDER | Enabling Gender-Responsive Disaster Recovery, Climate and Environmental Resilience in the Caribbean |
| ENSO | El Niño Southern Oscillation |
| ESL | extreme sea level |
| ESMP | Environmental and Social Management Plan |
| FAO | Food and Agriculture Organization |
| FPIC | Free Prior and Informed Consent |
| FSPs | Financial service providers |
| GRM | Grievance Redress Mechanism |
| IDB | Inter-American Development Bank |
| IICA | Inter-American Institute for Cooperation on Agriculture |
| ITCZ | Inter Tropical Convergence Zone |
| ITP | Indigenous and Tribal Peoples |
| KAMPOS | KAMPOS Tribal Peoples Partnership |
| LVV | *Ministerie van Landbouw, Veeteelt en Visserij* – Ministry of Agriculture, Animal Husbandry and Fisheries |
| MDS | *Meteorologische Dienst Suriname* - Meteorological Service Suriname |
| MSL | Mean sea level |
| MSMEs | Micro, Small and Medium Enterprises |
| NAP | National Adaptation Plan |
| NC3 | Third National Communication to the UNFCCC |
| NCCPSAP | Final National Climate Change Policy, Strategy and Action Plan |
| NGOs | Non-Governmental Organizations |

| | |
|---|---|
| NMA | *Nationale Milieu Autoriteit* - National Environment Authority |
| NRHG | National Council for Domestic Violence |
| NTFPs | non-timber forest products |
| OAS | Organization of the American States |
| OxC | Options by Context |
| PICSA | Participatory Integrated Climate Services for Agriculture |
| ROM | *Ministerie van Ruimtelijke Ordening en Milieu* - Ministry of Spatial Planning and Environment |
| ROS | *Ministerie van Regionale Ontwikkeling en Sport* - Ministry of Regional Development and Sport |
| SAMAP | Strengthening Market Access for farmers in Suriname |
| SBB | Foundation for Forest Management and Production Control |
| SDGs | Sustainable Development Goals |
| SEAH | Sexual Exploitation, Abuse and Harassment |
| SLR | sea level rise |
| SSB | *Surinaams Standaarden Bureau* - Surinamese Standards Bureau |
| TBS | Tan Bun Skrati |
| TC | tropical cyclones |
| ToC | Theory of Change |
| UNASAT | University of Applied Sciences and Technology |
| UNDP | United Nations Development Programme |
| UN-ECLAC | UN Economic Commission for Latin America and the Caribbean |
| VCP | Value Chain Platform |
| VIDS | *Vereniging van Inheemse Dorpshoofden in Suriname* - Association of Indigenous Village Heads in Suriname |
| VSG | *Vereniging Saramaccaanse Gezagsdragers* - Association of Saramaccan Authorities |
| WLA | *Waterlookundige Afdeling* – Hydraulic Service |

# 1. Project/Programme Background and Context

## 1.1 Introduction

Suriname, a country characterized by its vast and pristine tropical rainforests, faces unique challenges and opportunities in the realm of sustainable agriculture. Despite having over 93% of its land covered by forests, the country is grappling with the need to boost agricultural productivity to ensure food security and economic development. Climate change (CC) exacerbates these challenges, threatening both the agricultural sector and the integrity of the forest ecosystems. The agriculture sector was ranked as vulnerable to highly vulnerable to the effects of CC, while it is considered a key contributor to food security and accounts for 7.45% of national employment. The Adaptation Fund, designed to finance climate adaptation projects in developing countries, provides an avenue for Suriname to develop and implement innovative solutions that reconcile these competing needs. Suriname's commitment to preserving its forest cover while enhancing agricultural productivity requires a delicate balance. The country's agricultural ambitions must be pursued in a manner that does not compromise its forest ecosystems, which play a crucial role in carbon sequestration, biodiversity conservation, and climate regulation. To achieve this balance, sustainable agricultural practices that integrate conservation principles are essential. Key strategies include implementing regenerative agriculture systems, which create synergies between crop production and ecosystem conservation. These systems can enhance soil fertility,

increase biodiversity, and provide additional income streams for farmers through the production of timber, fruits, and other forest products[1]. Adaptive measures to deal with CC impacts are crucial and this project will therefore include community-level resource centres that provide training and support services for farmers and processors, strengthening of the agricultural value chains and sustainable knowledge management and transfer programs.

## 1.2 Country Context

### 1.2.1 Geography[2]

Suriname is located in northern South America (2°- 6°N, 54°- 58°W) and is nestled between the Cooperative Republic of Guyana in the west, French-Guiana in the east, the Federative Republic of Brazil in the south and the Atlantic Ocean in the north. Suriname has a total land area of 163,820 km$^2$ consisting of a coastal area, the cover landscape and the interior highlands (Figure 1). The coastal area consists of the Young Coastal Plain which is the flat, low-lying formations of clay, sand and shells bordering the Atlantic Ocean with elevations of 1-3 m above mean sea level (MSL) and the Old Coastal Plain that is further land-inwards (21-75km from the coast) consisting of extensive clay flats, sandy ridges and freshwater swamps approximately 4-7m above MSL. The Cover Landscape (also known as the Savanna or Zanderij Belt) just south of the Old Coastal Plain ranges from 10-100m above MSL and consists of coarse bleached white sands, yellowish-brown sands and sandy clays. The Interior Highlands (also known as the Precambrian Basement and is part of the Guiana Shield) covers about 80% of Suriname's land area and ranges from heights at 100m in the north to hills further in the south up to 750m (the highest point is 1230m) above MSL. Soils in the Interior Highlands consist of weathered and eroded Precambrian rocks with a generally thick layer of lateritic rocks and clays.

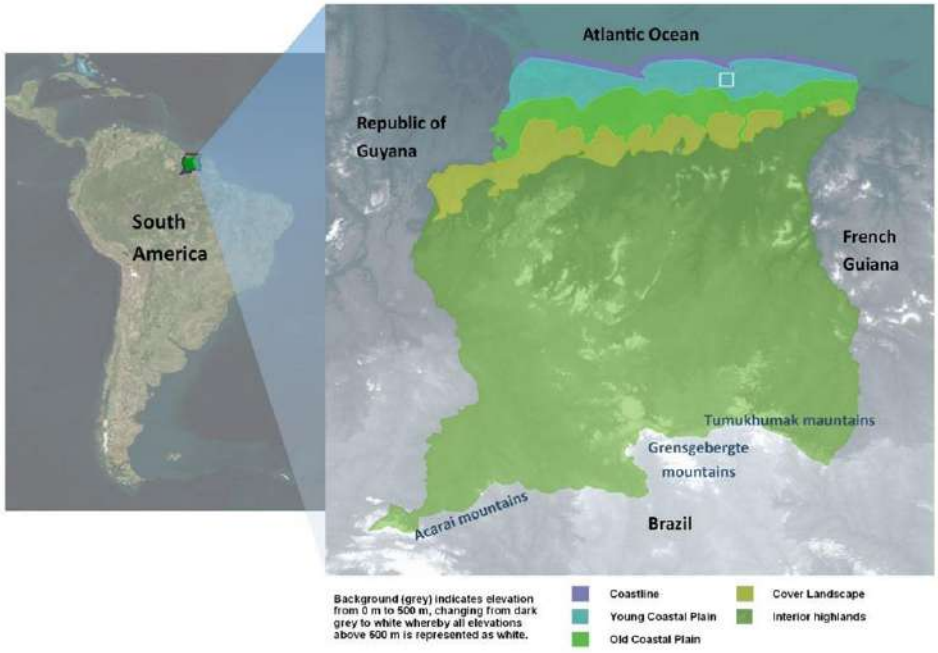


Figure 1. Map of Suriname showing the geographical setting (Source: Suriname NC3)

### 1.2.2 Demographics[3]

According to the last census, Suriname had a population of 541,638 persons (270,629M; 271,009F) in 2012. The General Bureau of Statistics (ABS) estimates that the population grew

[1] See for example GIZ (2022) A Policy Brief: Resilient Landscapes – Five Key Messages on How to Implement Agroecology as a Systemic Adaptation Response. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, Bonn, Germany.
[2] Government of the Republic of Suriname (2023). Third National Communication of the Republic Suriname to the United Nations Framework Convention on Climate Change
[3] Microsoft Word - DEMOGRAFISCHE DATA_DEMOGRAPHIC DATA 2018-2021-3 maart 2023 (statistics-suriname.org)

with 13.82% resulting in an estimated population of 616,500 persons (307,400M; 309,100F) in 2021. In 2021 the sex ratio was 49.86% males and 50.14% females, the mean age was 32.95 years (32.23 for males and 33.67 for females), and the median life expectancy at 70.51 for males and 71.95 for females. ABS divides Suriname in urban districts Paramaribo and Wanica with 406,800 inhabitants (201,000M; 205,800 F), rural coastal districts Nickerie, Coronie, Saramacca, Commewijne and Para with 122,300 inhabitants (62,500M; 59,800F) and interior districts Marowijne Brokopondo and Sipaliwini with 87,400 inhabitants (43,900M; 43,500F) (see districts in figure 2). Suriname has a multi-ethnic population[4] (See the Preliminary Gender Assessment in Appendix 1 for further details)[5,6] and the different ethnic groups are not equally distributed among the districts[7]. In general, Indigenous and Tribal Peoples (ITP) live in Sipaliwini, Brokopondo, Para and Marowijne, while other ethnic groups live in Paramaribo, Wanica, Para, Commewijne, Nickerie, Coronie and Saramacca. Even in these latter districts, pockets of specific ethnic groups can be found in different resorts or communities, which is often related to historical (colonial) settlement policies (Figure 3). This distribution of ethnic groups has an influence on crop preferences and traditional knowledge in agriculture and processing methods in the different districts, resorts and communities, which is of importance in this project (see further Part II, question A).


Figure 3. Map of Suriname showing the 10 districts (Suriname Central Wikimedia Commons)

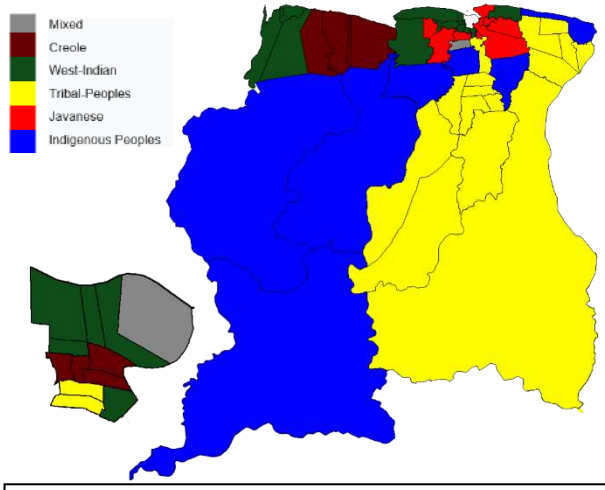


Figure 2. Map showing which ethnic group is the largest per resort
(Source: Suriname Central Wikimedia Commons)

### 1.2.3 Socio-economic and development context

**Introduction**

Suriname relies heavily on its natural resources, particularly mining and agriculture, which together account for a substantial portion of its GDP[8]. The mining sector, particularly gold extraction, is a key driver of economic growth, while agriculture plays a vital role in both domestic consumption and export. Despite this resource wealth, the country faces challenges such as fluctuating commodity prices and the need for economic diversification. According to the World bank, Suriname has a per capita GDP of US$6069, as of 2023[9]. In 2022, Suriname was ranked 124th out of 193 countries on the UN's Human Development Index, with a score of 0.690,

[4] Ethic groups described by ABS as: A group of persons who, based on a common socio-cultural identity, has the feeling to be a separate group in the society, focused on survival as a group and distinguishes themselves from others as such.
[5] mozaiek-van-het-surinaamse-volk-versie-5.pdf (statistics-suriname.org)
[6] Wayback Machine (archive.org)
[7] Wayback Machine (archive.org)
[8] https://pip.worldbank.org/country-profiles/SUR
[9] GDP per capita (current US$) - Suriname | Data (worldbank.org)

categorizing it within the medium human development tier. Approximately 17.5 percent of the population lives below the World Bank's upper middle-income poverty threshold of US$6.85 (2017 PPP) per day[10].

**Agriculture and Food Security[11, 12]**

Suriname has a diverse agricultural sector, with key crops including rice, cassava, and various fruits and vegetables. Agriculture is concentrated in the young and old coastal plains, where the fertile young coastal plain supports large-scale fruit and vegetable production for export, and the old coastal plain focuses on small-scale horticulture. In the interior, shifting cultivation predominates, particularly among women, with crops like dryland rice, bananas, cassava, and cash crops such as ginger and sweet potatoes. The coastal districts of Wanica and Saramacca are vital for vegetable production and food security, with smallholder farms supplying the Central Market in Paramaribo. Despite agricultural capacity, Suriname imports a significant amount of food, leading to strong reliance on imports. In 2021, local agricultural production totalled 345,227,000 kg, with small-scale farmers contributing 201,631,000 kg, while 197,911,000 kg was imported. Suriname faces food security challenges, with some portions of the population struggling to access sufficient, nutritious food. Factors like economic fluctuations, dependency on imports, and infrastructure limitations exacerbate these issues. While calorie access is generally adequate, the quality of diets and the diversity of food intake remain concerns. Initiatives to boost local food production, improve agricultural practices, and educate communities about nutrition are essential to address these challenges.

**Gender Context**

In 2018, the Ministry of Home Affairs (BIZA) published the National Report Situation Analysis of Women and Men in Suriname[13], which provides an overview of gender equality, economics, education, health, public participation, and human rights in Suriname. According to this report Suriname has made several commitments throughout the years to eliminate gender inequalities. Suriname's Constitution ensures equality before the law (Article 35) and prohibits discrimination based on various factors, including gender (Article 8). Internationally, Suriname has signed the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) in 1993, the Beijing Declaration in 1995, and the Belem do Para treaty in 2002, while also committing to the Sustainable Development Goals (SDGs). Regionally, it supports action plans from OAS, CARICOM, and UN-ECLAC. The Bureau of Gender Affairs (BGA) under BIZA oversees implementing gender policies and conventions.

Over the past years, progress has been made to close gender inequality, ranking in 95th place in 2016[14] to 53rd place with a score of 0.742 (range 0-1; 1=parity) in 2024 out of 146 countries[15] on the Global Gender Gap Index. In 2024, in terms of economic participation and opportunity, Suriname ranks on 35th place (score 0.72), education attainment in 80th place (score 0.992), health and survival in 31st place (score 0.979), and political empowerment 66th place (0.245).

**Women in Agriculture[16] and Food Processing**

In Suriname, women represent most small-scale farmers, particularly in the interior, where they

[10] Suriname Overview: Development news, research, data | World Bank
[11] IDB 2021. State of the Climate Report: Suriname.
[12] Suriname - Food Security and Nutrition Indicators - Humanitarian Data Exchange (humdata.org)
[13] BIZA. 2018. National Report Situation Analysis of Women and Men in Suriname Final Report Suriname CAR GEI Englisch version 17 June 2018 revised.pdf (unwomen.org)
[14] BIZA 2018
[15] WEF.2024. Global Gap Analysis WEF_GGGR_2024.pdf (weforum.org) . The gap index is a framework for capturing the magnitude and scope of gender-based disparities and tracking their progress. The Index benchmarks national gender gaps on economic, political, education and health criteria, and provides country rankings that allow for effective comparisons across regions and income groups, and over time. The rankings are designed to create greater awareness among a global audience of the challenges posed by gender gaps and the opportunities created by reducing them
[16] Ibid

often rely on farming as their primary income source. The Fifth Agricultural Census indicates that there are more women farmers in the interior than in coastal areas, where men dominate agricultural labour in larger enterprises. Challenges such as limited access to credit, land ownership issues, and increased vulnerability to climate impacts significantly affect these women, particularly those involved in shifting cultivation. Overall, while women in Suriname's agricultural sector face significant challenges, various programs and initiatives aim to empower them and enhance food security through sustainable practices and improved access to resources. An upcoming agricultural census in 2025 is expected to provide updated data to further support these initiatives. Globally, women often play an important role in climate smart agriculture uptake, saving and exchange of seeds and other plant material and fostering of (agro)biodiversity in communities[17], making them important agents of change.

Based on preliminary observations it seems that women are often involved in cottage industry, processing fruits and vegetables, etc. into traditional food products, often depending on their cultural backgrounds. These products are often for consumption by their own families or sold at farmers markets, small roadside kiosks or supermarkets within their community. Youth are often helping these women (their mothers, grandmothers, aunts, etc.) with tasks such as sorting, washing, cutting, and other preparations, packaging and cleanup. There are at least two women-led cooperative food-processing initiatives, one on cassava processing in District of Wanica[18] and one on pineapple and other fruit processing in an Indigenous village in District of Para[19]. Larger food processing companies also exist, often with a focus on both domestic and export markets, with products ranging from fruit and vegetable preserves, jams, pepper sauces to soy sauces, fruit syrups, frozen fruits and vegetables, etc[20].

**Education[21] and Training**

In Suriname, education completion rates show stark socio-economic and regional disparities. While 85% of children complete primary education, only 23% graduate from upper secondary school. The wealthiest children are significantly more likely to complete school compared to the poorest, with urban areas performing better than rural regions, particularly in districts like Sipaliwini, Coronie, and Brokopondo, where lower completion rates are due to limited educational infrastructure. Additionally, females tend to have higher completion rates than males, especially in lower secondary education. There is also a critical need for decentralized, ongoing training and practical learning, particularly in agriculture. Stakeholder engagement has revealed that current training programs are often short-term and centralized, limiting access and effectiveness. Farmers, for example, often revert to old practices due to the lack of continuous guidance and hands-on experience, highlighting the importance of long-term, practical learning solutions.

**SDGs[22]**

This project will aim to contribute to Sustainable Development Goals 2, 5, 12, 13,14 and 15 (see Part II, Question D). The Suriname SDG Policy Analysis Report provides a status of these SDGs as of 2023. As published by the UN[23], investments of its various agencies in these SDGs totalled an amount of US$ in 2024; with 69.3% spent on Zero Hunger (SDG2), 1.5% on Gender Equality (SDG5), 3.1% on Responsible Production and Consumption (SRD12), 11.6% on Climate Action (SDG13), 2.5% on Life Below Water (SDG14) and 0% on Life on Land (SDG15). The Preliminary Gender Assessment in Appendix 1 provides additional information on the of the gender context and considerations for this project.

