ADAPTATION FUND BOARD SECRETARIAT TECHNICAL REVIEW OF PROJECT/PROGRAMME PROPOSAL

PROJECT/PROGRAMME CATEGORY: Regular-sized Project Concept

Country/Region: Suriname
Project Title: Climate Resilient Food System Transformation in Suriname (CR-FST)
Thematic Focal Area: Coastal
Implementing Entity: Caribbean Community Climate Change Centre (CCCCC)
Executing Entities: Ministry of Agriculture, Animal Husbandry and Fisheries
AF Project ID:
IE Project ID: **Requested Financing from Adaptation Fund (US Dollars):** 9,998,839.20
Reviewer and contact person: Alpha Oumar Kaloga **Co-reviewer(s):** Neranda Maurice-George
IE Contact Person:

Technical Summary	The project "Climate Resilient Food System Transformation in Suriname (CR-FST)" aims to enhance climate-resilient food security through agroecology, regenerative agriculture, climate services, food processing, and value chain strengthening to ensure sustainable livelihoods in Suriname. This will be done through the four components below: 1. **Component 1**: Gender-responsive Climate-resilient Agriculture (USD 1,830,000). 2. **Component 2:** Community Food Processing (USD 1,860,000). 3. **Component 3:** Strong Agriculture Supply-chains (USD 3,606,000). 4. **Component 4**: Knowledge Management (USD 1,120,000). <u>Requested financing overview:</u> • Project/Programme Execution Cost: USD 799,520 • Total Project/Programme Cost: USD 9,215,520 • Implementing Fee: USD 783,319 • Financing Requested: USD 9,998,839

	The initial technical review raises several issues such as lack of quantifiable impact projections and logical justification in some key areas, namely the link between strengthening the value chain and building the adaptive capacity. Moreover, the cost-effectiveness of the work has not been well articulated, nor has there been any full explanation of FPIC processes, sustainability mechanisms, and how they comply with Suriname's national technical standards such as ESMS. There are still some overlaps existing with other projects, and therefore more clarification is needed on how CR-FST would bring complementarity rather than duplication to some of these initiatives.
Date:	February 28, 2025

Review Criteria	**Questions**	**First Technical Review Comments** February 28, 2025	**Response to technical review**
Country Eligibility	1. Is the country party to the Kyoto Protocol, or the Paris Agreement?	**Yes.**	
	2. Is the country a developing country particularly vulnerable to the adverse effects of climate change?	**Yes.** The proposal states in page 10 that "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 climate change.	
Project Eligibility	1. Has the designated government authority for the Adaptation Fund endorsed the project/programme?	**Yes**. As per the Endorsement letter dated January 20th 2025.	
	2. Does the length of the proposal amount to no more than Fifty pages for the project/programme concept, including its annexes?	**Yes.** **CAR1:** Please amend the Project Components and Financing Table on page 14 to remove all decimal point and to present rounded figures.	**CAR1:** All decimal points removed from financial table. All figures are rounded. Additionally, project outcomes and outcomes adjusted based on updated ToC.

	3. Does the project / programme support concrete adaptation actions to assist the country in addressing adaptive capacity to the adverse effects of climate change and build in climate resilience?	**Not cleared.** The section could benefit from strengthening. The project identifies economic benefits (p.23), social benefits (p.24), and environmental advantages, including gender considerations and attempts to mitigate negative impacts. However, this project lacks quantified impact projections. **CAR2**: Kindly provide figures for expected household income improvements, food production increases, and market access benefits and please setup monitoring system for gender-disaggregated benefits P 24. **CAR3**: Please strengthen the adaptation rationale of the project. The project proposal should be explicit in what makes this project different from previous agricultural development programs in Suriname, it should contain a comparison that highlights elements specific to	**CAR2:** Estimates are provided under the description of project beneficiaries (Part I, Paragraph 1.6). Food production is expected to increase, with a 20% yield improvement on pilot demonstration plots. Household income is expected to rise with +30% among agroecology MSME participants. Additionally, the project aims to achieve a doubling of community-level processed goods reaching formal markets. **CAR3:** This is addressed in Part II, question A. An adjusted adaptation rationale is provided that justifies an agroecological approach to strengthen resilience of the agriculture sector against climate change impacts. Barriers are identified

		adaptation for easy understanding. p14: The project defines clear outputs and measurable outcomes - six outputs and fifteen activities - all contributing to the adaptation goals (page 18). However, **CR1:** Please provide quantitative projections on some key adaptation benefits such as: number of farmers trained in climate-resilient agriculture, reduction of crop loss due to climate-induced risks, and the expected increase in drought-resistant cropping. **CR2**: In relation to the Theory of Change: 1. Please clarify what uncertainties in climate projections are accounted for in the adaptation planning (e.g., extreme rainfall variability). 2. Kindly ensure that ToC specifies the assumptions	as well as impacts and how these are related to vulnerable and unsustainable food systems under increasing climate pressure. **CR1:** Estimates are provided under the description of project beneficiaries (Part I, Paragraph 1.6). This includes the following: The project is expected to train at least 3000 farmers in climate-resilient agroecological practices. Furthermore, the project's crop loss reduction target is to achieve a 25% decline in flood/drought-induced losses by Year 4. Food production is expected to increase, with a 20% yield improvement on pilot demonstration plots. **CR2:** 1. This is addressed in Part II, question A. climate projections accounted for are increasingly erratic rainfall, prolonged dry seasons, flooding, and rising temperatures. 2. Assumptions are specified after the description of project

		regarding the farmer behaviour change. p. 18	outcomes, outputs and activities. These include: • 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. • Smallholders are willing to shift practices if training and market access are reliable. • Value chains become adaptive when embedded in local institutions and circular economies. • Climate projections (e.g. extreme rainfall) remain within the 10–30% uncertainty band. • 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.
		3. The Theory of Change makes a logical link between the inputs,	3. This is addressed in Part II, question A, in the introductory

		activities, outputs, and outcomes. However, major assumptions - for instance, how strengthening value chains translates into increased adaptive capacity - need to be further justified. Please provide clearer explanations of the assumptions underlying Output connections 3.1 and 3.2 with contributing factors to Outcomes 3 and 4. Ensure that these connections are evidence and best-practice-supported. Although the project meets numerous AF strategic objectives - objectives 1, 2, and 3 - further: CR2, please state clearly which adaptation indicators will be used to track impact and align them with the AF results framework on p6: **CR3:** Page 6: Please clearly state which AF indicators will be used to track adaptation impact and ensure alignment with the AF results framework	section before the description of outcomes, outputs and activities. **CR3:** Two strategic indicators were added, i.e. number of beneficiaries (direct and indirect) and assets produced, developed, improved, or strengthened. Project outcomes and outputs are linked to Adaptation Fund indicators. These are described in Part III, question A.