[17] Interview of Muriël Mensink as part of the Climate Finance Access Network (CFAN) Advisor training program - Caribbean Cohort 2024
[18] Home - Wi-Suriname
[19] Asajaka Weno Facebook
[20] See for example Interfood N.V. NV Interfood - Kwaliteit sinds 1975 and Chimady N.V. Facebook
[21] Suriname-MICS-EAGLE-education-factsheet-English_2019-final.pdf
[22] Suriname-SDG-Analysis-Report_September-2022-1.pdf (statistics-suriname.org)
[23] Sustainable Development Goals | United Nations in Suriname

## 1.3 Climate Context

### 1.3.1 Observed weather data[24,25,26]

Suriname has a diverse climate that includes Equatorial (Af), Monsoon (Am), and Tropical Savanna (Aw) zones, each with varying rainfall, temperature, and humidity characteristics. Coastal areas receive 1,500-1,750 mm of rainfall annually, while central regions experience even higher levels, 2,500-3,000 mm. Temperatures range from 25°C to 27.5°C in the north and 23°C to 25°C in the southern regions. Humidity is high throughout the year, ranging from 65% to 85%. The country experiences four distinct seasons, influenced by the Inter-tropical Convergence Zone (ITCZ): two rainy seasons (a short one from December to January and a long one from April to August) and two dry seasons (a short one from February to April and a long one from August to December). Suriname's rainforest generates about half of its own rainfall, with the rest being influenced by trade winds and the ITCZ. Additionally, the El Niño Southern Oscillation (ENSO) has a significant impact on rainfall patterns, often causing droughts by shifting moisture-bearing storms away from the country. This has led to issues such as drying up of wetlands (e.g., Bigi Pan) and disruptions to food and water security. In contrast, La Niña years bring heavy storms and flooding, compounding the challenges faced by the agricultural and rural communities.

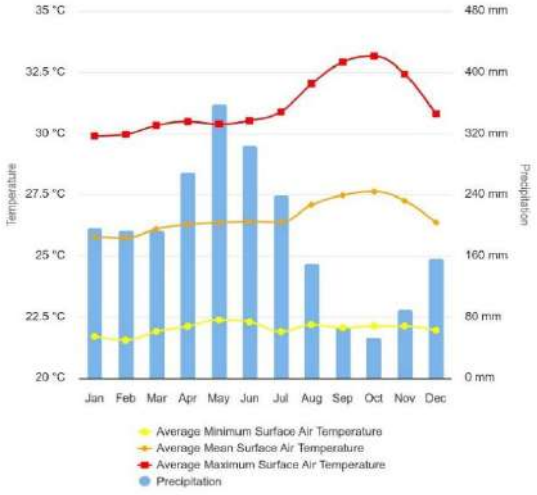


Figure 4. Observed monthly climatological averages in Suriname for 1991-2020 (Source: Climate Change Knowledge Portal)

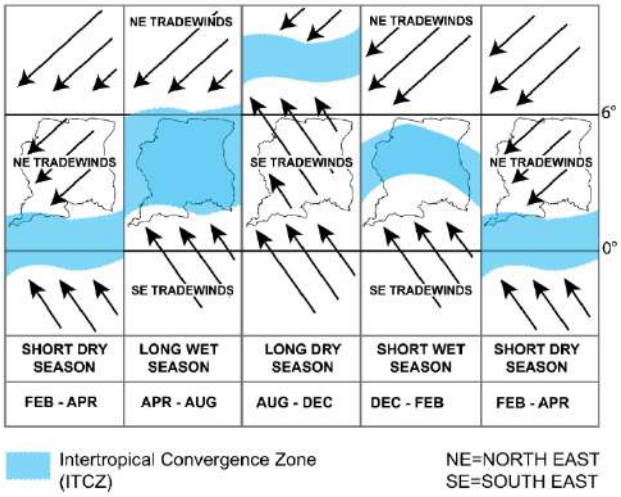


Figure 5. Overview of the 4 seasons in Suriname, influenced by the Intertropical Convergence Zone (Source: Suriname Central Wikimedia Commons)

### 1.3.2 Climate Change Projections[27, 28]

According to the IPCC, there is a significant increase in the probability of the global exceedances of tropical cyclones (TCs) of major intensity affecting the region. Many low-lying coastal areas, including small islands, will experience sea level rise (SLR) and extreme sea level (ESL) events such as coastal storm surges and coastal flooding more frequently in the coming decades. With its low-lying coast, Suriname is in fact listed as one of the top ten countries that are most vulnerable to the effects of CC. The third national communication to the UNFCCC (NC3)[29] lists sea-level rise of 1 meter, 10% decrease in rainfall, temperature increase with 2-3°C, humidity

[24] Caribbean Climatology – Caribbean Regional Climate Centre (cimh.edu.bb)
[25] Suriname - Climatology | Climate Change Knowledge Portal (worldbank.org)
[26] Nurmohamed R., Groen J. and Naipal S. 2018. Climatology and Hydrology. In: Natural History and Ecology of Suriname. De Dijn B. (ed). LM Publishers
[27] Chapter 15: Small Islands | Climate Change 2022: Impacts, Adaptation and Vulnerability (ipcc.ch)
[28] 10 urgent takeaways for the Caribbean from IPCC's latest global climate assessment report | The University of the West Indies (uwi.edu)
[29] Government of the Republic of Suriname (2023). Third National Communication of the Republic Suriname to the United Nations Framework Convention on Climate Change

decrease and a moderate increase of wind speeds as the CC projections for Suriname for the year 2100 (See figure 6 for precipitation and temperature projections). In addition, it is projected that the duration of dry seasons will increase, while precipitation will decrease, the intensity of rains will increase, and weather extremes will increase, including high winds. Rainfall is not only expected to decrease, but rainfall patterns are also expected to change. The number of rainy days is expected to decrease, especially in the coastal and South-West part of the country, resulting in shorter rainy seasons with more intense precipitation events. Areas in the interior will experience wetter conditions with heavier precipitation events, raising surface water levels and resulting in flooding events. Precipitation is expected to decrease and overall drier conditions during both dry seasons and the short rainy season throughout the country. The minimum, mean and maximum temperature is expected to increase throughout the country, especially along the coast and the South-West. The number of cold days and nights are expected to decrease, while the number of hot days and nights are expected to increase. The humidity is expected to decrease, especially in the South-West of the country.

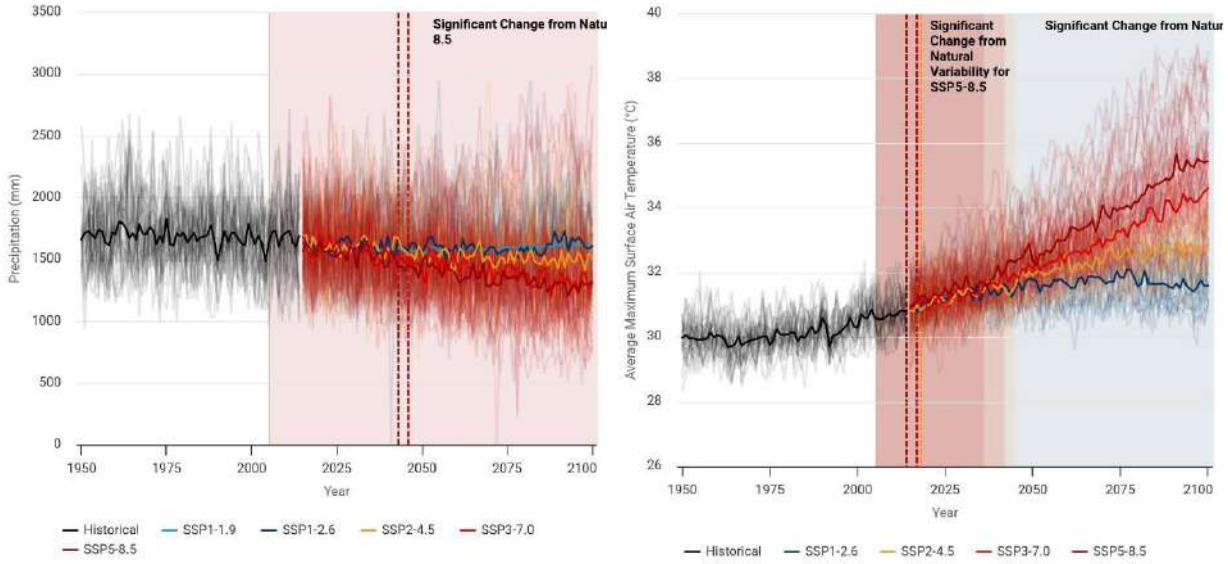


Figure 6. Climate Change projections (left: precipitation; right: temperature) for Suriname (Source: Suriname - Trends & Variability - Projections | Climate Change Knowledge Portal)

## 1.4 Agricultural Sector Vulnerability

According to the NC3, events caused by climate change are increasing and the most vulnerable sectors are agriculture (the production of cash crops, food security, livelihoods of farmers), health, education and environment. For the agriculture sector the general adaptation strategies formulated to increase resilience and sustainability include research programs and capacity-building activities focused on animal husbandry, crops and fisheries. Specific strategies formulated for major crops include topics such as irrigation and drainage systems, agroecological and other climate smart agriculture programs, integrated pest management, crop diversification and rotation, use of climate resilient species/ varieties, and insurance funds to compensate for loss and damage because of climate events (see further Part II, Question D). Most of the country's agriculture is practiced in the low-lying coast (1-3m above mean sea level), making it susceptible to sea-level rise, salt intrusion and floods, which will in turn negatively impact the production of cash crops, food security, and of course the livelihoods of farmers. The NC3 specifies how the different categories of hazards impact the agricultural sector:

- Sea level rise: saltwater intrusion threatens agricultural field on the low-lying coast which includes the rice sector in Western Suriname, and fruit and vegetable farms in Saramacca,

Wanica, Paramaribo and Commewijne.

- Drought: long droughts lead to irrigation-water shortages and food scarcity towards the end of dry seasons and starvation of cattle.
- Flooding: inundation of fruit and vegetable fields and pastures lead to a loss of income.
- Temperature rise: heat stress causes a reduction in productivity such as increased mortality of poultry and swine, reduced milk and beef production and reduced reproductive efficiency of swine.

Suriname recognizes the need for adaptation measures to build climate resilience in its agriculture sector. A capacity gap assessment (NC3) highlighted the need for techniques and technologies to address climate change mitigation and adaptation. Policy documents, including the NAP (2019–2029) and NCCPSAP (2014–2021), advocate for agroecological research, resilience-building agricultural techniques, agrobiodiversity conservation, integrated pest management, erosion minimization, and sustainable cultivation systems incorporating traditional knowledge. These priorities were reinforced through consultations with 25 organizations across various sectors between May and October 2024.

## 1.5 Gender and Climate Change

The policy brief Gender Inequality of Climate Change and Disaster Risk in Suriname[30] as a result of the project 'Enabling Gender-Responsive Disaster Recovery, Climate and Environmental Resilience in the Caribbean (EnGenDER)' found that women's vulnerability to natural hazards in Suriname are derived from their traditional roles and responsibilities in the household and community. There is a clear gender-based division of labour in the household where women do most of the unpaid care work. Women also are the ones who maintain their agricultural plot, which is an anchor of their food security. According to the EnGenDER policy brief, particularly single female-headed households face loss of crops and livestock, and therefore loss of income because of disasters. Women and girls also face an increased risk of gender-based violence and sexual trafficking during or after disasters, loss of livelihoods and restricted access to health services and supplies, and a greater risk of contracting (water borne) diseases. Furthermore, women have a lower livelihood resilience than men. Men and boys often face trauma, suffer from increased alcohol consumption and development of aggressivity. Young men with no prior employment have difficulty in building livelihoods. Youth and children suffer from disruption of education, girls in particular face a higher propensity of education disruption because they help with house duties. In desperate cases, both boys and girls could become victims of increased domestic abuse, child trafficking, and girls can become victims of early marriages. For further details, see the Preliminary Gender Assessment in Appendix 1.

## 1.6 Target Areas and Beneficiaries[31]

While nationwide implementation is ideal, this project will focus on five strategic areas (Figure 7) with existing agricultural infrastructure and initiatives, located along key roads connecting districts. Community-level agriculture and processing resource centres will be established in these areas through public-private partnerships on existing community-serving lands and facilities. These centres will be inclusive, self-sustaining, and income-generating, supporting strengthened value chains and improved access to finance. Additionally, a knowledge-sharing strategy will facilitate the dissemination of insights nationwide during and after the project's implementation.

**Commewijne and Marowijne** are coastal districts in Eastern Suriname, connected to Paramaribo

[30] EnGenDER. 2021. Policy Brief Gender Inequality of Climate Change and Disaster Risk in Suriname. EnGenDER_Gender Inequality CC DRR Brief_Suriname_20220204.pdf (unwomen.org)

[31] Areas indicated are based on statistics provided by the Ministry of LVV for the year of 2021 as presented in: ABS. 2022. 10th Environment Statistics Publication 2017-2021 https://statistics-suriname.org/wp-content/uploads/2022/12/GBS_10th-Environment-Statpub_15dec2022-1.pdf

via the 132km East-West Connection Road. Commewijne has around 443 hectares of agricultural land, with small-scale farmers producing a variety of fruits and vegetables. In Marowijne, farming is mostly done through shifting cultivation on approximately 419 hectares, with crops like cassava, ginger, and açai grown by Indigenous Tribal Peoples (ITPs). Agriculture in both districts is essential for food security and local markets, though it is vulnerable to droughts and floods. The Ministry of Agriculture (LVV) has a field station in Commewijne, offering agricultural testing and extension services. The establishment of knowledge centres along the main road will improve access for local communities and complement existing LVV and cooperative facilities.

**Wanica and Para** are located south of Paramaribo on the Young and Old Coastal plains. Wanica features small fruit and vegetable farms on about 1,160 hectares, supplying local markets and Paramaribo with crops like yard-long beans, peppers, and bitter melon. The district also has LVV field stations and some regenerative farming practices, along with medium to large food processing companies or cooperatives. To the south, Para produces crops like cassava and pineapples on approximately 1,220 hectares of small farms, primarily using manual labor. Both districts are vital for food security, with crops sold locally and in Paramaribo. Multiple road connections between Wanica and Para provide accessibility for communities in both districts. Agriculture in the area faces challenges such as droughts, heat stress, and intense rainfall/flooding.

**Brokopondo and Boven-Suriname** (in Sipaliwini) are home to ITP communities practicing shifting cultivation. Farmers grow crops such as ground provisions, bananas, pineapples, rice, peanuts, and vegetables, and harvest non-timber forest products (NTFPs) like açai and other palm fruits and nuts. There are also commercial farms cultivating dragon fruit and cacao. The Avobakaroad provides the only access to communities along the Upper Suriname River in Sipaliwini, where similar farming and NTFP harvesting practices are followed. Although the Ministry of Regional Development and Sport (ROS) oversees agricultural development in these areas, LVV is not present. Several institutions and NGOs, such as Tropenbos Suriname and CELOS, promote agroforestry and community-level processing opportunities. Establishing agriculture and processing resource centers in Brokopondo could leverage these ongoing efforts and benefit both Brokopondo and Sipaliwini (Boven Suriname).

**Saramacca**, located between Coronie and Wanica, is a key producer of fruits and vegetables for local markets. With about 1,232 hectares of agricultural land, farming is mainly manual but includes some mechanized operations and greenhouses. Ongoing agricultural initiatives include a CELOS demonstration plot, LVV test fields, and the Saramacca Fruits and Vegetables Cooperative. **Coronie**, with approximately 1,131 hectares of agricultural land, is known for its fruit production (especially coconut), vegetables, and honey sold in local kiosks. Both districts, including Indigenous Peoples in Saramacca and Coronie, would benefit from community-level agriculture and processing resource centers, with potential support extending to Western Wanica as well.

**Palumeu** (in Sipaliwini) is a remote Indigenous village in Southern Suriname, accessible only by air or a multi-day trip in dug-out canoes. The village, home to Wayana and Trio Peoples, practices shifting cultivation, primarily growing cassava for self-subsistence. Its strategic location serves both the Trio and Wayana communities, offering shared languages and cultural ties. Interventions in Palumeu will focus on self-subsistence agriculture and food processing. This location was proposed by Foundation Mulokot in May 2024 and endorsed during the validation session in December 2024, highlighting its importance for the surrounding communities.

Figure 7. Map showing indicative project locations

## 2. Project Objectives

This project is designed to be an agroecology[32] project to enhance ecosystem-based adaptation (EbA) measures in the agricultural sector in Suriname. Agroecology projects should include[33] diversity, co-creation and sharing of knowledge, synergies, efficiency, recycling, resilience, human and social values, culture and food traditions, responsible governance, and circular and solidarity economy. Therefore, the main objective is to create climate resilient food security, based on traditional knowledge, regenerative agriculture, climate services, processing, increased technical and financial capacity, and strong community-based value chains. EbA projects[34] should demonstrate the use of biodiversity and ecosystem services as part of an overall adaptation strategy to help people to adapt to the adverse effects of climate change. This project aligns with the National Adaptation Plan 2019-2029[35] using climate resilient crops and practices and integration of climate resilience into agricultural extension services (see further details under section D below). While agroecology and EbA are similar, the following should be incorporated into the project to ensure that the project indeed meets the requirements of both concepts[36]:

- Create/ enable crises-responsive and nature friendly food systems that depend on a systemic transformation along the whole value chain.
- Facilitate and encourage the formation of alliances for change to strengthen agroecology as an adaptation response.
- Facilitate and encourage circular knowledge transfer across sectors and scales to support farmers' resilience in diverse landscapes.
- Help create an enabling environment for long term success of climate resilient agroecological innovations.
- Identify and create mechanisms for strategic adaptation funding and local responsive financial support for the agricultural sector to ensure food security.

Ultimately, **if** a climate-resilient food system transformation occurs, **then** local food value chains will be strengthened, **because** food security will be enhanced. To enable this food systems transformation, the project includes the following specific objectives:

- Community level capacity strengthened in climate resilient agriculture informed by

[32] Agroecology is a food system approach that promotes agriculture based on ecological processes. Furthermore, it proactively addresses the various linkages between farmers, consumers, and the range of other elements constituting a food system (GIZ, 2022).
[33] FAO (2018) FAO's Work on Agroecology: A Pathway To Achieving the SDG's. Rome: Food and Agriculture Organization.
[34] FEBA (Friends of Ecosystem-based Adaptation). (2017). Making Ecosystem-based Adaptation Effective: A Framework for Defining Qualification Criteria and Quality Standards (FEBA technical paper developed for UNFCCC-SBSTA 46). Bertram, M., Barrow, E., Blackwood, K., Rizvi, A.R., Reid, H., and von Scheliha-Dawid, S. (authors). GIZ, Bonn, Germany, IIED, London, UK, and IUCN, Gland, Switzerland. 14 pp
[35] Suriname Final NAP_apr 2020.pdf (unfccc.int)
[36] GIZ (2022) A Policy Brief: Resilient Landscapes – Five Key Messages on How to Implement Agroecology as a Systemic Adaptation Response. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, Bonn, Germany.

traditional knowledge, regenerative agriculture, and climate services
- Community level processing capacity strengthened to secure food availability
- Community level MSMEs form strong value chains and enable efficient trading of goods and services.
- National knowledge sharing platform that enables knowledge sharing in a sustainable way and through multiple channels.