	4. Does the project / programme provide economic, social and environmental benefits, particularly to vulnerable communities, including gender considerations, while avoiding or mitigating negative impacts, in compliance with the Environmental and Social Policy and Gender Policy of the Fund?	**Not cleared.** However, additional information is required. While the proposal recognizes 'coastal communities' as beneficiaries, it does not detail how benefits will be equitably distributed among vulnerable sub-groups (for example, Indigenous Maroon communities). **CR4**: Kindly clarify how the project prioritizes marginalized groups in terms of priority in implementing these activities (Section 2.4, p. 8), and provide some metrics such as% reduction of waterborne diseases from improved irrigation; (Table 5, page 18).	**CR4:** Part I, paragraph 1.6 describes project beneficiaries and now includes a description of inclusion / prioritization of vulnerable and marginalized groups. Particular attention is given to women, youth and Indigenous and Tribal Peoples. Furthermore, project targets are specified to describe number of beneficiaries, crop loss reduction, yield improvement, income rise and formalized market access.
	5. Is the project / programme cost effective?	**Unclear.** **CAR4**: Kindly update the cost effectiveness section to elaborate the project's cost-effectiveness in comparison to alternative options to the proposed measures.	**CAR4:** A comparative table is inserted in Part II, question C. This table provides an overview of proposed interventions versus the business-as-usual (alternative) scenario, and a cost-effectiveness comparison

			(short and ling term) between both scenario's.
	6. Is the project / programme consistent with national or sub-national sustainable development strategies, national or sub-national development plans, poverty reduction strategies, national communications and adaptation programs of action and other relevant instruments?	**Yes.** However, additional information is required. **CR5:** Please confirm whether the project aligns with the NAP's Priority Action 3.2 ("Sustainable Agriculture in Coastal Regions") and revise text accordingly. **CR6:** 1. The proposal's focus on drought-resistant crops does not explicitly connect to Suriname's National Agricultural Development Plan's target to "increase climate-smart practices by	**CR5:** The concept note does not align with 'Strategic Objective 3: Develop and implement Sustainable Agriculture Policy including relevant climate resilience mechanisms in existing and new regulations'. This strategic objective calls for the implementation of the water boards act. The water boards only exist in one district of Suriname, i.e. Nickerie, and are to facilitate the industrial rice production. This part of the agricultural sector, i.e. the industrial rice sector, is not within the scope of this concept note. **CR6:** 1. Unclear which document this comment is referring to. The concept note does demonstrate alignment with the National Adaptation Plan 2019-2029 'Strategic objective 2. Integration of climate resilience into

		30% by 2025, subj. Section 3.4 to cross-reference the Agricultural Plan's Key Result Area 4 ("Climate Resilience). 2. Please include an assessment of how the project is aligned with Suriname's poverty reduction strategies and ensure interventions are equitable for benefiting the vulnerable constituencies. Pages 26-28.	agricultural extension services' as described under Part II question D of the concept note. This strategic objective includes provision of training and guidance in climate smart crop production (Adaptation measure C) with output indicator 'Increased adoption of techniques such as appropriate greenhouses and hydroponic gardens, improved drainage systems, crop diversification, etc. (fruit and vegetables)'. The concept note had mentioned that 'The training program that will be established as part of Output 1, will include climate resilience in the agricultural sector'. Additional clarification is provided to demonstrate alignment with abovementioned adaptation measure 2. For this assessment, the following publication is referenced: Suriname Poverty and Equity Assessment 2024 (IDB Technical Note 2971; see Suriname Poverty and Equity Assessment) Policy recommendations included in the abovementioned assessment which are addressed by the concept note

			include supporting vocational training, special focus on the interior of the country and historically marginalized groups, and making a deliberate effort to address poor labor market outcomes of women. The incorporation of this assessment is captured under Part II question D of the concept note.
	7. Does the project / programme meet the relevant national technical standards, where applicable, in compliance with the Environmental and Social Policy of the Fund?	**Yes.** However, the section requires strengthening. **CAR5:** kindly provide a more thorough assessment of relevant national technical standards and, if applicable, state what environmental permits or regulatory approvals the project might require. Specifically state how the project will meet Suriname's Environmental and Social Management System (ESMS). Section E-compliance with National Technical Standards. While the proposal acknowledges the AF's Environmental and Social Policy, there is no mention of how it is consistent with Suriname's national technical regulations concerning land use, water quality, and pollution control.	**CAR5:** To ensure procedures are followed to comply with national standards, the project will follow the EIA procedures mentioned in the concept note (Part II question E) which are the Suriname national requirements for ESMS. Under this section, additional clarification is provided in terms of the expected categorization and scope of the EIA. Furthermore, information is provided regarding applicable public disclosure, stakeholder engagement, FPIC, and social impact assessment guidelines. Based on an initial screening of the project by the CCCCC team against national EIA requirements it is expected that

			the project will fall under category B, however, the exact scope of the EIA will be determined during the screening and scoping phases. To ensure a coordinated and integrated approach in application of AF, CCCCC and national requirements additional clarification is inserted under Part II question E regarding the management and hierarchy.
		CR7: While climate-resilient storage facilities are proposed, the Suriname National Building Code of 2018 is not explicitly cited or integrated in the design specifications. Please address.2. The proposal states the use of 'durable materials,' but makes no reference to Suriname's National Building Code (from Section 4.2 on flood-resistant foundations); please clarify what sections of the code will stoke such construction and how its provisions ensure legal compliance as per standards advised for AF. 1. Please specify how community water systems will conform to the Water Resource Management Act	**CR7:** In the concept note Part II question E, Reference is made to the Suriname national building law (2002), code (2002) and guidelines (2022). Specific reference is made to recommendations regarding roof construction for high winds as well as the CARICOM Building Code regarding energy efficiency and. 1. It is unclear which legislation is referenced here. Can you provide a link or formal name and number of the legislation?

		2020 (such as water quality-testing protocols). 2. There is nothing in the proposal regarding compliance with Suriname's Coastal Zone Land Tenure Regulations of 2021, and this might delay or conflict.	In terms of water to be used in processing facilities. These will be connected to the national water distribution network. Water distributed by the water company undergoes treatment and is periodically tested for suitability as potable water. 2. As mentioned above, the EIA will include a legal assessment as well as an assessment of alternatives. This will ensure assessment of suitability of land; which will depend on environmental and social aspects and well as land tenure. After concept note endorsement, the feasibility studies will include an assessment of actual project sites and it is the intention to select sites that are already owned by government or partner organizations identified.
	8. Is there duplication of project / programme with other funding sources? -	**No.** However additional information is required. **CR8:** 1. Please indicate any linkages to the ongoing UNDP project, which has very similar objectives (i.e., training farmers on climate-resilient practices).	**CR8:** 1. The UNDP project included in the comparative table (see below) is the GCCA+ project

		2. How the lessons of the Suriname Rice Resilience Project (2020) have been incorporated into this project design. 3. Any other ongoing or past projects from which the project can build on/complement. **CR9:** Kindly present a comparative table that illustrates how CR-FST's reconstruction of post-harvest infrastructure complements UNDP's crop-oriented work, rather than duplicates it. Section 2.3, p. 9	2. The rice resilience project has a very different scope than the CR-FST project. However, this is included in the comparative table (see below) 3. Noted. All known projects relevant to CR-FST are included in the comparative table (see below). This list was established based on a desk study and engagement with stakeholders. **CR9:** The comparative table was added under Part II, question F. This table shows a comparison with all known relevant projects and the CR-FST; to illustrate complementarity of CR-FST.
	9. Does the project / programme have a learning and knowledge management component to capture and feedback lessons?	**Yes.** However additional information is required. The knowledge-sharing platforms as well as training materials are cited, but the document does give few specifics on how lessons learned will be documented and disseminated beyond the life of the project. **CAR6:** Please outline a knowledge management strategy by indicating the mechanism by which learning on adaptation will be captured and stored and how this will be shared	**CAR6:** Part II, question G describes knowledge management at project level (i.e. development, dissemination and long-term availability of material) as well as knowledge exchange