## 3. Project Components and Financing

| Project/ Programme Components | Expected Concrete Outputs | Expected Outcomes | Amount (US$) |
|---|---|---|---|
| Gender-responsive Climate-resilient agriculture | 1.1 Agriculture resource centres established and training provided to farmers | 1. Farmers practice gender-responsive climate resilient agriculture informed by traditional knowledge, regenerative agriculture, and climate services | 1,360,000.00 |
| | 1.2 Climate services provided to farmers | | 470,000.00 |
| Community food processing | 2.1 Food processing resource centres established and community members trained | 2. Communities process local agriculture products to secure food availability | 1,860,000.00 |
| Strong agriculture supply-chains | 3.1 Local value chain strengthened, and business skills improved | 3. Strong network of community-level agriculture value chains enables efficient trading of goods and services | 2,960,000.00 |
| | 3.2 Capacity of FSPs to provide better financial services to MSMEs in the agriculture value chain improved | | 646,000.00 |
| Knowledge management | 4.1 Knowledge sharing platform available online and material available on traditional media | 4. Improved knowledge transfer enables climate resilient food security | 1,120,000.00 |
| 5. Project Execution cost | | | 799,520.00 |
| 6. Total Project Cost | | | 9,215,520.00 |
| 7. Project Cycle Management Fee charged by the Implementing Entity (if applicable) | | | 783,319.20 |
| **Amount of Financing Requested** | | | 9,998,839.20 |

## 4. Projected Calendar

| Milestones | Expected Dates |
|---|---|
| Start of Project/Programme Implementation | Q 2 2026 |
| Mid-term Review (if planned) | Q1 2029 |
| Project/Programme Closing | Q2 2031 |
| Terminal Evaluation | Q4 2031 |

## PART II: PROJECT / PROGRAMME JUSTIFICATION

**A. Describe the project/programme components, particularly focusing on the concrete adaptation activities of the project, and how these activities contribute to climate resilience. For the case of a programme, show how the combination of individual projects will contribute to the overall increase in resilience.**

The objective is to create climate resilient food security, based on traditional knowledge, regenerative agriculture, climate services, processing, increased technical and financial capacity, and strong community-based value chains. Threaded throughout this project are concepts that will ensure community empowerment, ownership, sustainability and resilience, and include characteristic elements of agroecology (in **bold**) and EbA (underlined):

- **Regenerative agriculture[37]:** These are holistic farming practices that enhance water and air quality, boost ecosystem **biodiversity**, produce nutrient-rich food, and sequester carbon to combat climate change, working in harmony with nature while ensuring economic viability. Regenerative agriculture relies on 5 principles: (1) minimizing soil disturbance by reducing tilling and limiting the use of pesticides and fertilizers; (2) maintaining soil cover by using mulching and cover crops to protect the soil and enhance its health; (3) **increasing plant diversity by promoting a variety of crops and vegetation to improve soil health, support wildlife, and provide additional income**; (4) keeping living roots in the soil by ensuring the soil is continuously rooted by using techniques like overseeding or planting crops into existing cover crops; and (5) integrating livestock by utilizing animals to **enrich soil with manure, practice rotational grazing**, and reduce emissions and runoff. These principles work together to create resilient agricultural ecosystems.
- **Options by context (OxC):** This approach recognizes that many of the factors that affect the suitability of agronomic innovations, such as soil, climate, farming practices, **household characteristics, markets, social capital and policy implementation**, vary at a fine (local) scale[38]. The OxC approach aligns adaptation needs with suitable practices and ecosystem services. Key to this process is incorporating local **traditional knowledge** (see below) alongside scientific insights. The development of an OxC matrix is essential for selecting practices that support climate adaptation and biodiversity conservation based on the area's **socio-ecological context**. Given the diverse circumstances of farmers, including their social and ecological conditions, it's crucial to tailor these practices to the unique needs of various resource users[39].
- **Traditional knowledge:** There is a wealth of traditional knowledge about (subsistence) farming practices among the ethnic groups in Suriname. While indigenous peoples primarily grow e.g. bitter cassava, corn, and cashews, gardens of Javanese people traditionally include e.g. jackfruit, rambutan, and breadfruit, while tribal peoples (afro descendants) may grow e.g. cassava, dasheen, and ginger. This **variation in crops and knowledge** can be found throughout the different ethnic groups in Suriname. Aside from hosting a **wide variety of crops in various growing conditions**, these farmers also possess a wealth of knowledge about the suitability of crops for different conditions, best ways to grow and maintain them, etc. All of this can be considered traditional agricultural wealth. With modernization of lives and the uptake of more conventional agriculture which relies on monocropping of a limited number of crops, requiring imported seeds and high inputs, these traditional crop varieties are lost from the gardens and diets, as well as the traditional agriculture knowledge associated with them. This project will draw on modern scientific insights as well as indigenous and traditional knowledge about biological processes, leveraging the natural balance of

[37] Regenerative Agriculture - Chesapeake Bay Foundation (cbf.org)
[38] See further https://www.cambridge.org/core/journals/experimental-agriculture/article/options-by-context-approach-a-paradigm-shift-in-agronomy/EE2BBFAA28E34D4C64C35B2CE29CA7A5
[39] GiZ. 2023. Agroecology: Making Ecosystem-based Adaptation Work in Agricultural Landscapes.

ecosystems to produce nutritious food with minimal reliance on external inputs. As an extension to the traditional crops grown, communities have a wealth of traditional knowledge regarding processing of the crops they grow which is ultimately connected to their **culture and food traditions**. Obvious examples include cassava bread and cassava cereal that can be stored for many months to years. However, each culture has its own various ways of processing foods which include making sauces, condiments and jams, pickling, drying, etc. that prolong shelf-life, increase their value, reduce food waste and make foods available outside of growing seasons. This approach will empower communities and local leadership, while building on traditional knowledge, resources and agroecology[40].

- **Climate services:** By developing a climate information system, the project will inform farmers of weather predictions and provide early warnings to increase preparedness and response capacity in the sector. Furthermore, the climate services will include advisory messages about preparations and response, crop selection and management, etc. This will be built on Participatory Integrated Climate Services for Agriculture (PICSA) training[41] workshops during which attendees can share farming and livelihoods practices, identify and select suitable crops, varieties, and crop practices; crop management; understanding and using short term and seasonal forecasts; and the role extension officers in empowering farmers to make informed decisions about which practices work best in their context.
- **Value chain approach:** Short, community-level, value chains result in **less food loss and waste, and lead to more sustainable production and consumption based on diversified diets with high nutrition**. Often farmers and processors in local communities suffer from underdeveloped value chains, which results in food loss, high prices for transport, excessive emissions due to inefficiencies, limited access to markets, etc. To ensure sustainability of the food system, it is necessary to provide capacity strengthening and guidance throughout the value chains. A value chain approach which incorporates inclusion of women, youth and marginalized communities, is important to enhance their ownership of improved practices and increase productivity as well as profits and to attract the entire workforce towards adoption of climate resilient agriculture. Furthermore, a value chain approach ensures engagement of the private sector as both actors and innovators on investments and financing of regenerative businesses across agriculture and food systems value chain[38].
- **Partnerships:** This project will establish partnerships and seek **synergies** with ongoing efforts by CBOs, NGOs, cooperatives, etc. that support community-level farming and processing. This will increase **efficiency** of efforts and ownership by local communities and organizations active in these communities. These partnerships will be facilitated through the community-level knowledge centers to empower smallholder farmers and processors with the knowledge and resources to enhance productivity, sustainability, and profitability. These knowledge centers will **provide accessible education, resources, and support services through collaboration with public and private entities**. Partnerships will be sought with the public sector such as local governments (for funding and support), agricultural extension services (for expertise and training), educational institutions (for research and curriculum development) and private sectors such as agricultural and food processing companies (for technology and resources), financial institutions (for microloans and financial literacy), NGOs and CBOs (for community outreach and support). These knowledge centers will provide **training programs**, consultation services, resources such as farming and processing tools and equipment, and educational materials, but also **facilitate connections among farmers, processors, suppliers, and buyers**. The knowledge centers will generate income through small membership fees for access to the center's resources and training, training fees for specialized workshops and certification programs, sponsorships and grants, sale of resources such as seeds, seedlings and other propagation material, and consulting fees for personalized advisory services. This business model leverages the strengths of public and private

[40] Strategies to overcome barriers related to agriculture and food security as described in the Agriculture and Food Security Sectoral Guide by the GCF (2021)
[41] An example of a PICSA training in the Caribbean region ClimSA-Press-Release_PICSA-Training-Rolled-Out-in-Jamaica.pdf (cimh.edu.bb)

partnerships to create sustainable knowledge centers. By focusing on education, resource accessibility, and community involvement, the knowledge centers can significantly enhance agricultural and processing practices in small communities, ultimately contributing to local economic development.

- **Training and knowledge management:** A major element throughout all components will be the provision of **training** about agriculture, processing, climate change and business skills. First, training of trainers will be provided to extension officers of LVV, representatives of CBOs, NGOs, cooperatives, (remote) communities and educational institutes. This will be followed by training community members through the various community-level knowledge centers. To ensure that **training material is widely accessible and will remain available beyond project lifetime**, knowledge management includes the development of an online knowledge sharing platform that will include brochures, podcasts and videos of training material. The various forms of material will enable learning by different groups and types of learners but also facilitate distribution through various media channels: podcasts can be broadcast through national and local radio stations and videos can be broadcast through television. Other media channels can also be explored to improve reach. The knowledge products will also be accessible and distributed through the hubs.
- **Decolonization:** Decolonizing food systems refers to the process of recognizing and addressing the historical and ongoing impacts of colonialism on food production, distribution, and consumption. It involves several key aspects such as (1) **restoring indigenous and local food practices, ingredients, and traditions** that were suppressed or marginalized by colonial influences; (2) advocating for communities to improve management of their land and resources; (3) emphasizing **agricultural practices that are ecologically sound and culturally relevant, promoting biodiversity and sustainability**; (4) **fostering equitable distribution and access to healthy foods**; and (5) **supporting local communities in building their own food systems that reflect their values, needs, and knowledge, promoting self-determination**. Overall, decolonizing food systems seeks to create a more **just and equitable food landscape** that honors and integrates the voices and practices of marginalized communities.
- **Social inclusion:** Stakeholder engagements have emphasized the need for training programs that are socially inclusive and respect existing traditional knowledge. These programs should be hands-on and practical, considering language, cultural barriers, and local customs (See the Preliminary Gender Assessment in Appendix 1 and Appendices 2, 3 and 4 regarding stakeholder engagement). In addition to interest in training, there may be other obstacles preventing participation, such as understanding the direct benefits of the training, long travel distances, childcare responsibilities, and gender roles. Addressing these barriers is essential to ensure equitable access and participation, particularly for women and vulnerable groups, in line with Suriname's National Adaptation Plan (NAP) adaptation measure to "Strengthen participation in agricultural activities among women and vulnerable groups." To ensure training programs are accessible, a baseline and feasibility study will assess these barriers. This will inform the development of targeted, inclusive, and sustainable training initiatives. By addressing the specific needs of stakeholder groups, the project aims to enhance their capacities and ensure long-term, positive outcomes, ultimately supporting climate resilience and sustainable agricultural practices.[38]

The project consists of four outcomes, six outputs and fifteen activities, which are described below and summarized in the Theory of Change (ToC diagram Figure 7).

**Outcome 1. Farmers practice gender-responsive climate resilient agriculture informed by traditional knowledge, regenerative agriculture, and climate services.** To achieve this outcome, the following barriers will need to be addressed: (1) the loss of traditional knowledge of farming practices and species that play an important role in climate resilient agriculture and food security; (2) productivity decrease and loss of income & livelihoods due to climate change

impacts; and (3) a high dependency on imported seeds, pesticides, chemical fertilizers and materials for conventional agricultural production systems.

***Output 1.1 Agriculture resource centers established and training provided to farmers.***

- **Activity 1.1.1** The project aims to establish community-level agriculture knowledge centers to promote climate-resilient agriculture. These centers will build on existing initiatives and partnerships with government, NGOs, and local cooperatives to provide essential resources, training, and services to farmers (described under F below). Each center will feature agriculture test fields to demonstrate climate-resilient crops and practices, serve as living seed banks, produce nursery materials, and support waste management and composting. The centers will also offer hands-on training and opportunities for knowledge exchange, while prioritizing inclusivity to ensure access for all community members. By generating income and collaborating with financial institutions and private sector partners, these centers will operate sustainably and reduce barriers to critical services, fostering long-term resilience and community ownership in agriculture.
- **Activity 1.1.2** Train extension officers and farmers in climate resilient regenerative agriculture practices: As described above, there is a wealth of traditional knowledge about (subsistence) farming practices among the various ethnic groups in Suriname. With modernization of lives and the uptake of more conventional agriculture which relies on monocropping of a limited number of crops, requiring imported seeds and high inputs, these traditional crop varieties are lost from the gardens and diets, as well as the traditional agriculture knowledge associated with them. This project will operate based on the OxC approach and will therefore explore the climate resilience of traditional crops and develop training packages that combine traditional knowledge and crops with regenerative agriculture practices. By combining strengths of both traditional and regenerative practices, the project will foster existing traditional agricultural wealth and increase ownership while providing farmers with new knowledge and skills to deal with impacts of climate change. Through the uptake of regenerative practices and increased appreciation of (heirloom[42]) traditional crops, there will be a decreased dependency on imported seeds, pesticides, fertilizers and other materials which are often associated with conventional farming. Training will include, but not be limited to, climate resilient regenerative farming practices, good agricultural practices (GAP), pest control, waste management and composting, post-harvest (handling, storage, transport), etc. Additionally, training will be provided about climate change, its impacts on Suriname and the agricultural sector, as well as adaptation strategies. These training courses will, of course, utilize the community-level agriculture knowledge centers established under activity 1.1.1 and will be informed by the climate information system under activity 1.2.1.

***Output 1.2 Climate services provided to farmers.***

- **Activity 1.2.1** Organize Participatory Integrated Climate Services for Agriculture (PICSA) training workshops. During these workshops attendees can share farming and livelihoods practices, identify and select suitable crops, varieties, and crop practices; crop management; understanding and using short term and seasonal forecasts; and the role extension officers in empowering farmers to make informed decisions about which practices work best in their context. These workshops should also serve to assess vulnerabilities and capacities (VCA) of the communities to deal with the impacts of climate change. Outcomes of these workshops will inform the climate information system under activity 1.2.2
- **Activity 1.2.2** Create and disseminate a climate information system to enhance farmers' readiness for extreme weather events: To increase the preparedness of farmers to weather

[42] Encyclopedia Britannica: "A heirloom plant is any plant cultivar that has been grown for a certain number of years and that breeds "true to type" from seeds, with each generation of the plant having the same combination of traits.[…] In general, the cultivar was grown and maintained by a family, community, or other group, with the seeds passed down from generation to generation."

conditions and events, a climate information system will be developed that will provide monthly and where possible longer weather predictions for farmers. This system will also provide warnings about weather events such as strong winds, heavy rain, droughts and heat. In addition to these predictions, the climate information system will include advisory messages to farmers on how to prepare for and respond to the expected weather events, with the purpose of safeguarding food security, minimizing losses of crops, damage to fields and their infrastructure and therefore minimizing loss of income and livelihoods. Furthermore, climate information services to farmers will further help them to increase productivity, improve production standards, and strengthen the development of national and local agricultural economies[43].

**Outcome 2. Communities process local agriculture products to secure food availability.** This outcome will target barriers quite like those faced by farmers, but on the level of processors. These barriers include (1) the loss of traditional knowledge and skills regarding food processing, preservation and storage methods; (2) a high dependency on imported foods; and (3) food scarcity, increased food prices and loss of access to healthy food due to productivity decrease.

***Output 2.1 Food processing resource centers established and community members trained.***

- **Activity 2.1.1** Expand / establish community-level processing capacities: As is the case with farming initiatives, there are various initiatives by cooperatives, NGOs and CBOs to improve community capacities to process foods. Oftentimes these foods come from local farms, gardens and collected in nearby natural areas (non-timber forest products – NTFPs). Examples of this include production of cassava bread, cassava flour, processing of fruits into juices, syrups, and jams, production of various traditional pepper sauces, herbal medicines, etc. By creating partnerships with existing organizations, this project will establish and/or expand shared community level post-harvest and processing facilities, which will enable local communities to increase their capacity to handle and process locally produced foods and thereby improving their food security and decreasing the needs for imported foods. The increased capacity to handle and process foods will increase availability of locally produced foods outside of growing seasons and after destructive climate events that impact agriculture fields. This will improve the buffering capacity of the communities to deal with temporary food shortages and reduce their dependence on e.g. relief efforts after climate events. These community-level facilities will serve a similar purpose as the agriculture centers by also functioning as a knowledge center to create access for MSMEs to opportunities and services they require.
- **Activity 2.1.2** Strengthen capacity of processors to enable safe food handling and processing: Much food is wasted due to poor handling of produce by farmers, during transport, packaging and display at markets. Training will be provided to community members about post-harvest techniques to safeguard the quality and shelf-life of fresh produce. Like the crops themselves, many of the products produced by communities are tied to traditional foods and therefore traditional processing techniques. Through modernization of life there is an increased dependency on imported food products as these are more common than locally produced products in stores. This project will support communities to capture this traditional knowledge and ensure that these recipes are stored in appropriate knowledge products, considering cultural sensitivity and safeguarding intellectual property rights. Furthermore, the community-level processing facilities will serve as a training location to teach community members modern processing techniques that ensure food safety, increased shelf-life, quality, etc., based on good manufacturing practices (GMP). With the combination of traditional and modern food processing knowledge, these communities will possess an increased capacity to process their locally grown foods, create value-added products, increase their income, and

[43] GCF.2021. Agriculture and Food Security Sectoral Guide

secure food availability for periods of decreased harvests (scarcity) due to weather variability or events (e.g. droughts or floods). Increased income will also increase their capacity to prepare, adapt and respond to climate change. Additionally, training will be provided about climate change, its impacts on Suriname and agricultural sector, food processing and shelf-life, as well as adaptation strategies.

**Outcome 3. Strong network of community-level agriculture value chains enables efficient trading of goods and services.** Micro, Small and Medium Enterprises (MSMEs) often face similar challenges of possessing poor or insufficient business skills which result in losses, inability to invest, access financing and save. Furthermore, weak value chains result in loss due to spoilage, low prices for farmers, limited processing and value addition and scarcity of (processed / stored) fruits and vegetables outside of the growing or fruiting season. These barriers result in high vulnerability of farming communities due to unstable income streams. Climate change impacts such as droughts, floods, strong winds and heat exacerbate this vulnerability. Outcome three will address these barriers through the following output and activities.