		across sectors, regions, and future adaptation equity initiatives.	in terms of lessons learned at a national and regional level.
	10. Has a consultative process taken place, and has it involved all key stakeholders, and vulnerable groups, including gender considerations in compliance with the Environmental and Social Policy and Gender Policy of the Fund?	**Yes.** Additional information is provided in the annexes. **CR10:** On stakeholder engagement, please clarify how the stakeholder feedback changed the design of the project and, particularly, how opportunities for collaboration with ongoing efforts such as SAMAP and ASTA were taken into account, Appendices 2, 3, and 4 (Pages 44-50). A multi-layered stakeholder engagement process is described, including government representatives, NGOs, and organizations of Indigenous Peoples. However, the methodology for seeking Free, Prior, and Informed Consent is not clearly articulated. **CAR7:** Please articulate how the FPIC process has operated, including how consent was secured, the role of Indigenous organizations, and how traditional knowledge would be protected. Also, clarify how stakeholder feedback, particularly that from vulnerable	**CR10:** Part II question H describes the stakeholder engagement process including a more elaborate description was added to this section to describe how stakeholder inputs / feedback has contributed to the development of the concept note. Summaries of stakeholder engagement sessions are provided in appendices 2-4 **CAR7**: Part II question H describes the stakeholder engagement process including interaction with ITP groups. An explanation is provided on what has been agreed with the organization in terms of FPIC during concept note development, full proposal

		groups, has informed project design and activities.	development as well as aspects of implementation. Furthermore, a more elaborate description was added to this section to describe how stakeholder inputs / feedback has contributed to the development of the concept note. Summaries of stakeholder engagement sessions are provided in appendices 2-4
		CR11: While gender-disaggregated data collection is mentioned (p. 10), the cultural/legal barriers faced by women in the agricultural sector of Suriname have not been elaborated upon (AF Gender Policy §3.1). CA: Please do elaborate on the cultural/legal barriers faced by women in Suriname's agriculture sector, though gender-disaggregated data collection is mentioned (p. 10).	**CR11:** These topics are elaborated upon in the preliminary gender assessment in appendix 1. An appropriate summary of this appendix is added under Part I, paragraph 1.5 to highlight cultural/legal barriers faced by women in Suriname's agriculture sector
		CAR8: Kindly add a subsection specifying consultations with the Ministry of Land Management.	**CAR8:** As described under Part II, question H: 'The Ministry of Land and Forest Management was invited to this validation session but was not represented. Efforts made to engage with the Ministry have not yet resulted in a meeting. One reason for this may be the fact that 2025 is a year of

			elections; once the new government in installed, engagement will be sought once more with the Ministry. The environmental impact assessment will include an assessment of land-ownership to safeguard land-ownership of selected sites.
	11. Is the requested financing justified on the basis of full cost of adaptation reasoning?	**Yes.** While the proposal fails to make a clear distinction between climate adaptation interventions and general development activities, such a distinction is necessary to justify the requested funding. Some activities, for instance, value chain strengthening, may be interpreted as business-as-usual development rather than adaptation interventions. **CAR9:** please justify the requested financing by showing how climate change imposes added costs on each activity clarify why these costs would not be offset.	**CAR9:** Part II, question I is adjusted based on CAR9, but also instruction received during the Adaptation Fund writeshop in Recife Brazil (May 2025). This section is changed to reflect a detailed description of how the project budget will ensure full project implementation. Elements identified for external contribution are highlighted (particularly buildings for community level resource centres) and mitigation

			measures formulated for potential risks.
	12. Is the project / program aligned with AF's results framework?	**Yes.** However, amendments are required. **CR12:** Please amend the results framework as alignment table as follows: 1. First row represents the overall project objective, overall project indicator, an AF outcome and an AF outcome indicator followed by total grant amount. 2. The second row commences this information for the various project components. The top have of the table at outcome level, the lower half for the output level. 3. Please separate grant amount by the various AF indicators for example if one project outcome is aligned to 2 AF indicators the last column should separate the costs per AF indicator. 4. The results framework total should reflect the total project component costs.	**CR12:** 1. and 2. Indicator table adjusted accordingly 3. and 4. The indicator table is adjusted to ensure the project outcome and output budgets contributing to each Adaptation Fund indicator is specified. Both the outcome budget and output budget reflect the total project component costs.
	13. Has the sustainability of the project/programme outcomes	**Yes.**	

	been taken into account when designing the project?	However, amendments are required. The proposal does not explicitly indicate the strength of the linkages between project activities and the contribution to priority sectors of agriculture, food security, and climate resilience. **CAR10**: please add more detail on how project activities support the achievement of Suriname's adaptation targets, particularly in relation to agriculture, water, and forestry, by specifying the expected impact pathways'. p.26-28. The proposal has sustainability mechanisms such as agricultural resource centers and knowledge-sharing platforms, yet the very critical and specific details on task and structure that would ensure the sustainability and viability of these project initiatives after the completion is very vague. **CR13**:Please provide further details on how these agricultural resource centers and value chain initiatives will be sustained after the project, also please detailed sustainability framework highlights governance, financing, and institutional arrangements that would ensure long-term sustainability,	**CAR10:** Part II, question D describes alignment with the NCCSAP, NAP, NC3, Gender Vision Policy Document. Alignment with the Suriname Poverty and Equity Assessment Policy Recommendations were added. Specific alignment with sustainable forest management and integration of climate resilience into agricultural extension services were added. **CR13:** The sustainability section of the concept note (Part II, question J describes the sustainability considerations regarding the community-level agriculture and processing resource centres. These include provisions for inclusive governance structures, tailored business plans, financial

			sustainability and how they will be embedded in existing structures.
	14. Does the project / programme provide an overview of environmental and social impacts / risks identified, in compliance with the Environmental and Social Policy and Gender Policy of the Fund?	**Not cleared.** **CR14**: Please clearly outline the plan for procuring Free, Prior and Informed Consent (FPIC) and clarify what concrete steps will be taken to ensure environmental and social safeguards, with particular reference, albeit not limited to, pollution minimization and biodiversity conservation.	**CR14:** Part II question H describes the stakeholder engagement process including interaction with ITP groups. An explanation is provided on what has been agreed with the organization in terms of FPIC during concept note development, full proposal development as well as aspects of implementation (see below). Part II question K, under Physical and Cultural Heritage a description is provided to about FPIC procedures related to the use of traditional knowledge. This is described as follows: 'The ITP organizations proposed that 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.'
Resource Availability	1. Is the requested project / programme funding within the cap of the country?	**Yes.**	

	2. Is the Implementing Entity Management Fee at or below 8.5 per cent of the total project/programme budget before the fee?	**Yes.** **CAR11:** Please round figures to whole numbers (i.e. no decimals).	**CAR11:** Done
	3. Are the Project/Programme Execution Costs at or below 9.5 per cent of the total project/programme budget (including the fee)?	**Not cleared.** **CAR12:** Please round figures to whole numbers – please see CAR 11.	**CAR12:** Done
Eligibility of IE	1. Is the project/programme submitted through an eligible Implementing Entity that has been accredited by the Board?	**Yes.** CCCCC is accredited until 07 April 2027.	
Implementation Arrangements	1. Is there adequate arrangement for project / programme management, in compliance with the Gender Policy of the Fund?	n/a at concept stage	
	2. Are there measures for financial and project/programme risk management?	n/a at the concept stage	
	3. Are there measures in place for the management of for environmental and social risks, in line with the Environmental and Social Policy and Gender Policy of the Fund?	n/a at concept stage	

	4. Is a budget on the Implementing Entity Management Fee use included?	n/a at concept stage	
	5. Is an explanation and a breakdown of the execution costs included?	n/a at concept stage	
	6. Is a detailed budget including budget notes included?	n/a at concept stage	
	7. Are arrangements for monitoring and evaluation clearly defined, including budgeted M&E plans and sex-disaggregated data, targets and indicators, in compliance with the Gender Policy of the Fund?	n/a at concept stage	
	8. Does the M&E Framework include a break-down of how implementing entity IE fees will be utilized in the supervision of the M&E function?	n/a at concept stage	
	9. Does the project/programme's results framework align with the AF's results framework? Does it include at least one core outcome indicator from the Fund's results framework?	n/a at concept stage	
	10. Is a disbursement schedule with time-bound milestones included?	n/a at concept stage	

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.

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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~~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.

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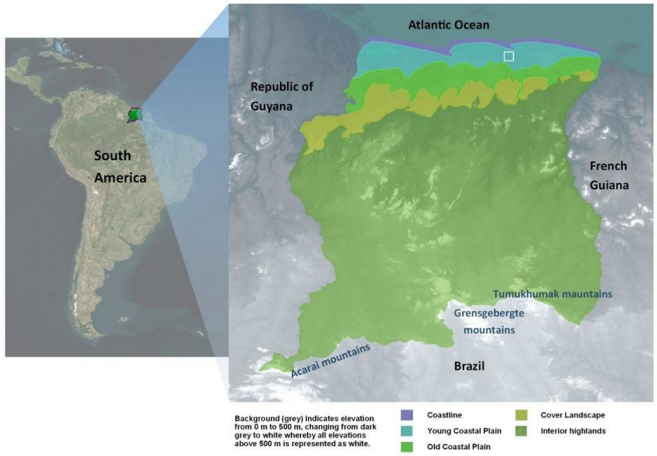

Figure 1. Map of Suriname showing the geographical setting (Source: Suriname NC3)

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

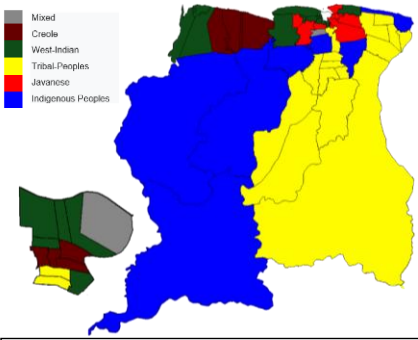

Figure 23. Map showing which ethnic group is the largest per resort
(Source: Suriname Central Wikimedia Commons)

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)

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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)

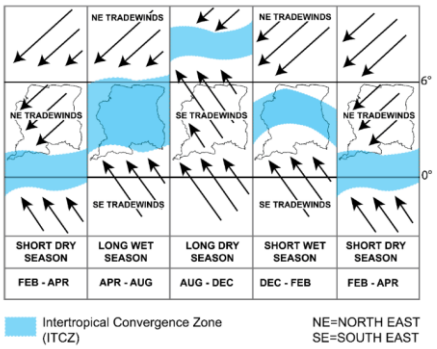

Figure 5. Overview of the 4 seasons in Suriname, influenced by the Intertropical Convergence Zone (Source: Suriname Central Wikimedia Commons)

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.

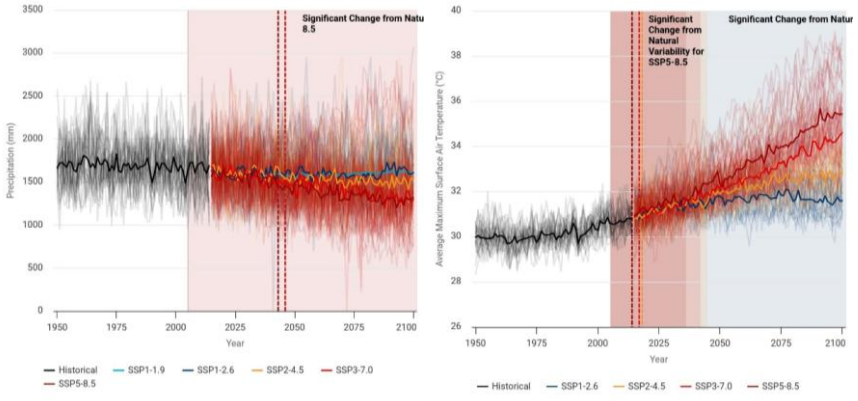

Figure 6. Climate Change projections (left: precipitation; right: temperature) for Suriname (Source: Suriname - Trends & Variability - Projections | Climate Change Knowledge Portal)

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.~~

Despite Suriname's national commitment to gender equality, deeply rooted cultural practices and structural inequities continue to constrain women's participation and resilience in the agricultural sector. The policy brief *Gender Inequality of Climate Change and Disaster Risk in Suriname*, developed under the EnGenDER initiative (*Enabling Gender-Responsive Disaster Recovery, Climate and Environmental Resilience in the Caribbean*)[31] and the the Preliminary Gender Assessment (Appendix 1), highlight that women's vulnerability to natural hazards is largely shaped by traditional roles and responsibilities within the household and community. There exists a clear gender-based division of labour, where women bear the burden of unpaid care work while also managing agricultural plots—often their main source of food security.

Single female-headed households are particularly vulnerable to climate-induced disasters, facing

Commented [CL1]: CR11: While gender-disaggregated data collection is mentioned (p. 10), the cultural/legal barriers faced by women in the agricultural sector of Suriname have not been elaborated upon (AF Gender Policy §3.1). CA: Please do elaborate on the cultural/legal barriers faced by women in Suriname's agriculture sector, though gender-disaggregated data collection is mentioned (p. 10).

~~[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] 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)

the compounded risks of crop and livestock loss, reduced income, and restricted access to health services and supplies. Women and girls also face elevated risks of gender-based violence, sexual exploitation, and trafficking during and after such events. These risks are further exacerbated by cultural norms that limit women's mobility, restrict their participation in community decision-making (as seen in many Indigenous and Tribal Peoples' communities), and in some cases, enforce taboos—such as prohibiting menstruating women from entering agricultural plots. Furthermore, the lack of formal land ownership or recognition of customary land rights restricts women's access to credit and extension services, which are often tied to land title or male household status.

The EnGenDER brief also identifies broader social impacts that compound these vulnerabilities: women have lower livelihood resilience compared to men, while men and boys often experience trauma, increased alcohol consumption, and aggression following disasters. Unemployed young men struggle to establish sustainable livelihoods, and youth in general face disruptions in education—especially girls, who are more likely to drop out to take on household duties. In extreme circumstances, children may be subjected to domestic abuse, trafficking, and early marriage. These findings underscore the urgent need for gender-responsive adaptation strategies that address both cultural norms and institutional gaps to ensure equitable access to resources, decision-making, and recovery efforts in the face of climate change.