***Output 3.1 Local value chain strengthened, and business skills improved.***

- **Activity 3.1.1** Strengthen community-level agricultural value chains to increase food security for communities: the community-level agriculture and processing knowledge centres will function as service and knowledge centres for farmers, processors and other actors in the local agriculture value chains. These knowledge centres can facilitate networks of service providers and provide services themselves which will ensure income for the knowledge centres and therefore safeguard their sustainability beyond project life. The agriculture knowledge centre can e.g. provide seeds and seedlings, compost, and rent out farming equipment, either autonomously or through partnerships with local private sector actors in the value chain. The processing knowledge centres will play a similar role and will e.g. rent processing facilities for use by local communities, provide waste management and composting services, etc. Through their function as knowledge centres for farmers, processors, and other actors in the value chain, these MSMEs will be able to gain better access to markets by pooling costs for transport, collectively offering products to buyers, etc. Under this activity, the knowledge centres will actively engage with local value chain actors to develop partnerships and create/ improve value chain linkages.
- **Activity 3.1.2** Develop and disseminate a platform for efficient trading within the value chain: To further strengthen the value chain, a platform (mobile phone app) will be produced that will enable trading of goods and services for farmers and processors while allowing them to keep track of expenditures and income. This platform will create efficiency, decrease time loss and therefore spoilage of foods, increase access to markets, and will build on the networks established through and the capacities improved by the community-level knowledge centres. This platform may include options to keep track of expenditure and income, ability to contact buyers and service providers, conduct payments and allow for track-and-trace.
- **Activity 3.1.3** Develop and deliver training in business skills: This activity will target the various actors in the agriculture value chain, not only the farmers and processors, but also the actors providing goods and services to the sector. These often have insufficient business skills that allow them for proper administration, financial literacy and management, formalization, access finance for investments, etc. By providing training in these business skills to the various actors, the resilience of the entire value chain will increase. For the delivery of these training modules, the community-level knowledge centres can act as training centres. Additionally, training will be provided about climate change and associated risks, its impacts on Suriname and the agricultural sector, as well as adaptation strategies such as introducing new resilient and low-emission technologies.

***Output 3.2 Capacity of FSPs to provide better financial services to MSMEs in the agriculture value chain improved.***

- **Activity 3.2.1** Improve the capacity of FSPs to provide better financial services to MSMEs in the agriculture value chain. There are existing initiatives to increase accessibility of financial products for MSMEs. These include savings and microcredit programs by Savings and Credit Cooperation De Schakel[44], the National Development Fund for Agribusiness (NOFA)[45], and the credit and guarantee funds of the National Development Bank (NOB)[46]. Financial service providers (FSPs) will be engaged to develop tools, methodologies and procedures to better serve MSMEs in the agricultural sector. Subsequently, staff of these FSPs will receive training on the background of agricultural value chains and the specific tools and procedures created.
- **Activity 3.2.2** Utilize knowledge centres to decentralize financial services. FSP offices are often still quite centralized in and around Paramaribo. Therefore, FSPs will be encouraged to utilize the knowledge centres to bring their products and services closer to their target groups. This activity will focus on developing systems / establish partnerships through which the knowledge centres can serve as intermediary locations for FSPs.
- **Activity 3.2.3** Improve capacity of MSMEs to access financial services provided by FSPs. Stakeholders in the agricultural value chains have argued that a lack of collateral and financial administration form major barriers for MSMEs to access loans. This activity will further strengthen the capacity of MSMEs to access financial products by providing training packages and support to improve financial administration, increasing uptake of savings (which can serve as collateral), using cooperatives for pooling of resources, etc. The knowledge centres will play a key role in providing the training and support to the MSMEs.

**Outcome 4. Improved knowledge transfer enables climate resilient food security.** The final barrier to be addressed is inadequate knowledge transfer between generations, cultures and institutions about sustainable agricultural practices, processing methods, business skills, value chains and disasters preparedness. This outcome will address this barrier through the implementation of the two activities listed below.

***Output 4.1 Knowledge sharing platform available online and material available on traditional media.***

- **Activity 4.1.1** Develop a socially inclusive knowledge sharing platform for climate resilient agriculture value chains: All training material, other capacity building and awareness material, and reports produced as part of this project will be stored and made available on an online platform hosted by LVV. It is the ambition that most if not all material will be made available in different forms such as written text, but also brochures, podcasts and video's which will enable learning by different groups and types of learners but also facilitate distribution through various media channels (see below). By creating and storing these knowledge products a wider audience will have access to the knowledge even beyond the project lifetime. All material will also be stored in the online repository of CCCCC, making it available for a wider audience.
- **Activity 4.1.2** Utilize knowledge centres to distribute training and awareness material: Aside from creating an online platform, it is important that material is also accessible for people who do not have (stable) internet access. Therefore, the knowledge products will also be distributed through the community-level knowledge centres. This will support locally managed information systems that encourage local and regional peer to peer sharing and learning.
- **Activity 4.1.3** Use traditional media to broadcast material and interact with communities: Podcasts can be broadcast through national and local radio stations and videos can be broadcast through television. Radio broadcasts can provide the opportunity to tailor to the needs of beneficiaries by utilizing local radio stations (district or village stations) and e.g. creating opportunities for listeners to call/ submit questions to extension officers in the studio. Other media channels can also be explored to improve reach.

[44] Savings and Credit Cooperation De Schakel (SKCS)
[45] NOFA
[46] NOB

- **Activity 4.1.4** Utilize agricultural fairs and farmers markets to enable knowledge exchange and strengthening of value chains: Existing farmers markets and agricultural fairs at community and national level will be utilized to organize thematic days to enable knowledge exchange within the value chain, enable business to business interactions, promote local foods, healthy and special diets to community members, and create awareness among communities about climate change, its impacts and needs for resilience building.

To make all of this possible, the project assumes that farmers and processors are interested and willing to participate; organizations, persons and companies are interested and willing to fulfil a role throughout the value chain; and the Ministry of Spatial Planning and Environment, the Ministry of Regional Development and Sport, the National Environment Authority, the Ministry of Agriculture, Animal Husbandry and Fisheries, the Meteorological Service, the National Coordination Center for Disaster Response and other relevant government authorities and institutions provide their full support for project implementation.

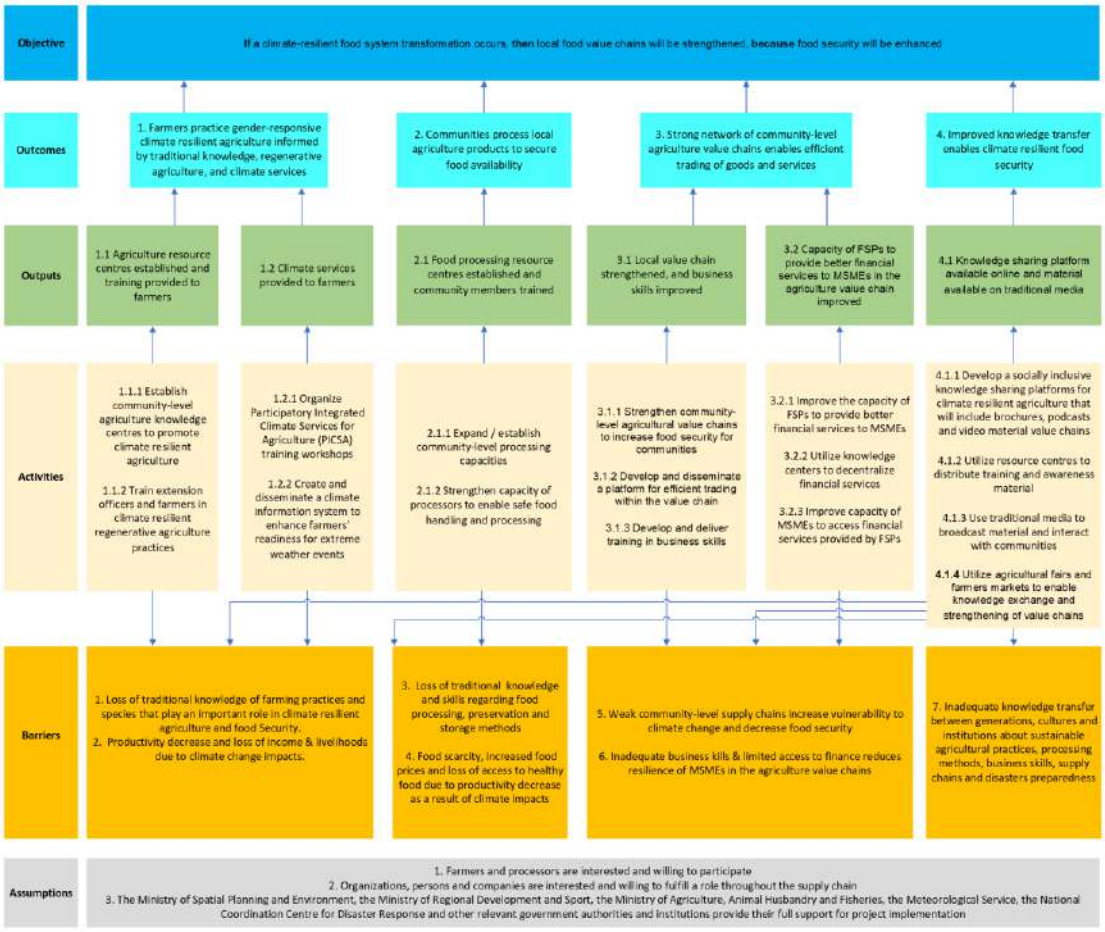


Figure 7. Theory of Change Diagram

## B. Describe how the project/programme provides economic, social and environmental benefits, with particular reference to the most vulnerable communities, and vulnerable groups within communities, including gender considerations. Describe how the project/programme will avoid or mitigate negative impacts, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

Benefits described below take into account findings of the Preliminary Gender Assessment

(Appendix 1) and inputs received during stakeholder engagement (Appendices 2, 3 and 4).

**Economic Benefits**

- Improved Market Access and Operational Efficiency: The establishment of community-level agriculture knowledge centres and storage and processing facilities will function as hubs for farmers, processors, and other actors within the local agriculture value chains. These centres will enable better market access by pooling costs for transport and facilitating collective offerings to buyers. This model fosters greater market reach and reduces logistical barriers that typically prevent farmers from accessing services and markets.
- Cost Reduction through Regenerative Practices: By transitioning to regenerative agricultural practices, farmers will reduce their dependency on imported seeds, pesticides, fertilizers, and other materials associated with conventional farming. This shift will result in a reduction in operational costs, as farmers increasingly rely on locally adapted crops and sustainable farming practices.
- Climate Resilience through Climate Information System: The climate information system will provide farmers with tailored advisory messages, helping them prepare for and mitigate the impacts of extreme weather events, such as droughts, floods, or heat waves. This system aims to safeguard production, minimize crop loss, protect fields and infrastructure, and ultimately secure farmers' income and livelihoods, contributing to economic stability.
- Increased Capacity for Food Storage and Processing: The enhanced capacity for food storage and processing at the community level ensures the availability of locally produced foods beyond the growing season or after disruptive climate events. This buffering capacity enhances food security and reduces reliance on external aid. The capacity for local processors to increase incomes further strengthens the community's economic resilience by adding value to local agricultural products.
- Market Efficiency through Online Platform: The development of a mobile trading platform will streamline operations, reduce spoilage, and enable farmers and processors to better access markets, enhancing their ability to trade goods and services efficiently. By enabling farmers to track expenditures, incomes, and engage with buyers and service providers, this platform helps to optimize the value chain.
- Business Skill Development for MSMEs: Training in business skills for MSMEs will bolster the overall resilience of the agricultural value chain. Enhanced business acumen will alleviate barriers to accessing finance, improve resource management, and foster sustainable growth in local agriculture, food processing, and value-added activities.

**Social Benefits**

- Wider Accessibility to Training Materials: To ensure inclusive access to training materials, the project will provide resources in various formats (written text, brochures, podcasts, videos) that cater to diverse educational levels, languages, and internet access capabilities. This approach supports broad dissemination across rural and remote communities, particularly where internet connectivity may be unstable. Additionally, training materials will be distributed through community-level knowledge centres and broadcast via radio and television to ensure maximum outreach.
- Preservation of Traditional Knowledge and Agricultural Biodiversity: The project will actively work to capture and preserve traditional agricultural knowledge and species, which are vital for building climate resilience. By integrating traditional crops and farming practices with regenerative agriculture methods, the project safeguards both cultural heritage and biodiversity. This preservation of agrobiodiversity boosts communities' ability to adapt to climate change and increases agricultural resilience.
- Increased Food and Income Security/ Income diversification: By improving agricultural practices and processing capabilities, the project will enhance food security in communities, even during off-seasons or following climate-related disruptions. This will reduce food scarcity, increase local food availability, and create stable income opportunities. Moreover, processing

facilities will provide income-generating opportunities, diversifying income sources and strengthening local economies. Access to value-added processing activities and business training will provide women with opportunities to diversify income sources, reducing their economic vulnerability.

- Empowerment of women farmers and processors: Women, who often play a critical role in agriculture and food processing, will benefit from targeted training and capacity-building activities, enhancing their skills and economic opportunities. The project's gender-responsive approach ensures that women's traditional knowledge and practices are recognized and integrated into climate-resilient agricultural strategies.
- Equal access to resources and decision-making: The project will address structural barriers by ensuring equitable access to training, resources, and value chain opportunities for women and other marginalized groups. Women's participation in community-level governance and knowledge-sharing initiatives will be encouraged, promoting gender equality.

**Environmental Benefits**

- Carbon Sequestration and Soil Health: The adoption of regenerative agriculture practices, including permaculture and syntropic agriculture, promotes carbon sequestration in food-producing trees and soil. This method contrasts sharply with conventional farming, which often relies on seasonal crops, frequent tillage, and chemical fertilizers. While carbon sequestration will develop progressively over time, the project serves as a catalyst for this long-term process, initiating a shift toward more sustainable and carbon-negative farming practices.
- Urban Greening and Environmental Cooling: The integration of regenerative practices into agricultural systems near urban areas will enhance urban greening, cooling, and water filtration. The incorporation of trees, diversified crops, and improved soil health will reduce the urban heat island effect, improve water retention, and foster biodiversity. Additionally, raising awareness about regenerative agriculture could encourage its adoption in urban gardens, further promoting environmental sustainability.
- Reduced Soil and Water Pollution: Regenerative farming practices focus on nutrient cycling and ecosystem health, reducing the need for chemical inputs like fertilizers and pesticides. By decreasing the reliance on these harmful substances, the project will contribute to the long-term reduction of soil and water pollution, promoting cleaner ecosystems and safer water resources for communities.

By targeting these economic, social, and environmental benefits, the project promises a multifaceted approach to fostering climate resilience in Suriname's agricultural sector. These outcomes align with sustainable development goals, creating a foundation for lasting positive change in the region.

## C. Describe or provide an analysis of the cost-effectiveness of the proposed project/programme.

The proposed project to transform Suriname's food systems into climate-resilient models exhibits several features that enhance its cost-effectiveness, particularly in addressing food security through traditional knowledge, regenerative agriculture, and community-based initiatives. The project demonstrates a high degree of cost-effectiveness by using existing resources and partnerships to lower implementation costs, promoting sustainable, low-input agricultural practices, enhancing local value chains and reducing inefficiencies in the system, and fostering knowledge sharing and capacity building for long-term self-sufficiency. Below is a breakdown of the cost-effectiveness elements.

**Leveraging existing resources** reduces initial costs and operational expenses while promoting local ownership and sustainability. By establishing Agriculture Knowledge Centres in collaboration with local cooperatives, NGOs, and government entities, the project avoids duplication of efforts and optimizes the use of existing infrastructure, expertise, and networks. Additionally, it integrates

traditional agricultural knowledge in Suriname, preserving cultural heritage and reducing reliance on costly research and development initiatives. **Promoting regenerative and climate-resilient agricultural practices** fosters long-term sustainability and strengthens resilience to climate shocks. By encouraging the use of heirloom and climate-resilient crops, the project reduces reliance on imported seeds, pesticides, and fertilizers, lowering costs for farmers and enhancing local food sovereignty. Training programs integrate low-cost traditional practices with modern techniques, improving productivity and climate adaptation without depending on expensive technological inputs. **Decentralization** reduces operational inefficiencies and enhances access to essential resources for farmers and processors. Agriculture and processing knowledge centres serve as decentralized service hubs, improving accessibility, reducing transportation and logistical expenses, and facilitating training and financial access. Collaborations with financial service providers further leverage these centres to offer localized financial services, enabling MSMEs to overcome high transaction costs and administrative challenges. **Focusing on value addition and market linkages** increases the profitability of agricultural products and enhances economic returns. Establishing post-harvest processing facilities helps communities minimize food waste and adds value to locally grown products, boosting income and market competitiveness. Additionally, the development of a digital market platform, such as a mobile app, strengthens value chains, reduces spoilage, and addresses market inefficiencies. **Knowledge transfer and capacity building** promote self-reliance and reduce long-term dependency on external support. Comprehensive training programs in regenerative practices, business skills, and climate adaptation equip farmers and MSMEs with the tools to operate more effectively. Multi-platform knowledge sharing, through online and offline channels such as radio, podcasts, and fairs, ensures inclusive and widespread dissemination while minimizing the costs associated with repeated training programs. **Building long-term resilience and adaptation** enhances preparedness, reducing losses and recovery costs from climate shocks. Tailored climate services, including specific information and early warnings, help farmers minimize crop losses and safeguard livelihoods, ensuring economic stability. Strengthened food processing, storage, and local production capacity further mitigate the effects of climate-related food shortages, decreasing reliance on costly external aid.

### D. Describe how the project/programme is consistent with national or sub-national sustainable development strategies, including, where appropriate, national adaptation plan (NAP), national or sub-national development plans, poverty reduction strategies, national communications, or national adaptation programs of action, or other relevant instruments, where they exist.

**Final National Climate Change Policy, Strategy and Action Plan (NCCPSAP) for Suriname 2014-2021[47]:** annex B of this document holds several actions for various sectors, including agriculture. Relevant actions are listed below**.**

- Develop and trial agricultural, livestock and fishing techniques that build resilience to a variable and changing climate in a participatory way (gender specific and according to Free Prior and Informed Consent (FPIC) protocol). This includes agrobiodiversity conservation; integrated pest management and disease control; crop rotation; crops tolerant to saltwater, water logging and drought; use of appropriate greenhouse systems; minimization of tillage and as such erosion; and traditional knowledge).
- Provide guidance/ training on alternative growing systems such as appropriate greenhouses and hydroponic gardens, improved drainage systems, crop diversification, etc. (fruit and vegetables); climate-control systems on livestock farms, modification of livestock feed, in both the coastal area and the interior. Examples of this include sustainable cultivation systems & agribusiness chains characterized by integration of annual & perennial crops & animals, socio-

[47] Although outdated, the NCCPSAP is still applicable and includes relevant strategies and actions sur171350.pdf (fao.org)

economic benefits & low environmental impact practices.