1.6 Target Areas and Beneficiaries[32]

While nationwide implementation is ideal, this project ~~will focus on~~prioritizes 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. Each centre will be developed with the participation of local stakeholders - including women, youth, and ITP representatives - to ensure equitable benefit distribution and reflect local cultural contexts. Furthermore, the project will ensure inclusion of female and youth representatives in resource centre management (see further description under project sustainability). Communities served by the centres Brokopondo/Boven-Suriname and Palumeu will 100% consist of ITPs. The centre in Commewijne/Marowijne will serve ITP communities primarily in Marowijne, while the centres in Wanica/Para and Saramacca/Coronie will serve ITP in all four districts. ~~Additionally,~~ The CR-FST project will ensure gender and social inclusion by developing a responsive Gender Action Plan that reflects community-specific dynamics of land tenure, decision-making, and resource access, and by establishing equitable mechanisms for distributing resources through community centres—particularly to women, youth, ITP, and other vulnerable groups. Training curricula in especially Sipaliwini, Brokopondo, and Marowijne will be adapted to language and cultural practices of ITP communities. Training and value chain support will be tailored to accommodate the care responsibilities and socio-economic realities of women and marginalized populations, ensuring fair participation and benefit-sharing across all communities and agro-processing activities. To ensure widespread and long-term dissemination and availability of resources and training material a knowledge-sharing strategy will be developed to facilitate the dissemination of insights nationwide during and after the project's implementation.

The project is expected to train at least 3000 farmers in climate-resilient agroecological practices. Furthermore, the project's crop loss reduction target is to achieve a- 25% decline in flood/drought-induced losses by Year 4. Food production is expected to increase, with a 20% yield improvement on pilot demonstration plots. Household income is expected to rise with +30% among agroecology MSME participants. Additionally, the project aims to achieve a doubling of community-level

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CR4: Kindly clarify how the project prioritizes marginalized groups in terms of priority in implementing these activities (Section 2.4, p. 8), and provide some metrics such as% reduction of waterborne diseases from improved irrigation; (Table 5, page 18).

[32] 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

processed goods reaching formal markets.

~~result in a 25% increase in productivity among smallholder farms because of the adoption of improved practices. Secondly, climate-smart practices and improved drainage are expected to reduce post-harvest losses by an estimated 20–30% and improving food safety standards across supply chains. Thirdly, the project is expected to result in a 20% increase in food availability per household by year three in isolated areas and villages that are (almost) completely dependent on local agriculture for their food security — this would include Palumeu, but also other ITP communities in other target areas~~In the full proposal, these projections will be refined based on baseline assessments, the detailed Monitoring & evaluation (M&E) framework, and agricultural census data (the latter will be published by the FAO in August 2025). The M&E framework to be included in the full proposal, will furthermore include metrics to monitor reduction in gender disparities in land access and financial services. The project will clarify how these outcomes exceed baseline development activities by showing integration of climate information services with traditional knowledge for adaptive decision-making, and diversified agroecosystems that reduce exposure and sensitivity to shocks.

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

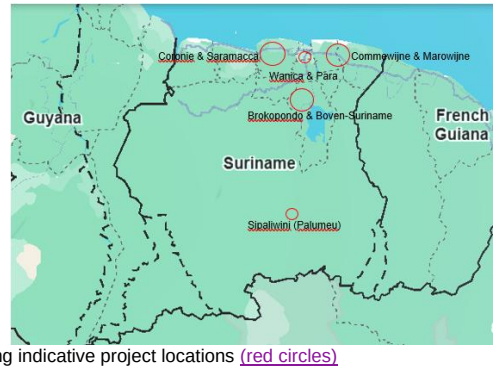

Figure 7. Map showing indicative project locations (red circles)

2. Project Objectives

This project is designed to be an agroecology[33] project to enhance ecosystem-based adaptation (EbA) measures in the agricultural sector in Suriname. Agroecology projects should include[34] 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[35] 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[36] using climate resilient crops and practices and integration of climate resilience into agricultural extension services (see further details under

[33] 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).
[34] FAO (2018) FAO's Work on Agroecology: A Pathway To Achieving the SDG's. Rome: Food and Agriculture Organization.
[35] 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
[36] Suriname Final NAP_apr 2020.pdf (unfccc.int)

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[37]:

- 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 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 Agroecology training programs co-developed with communities~~Agriculture resource centres established and training provided to farmers~~	1. Smallholders adopt diversified agroecological practices adapted to local ecologies and cultural knowledge~~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~~Climate services provided to farmers~~		470,000~~.00~~
Community food processing	2.1 Food processing resource centres established and community members trained	2. Local processing capacity enhances community-level food security and value retention~~Communities process local agriculture products to secure food~~	1,~~860~~290,000~~.00~~
	2.2 Traditional and climate-resilient food products developed		570,000

Commented [CL3]: CAR1: Please amend the Project Components and Financing Table on page 14 to remove all decimal point and to present rounded figures.

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[37] 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.

		availability	
Strong agriculture supply-chains	3.1 Business incubation and agroecological market linkages supported~~Local value chain strengthened, and business skills improved~~	3. Inclusive, climate-resilient value chains strengthen rural livelihoods~~Strong network of community-level agriculture value chains enables efficient trading of goods and services~~	2,960,000~~.00~~
	3.2 Financial literacy and access improved for women/youth-led MSMEs~~Capacity of FSPs to provide better financial services to MSMEs in the agriculture value chain improved~~		646,000.~~00~~
Knowledge management	4.1 Agroecology learning platform launched and content localized~~Knowledge sharing platform available online and material available on traditional media~~	4. Climate knowledge sharing via horizontal learning systems~~Improved knowledge transfer enables climate resilient food security~~	~~1,120,000~~660,000.~~00~~
	4.2 Traditional media and public events leveraged to promote climate awareness, facilitate knowledge exchange, and strengthen agricultural value chains		460,000
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.

Suriname's agricultural sector is experiencing intensifying climate risks due to increasingly erratic

Commented [CL4]: The project identifies economic benefits (p.23), social benefits (p.24), and environmental advantages, including gender considerations and attempts to mitigate negative impacts. However, this project lacks quantified impact projections.

CAR2: Kindly provide figures for expected household income improvements, food production increases, and market access benefits and please setup monitoring system for gender-disaggregated benefits P 24.

CAR3: Please strengthen the adaptation rationale of the project. The project proposal should be explicit in what makes this project different from previous agricultural development programs in Suriname, it should contain a comparison that highlights elements specific to adaptation for easy understanding. p14:

The project defines clear outputs and measurable outcomes - six outputs and fifteen activities - all contributing to the adaptation goals (page 18). However,

CR1: Please provide quantitative projections on some key adaptation benefits such as: number of farmers trained in climate-resilient agriculture, reduction of crop loss due to climate-induced risks, and the expected increase in drought-resistant cropping.

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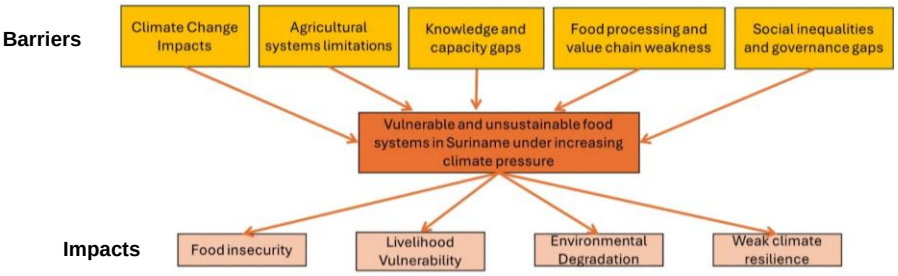
rainfall, prolonged dry seasons, flooding, and rising temperatures—threats that disproportionately impact vulnerable populations, particularly Indigenous and Tribal Peoples (ITPs), women, and smallholder farmers. The country's food system exhibits dual vulnerabilities: (i) ecological degradation and exposure in low-lying, intensively cultivated coastal zones, and (ii) socio-economic exclusion and subsistence fragility in the interior. Agriculture is not only crucial for food security but is also a significant employer, particularly in rural communities, yet current practices are poorly equipped to withstand climate-related shocks.