**National Adaptation Plan (NAP) 2019-2029:** Sector Adaptation Action Plans[48]

- **Water resources:** Under the second strategic objective, adaptive measure C there is an indicative output to reduce discharge of pollutants including sediments, sewage, agrochemicals and mining pollutants into water systems and protect aquifers from surface contamination. With the adoption of regenerative agriculture and waste management practices the project will result in a reduction in the sector's contribution to water pollution, through the reduced use of pesticides and chemical fertilizers, as well as soil improvement.
- **Sustainable forest management:** Under the first strategic objective, adaptive measure B is the identification, analysis and implementation of sustainable forestry options in Suriname including but not limited to: soil degradation and nourishment, reforestation planning, irrigation, protected areas, agroforestry, buffer zones, production and harvesting, natural stands and participatory management. This project will include investigation into how regenerative agriculture systems, which include agroforestry, can most suitably be incorporated in community-level food production. The training packages developed under activity 1.1.2 will incorporate exploration of suitable regenerative systems in combination with traditional knowledge and crops.
- **Agriculture, livestock and fisheries:**
  - Strategic objective 1. Comprehensive national research program on climate resilient crops, agricultural practices, animal husbandry and fisheries: Although this project does not include a research component, it does include studies to gain understanding of climate resilience of traditional crops and how these can be utilized to create greater food security. These crops will be included in the development of the training programs for farmers and processors as well as their application in the agriculture test fields. Furthermore, this strategic objective includes strengthening of participation in agricultural activities particularly among women and vulnerable groups, which is included in multiple facets of this proposed project.
  - Strategic objective 2. Integration of climate resilience into agricultural extension services: The training program that will be established as part of Output 1, will include climate resilience in the agricultural sector. The project will utilize training of trainers to increase capacity for decentralized training. These trainers will be extension officers from LVV, but also key stakeholders in communities such as representatives of cooperatives, educational institutions, CBOs and NGOs.

**Third National Communication (NC3) to the United Nations Framework Convention on Climate Change 2023[49]:** Adaptation measures for fruits and vegetables include implementation of crop diversification to guarantee food security under changing climate conditions.

**The Gender Vision Policy Document 2021-2035[50]** lists 7 priority areas, 3 of which are relevant to this project:

- Labour, income and poverty reduction: The policy document highlights a lack of gender-specific data in agriculture and the informal sector, emphasizing the need for targeted training for marginalized groups, particularly women in rural and interior areas. This project addresses these gaps by establishing community knowledge centres and providing capacity-building initiatives to empower men, women, and youth in agricultural value chains. Additionally, the project aligns with the policy's call for feasibility and marketing studies by conducting value chain analyses to inform targeted capacity-building training. These efforts aim to enhance business skills among value chain actors, thereby strengthening agricultural production and

[48] Suriname Final NAP_apr 2020.pdf (unfccc.int)
[49] SURINAME NC3_2023_FINAL.pdf (unfccc.int)
[50] 3-juli-engelse-printversie-gender-vision-policy-document-2021-2035-1.pdf (gov.sr)

economic opportunities in rural and interior regions.

- Environment and climate change: Women, though disproportionately impacted by climate change, play a vital role in adaptation and mitigation efforts. While the policy document does not directly address agriculture and processing, it highlights the importance of integrating traditional knowledge, particularly from women, into environmental programs. This project builds on that by incorporating women's knowledge of agriculture and food processing to enhance climate adaptation in community-level agricultural value chains. It also addresses women's vulnerability to climate change, their participation in decision-making, and their role in biodiversity protection. By providing climate information services, men, women, and youth can make informed decisions for farming and processing activities. Additionally, the promotion of regenerative agricultural practices encourages farmers, particularly women in rural and Indigenous communities, to view their farms as integrated ecosystems, fostering sustainable practices that align with the biodiversity of surrounding rainforests.

**Sustainable Development Goals:**

- **2. Zero hunger:** The project will create food security, nutrition and sustainable agriculture through the implementation of various activities. Specifically, the project will contribute to indicator 2.1 to ensure food access, 2.3 to increase agricultural productivity and incomes of small-scale food producers, 2.4 by ensuring sustainable food production systems and implementing resilient agricultural practices, 2.5 by maintaining genetic diversity of crops, and to target 2.a through increasing investments in agriculture extension services and technology development to enhance agricultural productivity.
- **5. Gender equality:** By mainstreaming gender throughout project management and activities, it will ensure gender equality. The project will ensure women's full and effective participation and equal opportunities for leadership (indicator 5.5) and undertake measures to give women equal rights to economic resources and financial services (target 5.a). Furthermore, through compliance with the CCCCC SEAH Policy[51], the project will include the elimination of all forms of violence against women and girls (indicator 5.2).
- **12. Responsible consumption and production:** The project includes regenerative agricultural production which encompasses responsible production systems and sustainable management and efficient use of natural resources (indicator 12.2). By increasing community-level food storage and processing capacities, facilitating waste management and composting, and strengthening the value chain to increase efficiency, the project will contribute to the reduction of food losses along the production and value chains (indicator 12.3). The waste management and composting activities will contribute to the reduction of waste generation (indicator 12.5).
- **13. Climate action:** With its focus on climate adaptation, the project will contribute to achieving indicator 13.1 to strengthen resilience and adaptive capacity to climate-related hazards and natural disasters. Furthermore, by creating the climate information service for the agricultural sector, the project will improve awareness-raising and institutional capacity on impact reduction and early warning (indicator 13.3).
- Furthermore, by promoting regenerative agriculture practices that reduce impacts on biodiversity and the environment, and promote soil and water quality improvements, the country contributes to **SDG 14 Life below water** by reducing nutrient pollution (indicator 14.1) and **SDG 15 Life on land** through sustainable use of terrestrial and inland freshwater ecosystems and their services (indicator 15.1), by restoring degraded soil (indicator 15.3) and by reducing degradation of natural habitats (indicator 15.5).

**CARICOM Secretariat Strategic Plan 2022-2030[52]:**

- Effective implementation of specific adaptation measures to reduce vulnerabilities to climate

[51] CCCCC SEAH Policy Published.pdf (sharepoint.com)
[52] The CARICOM Secretariat Strategic Plan 2022-2030 by Caribbean Community (CARICOM) - Issuu

change: The project aims to reduce vulnerabilities in Suriname's agricultural value chains, focusing on marginalized and vulnerable communities. It will achieve this by introducing climate-resilient agricultural practices, improving food processing and storage, and strengthening value chains.

- Society with the impetus and capacity for building resilience to the impacts of climate change: The interventions will enhance food security, boost incomes, and raise climate change awareness, empowering local communities to strengthen their resilience to climate change.
- Effective platform for averting, minimizing and addressing loss and damage from climate change: The project will establish a climate information system to provide farmers with weather forecasts and disaster warnings, helping to minimize crop loss and enhance their ability to respond swiftly and effectively to climate events.

**CCCCC Strategic & Implementation Plan 2021-2025[53]:**

- **Strategic Objective 1.** Scale up actions to manage the effects of climate change under activity 1.1.2.1 - provide technical support to Member States to fulfil UNFCCC commitments including delivering on NDC commitments and Outcome 1.2 - increase finance flows to Member States to address climate resilience/climate change priorities
- **Strategic Objective** 3. Increase the uptake of climate change data and innovative tools for socio-economic development and for evidence-based decision-making across the region: Under activity 1.1.3 the project will develop a climate information system to inform farmers of monthly and seasonal weather predictions and early warnings for disasters. This is in line with output 3.2.2 under SO3 to expand cooperation initiatives to develop new tools/solutions to address climate change challenges.
- **Strategic Objective 4.** Increase the Caribbean public's ability to make informed decisions in responding to climate change and its impact: All project outcomes contribute to this SO4 and are in line with outputs 4.1.1 public education, awareness and outreach activities on climate change implemented, through the various training and awareness activities and materials incorporated within them, primarily pertaining to climate change impacts on the agricultural value chain and how to overcome these.

## E. Describe how the project/programme meets relevant national technical standards, where applicable, such as standards for environmental assessment, building codes, etc., and complies with the Environmental and Social Policy of the Adaptation Fund.

**CCCCC Requirements:** The Concept Note is screened for compliance with CCCCC Environmental and Social Management System Screening Checklist [54]. Performance Standard 2. Labour and Working Conditions (PS2), PS-3: Resources Efficiency and PS-4: Pollution Prevention, Health, Safety, Security, (PS-6): Biodiversity Diversity Conservation and Management of Living Natural Resources and PS7. Indigenous Peoples were triggered. The use of agricultural and processing equipment can form occupational hazards for trainees and users of the equipment (PS2). The project will ensure that any equipment used as part of project implementation will be carefully selected based on safety for use. Furthermore, safety provisions (incl. signage) and procedures will be put in place for use of the equipment; training courses will include occupational health and safety; and if needed PPE will be provided to users of equipment. As for PS7, the project will elevate the use of traditional knowledge in climate change adaptation. ITP organizations have been consulted about the process to be followed and provisions to be made in project development and implementation. These organizations proposed the following: Knowledge management will need formal agreements to ensure that ITP traditional knowledge is available for their respective peoples but protected from misuse. There are existing practices at

[53] 22. Strategic & Implementation Plan_(October 2021-2025).pdf (sharepoint.com)
[54] CCCCC Environmental and Social Management System approved July 15, 2022

national level that can be used as examples.

**AF Requirements:** Furthermore, the Concept Note was screened against the Environmental and Social Policy of the Adaptation Fund[55]. The checklist of environmental and social principles under question K below, regarding the environmental and social impacts and risks identified as being relevant to the project, is used to elaborate on further assessment and management required for compliance. These include studies that will inform the Full Funding Proposal to be developed as well as measures for project implementation. To ensure mitigation measures are properly implemented during project execution, the project will include an Environmental and Social Management Plan (ESMP) as well as Monitoring, Reporting, and Evaluation, and Public Disclosure and Consultation in accordance with the CCCCC, AF and national requirements.

**Suriname National Requirements:** Article 22 of Suriname's Environmental Framework Law[56] requires all projects with potential impacts to the environment to be screened[57] by the National Environment Authority (NMA). The screening process determines whether the project is categorized as Category A (an Environmental Impact Assessment (EIA) is mandatory), Category B (An EIA is required/ Another environmental document is needed/ No EIA is needed, but some environmental information is required before a decision can be taken) or Category C: No EIA is required, but the applicant will have to keep with the minimal guidelines. After screening, the NMA will provide an official letter stipulating requirements, if indeed and EIA is required, scoping, assessment, review and decision-making will follow as per the EIA guidelines (see the EIA Guidance Note). An initial screening was done by the project development team at CCCCC based on Suriname's EIA guidelines for agriculture projects[58] as well as the generic guidelines[59]. Based on this initial screening it is expected that the project will fall under category C, i.e. that no EIA will be required. After endorsement of the current Concept Note, documentation of the proposed project will be submitted to the NMA for formal screening which will then determine the path forward to comply with national legislation. Provisions will be made to ensure that any process following, and documentation produced also meet CCCCC and AF requirements. The output of this entire process will feed into the development of the Fully Developed Proposal.

**Grievance Redress Mechanism:** The Suriname NDA and CCCCC are receptive to receiving formal communications from residents and stakeholders with any complaints, concerns, or query which is affecting their lives and livelihoods so that they can be clarified and resolved in a professional and confident manner through either correspondence or by engagement when deemed necessary. The CCCCC has an established Grievance Redress Mechanism (GRM), which is comprehensive and has improved transparency, better serves CARICOM Member States and project beneficiaries, operationalizes the CCCCC's environmental and social policies, mainstreams gender policies, and raises its profile to work with multiple funding sources. To this end, the CCCCC's GRM along with its Employee Protection (Whistle-blower) Policy and other policies are applicable to this Readiness Proposal. During implementation, stakeholders will be made aware of the GRM and how to access it. Formal or informal interactions with stakeholders will also be opportunities for them to express grievances, and assistance can be provided if necessary for submission of these grievances. This project will be utilizing the CCCCC's Employee Protection (Whistle-blower) Policy to ensure that any concerned national stakeholder from Suriname and from the CCCCC can express a complaint or provide any other critical information that is contrary to the agreement between the CCCCC and the AF and the implementation of this project. The Policy will ensure that the complainant is protected so that the complaint can be addressed in the most effective, timely and professional manner. Furthermore,

[55] Environmental-Social-Policy-approved-Nov2013.pdf (adaptation-fund.org)
[56] Environment Framework Law SB_2020___97.pdf (dna.sr)
[57] Guidance Note NIMOS EIA Process 2023.pdf - Google Drive
[58] MEA Richtlijnen Deel VII-Landbouwprojecten Finaal Mei 2013.pdf - Google Drive
[59] Environmental Assessment Procedures Volume I Generic December 2023.pdf - Google Drive

the CCCCC will be employing its GRM to effectively address any complaints, issues, or claims that may be made by national stakeholders from Suriname and any team member from the CCCCC supporting the implementation of this Readiness project. Additional information regarding the CCCCC GRM can be found via the following link https://caribbeanclimate.org/complaints/

## F. Describe if there is duplication of project/programme with other funding sources, if any.

Desk research and the consultative process (see section H below) have shown that the following relevant projects and initiatives are planned or under implementation. These projects are not considered duplication, but work done as part of these can serve as a basis and/or provide important opportunities for collaboration:

- Food and Agriculture Organization (FAO)
  - Strengthening Market Access for farmers in Suriname (SAMAP) – getting smallholder farmers to the level of export. The project has worked on modernizing agricultural production through the financial support of farmers (2 rounds of matching grants- grantees had to match 10% of funding) and the establishment of value chain platforms (Cassava, Fruits and Vegetables and Non-Timber Forest Products). The value chain platforms have provided inputs for this CR-FST proposal and will form an important means for engagement with stakeholders in the agricultural sector.
  - Agrifood Systems Transformation Accelerator (ASTA) – capacity building of the pineapple sector, establishing partnerships and creating access to finance. Lessons learnt from this project can inform the funding proposal, especially regarding capacity building and access to finance.
  - Agriculture census – to be implemented at the end of 2024-start of 2025. The census should lead to the development of an agriculture strategy and combat high food prices. Information from the census, if available on time, will be utilized when formulating the funding proposal for the CR-FST project.
- FAO, UN Women and UNFPA, PMU is at the Ministry of Regional Development and Sport (ROS): Leaving No One Behind, Building Resilience, and Improving Livelihoods of Indigenous and Tribal Peoples (ITPs) in Suriname - The project includes the production methods for highland rice in ITP community, financial literacy, gender equality and crafting. In addition to training for government officials in good agricultural practices. Experiences and lessons learnt will inform the formulation of the funding proposal for the CR-FST project. Partnerships established through ROS may be utilized for collaboration during CR-FST project implementation.
- Tropenbos Suriname: The CR-FST project can benefit from past and ongoing efforts of Tropenbos Suriname (see below), by establishing partnerships for implementation in Brokopondo and Upper Suriname River in terms of agroforestry training, processing facilities and test fields.
  - As part of the working landscapes programme in the Saamaka area (Upper Suriname River) Tropenbos provided guidance to farmers to adopt agroforestry techniques. In the end, there remained 8 farmers who can serve as an example for agroforestry. The main challenge was the distance to the communities, making frequent guidance and visits difficult and expensive. Tropenbos also assisted in the establishment of farmers' cooperatives in these communities.
  - Sustainable forest development in Bigi Poika and Brownsweg 2022-ongoing, funded by The Alcoa Foundation. The focus was also on agroforestry. Some farmers already practiced some form of agroforestry / had permanent plots. The strategy was to introduce agroforestry practices in combination with the traditional agricultural practices. This was more successfully adopted than trying to replace existing practices with something completely new.
  - In development:
    - Establishing an agroforestry farmers field school at Brownsweg (Brokopondo), funding

is underway.
    - Amazon Sustainable Livelihoods (ASL2) program – funding was requested to establish a processing unit for local agricultural products. Right now, a consultant is looking into options for management of such a communal processing unit. The project will also include the establishment of greenhouses, 2 along the Upper Suriname River and 2 at Brownsweg.
    - Basin Needs Trust Fund 10 - Caribbean Development Bank (CDB) and managed by the Ministry of Finance and Planning - Upper Suriname River. An agroforestry project which will focus on training of trainers, who will play a major role in training of local communities. This will enable them to work more independently.
    - Sustainable Forest Livelihoods (SFL) project funded by the EU Forest for the Future Facility– Project to establish a processing unit for Maripa (a palm fruit *Attalea maripa*) and value chain development for the oil extracted from the maripa. The plan is that the processing unit will ultimately include machinery for the processing of other NTFPs and agriculture products as well.
- Mulokot Foundation: Looking into introduction of methods that could be adopted alongside existing practices. E.g. having raised beds near the houses with some traditional crops. This would not demand additional work or trips to the agriculture plots outside of the villages and therefore have more chance of success. The interest of Wayana and Trio peoples to learn alternative agricultural practices opens the door for capacity building in these communities within the CR-FST project.
- LVV and MDS: Designing a system to provide monthly and seasonal forecast forecasts for crop development, with a monthly update based on actual measurements from the previous month to adjust seasonal forecasts if needed. A pilot forecast was provided by MDS to LVV containing temperature and precipitation forecasts. LVV will work with the pilot to further develop the system. This effort will set a good foundation for the climate services elements of the CR-FST project.
- University of Applied Sciences and Technology Suriname (UNASAT): Aimed at supporting fruit and vegetable farmers, by designing hands-on training for existing farmers, establishing agriculture test fields to promote self-sufficiency, and implementing a USAID project with demonstration plots for ginger, plantain, and passion fruit. The CR-FST project can benefit from ongoing efforts of UNASAT by establishing partnerships for implementation in Saramacca.
- Center for Agricultural Research in Suriname (CELOS): Agroforestry training – For farmers in the villages of Brokopondo and Upper Suriname who are embracing the agroforestry training, recognizing that the skills they gain will allow them to cultivate more crops on their land, increasing production and income while also addressing climate challenges. Like Tropenbos Suriname, there is opportunity to benefit from past and ongoing efforts of CELOS, by establishing partnerships for implementation in Brokopondo in terms of agroforestry training.
- Tan Bun Skrati (TBS): No Bean Left behind – A project initiated to provide tools needed to support a viable ecosystem for the cacao production and processing as well as a circular economy model for the industry in Suriname. The project will include improvement of sustainable primary production through agroforestry and adding value at community/farm level, piloting a track-and-trace system, product development focused on circular economy principles, and marketing and branding. Many elements of this project are closely related to the CR-FST project, however on a much smaller scale and focused on only cacao. Nevertheless, TBS can share lessons learnt and potentially be an important partner for implementation in topics related to cacao.

### G. If applicable, describe the learning and knowledge management component to capture and disseminate lessons learned.

Knowledge management is fully captured under outcome 4. Knowledge sharing platform available online and material available on radio, tv and paper. Through the development of knowledge

sharing platforms that will include brochures, podcasts and video material about agriculture, processing, business skills, and climate resilience, and the use of the knowledge centres to distribute brochures, radio, television, and social media to broadcast podcasts and videos (Refer to section A above). Furthermore, the CCCCC as a Regional Hub for climate change information and data which will support capacity building, national knowledge sharing and learning within and between projects. Lessons learnt throughout projects are logged within the CCCCC to improve the project development and implementation in CARICOM Member States.

## H. Describe the consultative process, including the list of stakeholders consulted, undertaken during project preparation, with particular reference to vulnerable groups, including gender considerations, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

The consultation process consisted of four stages:

1. Initial in-person consultations with key stakeholders identified during idea note formulation took place in May 2024. During these consultations the barriers and needs of the agricultural sector and its value chain, incl. processing, were discussed. The first concept project idea was presented, and stakeholders were requested to provide their feedback, express concerns, share any knowledge of similar initiatives for potential synergies and overlap. indigenous and tribal people organizations were specifically asked to provide potential concerns regarding traditional knowledge and processes to be followed regarding FPIC where needed, and the process of utilizing knowledge products from ITPs. Refer to appendix 2 for the stakeholder engagement reports for stage 1.
2. During the initial consultation additional stakeholders were identified and contacted afterwards for similar conversations through online meetings. Where needed, follow-up consultations with stakeholders were conducted through (online) meetings or email communications. Refer to appendix 3 for the stakeholder engagement reports for stage 2.
3. A summarized Dutch version of the draft Concept Note (CN) was shared through email on 24 November 2024 with all stakeholders consulted during project preparation for their review, feedback and concerns, ahead of the validation meeting (see below). No feedback or concerns were reported based on the document shared.
4. The CN was then presented during an in-person validation meeting on 3 December 2024 to present for feedback. This feedback was addressed into the formulation of the final CN as submitted. Refer to appendix 4 for a summary of the validation meeting report.

## I. Provide justification for funding requested, focusing on the full cost of adaptation reasoning.

The proposed project addresses critical challenges related to food security and agricultural resilience in Suriname, exacerbated by climate change impacts such as increased droughts, flooding, and extreme weather events. The requested funding from the Adaptation Fund is essential to cover the full cost of adaptation measures that cannot be achieved through baseline development or existing initiatives. Below is the detailed justification. The project **addresses climate change-specific barriers** by tackling challenges directly caused or worsened by its impacts. Climate change threatens traditional farming practices and crop varieties critical to community resilience. To counter this, funding will support the documentation, preservation, and integration of traditional knowledge into regenerative practices, enabling sustainable adaptation. Farmers, increasingly vulnerable to declining productivity, crop failures, and livelihood losses from extreme weather, will benefit from knowledge centers and tailored training to build resilience. Additionally, the project promotes low-input, climate-resilient practices to reduce dependence on imported seeds, pesticides, and fertilizers, ensuring sustainable food security. Without these measures, communities will remain highly vulnerable, facing risks such as food insecurity, income loss, and displacement. The project introduces innovative, climate-focused **interventions that extend beyond conventional agricultural development** to address the unique challenges

posed by climate change. Regenerative agricultural practices and climate information systems are implemented to enhance the adaptive capacity of farming systems, which are inadequately equipped to handle increasingly variable weather patterns. Additionally, expanding community-level food processing facilities tackles climate-induced issues like food spoilage and scarcity during extreme events—challenges not fully addressed by traditional development methods. These targeted measures involve costs beyond standard approaches but are essential for achieving climate resilience. The funding request covers the **full cost of adaptation measures** essential for building resilient food systems in the face of climate change. Key components include developing agriculture and food processing knowledge centers to serve as hubs for training, knowledge sharing, and resilience-building activities. It also includes technical training on climate-resilient agriculture, regenerative practices, and adaptation strategies for farmers, processors, and stakeholders. Inclusive knowledge-sharing platforms, both online and offline, will ensure widespread access to climate adaptation information, even for communities with limited internet connectivity. Climate information systems will provide timely weather forecasts and early warnings, helping farmers mitigate risks and minimize losses from extreme weather events. Additionally, strengthening value chains through tools, platforms, and partnerships will improve efficiency and resilience across the agricultural sector. These investments address systemic vulnerabilities caused by climate change that traditional development funding does not adequately cover. The proposed adaptation measures are designed to ensure **long-term sustainability and scalability**. By involving local cooperatives, NGOs, and governments, the project fosters strong community ownership, ensuring continuity beyond the funding period. The emphasis on value addition, market linkages, and access to finance enhances economic resilience, equipping communities to sustain their livelihoods amid climate shocks. Additionally, preserving and disseminating knowledge through various formats and distribution channels, such as knowledge centers and traditional media, ensures that valuable information remains accessible for future generations. This approach will establish a foundation for ongoing resilience-building, reducing the need for repeated external interventions. The project **aligns closely with the Adaptation Fund's mandate** to support climate-resilient livelihoods and ecosystems. By targeting marginalized farmers and processors, it ensures that the most vulnerable populations are equipped to adapt to climate change. Promoting regenerative agriculture helps protect biodiversity, improve soil health, and enhance natural resource management, contributing to overall ecosystem resilience. Additionally, the project addresses climate-induced food insecurity, ensuring sustainable livelihoods and economic stability for affected communities. Through these efforts, the project directly supports the Adaptation Fund's goals of reducing vulnerability, enhancing resilience, and fostering sustainable development in the context of climate change. **Without the requested funding**, Suriname's agricultural sector and rural communities will face escalating risks, including increased food insecurity, which will worsen food shortages, malnutrition, and dependency on imported food. Economic instability will persist, with farmers and processors continuing to suffer income losses and livelihood disruptions, leading to higher levels of poverty and migration. Environmental degradation will also worsen, as reliance on conventional agricultural practices depletes soil health, reduces biodiversity, and heightens vulnerability to climate shocks. The cost of inaction will far exceed the investment required for these adaptation measures, leading to significant economic losses and human suffering.

The proposed project represents a critical investment in the climate resilience of Suriname’s food systems. The funding request to the Adaptation Fund is fully justified, as it covers the costs of essential adaptation measures that address climate-specific vulnerabilities, ensure sustainable development, and safeguard food security for vulnerable communities. The requested funding will enable transformative change, building a robust foundation for long-term resilience and adaptive capacity.

### J. Describe how the sustainability of the project/programme outcomes has been taken into account when designing the project/programme.

Sustainability is captured in a number of ways within the project:

- To ensure continuation of efforts and increased ownership, the project will build and expand on ongoing efforts at national and community level, which include those formulated in the NAP 2019-2029, Third National Communication to the UNFCCC 2023, the Gender Vision Policy Document 2021-2035, as well as the national efforts to achieve SDGs 2, 5, 12, 13, 14 and 15.
- Through continued cooperation with key stakeholders, the project will create ownership and build capacities to ensure sustained efforts.
- Establishment of community-level agriculture and processing resource centres through partnerships with government, local cooperatives, NGOs, CBOs and private sector to create lasting multi-faceted support mechanisms for agriculture value chains. Establishment of these hubs will include the development of business plans to ensure income generation for continued operation beyond project lifetime and without the expectation of availability of government resources.
- Knowledge management strategies are designed to make knowledge products available beyond project lifetime and distributed through various channels and the established hubs. This will ensure that any training material remains accessible to all stakeholders and other documentation is available for potential follow-up initiatives. The lessons learned will serve as a feedback loop for continued enhancement of local knowledge base in target communities.

**K. Provide an overview of the environmental and social impacts and risks identified as being relevant to the project/programme.**

| Checklist of environmental and social principles | No further assessment required for compliance | Potential impacts and risks – further assessment and management required for compliance |
|---|---|---|
| *Compliance with the Law* | | Location specific assessment required to determine the extent of compliance with the relevant laws and regulations, identify the gaps and how they will be addressed. Identify all permits required before project implementation |
| *Access and Equity* | | Assess the extent of marginalized and vulnerable groups to social services at the community level in participating villages. The methodology that will be utilized to determine the direct beneficiaries and the extent of the services. How will the project ensure that marginalized or vulnerable groups will not be further excluded. |
| *Marginalized and Vulnerable Groups* | | See access and equality above |
| *Human Rights* | | Assess if human right issues directly or indirectly due to primary and residual risk and impacts as a result of implementation of project activities with the participating villages/communities. This includes added negative impacts such as pollution to air, land and water that can impede the lives and livelihood of all the residents within the communities |
| *Gender Equality and Women's Empowerment* | | Gender Assessment to ensure equitable distribution of benefits within identified communities, and to maximize benefits small scale women farmers and food processors. |
| *Core Labour Rights* | | Characterize the labour situation in each of the beneficiary villages (communities collectively). What is existing status of vulnerable category of works including |

| | | |
|---|---|---|
| | | children, migrant workers and workers engaged by third parties including workers in the supply chain, assess the prevalence of forced or child labour and status of working the environment |
| *Indigenous Peoples* | | The project is addressing risk and impacts specifically associated with indigenous and tribal peoples in compliance with the CCCCC PS-7 Indigenous Peoples |
| *Involuntary Resettlement* | No involuntary resettlement will occur under the project | |
| *Protection of Natural Habitats* | | Assessment required to characterize natural habits, their current status and how the project can assist to maintain their status in the ecosystem. Determine how the project will ensure protect natural habitats and assess what will be the risk and impacts for the communities. Identify appropriate mitigation measures that are cost effective and sustainable. |
| *Conservation of Biological Diversity* | | Identification and assessment of valuable ecosystem within the participating communities that can be affected directly and indirectly by implementation of project activities and the impacts the communities can have on these ecosystems. Exploit opportunities to enhance and conserve and the sustainable use of the derivatives from the ecosystem. These should include protection status under International Union for Conservation of Nature (IUCN), World Heritage Sites, Ramsar Convention on Wetlands, where they apply. Identify appropriate and cost-effective mitigation measures that are sustainable. The assessment should not be limited to legally protected ecosystems but also to areas that are considered critical to maintain connectivity to other protected areas. Make recommendations if the status of the areas identified should be changed or upgraded. |
| *Climate Change* | | Identification and assessment of nature and extent of land preparation within the within the participating communities. Determine the extent of the impacts from methodology utilized and how the project will reduce carbon emissions and contribute to the country's carbon reduction commitments. |
| *Pollution Prevention and Resource Efficiency* | | Identify, assess and describe the extent to which the regenerative agriculture practice is beneficial over the conventional agriculture system based on the prevailing environmental characteristics within each of the local areas. How will the risk and impacts be assessed (positive or negative) and measured and monitored during project implementation. |
| *Public Health* | | Identify and evaluate the extent of risk and impacts to the specific participating villages and surrounding communities. The extent to when the increased production will impact road conditions and reduce the easy access to communities by emergency services and the necessity of an Emergency Preparedness Plan. |

| | | |
|---|---|---|
| *Physical and Cultural Heritage* | | Identify, describe and assess the specific risk posed to the communities located in or around each of the five areas, identified as direct beneficiaries of the project, that has the potential to threaten or damage physical and cultural resources including items of traditional and historical importance. How the impacts will be mitigated and how communities will ensure that access to the site(s) will not be prohibited.<br><br>The project will elevate the use of traditional knowledge in climate change adaptation. ITP organizations have been consulted about the process to be followed and provisions to be made in project development and implementation. These organizations proposed the following: Knowledge management will need formal agreements to ensure that ITP traditional knowledge is available for their respective peoples but protected from misuse. There are existing practices at national level that can be used as examples |
| *Land and Soil Conservation* | Only land that have been previously farmed or impacted will be utilized under project. Land that has not been previously impacted will not be utilized in any of the participating areas including the communities | Describe the existing characteristics of land and soil specifically within the areas of the participating communities. Identify and assess the risk and impacts specific to the communities and how the project activities will contribute to soil conservation. Furthermore, assess and indicate the extent to which the traditional regenerative agricultural farming practices are advantageous and sustainable for the soil conditions within the specific communities. Since the regenerative agriculture practice is favourable, indicate the advantages<br>and disadvantages for various soils identified and how the drawbacks will be overcome. |

## PART III: IMPLEMENTATION ARRANGEMENTS

### A. Demonstrate how the project/programme aligns with the Results Framework of the Adaptation Fund

| Project Objective(s)[1] | Project Objective Indicator(s) | Fund Outcome | Fund Outcome Indicator | Grant Amount (USD) |
|---|---|---|---|---|
| Community level capacity strengthened in climate resilient agriculture informed by traditional knowledge, regenerative agriculture, and | Number of communities (villages/ counties) practicing gender-responsive climate resilient agriculture | 8: Support the development and diffusion of innovative adaptation practices, tools and technologies | 8. Innovative adaptation practices are rolled out, scaled up, encouraged and/or accelerated at regional, national and/or subnational level. | 115,000 |

| | | | | |
|---|---|---|---|---|
| climate services | Number of climate information services & early warning systems developed and disseminated | 1: Reduced exposure to climate-related hazards and threats | 1. Relevant threat and hazard information generated and disseminated to stakeholders on a timely basis | |
| Community level processing capacity strengthened to secure food availability<br>Community level MSMEs form strong value chains and enable efficient trading of goods and services | Percentage of target communities adopting adapted practices in response to changing and variable climate | 4: Increased adaptive capacity within relevant development sector services and infrastructure assets | 4.1. Responsiveness of development sector services to evolving needs from changing and variable climate | 100,000 |
| National knowledge sharing platform that enables knowledge sharing in a sustainable way and through multiple channels | Percentage of population in target communities aware of climate change, climate impacts and adaptation response methods for the sector | 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level | 3.1. Percentage of targeted population aware of predicted adverse impacts of climate change, and of appropriate responses | 100,000 |
| **Project Outcome(s)** | **Project Outcome Indicator(s)** | **Fund Output** | **Fund Output Indicator** | **Grant Amount (USD)** |
| 1. Farmers practice climate resilient agriculture informed by traditional knowledge, regenerative agriculture, and climate services | Number of agriculture resource centres established | 6. Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability | 6.1.1 No. And type of adaptation assets (physical as well as knowledge) created in support of individual or community-livelihood strategies | 50,000 |
| | Number of farmers trained in traditional knowledge, regenerative agriculture and climate services | 2.1 Strengthened capacity of national and regional networks to respond rapidly to extreme weather events | 2.1.1 No. of staff trained to respond to, and mitigate impacts of climate-related events from targeted events | 50,000 |

| | | | | |
|---|---|---|---|---|
| 2. Communities process local agriculture products to secure food availability | Number of food processing centres established | Output 4: Vulnerable development sector services and infrastructure assets strengthened in response to climate change impacts, including variability | 4.1.2 No. Of physical assets strengthened or constructed to withstand conditions resulting from climate variability and change | 115,000 |
| | Number of farmers trained in food processing practices | 2.1 Strengthened capacity of national and regional networks to respond rapidly to extreme weather event | 2.1.1 No.of staff trained to respond to, and mitigate impacts of climate-related events from targeted events | |
| 3. Strong network of community-level agriculture value chains enables efficient trading of goods and services | Number of crops selected for value chain analysis | 6. Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability | 6.1.2 Type of income sources for households generated under climate change scenario | 50,000 |
| 4. Improved knowledge transfer enables climate resilient food security | Number of platforms developed to disseminate training and awareness material to national stakeholders | 3.2: Strengthened capacity of national and subnational stakeholders and entities to capture and disseminate knowledge and learning | 3.2.2 No. of tools and guidelines developed (thematic, sectoral, institutional) and shared with relevant stakeholders | 50,000 |

[1] The AF utilized OECD/DAC terminology for its results framework. Project proponents may use different terminology, but the overall principle should still apply

## PART IV: ENDORSEMENT BY GOVERNMENT AND CERTIFICATION BY THE IMPLEMENTING ENTITY

***A.*** **Record of endorsement on behalf of the government**[2] *Provide the name and position of the government official and indicate date of endorsement. If this is a regional project/programme, list the endorsing officials all the participating countries. The endorsement letter(s) should be attached as an annex to the project/programme proposal. Please attach the endorsement letter(s) with this template; add as many participating governments if a regional project/programme:*

| | |
|---|---|
| *(Enter Name, Position, Ministry)* | Date*: (Month, day, year)* |

***B.*** **Implementing Entity certification** *Provide the name and signature of the Implementing Entity Coordinator and the date of signature. Provide also the project/programme contact person's name, telephone number and email address*

| | |
|---|---|
| I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans (……list here…..) and subject to the approval by the Adaptation Fund Board, commit to implementing the project/programme in compliance with the Environmental and Social Policy and the Gender Policy of the Adaptation Fund and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme. | |
| *Name & Signature*<br>Implementing Entity Coordinator Mark Bynoe, PhD. | |
| Date: 01/25/2025 | Tel. and email: +592 620 0559 |
| Project Contact Person: Mark Bynoe, PhD | |
| Tel. And Email: mbynoe@caribbeanclimate.org | |

[6] Each Party shall designate and communicate to the secretariat the authority that will endorse on behalf of the national government the projects and programmes proposed by the implementing entities.

ADAPTATION FUND

**Letter of Endorsement by Government**

**MINISTRY OF SPATIAL PLANNING AND ENVIRONMENT**
**DIRECTORATE FOR THE ENVIRONMENT**
Prins Hendrikstraat 22, Paramaribo, Suriname
Tel: +597 522021
Email: secdir.milieu@rom.gov.sr

January 20, 2025

**To: The Adaptation Fund Board**
c/o Adaptation Fund Board Secretariat
Email: Secretariat@Adaptation-Fund.org
Fax: 202 522 3240/5

**Our reference: KV/VD/03/25**

**Subject: Endorsement for Climate Resilient Food System Transformation in Suriname (CR-FST)**

In my capacity as the designated authority for the Adaptation Fund in Suriname, I confirm that the above-mentioned project proposal is in accordance with the government's National Adaptation Plan 2019-2029, Third National Communication (NC3) to the United Nations Framework Convention on Climate Change 2023, the Gender Vision Policy Document 2021-2035 and other national priorities focused on implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in Suriname.

Accordingly, I am pleased to endorse the above-mentioned project proposal with support from the Adaptation Fund. If approved, the project proposal will be implemented by the Caribbean Community Climate Change Centre (CCCCC) and executed by the Ministry of Agriculture, Animal Husbandry and Fisheries.