Climate Change Impacts include increased droughts, floods, heatwaves, and sea-level rise; crops and livestock losses due to extreme weather; and changing rainfall patterns affecting planting cycles. These climate pressures are exacerbated by the dominance of monoculture farming, loss of traditional crop diversity, limited climate information services, and insufficient access to credit and technical support for smallholder farmers. Women and youth—often key actors in subsistence farming and informal food processing—face additional constraints due to structural inequalities in access to land, finance, and decision-making spaces. This results in food insecurity, livelihood vulnerability, environmental degradation and weak climate resilience (as visualized below).



The proposed **Climate Resilient Food Systems Transformation (CR-FST)** project is an adaptation response to these intersecting climate risks, social vulnerabilities, and ecological pressures. It is built on a strong climate rationale: without structural transformation of agricultural practices and value chains, climate change will further entrench food insecurity and deepen rural poverty. The project embraces agroecology and ecosystem-based adaptation (EbA) approaches to strengthen resilience by integrating traditional knowledge, regenerative agriculture, climate services, and sustainable food processing into community-led systems.

Through the establishment of community-level agriculture and processing resource centres, the project will address the erosion of climate-resilient traditional practices, reduce input dependency, and empower marginalized communities to restore and diversify their food production systems. These centres serve as hubs for decentralized training, knowledge exchange, and service delivery tailored to the cultural and linguistic contexts of ITP communities, youth, and women. Climate information systems and integrated training programs will enable proactive adaptation, improve yield stability, and mitigate post-harvest losses.

The project directly supports the objectives of Suriname's National Adaptation Plan (NAP), Final Climate Change Policy and Action Plan (NCCPSAP), and Third National Communication (NC3) by promoting climate-smart agriculture, resilient value chains, and participatory adaptation planning. It also aligns with the Gender Vision Policy and Suriname's SDG commitments by ensuring equitable participation, income diversification, and inclusion of customary land practices and agro-biodiversity conservation.

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By strengthening agroecological knowledge systems, diversifying local economies, and improving access to weather forecasts and financing, the project enhances both short-term coping capacities and long-term adaptive strategies. This project proposes an agroecological approach to address the challenges identified. Agroecology has a comprehensive scope (includes principles from both regenerative agriculture and EbA), it supports global policy alignment (is increasingly used by UN agencies (FAO, IFAD) as a systemic framework for food systems transformation), has a strong social inclusion component (incorporates gender, youth, and local/traditional knowledge) and its scale of application is flexibility (from farm-level to landscape and value-chain levels).

Ultimately, this transformation aims to shift Suriname's food systems from vulnerable and fragmented to climate-resilient, inclusive, and self-sustaining, ensuring improved food security, livelihoods, and ecosystem integrity in the face of accelerating climate change. ~~The~~ The objective therefore 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[38]:** 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[39]. 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[40].~~
- ~~**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~~

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~~[38] Regenerative Agriculture - Chesapeake Bay Foundation (cbf.org)~~
~~[39] See further https://www.cambridge.org/core/journals/experimental-agriculture/article/options-by-context-approach-a-paradigm-shift-in-agronomy/EE2BBFAA28E34D4C64C35B2CE29CA7A5~~
~~[40] GiZ. 2023. Agroecology: Making Ecosystem-based Adaptation Work in Agricultural Landscapes.~~

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 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[41].

- **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[42] 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

[41] Strategies to overcome barriers related to agriculture and food security as described in the Agriculture and Food Security Sectoral Guide by the GCF (2021)

[42] An example of a PICSA training in the Caribbean region ClimSA-Press-Release_PICSA-Training-Rolled-Out-in-Jamaica.pdf (cimh.edu.bb)

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 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. **Smallholders adopt diversified agroecological practices adapted to local ecologies and cultural knowledge**~~**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

Commented [CL5]: CR2: In relation to the Theory of Change:
1. Please clarify what uncertainties in climate projections are accounted for in the adaptation planning (e.g., extreme rainfall variability).
2. Kindly ensure that ToC specifies the assumptions regarding the farmer behaviour change. p. 18
3. The Theory of Change makes a logical link between the inputs, activities, outputs, and outcomes. However, major assumptions - for instance, how strengthening value chains translates into increased adaptive capacity - need to be further justified. Please provide clearer explanations of the assumptions underlying Output connections 3.1 and 3.2 with contributing factors to Outcomes 3 and 4. Ensure that these

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 ***Agroecology training programs co-developed with communities~~Agriculture resource centers established and training provided to farmers~~.***

- **Activity 1.1.1** Establish community-level agriculture knowledge centres to promote climate resilient agriculture: 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[43]) 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**.

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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

[43] 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."

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 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[44].

Outcome 2. Local processing capacity enhances community-level food security and value retention~~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 Community-led processing hubs built and equipped~~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.

- ***Output 2.2 Traditional and climate-resilient food products developed.***
- **Activity 2.~~1.2~~2.1** 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

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

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 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. **Inclusive, climate-resilient value chains strengthen rural livelihoods** ~~**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 ***Business incubation and agroecological market linkages supported*** ~~***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** Financial literacy and access improved for women/youth-led MSMEs~~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[45], the National Development Fund for Agribusiness (NOFA)[46], and the credit and guarantee funds of the National Development Bank (NOB)[47]. 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. Climate knowledge sharing via horizontal learning systems~~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** Agroecology learning platform launched and content localized~~Knowledge sharing platform available online and material available on traditional media~~.*

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- **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.

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

- **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.

Output 4.2 Traditional media and public events leveraged to promote climate awareness, facilitate knowledge exchange, and strengthen agricultural value chains.

- **Activity 4.~~1.3~~2.1** 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.
- **Activity 4.~~1.4~~2.2** 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.

This proposed approach 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.
- Smallholders are willing to shift practices if training and market access are reliable.
- Value chains become adaptive when embedded in local institutions and circular economies.
- Climate projections (e.g. extreme rainfall) remain within the 10–30% uncertainty band.
- ~~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 t~~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.

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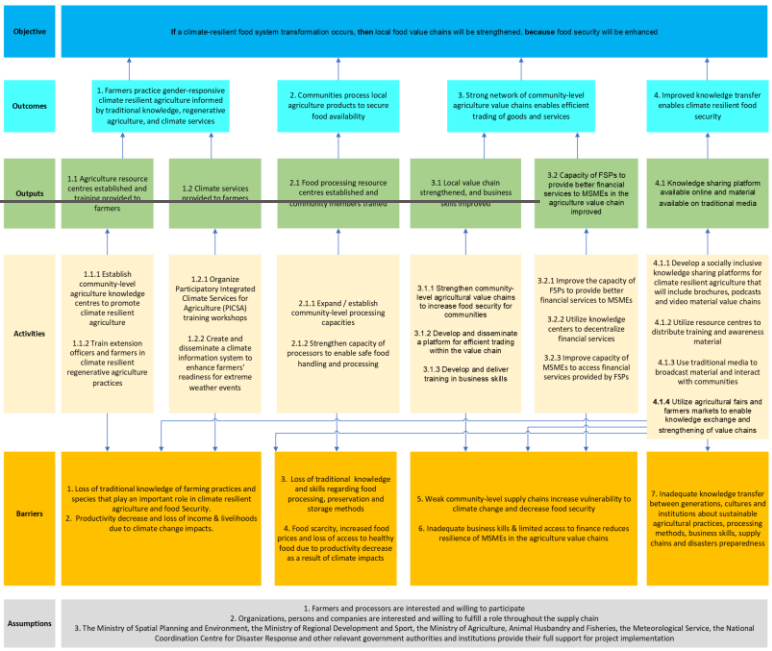

Figure 7. Theory of Change Diagram

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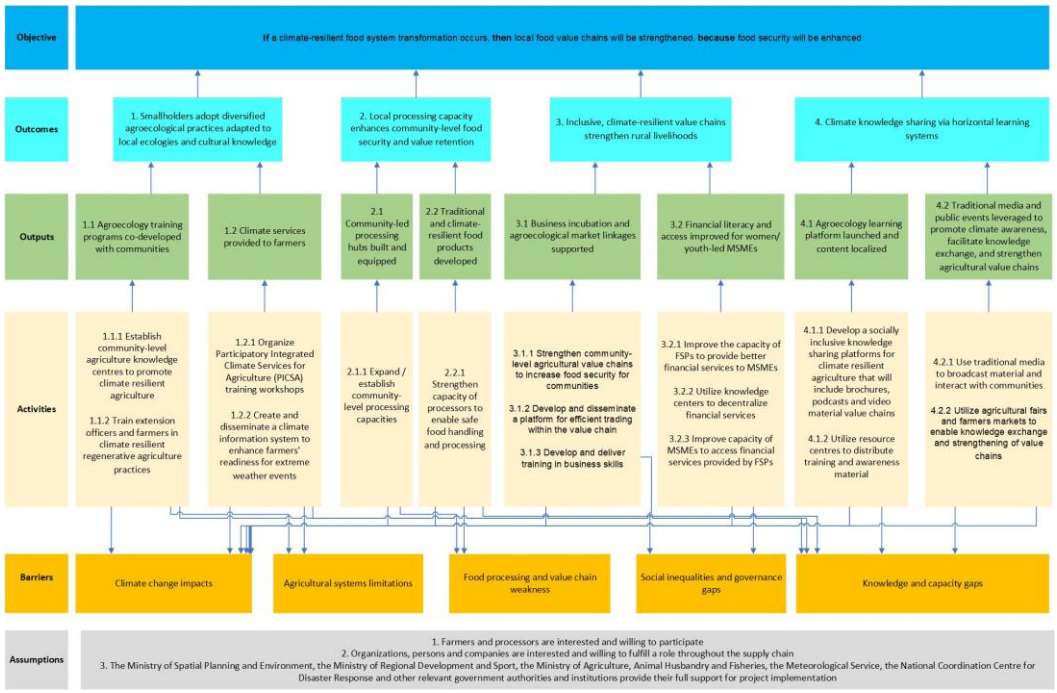

B. Describe how the project/programme provides economic, social and environmental benefits, with particular reference to the most vulnerable communities, and vulnerable groups within communities, including gender considerations. Describe how the project/programme will avoid or mitigate negative impacts, 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 table below compares the cost-effectiveness of the project's proposed interventions against the business-as-usual (BAU) approach across five key outcome areas. The proposed measures prioritize shared infrastructure, climate-smart and regenerative agriculture, locally relevant training, timely climate information, and stronger value chains. These interventions aim to reduce costs, improve access and equity, and build long-term resilience at the community level.

In contrast, the BAU scenario is characterized by fragmented efforts, high individual costs, and limited sustainability, often reinforcing systemic inefficiencies. The comparison demonstrates that the proposed interventions offer significantly greater value for money—yielding both short-term cost savings and long-term socioeconomic and environmental benefits. This positions the project as a strategic and cost-effective investment in resilient, inclusive rural development.~~The proposed project to transform Suriname's food systems into climate-resilient models demonstrates strong cost-effectiveness relative to alternative options, through its blended implementation model, use of low-input agroecological practices, and strategic leveraging of in-kind contributions and existing infrastructure. The project's approach not only reduces upfront and operational costs but ensures sustainability, scalability, and alignment with regional cost benchmarks.~~

Outcomes / Proposed Interventions	Business-as-Usual (BAU)
1. Establishment of community-level agriculture and processing resource centres Provides shared infrastructure, tools, and services for training, processing, storage, and value addition. **Short-term:** Reduced costs through shared resources and coordinated service delivery. **Long-term:** Economies of scale, improved market access, increased community resilience and	**Individual and fragmented efforts** Limited access to facilities; higher duplication of resources; training and services often out of reach for rural communities. **Short-term:** Higher costs for individual farmers to access similar services.

Commented [CL6]: CAR4: Kindly update the cost effectiveness section to elaborate the project's cost-effectiveness in comparison to alternative options to the proposed measures.

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ownership.	**Long-term:** Persistent inefficiencies, lack of sustainability, and missed opportunities for scaling.
2. Use of climate-resilient and traditional crops integrated with regenerative agriculture Reduces dependence on costly inputs, enhances soil health, and preserves agrobiodiversity. **Short-term:** Lower input costs; increased productivity in diverse agroecological conditions. **Long-term:** Enhanced resilience, reduced crop failure risks, improved soil fertility and ecosystem services.	**Reliance on monocropping and imported seeds and chemicals** Leads to soil degradation, input cost dependency, and loss of traditional knowledge. **Short-term:** High input costs; vulnerability to market price fluctuations. **Long-term:** Increased risk of climate-related crop loss and environmental degradation.
3. Climate information system for seasonal forecasts and early warnings Helps farmers make informed decisions to prevent crop losses and optimize planting/harvest timing. **Short-term:** Reduced yield losses through timely decision-making. **Long-term:** Enhanced adaptive capacity, cost savings from avoided damages.	**No access to timely or localized climate information** Farming decisions are reactive, not adaptive. **Short-term:** Higher losses from unpredictable weather. **Long-term:** Repeated shocks weaken household incomes and productivity.
4. Hands-on, inclusive training that integrates traditional knowledge with modern practices Delivered via local hubs in culturally and linguistically appropriate ways. **Short-term:** Greater uptake due to practical relevance and accessibility. **Long-term:** Sustainable behaviour change and knowledge retention; builds local trainers.	**Occasional, centralized, top-down training** Often not suited to local conditions; low retention and adoption rates. **Short-term:** Low participation, minimal impact. **Long-term:** Continuous knowledge gaps and low resilience.
5. Strengthening local value chains and market access through public-private partnerships Supports aggregation, processing, marketing, and access to finance. **Short-term:** Increased income from value addition and better prices. **Long-term:** More resilient rural economies and job creation.	**Fragmented production with limited market access** Farmers sell at low prices or lose produce due to lack of storage/processing. **Short-term:** Low farm gate prices and post-harvest losses. **Long-term:** Continued poverty and disincentives to invest in farming.