Sincerely,

Mrs. Ivette Pengel-Patterzon
Deputy Permanent Secretary Climate Change
NDA Adaptation Fund - Suriname

# Appendices

## Appendix 1. Preliminary Gender Assessment

### Context

Suriname has a multi-ethnic population and is home to four Indigenous and six maroon tribes[60]. There are also small settlements of other Amazonian Indigenous peoples in the south of Suriname near the border with Brazil. The General Bureau of Statistics (ABS) identified that in 2012 the population was broken down as follows: Indigenous peoples (10,296M; 10,048F), Tribal peoples (56,484M; 61,083F), Afro-descendants (1,927M; 1,996F), Creole (42,138M; 42,795F), West-Indians (74,833M; 73,610F), Javanese (37,481M; 37,494F), Chinese (4,264M; 3,621F), Caucasian (897M; 770F), Mixed (36,273M; 36,067F), unknown (1,250M; 555F), others (3,969M; 3,197F) or no answer (817M; 773F).[61,] Total population growth since the 2012 census is 8.95%. Sex ratio of the population by urban, rural and interior in 2018 was resp. 97.5; 105.8; and 100.0[62]. The following framework documents outline the country's commitment to gender equality[63]:

- The National Development Plan 2017 – 2021 (Chapter X, pp. 152-153), which states that women and men "are full partners in their families, neighbourhoods and society", and formulates the strategic goal to achieve gender equality as "[Ensure] legislation and policies of public and private organizations, which guarantee the right of men and women to personal safety, freedom and equal opportunities to realize their ideals and talents without being influenced by gender stereotypes".
- The Gender Vision Policy Document 2021 – 2035 (p.26), which formulates the following vision: "In 2035 Surinamese society is free of gender discrimination, gender stereotypes and gender-related violence, in the public as well as the private spheres. Gender equality and equity, shared responsibility, equal opportunities and equal access to all sectors, funds and resources, are central."

### Education

There are gaps in educational performance. Boys have lower rates of overall secondary school enrolment and completion compared to girls. Conversely there is a higher rate of boys' enrolment in vocational training[64]. The EnGenDER Policy Brief- Gender Inequality of Climate Change and Disaster Risk in Suriname (EnGenDER) highlighted that boys and girls residing in the interior of the country show poorer educational outcomes compared to those in urban and coastal areas. "This is due to factors such as lower quality education, lack of secondary schools, the unaffordability of school fees and inadequacy of school buildings".[65]

### Decision Making

There have been several initiatives to increase women's participation in decision making at the highest level of governance in Suriname over the past three decades. There are notable increases

60 Annette Tjon Sie Fat M.A. & Drs. Marie-Josee Artist, 2020, GENDER ASSESSMENT for the pineapple value chain in Suriname Accelerator for Agriculture and Agroindustry Development and Innovation

61 mozaiek-van-het-surinaamse-volk-versie-5.pdf (statistics-suriname.org)

62 Annette Tjon Sie Fat M.A. & Drs. Marie-Josee Artist, 2020, GENDER ASSESSMENT for the pineapple value chain in Suriname Accelerator for Agriculture and Agroindustry Development and Innovation

63 As cited in Annette Tjon Sie Fat M.A. & Drs. Marie-Josee Artist, 2020, GENDER ASSESSMENT for the pineapple value chain in Suriname Accelerator for Agriculture and Agroindustry Development and Innovation

64 UN Women (2021) as cited in World Bank, N.D, Suriname Country Profile-Gender and Disaster Risk Management.

65 *ibid*

Number of members of the Cabinet of the Republic of Suriname by sex in the Election Years as of 1987 as well as the most recent state in the year 2021

| | Male | Female | Total | Ratio |
|---|---|---|---|---|
| 1987 | 16 | 1 | 17 | 5.88 |
| 1991 | 18 | 0 | 18 | 0.00 |
| 1996 | 16 | 2 | 18 | 11.11 |
| 2000 | 17 | 3 | 20 | 15.00 |
| 2005 | 17 | 2 | 19 | 10.53 |
| 2010 | 15 | 2 | 17 | 11.76 |
| 2015 | 13 | 4 | 17 | 23.53 |
| 2020 | 11 | 6 | 17 | 35.29 |
| 2021 | 11 | 6 | 17 | 35.29 |

Number of members in the Parliament of Suriname by sex in the Election years as of 1987 as well as the most recent state in the year 2021

| Year | Male | Female | Total | Ratio |
|---|---|---|---|---|
| 1987 | 47 | 4 | 51 | 7.84 |
| 1991 | 48 | 3 | 51 | 5.88 |
| 1996 | 43 | 8 | 51 | 15.69 |
| 2000 | 42 | 9 | 51 | 17.65 |
| 2005 | 38 | 13 | 51 | 25.49 |
| 2010 | 43 | 8 | 51 | 15.69 |
| 2015 | 37 | 14 | 51 | 27.45 |
| 2020 | 35 | 16 | 51 | 31.37 |
| 2021 | 36 | 15 | 51 | 29.41 |

of women in decision making over the period, although there is still a representation gap at parliamentary and cabinet levels, as well as at the level of management within public and private sectors.
Source: Parliament of Suriname as cited in Suriname SDG Policy Analysis Report (2022)

With regards to ITPs, EnGenDER assessment posited that "while indigenous communities have strong, independent governance practices with less interference from the state, women are not involved in decision-making…They are less likely to be involved in risk management and have minimal control over emergency recovery. Indigenous women and tribal associations need to be more involved in disaster risk reduction and climate issues. And currently, there is no structure/system for consulting with indigenous women"[66].

A gender assessment for the pineapple value chain in Suriname Accelerator for Agriculture and Agroindustry Development and Innovation identified that "in October 2019, a number of Indigenous and Maroon women participated in a two-day workshop organized by the Bureau for Gender Affairs (BGA) and the umbrella organizations of Indigenous and Maroon tribal peoples (VIDS and KAMPOS) to discuss the principles of free, prior and informed consent (FPIC) and the roles of men and women in communities, engagement processes and decision-making"[67]. Women gave input on how gender should be integrated in engagement processes. They pointed out that separate meetings (facilitated by women) might be needed in villages where women are not accustomed to participating in community meetings[68]. Involvement of the umbrella organizations of Indigenous and Maroon peoples in all engagement processes is seen as important in engaging network of women.

**Access to Land**

Throughout the Project's footprint, there are various forms of land tenureship and varying ratios of male to female land ownership. Forms of land tenureship are intricately linked to ethnicity of those who live in the respective locations. Project communities of Marowijne, Sipaliwini and Brokopondo are communities of ITPs. Land tenureship is based on customary and traditional practices ITPs. In Communities such as Commewijne, Wanica, Saramacca and Coronie land ownership is primarily owned or lease holdings.

A 2003 Needs Assessment Report of the Indigenous and Tribal Peoples in Suriname identified that all participants in their research exercise "own" land within their villages, however this is not formally recognized by the Government[69]. Women and men in traditional Indigenous and tribal

66 UN Women (2021) as cited in World Bank, N.D, Suriname Country Profile-Gender and Disaster Risk Management.

67 *ibid*

68 *ibid*

69 UN JOINT SDG FUND, 2023, Needs Assessment Report of the Indigenous and Tribal Peoples in Suriname- A Critical Assessment of Food Security, Livelihoods, Gender Equality and Women's Empowerment

communities have equal access to and control over collective land and natural resources[70]. The UN Special Adviser on Gender Issues and Advancement of Women highlighted that worldwide the gradual loss of collective ownership of lands and other natural resources, and the introduction by dominant outsiders of institutions of private property, may cause the communities to lose their traditional rights to lands and natural resources. The loss of rights specifically by women has not been identified in Suriname, neither among the Indigenous nor the Maroon tribal communities[71].

**Gender Differentiated Climate Change Risks and Impacts**

"Women's vulnerability to natural hazards in Suriname is mainly linked to their traditional roles and responsibilities in the household and community, cultural practices which limit women's mobility, and unequal access to services, education, and information". [72] Following floodings in 2006 the districts of Brokopondo and Sipaliwini were the most heavily affected by the floods in May 2006 and Indigenous and Maroon communities were among the most impacted[73]. An analysis of potential impacts of floods and droughts in Suriname highlights the risk of increased burden on women given their caregiving role, as well as for girls tasked with assisting with household duties. EnGenDER highlights that the most vulnerable to climate change within the agriculture sector are Subsistence farmers mostly in indigenous communities of Interior Suriname (Sipaliwini, Brokopondo) and single female-headed households[74]. Following disasters, it is reported that geographic isolation impacts women more due to cultural practices that place restrictions on their movement[75].

**Gender Differentiated Activities and Division of Labour with Agriculture Sector.**

There are differentiated activities done by men and women in the agriculture sector. These differentiations vary based on community but also based on crop type. Typically, from consultations and studies, women are more involved in subsistence agriculture and nearer to home than are men. Of the communities identified for this CR-FST project, the division of labour has been categorized in table 1 below.

*Table 1: Division of Labour by Location*

| **Location** | **Local challenges due to Climate Change** | **Role of men/women/children** |
|---|---|---|
| **Commewijne/ Marowijne**<br>Disadvantages: *political influences, poor maintenance, little/no monitoring* | Drought, Water damage (floods), Pests (animal pests) | Men do more decision-making in the value chain and transportation. Women are less involved in decision-making, but more in production. Children support where needed. |
| **Wanica/ Para**<br>Disadvantage: can't accommodate everyone<br>Advantage: central location, so you reach most people | Long term drought, Transport can be challenging | 70% are men<br>30% of women own a business |

70 Annette Tjon Sie Fat M.A. & Drs. Marie-Josee Artist, 2020, GENDER ASSESSMENT for the pineapple value chain in Suriname Accelerator for Agriculture and Agroindustry Development and Innovation

71 *Ibid*

72 UNWomen, 2021 as cited in World Bank, N.D, Suriname Country Profile-Gender and Disaster Risk Management.

73 ibid

74 UNWomen, 2021, EnGenDER-Policy Brief Gender Inequality of Climate Change and Disaster Risk in Suriname

75 Ibid

| | | |
|---|---|---|
| **Brokopondo / Boven-Suriname** | Drought, Floods, Pests and diseases such as cassava tops drying up, animals relocating and becoming a burden on agricultural plots | More women need to be involved. Men prepare the land. Women and children plant and harvest. Women take the harvest to the market. |
| **Saramacca/Coronie** Advantage: good infrastructure | Flooding, Animal pests | Women are planting more. Young people are moving away. Culture also plays a role. |
| **Sipaliwini (Palumeu)** | Extreme drought in the past year. Diseases due to river pollution (diarrhoea, vomiting) | Men and women prepare the plots and the women plant. Harvesting is done by both men and women. When the women are in their period, they are not allowed to go to the plots. |

**Farming**

In Suriname, women represent most small-scale farmers, particularly in the interior, where they often rely on farming as their primary income source. The Fifth Agricultural Census indicates that there are more women farmers in the interior than in coastal areas, where men dominate agricultural labour in larger enterprises. The Bureau of Gender Affairs identified that Gender roles in agriculture vary significantly between the hinterland and coastal Suriname. In the hinterland women tend the agricultural plots while men establish the plots. In coastal areas with women primarily grow flowers and vegetables while men tend to larger plots with crops like tomatoes. Yet farmers in both regions face challenges due to climate change and limited access to resources and training. Efforts are being made to implement gender-responsive frameworks in agricultural productivity projects, but significant gaps remain in data, cooperation among ministries, and the overall understanding of how climate change impacts different demographics, particularly regarding access to education, decision-making, and financial resources. There remain challenges such as limited access to credit, land ownership issues, and increased vulnerability to climate impacts significantly affect these women, particularly those involved in shifting cultivation.

In some communities, agro-processing is linked to on farm activities and the person(s) within households who undertake agricultural activities also undertake agro-processing and transportation to market. In other instances, there are agro-processing cooperatives that are largely operated by women. Differentiation in ownership and operation of processing operations based on location is a relevant factor to be considered.

**Stakeholder Consultations**

In the development of the CR-FST project a cross sector of stakeholders were engaged and validated the proposal. Among these stakeholders included the Bureau of Gender Affairs, NGOs, CSOs and representatives of indigenous and tribal communities (Association of Indigenous Village Heads in Suriname (VIDS) & KAMPOS Tribal Peoples Partnership (KAMPOS). As this proposal continues to be fleshed out, further consultation will be required adhering to FPIC protocols and for improved identification of equitable benefits sharing within the context of community-based farming, agro-processing and value chain improvements.

**EnGenDER Recommendations for Agriculture Sector in Suriname**

The 2022 EnGenDER assessment produced concrete recommendations for ensuring gender responsive climate resilience in the agriculture sector. The recommendations as highlighted

below[76] are useful for shaping gender solutions for this CR-FST Project:

- Women and their families also need support from the Government and non-governmental organizations (NGOs) to identify locations for new agricultural plots. They also need technical assistance in terms of agricultural skills and techniques since agriculture is their anchor of food security.
- Ensure that eligibility for training programmes and microcredit is not dependent on land-owning status or gender.
- Include disaster risk reduction and gender elements in Agriculture sectoral plans.
- Diversify agricultural livelihoods to strengthen resilience of women, men, and other vulnerable groups.

**Gender Solutions for CR-FST**

The CR-FST project must consider varying dynamics of gender across the project communities. Chiefly, the gender assessment for the project will need to further explore these dynamics of land tenureship, decision making and stewardship of community resources in respective areas to develop a responsive gender action plan. Importantly, the project must ensure that mechanisms are carefully identified to allow for resources available through community resource centres to be equitably distributed and are not solely meted out to community leaders.

Similarly, opportunities for training will need to consider the care needs or women and tailor strategies to ensure that when training services are directed at community members, that the needs of vulnerable members of communities are identified and catered to. This will be further identified in the full gender assessment to be undertaken for this project.

The preliminary assessment has identified that there is segmentation in the agriculture sector across communities. With this established fact, the CR-FST programme will need to ensure that activities provide benefits across the value chain to ensure equitable benefits sharing. The same applies to the agro-processing activities of the project. That said, the gender assessment for the project requires further exploration of the roles of men, women and gender diverse people within the agro-processing and medium and small enterprises space across communities and based on ethnic diversity.

## Appendix 2. Stakeholder Engagement Overview for Stage 1

| Date, time, venue | Organization, participant name, title, email | Summary of Engagement |
|---|---|---|
| 6 May 24<br>11:00-13:00<br>ROM Office, Paramaribo | Ministry of Spatial Planning and Environment (ROM).<br>Nasser Rodjan, Acting Deputy Director Living Environment & Ecosystems, iemdaad.rodjan@gov.sr<br>Ivette Patterzon, Deputy Director Climate Change, ivette.patterzon@gov.sr<br>Vijona Dipowirono, Policy Officer Climate Change, vijona.dipowirono@gov.sr | The idea note connects well with Suriname's food culture and demand, could benefit from collaboration with the Ministry of Agriculture. The Adaptation Fund should be explored as a potential funding source. |
| 7 May 24<br>9:00-10:00 | Inter-American Institute for Cooperation on Agriculture (IICA). | IICA's projects aim to enhance beekeeper capacity, improve climate resilience in farming, identify key traditional crops, and support fish |

[76] Sourced directly from CANARI, EnGenDER Report of the Gender-based Climate Resilience Analysis for Saint Lucia (2022)

| | | |
|---|---|---|
| IICA Office, Paramaribo | Curt Delice, Special Affairs Coordinator for the Caribbean Region, curt.delice@iica.int<br>Laurenzio Tirtopawiro, Agricultural Technology and Innovation Specialist, laurenzo.tirtopawiro@iica.int | processors, while proposal development should focus on market-driven strategies, create enabling environments, ensure immediate beneficiary impact, adopt a multi-phased approach for adaptive management, and tackle disorganization in the agro-processing sector. |
| 7 May 24<br>11:00-12:00<br>FAO Office, Paramaribo | Food and Agriculture Organization (FAO).<br>Janelle Joe, Assistant FAO Representative (Programme), janelle.joe@fao.org | FAO has nine ongoing projects in Suriname focused on modernizing agricultural production for smallholder farmers, enhancing the pineapple sector, conducting an agricultural census to inform strategy, managing agricultural data post-COVID-19, reducing bycatch in fisheries, strengthening the climate change unit of LVV, and improving livelihoods through a joint UN initiative. Currently, there are no new projects in development, but discussions with LVV are planned to determine future priorities. |
| 8 May 24<br>9:30-10:30<br>LVV Office, Paramaribo | Ministry of Agriculture, Animal Husbandry and Fisheries (LVV).<br>Iwan Samoender, Manager Climate Change Unit, isamoender@hotmail.com | In 2016, Suriname appointed a Climate Change focal point to address climate impacts on agriculture, leading to the establishment of a Climate Change Unit in 2021 under the LVV/FAO/GCF Readiness project to enhance capacity for climate resilience. The unit has initiated pilot projects but faces challenges such as lack of funding for adaptation initiatives, absence of agricultural maps for planning, insufficient data collection on climate impacts, and the need for structured action at the farmer level, while efforts are underway to improve data systems and seek funding opportunities. |
| 9 May 24<br>13:30-14:30<br>IDB Office, Paramaribo | Inter-American Development Bank (IDB).<br>Steven Hofwijks, Operations Associate, shofwijks@iadb.org<br>Anaitee Mills, Climate Change Sector Specialist, anaiteem@iadb.org<br>Santiago Bucaram, Natural Resource Specialist, santiagobu@iadb.org | IDB is focusing on strengthening institutional capacities within ROM through various initiatives, including the establishment of the NMA and ongoing projects like mangrove restoration, enhancing logging monitoring for the SBB, supporting the Amazonia Forever Initiative, and creating a microcredit facility for SMEs in the bioeconomy, while also seeking to revive a technical cooperation initiative with LVV on the stock assessment of shared marine fish species with Guyana. |
| 10 May 24<br>10:00-11:00<br>UNDP Environment Office, Paramaribo | United Nations Development Programme (UNDP).<br>Bryan Drakenstein, Programme Specialist Energy and Environment, bryan.drakenstein@undp.org<br>Anuradha Khoekhoen, Programme Assistant Energy and Environment, anuradha.khoenkhoen@undp.org | UNDP currently has no ongoing or planned projects in agriculture, but is implementing projects focused on responsible gold mining, sustainable livelihoods, and biodiversity conservation, with future initiatives including EU-funded mangrove conservation, a biodiversity framework proposal, and the development of ASL3 for West-Suriname, alongside efforts to support the Green Development Strategy and finance priorities in national climate commitments. |
| 13 May 24<br>9:00-11:00<br>Commewijne | Practitioner and Trainer Regenerative Agriculture Methods.<br>Alex Yakaumo, Practicitioner and Trainer, alexyakaumo@gmail.com | Farmers in Suriname are seeking better agricultural methods but lack knowledge of viable alternatives, leading them to continue conventional practices that harm soil health; thus, it is crucial to assess their specific needs, challenges, and processing opportunities to design effective projects. Establishing agriculture knowledge centers with test fields, biowaste management facilities, laboratories, seedbanks, and training centers will provide hands-on learning and support, while a phased approach to implementation and a focus on permaculture principles can foster sustainable changes in farming practices and facilitate knowledge exchange among communities. |
| 13 May 24<br>14:00-15:00<br>Tropenbos Office, Paramaribo | Tropenbos Suriname.<br>Rudi van Kanten, Director, r.vankanten@tropenbos.sr<br>Ivan Karnadi, Project coordinator, i.karnadi@tropenbos.sr<br>Davita Obergh, Project coordinator, d.obergh@tropenbos.sr<br>Niradj Hanoeman, Project coordinator, n.hanoeman@tropenbos.sr | Past and ongoing agroforestry projects in Suriname include various initiatives such as the Guyagrofor project, P3DM Upper Suriname River project, and Tropenbos' work with farmers in the Saamaka area, focusing on integrating agroforestry with traditional practices to improve sustainability and market access. Future plans involve establishing agroforestry farmers field schools, processing units for local agricultural products, and training programs for community trainers, while challenges like price fluctuations of non-timber forest products (NTFPs) and limited processing capacities need to be addressed to enhance local livelihoods. |

| | | |
|---|---|---|
| 14 May 24<br>10:30-11:30<br>Mulokot Office, Paramaribo | Foundation Mulokot.<br>Jupta Itoewaki, Chairperson and co-founder, juptaitoewaki@mulokot.com<br>Andreas Verhoogt, Managing Director, andreverhoogt@mulokot.com | Mulokot is working with Wayana Indigenous villages in southern Suriname, where communities rely on subsistence farming and have expressed interest in learning alternative agricultural methods that enhance food security without disrupting their daily lives, particularly in light of recent challenges like climate impacts and mining activities. The organization aims to introduce complementary practices, such as raised beds for traditional crops close to homes, to promote adoption while considering the similar challenges faced by the Trio people in the region. |
| 15 May 24<br><br>Office MDS & WLA, Paramaribo | Meteorological Service Suriname (MDS):<br>Dwight Samuel, Head MDS, dwightsamuel82@gmail.com<br>Shavelli Bardan, Department of Climatology<br>George Paiman, Department of Instruments (Installations and Repairs)<br>Lorenzo Kasmani, Project Assistant<br><br>Hydraulic Service (WLA):<br>Frits Kosso, Acting Head, frkosso@gmail.com<br>Georgeo Pawirodinomo, Department of Instruments (Installations and Repairs) | LVV and MDS are collaborating to design a forecasting system for crop development that includes monthly updates based on actual measurements, while also seeking to partner with WLA to calculate soil saturation. |
| 16 May 24<br>14:00-15:00<br>Teams | University of Applied Sciences and Technology (UNASAT).<br>Trevie Feurich, Chairperson UNASAT Board, tfeurich@yahoo.com<br>John King, Member UNASAT Board | UNASAT is expanding its existing business program to include an agri-business focus, launching a pilot program in Nickerie for fruit and vegetable farmers while aiming to develop hands-on training relevant to local practitioners and establish agriculture test fields for community food security. Additionally, UNASAT is implementing a USAID project with demonstration plots and forming partnerships for agricultural exchange programs, while considering the importance of project scope, technical capacity, and accessible knowledge management for future agroecology initiatives. |
| 17 May 24<br>9:00-10:00<br>Teams | Center for Agricultural Research in Suriname (CELOS).<br>Mayra Esseboom, Researcher NTFP, m.esseboom@gmail.com | Ongoing projects by CELOS focus on agroforestry, ginger, and açai value chain development, yet challenges include the lack of protection for intellectual property rights, insufficient support for small enterprises, and the environmental risks associated with monoculture practices, as evidenced by the negative impacts of the growing açai industry in Brazil. Feedback on the agroecology idea note emphasizes the importance of clearly defining target groups, incorporating community and school gardens in urban areas, and engaging youth through traditional cooking classes, while also highlighting the need to capture traditional agricultural knowledge and promote biodiversity alongside food security. |
| 17 May 24<br>11:00-12:00<br>Teams | Association of Indigenous Village Heads in Suriname (VIDS):<br>Josee Artist, staff member Bureau VIDS, josee.artist@vids.sr<br>Max Ooft, Policy Advisor, max.ooft@vids.sr<br><br>KAMPOS Tribal Peoples Partnership (KAMPOS):<br>Renatha Simson, Director Bureau KAMPOS, renatha.simson@hotmail.com | Both VIDS and KAMPOS express strong interest in the agroecology project, emphasizing the need for agricultural capacity building to address climate-related food shortages while promoting agroforestry and regenerative practices through community-specific test plots and practical training programs. Engagement should involve direct communication with bureau directors for coordination with traditional leaders, while ensuring projects are long-term and sustainable, address stakeholder fatigue, allocate budgets for local organizations, and recognize the importance of collective land rights for Indigenous Peoples to facilitate effective participation and benefit sharing. Knowledge management will need formal agreements to ensure that ITP traditional knowledge is available for their respective peoples, but protected from misuse. There are existing practices that can be used as examples, with Tropenbos Suriname. |

| | | |
|---|---|---|
| 20 May 24<br>13:00-14:00<br>ROM Office, Paramaribo | ROM.<br>Ritesh Sardjoe, Permanent Secretary, ritesh.sardjoe@gov.sr<br>Ivette Patterzon, Deputy Director Climate Change, ivette.patterzon@gov.sr | Agreed to move project forward. Next steps would include (1) sharing the ToC and presenting it to the Minister and (2) organizing a stakeholder session to discuss the ToC with a larger audience. |
| 20 May 24<br>13:00-14:00<br>CAHFSA Office, Paramaribo | Caribbean Agricultural Health and Food Agency (CAHFSA).<br>Gavin Peters, CEO, gavin.peters@cahfsa.org<br>Nneka Hull James, Animal Health Specialist, nneka.hulljames@cahfsa.org | CAHFSA has expertise in coordinating agriculture organizations in the region and can provide specific technical expertise includes diseases, quality control for food processing. |
| 23 May 24<br>11:00-12:00<br>Torarica, Paramaribo | Ministry of Regional Development and Sport (ROS).<br>Sharon Westerlow-Pinas, Advisor to the Director of Regional Development and Project Manager to the SDG Joint Programme, Sharonwesterlowwork@outlook.com | The SDG Joint Programme aims to improve the living conditions of Indigenous Peoples through capacity building for food security, development of a government handbook for engagement with Indigenous communities, and identified follow-up needs including business training, access to finance, vocational training, agricultural equipment, transportation, and quality education and healthcare. |
| 28 May 24<br>10:00-11:00<br>TBS Facility, Paramaribo | Tan Bun Skrati (TBS), Cacao Cluster and NTFP Value Chain Platform (NTFP VCP).<br>Ellen Ligteringen, co-owner TBS, Board member and lead Cacao Cluster tanbunskrati@gmail.com<br>Rutger Lem, co-owner TBS, board member Cacao Cluster, Cacao cluster representative in NTFP VCP, rutgerlem@hotmail.com | TBS plans to enhance production capacity through the installation of an exhaust system and equipment for high-end cacao waste products, while the Cacao Cluster aims to establish post-harvesting units and agroforestry nurseries in various communities. Challenges include the need for a 'Purchase Fund' to support growers and processors and the lack of formal financing options for farmers, highlighting the importance of a food systems value chain analysis and collaboration with the Ministry of Economic Affairs to foster an enabling environment for entrepreneurs. |
| 28 May 24<br>14:00-15:00<br>SAMAP Office, Paramaribo | Suriname Agriculture Market Access Project (SAMAP).<br>Ashmie Sheoratan-Jairam, National Project Coordinator, ashmie.sheoratan@fao.org | The SAMAP initiative supported four agricultural sectors—fruits, vegetables, ground provisions, and non-timber forest products—by establishing three sectoral value-chain platforms and providing matching grants, training in business management and food safety, and facilitating access to export markets. Although there will be no follow-up project, documentation will be available to the Ministry of Agriculture (LVV) after closure, highlighting challenges such as the lack of capacity within value-chain platforms and the need for regulations on good agricultural practices (GAP). Future agroecology projects should collaborate closely with agricultural education departments, assess training needs, and include financial administration support to enhance the sector's capacity and sustainability. |

## Appendix 3. Stakeholder Engagement Overview for Stage 2

| **Date, time, venue** | **Organization, participant name, title, email** | **Summary of Engagement** |
|---|---|---|
| 25 Sep 24<br>8:00-9:30<br>Teams | Agriculture Value Chain Platforms (VCP).<br>Fruits and Vegetables: Lucien Bourne, Chairperson, customs.specs@gmail.com<br>Wendel Margaret, Boardmember & Director Paralab N.V., wfmargaret@gmail.com<br>Christine Wirokromo, Deputy Director Paralab NV, cwirokromo.paralabnv@gmail.com<br>Judith Rattan, Chairperson Saramacca | Farmers in Suriname face significant challenges during both dry and wet seasons, including irrigation water shortages, crop losses from flooding, and diseases affecting yields, leading many to reduce production or shift to more drought-resistant crops. The agricultural sector is hindered by high operational costs, limited access to financing, and insufficient administrative capacity among MSMEs, which affects their ability to maintain accurate financial records and secure necessary certifications. Additionally, there is a pressing need for practical, accessible training on modern agricultural practices and climate change adaptation, as well as support for value chain development to enhance productivity and sustainability in the face of changing environmental conditions. |

| | | |
|---|---|---|
| | fruit and vegetable farmers<br>Non-Timber Forest Products: Cyrano Asoiti, Voorzitter, casoiti@gmail.com<br>Cassava: Shequita Claver, Boardmember & representative Ministry of Economic Affairs | |
| 2 Oct 24<br>9:00-10:00<br>Teams | Anton de Kom University of Suriname (AdeKUS)– Department of Agriculture.<br>Joan Muller, lecturer, joan.muller@uvs.edu<br>Jane Jagernath, adjunct scientific officer, jane.jagernath@uvs.edu | Agriculture in Suriname is severely impacted by prolonged droughts and climate change, which increase pest and disease outbreaks, while farmers struggle to implement climate-smart practices due to high costs and insufficient knowledge about post-harvest processes. Collaborative efforts are needed among local institutions, such as LVV and AdeK, to enhance technical capacity, improve training on handling and storage, and establish knowledge hubs, alongside the exploration of seed systems and disaster insurance to support sustainable agricultural practices. |
| 15 Oct 24<br>8:00-9:00<br>Teams | Bureau of Gender Affairs (BGA).<br>Shiefania Jahangier, Head, bgasuriname@gmail.com<br>Yvonne Towikromo, Policy Advisor and responsible for priority areas climate change, and GBV, hanacaraca@gmail.com<br>Shiffion Alimoestar, Responsible for the priority area Environment & Climate Change, shiffy92@hotmail.com<br>Detie Jagan, Responsible for the priority area Labor, Income and Poverty Reduction | Gender roles in agriculture vary significantly between the hinterland and coastal Suriname. In the hinterland women tend the agricultural plots while men establish the plots. In coastal areas with women primarily grow flowers and vegetables while men tend to larger plots with crops like tomatoes. Yet farmers in both regions face challenges due to climate change and limited access to resources and training. Efforts are being made to implement gender-responsive frameworks in agricultural productivity projects, but significant gaps remain in data, cooperation among ministries, and the overall understanding of how climate change impacts different demographics, particularly regarding access to education, decision-making, and financial resources. |
| 18 Oct 24<br>10:00-<br>11:00<br>Teams | Association of Saramaccan Authorities (VSG) Youth.<br>Samunda Jabini, Youth Coordinator, samundajabini6@gmail.com<br>Daniel Stewart, involved in GIS project, danielstewart597@gmail.com | In the Upper Suriname River area, agriculture is the primary livelihood, but farmers face significant challenges from climate change, including prolonged droughts and flooding that devastate crops, leading to food insecurity. Access to training and financial opportunities is limited, and there is a disconnect between community needs and external project initiatives, highlighting the importance of culturally sensitive approaches and genuine community involvement in developing sustainable agricultural solutions. |
| 22 Oct 24<br>15:00-<br>16:00<br>Teams | LVV.<br>Niraj Parsadi,<br>Climate Change unit,<br>ccu.lvv.2023@gmail.com | LVV is focusing on training extension officers in affordable climate-smart agriculture techniques and plans to cultivate black pepper with a foundation involving the Ministry of LVV. The ministry advices to engage ROS in establishing demonstration gardens in Brokopondo to train locals, shifting from political appointments back to agricultural expertise for leadership in local offices. |
| 31 Oct 24<br>10:00-<br>11:00<br>Teams | Surinamese Standards Bureau (SSB).<br>Tanwir Hassankhan, Executive Director SSB, t.hassankhan@ssb.sr | SSB has developed a number of standards for the agricultural sector (see ssb-standards-catalogue-updated-feb-2024.pdf ) and can provide training and guidance, all over the country. Training costs can be paid by trainees or incorporated in projects; own contribution by trainees does result in higher attendance rates. The National Institute for Food Safety in Suriname (NIVS) will take over the responsibility for developing further standards; however, this organization is not yet operational. |
| 4 Nov24<br>9:00-10:00<br>Teams | ROM.<br>Jerrol Renfurm<br>SIDAR Project Development Consultant Suriname<br>projectdevelopersur@<br>caribbeanclimate.org | Jerrol believes the CR-FST proposal effectively addresses the needs of Suriname's agriculture sector and emphasizes collaboration with existing alliances to promote private sector ownership and sustainability. His project, seeking $3M from the special climate change fund, will focus on agricultural adaptation in Coronie, addressing challenges related to drought through intercropping, drought-resistant crops, water storage, and irrigation. |
| 6 Nov 24<br>8:00-9:00 | Trustbank Amanah - Nationaal Ontwikkelings-fonds | The NOFA Act, approved in April 2022, has provided financing to approximately 100 primary producers and processors, with repeat |

| | | |
|---|---|---|
| Teams | Agribusiness (NOFA).<br>Clarence Tokromo, Head of Agribusiness and Institutional Relations. clarence.tokromo@trustbankamanah.com<br>Roshnie Gangapershad, Coordinator Agribusiness roshnie.gangapershad@trustbankamanah.com<br>Eduard Kidjo, Group Head of Operations eduard.kidjo@trustbankamanah.com<br>Lucille Panhuyzen, Legal & Corporate Affairs Officer (Environment, Social and Governance) lucille.panhuyzen@trustbankamanah.com | applicants seeking additional loans. Challenges include difficulties in providing collateral, managing cash flows, serving remote areas, and ensuring the proper use of funds, while a proposed guarantee fund and better administration are being explored to address these issues. |

## Appendix 4. Validation Meeting Summary Report

This is a brief overview of the stakeholder inputs provided during the concept note validation meeting in December 2024. Gender aspects are captured in the preliminary gender assessment. The complete validation workshop report can be made available upon request.

Theory of Change:

- Output 1.1: Work out more detailed activities during full-proposal development, incorporating different disciplines.
- Output 1.2: Include a vulnerability assessment.
- Output 2.1: Feasibility study for full proposal should include assessment of cop/design of processing facilities, as well as best location for market access.
- Output 3.1: Feasibility study for full proposal should include more detailed stakeholder mapping. Training material developed should be based on local languages and cultures/customs.
- Output 3.2: Capacity building of FSPs, training and coaching of SMEs and capacity building of farmers should be included.
- Output 4.1: Material and online platform should be in multiple (local) languages to increase accessibility. Capacity building efforts should strengthen existing structures and include scholarships for men and women to increase participation.

Locations, stakeholders and beneficiaries:

- Stakeholders agree on the proposed areas for the project and have identified specific locations, including LVV facilities in Wanica (Lelydorp), Brokopondo, Saramacca (LVV/China facilities), and the village of Palumeu in Sipaliwini. No specific location has been identified for Commewijne/Marowijne yet, though the LVV facilities in Commewijne were discussed.
- Many organizations active in agriculture, food processing, and capacity building have been identified for potential partnerships across the different districts. These organizations are already involved in local initiatives.

List of participants

| Name | Organization | Position / Title |
|---|---|---|
| **Alex Yakaumo** | Soil Care Consultancy | Permaculture expert & Consultant soil biology |
| **Anwar Helstone** | CELOS | Head Agricultural Production |
| **Arnold Majokko** | Agriculture value chain platforms (VCP): NTFP | Secretary |
| **Ashitesh** | Ministry of Finance and the Ministry of Economic | ECD |

| Name | Organization | Position / Title |
|---|---|---|
| **Bhagole** | Affairs, Entrepreneurship and Technological Innovation (EZOTI) | |
| **Chantal Landburg** | CCCCC | Project Development Specialist |
| **Cheryll-Ann Mans** | University of Applied Sciences and Technology | Director USTI |
| **Cirano Asoiti** | VCP: NTFP | Chair |
| **Clarence Tokromo** | Trustbank Amanah | Head Agribusiness |
| **Clarissa Vaseur** | Write4You Consultancy Suriname | Workshop Rapporteur |
| **Daveni Adjako** | VCP: Cassava | Member |
| **Desadien Santoesha** | Ministry of Public Works (OW)- Meteorological Service Suriname | Department of Climatology |
| **Faizel Wilnis** | IICA | Livestock & Animal Health Specialist / |
| **Frits Kosso** | OW - Hydraulic Service | Acting Head |
| **Janice Overman** | Ministry of Agriculture, Animal Husbandry and Fisheries (LVV) | Policy Officer Climate Change |
| **Jerrol Renfurm** | Ministry of Spatial Planning and Environment (ROM) | SIDAR Project Development Consultant |
| **Jurmen Adang** | ROM | Policy Officer Climate Change |
| **Lucien Bourne** | VCP: Fruits and Vegetables | Chairman |
| **Lucille Panhuyzen** | Trustbank Amanah - National Development Fund for Agribusiness (NOFA) | Legal & Corporate Affairs Officer |
| **Maitriedebie Ramautar-Jagroep** | LVV | Deputy Director of Agricultural Research of the Directorate of Agricultural Research, Marketing and Processing |
| **Marco Ouboter** | CELOS | Scientist |
| **Naraj Parsadi** | LVV | Policy officer Climate Change |
| **Natachia De Sanders** | VCP: Fruits and Vegetables | Member |
| **Nemuel Ajambia** | VCP: NTFP | Member |
| **Niradj Hanoeman** | Tropenbos Suriname | Project Coordinator |
| **Orlando Cairo** | VCP: Cassava | Chair |
| **Rabia Ramdin** | Agriculture cooperative Kwatta | Secretary |
| **Ratan Kalka** | Suriname Business Development Center | Manager Business Support Services |
| **Ray Jong-A-Lock** | Get!T Talent & Organizational Development | CSO - Program Leader for Integrated Organizational Development of VCP |
| **Renatha Simson** | KAMPOS | Director of the Bureau |
| **Rosaya Gunther-Kamit** | Caribbean Agricultural Health and Food Agency | Animal Health Programme Officer |
| **Saskia Nahar** | EZOTI | Policy Officer |
| **Sathyam Noersalim** | Association of Indigenous Village Leaders in Suriname (VIDS) | Project Officer |
| **Shiffion Alimoestar** | Ministry of Domestic Affairs - Bureau of Gender Affairs | Staff |
| **Sjenelva Slory** | IICA | Technical Project Secretary |
| **Sukarni Mitro** | ROM | SIDAR Project Development Officer |
| **Vanessa Hok** | Tropenbos Suriname | Project Assistant |
| **Vijona Dipowirono** | ROM | Policy Officer Climate Change |