~~A key measure of cost-efficiency is the **unit cost per household reached**, estimated at approximately **USD 720**, which is **significantly below the regional benchmark for climate-smart agriculture (CSA) interventions** ranging from **USD 850 to 1,100** per household. This competitive cost positioning reflects the efficiency gains achieved through community engagement, resource optimization, and the use of proven low-cost practices. The project employs a **blended financing model**, where **in-kind contributions of land, labor, and community infrastructure** from beneficiaries and local partners help reduce the financial burden on the project. This approach strengthens local ownership, lowers implementation costs, and~~

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enhances long-term viability by embedding the project within community-led systems. Further cost savings are achieved through the **promotion of agroecology and regenerative agriculture**, which significantly **reduces dependence on costly inputs** such as synthetic fertilizers and pesticides. By prioritizing the use of climate-resilient and heirloom crop varieties, as well as traditional soil and water conservation techniques, the project minimizes input costs for farmers while building long-term ecological and economic resilience. The establishment of **Agriculture Knowledge Centres** in partnership with cooperatives, NGOs, and public institutions enables efficient delivery of services without the need for major new infrastructure. These decentralized hubs reduce transportation and logistical costs, improve access to training and financial services, and serve as local platforms for technical support and market engagement.
Value addition strategies, such as the development of **post-harvest processing facilities** and a **digital market platform**, contribute to cost-effectiveness by increasing income per unit of production, minimizing losses from spoilage, and improving market access. These activities generate higher returns on investment than traditional production-focused interventions, as they enhance profitability throughout the value chain. The project also emphasizes **knowledge transfer and capacity building**, which supports long-term cost savings by reducing the need for repeated external interventions. Training in regenerative agriculture, business development, and climate risk management is delivered through cost-effective, multi-platform channels—such as community radio, podcasts, brochures, and local fairs—ensuring broad reach with minimal recurring expenses. By building resilience at the household and community level, including through the provision of **tailored climate services and early warning systems**, the project helps prevent costly losses and recovery needs associated with extreme weather events. This proactive adaptation approach is significantly more cost-effective than reactive emergency responses or reconstruction efforts.

In summary, the project achieves high cost-effectiveness by delivering measurable impact at below-average regional costs, using low-cost, high-impact practices, leveraging in-kind and local contributions, and investing in sustainable, community-driven solutions. These features make the proposed intervention a financially prudent and scalable model for climate-resilient food systems transformation in Suriname and the wider Caribbean region.

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

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~~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[48]: 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-economic benefits & low environmental impact practices.

National Adaptation Plan (NAP) 2019-2029: Sector Adaptation Action Plans[49]

- **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,

[48] Although outdated, the NCCPSAP is still applicable and includes relevant strategies and actions sur171350.pdf (fao.org)
[49] Suriname Final NAP_apr 2020.pdf (unfccc.int)

Commented [CL7]: CR5: Please confirm whether the project aligns with the NAP's Priority Action 3.2 ("Sustainable Agriculture in Coastal Regions") and revise text accordingly.

CR6:
1. The proposal's focus on drought-resistant crops does not explicitly connect to Suriname's National Agricultural Development Plan's target to "increase climate-smart practices by 30% by 2025, subj. Section 3.4 to cross-reference the Agricultural Plan's Key Result Area 4 ("Climate Resilience).

2. Please include an assessment of how the project is aligned with Suriname's poverty reduction strategies and ensure interventions are equitable for benefiting the vulnerable constituencies. Pages 26-28.

Commented [CL8R7]: The proposal does not explicitly indicate the strength of the linkages between project activities and the contribution to priority sectors of agriculture, food security, and climate resilience.

CAR10: please add more detail on how project activities support the achievement of Suriname's adaptation targets, particularly in relation to agriculture, water, and forestry, by specifying the expected impact pathways'. p.26-28.

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. By promoting agroforestry practices, pressure on intact forest areas will be reduced.
- **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 s~~trengthening~~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, by training at least 3000 farmers in climate-resilient agroecological practices. This ~~which~~ will include training related to improved drainage systems and crop diversification (fruit and vegetables) as identified under adaptation measure C. provide training and guidance in climate smart crop production. This will contribute to the target to "increase climate-smart practices by 30% by 2025". 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[50]: 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[51] 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 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

[50] SURINAME NC3_2023_FINAL.pdf (unfccc.int)
[51] 3-juli-engelse-printversie-gender-vision-policy-document-2021-2035-1.pdf (gov.sr)

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.

The Suriname Poverty and Equity Assessment 2024[52], Policy Recommendations: below the alignment between the CR-FST project and the Suriname's national poverty reduction strategies is highlighted, with specific mention which interventions will ensure equitable benefits for vulnerable constituencies.

- **Vocational training:** To ensure optimal participation of trainees, the project will reduce entry barriers to the various trainings. This may include removing financial constraints for participation by not requiring fees for the course nor materials, providing transportation to communities in remote locations to attend trainings, workshops, etc., to provide childcare to ensure participation of especially women, and to plan trainings and workshops on days and at times that are most suitable for beneficiaries.
- **Special focus on the interior of the country and historically marginalized groups:** ITP have markedly lower educational attainment, are less likely to participate in the ~~labor~~labour force, and face higher rates of unemployment compared to non-ITP groups. By also targeting ITP communities with this project and creating an enabling environment for their optimal participation, this project will attempt to improve alternative livelihood opportunities. This enabling environment will depend on specific community needs and may include reduction of entry barriers as mentioned above, but will also take language and cultural barriers into account. Training material and provision will therefore be provided in local languages where necessary, e.g. in Sranan-Tongo, the Suriname Lingua Franca, or indigenous languages in Palumeu.
- **Making a deliberate effort to address poor labour market outcomes of women:** By creating access to vocational training, creating access to finance and strengthening of the agricultural supply chains at community level, with special considerations for women's access and participation, the project will attempt to address constraints on women starting and running a business. The project will target equal distribution of male and female participants / beneficiaries to capacity building programs, with the ambition to achieve at least 50% youth participation and significant participation of ITP in specific areas (i.e. 100% in Palumeu; participation levels of ITP in other districts will be determined based on studies that will inform the full proposal).

Sustainable Development Goals:

- **2. Zero hunger:** The project will reduce import reliance, and ~~create~~ enhance food security, dietary diversity, 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

[52] Suriname Poverty and Equity Assessment

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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[53], 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[54]:

- Effective implementation of specific adaptation measures to reduce vulnerabilities to climate 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[55]:

- **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.

[53] CCCCC SEAH Policy Published.pdf (sharepoint.com)
[54] The CARICOM Secretariat Strategic Plan 2022-2030 by Caribbean Community (CARICOM) - Issuu
[55] 22. Strategic & Implementation Plan_(October 2021-2025).pdf (sharepoint.com)

- **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.

The project will abide by requirements as set out by CCCCC, AF and Suriname. To reduce multiple and overlapping requirements for activities, a common approach will be developed that considers the requirements of CCCCC, AF and Suriname national standards. This will include an Environmental and Social Management Plan (ESMP) as well as Monitoring, Reporting, and Evaluation, and Public Disclosure and Consultation that are harmonized. The project will adhere to the highest applicable standards; if the requirements of CCCCC and/or the Adaptation Fund (AF) are more stringent than national regulations, the stricter standards will be applied.

CCCCC Requirements: The Concept Note is screened for compliance with CCCCC Environmental and Social Management System Screening Checklist [56]. 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 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[57]. 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:

- Environmental and Social Assessment: Article 22 of Suriname's Environmental Framework

[56] CCCCC Environmental and Social Management System approved July 15, 2022
[57] Environmental-Social-Policy-approved-Nov2013.pdf (adaptation-fund.org)

Commented [CL9]: CAR5: kindly provide a more thorough assessment of relevant national technical standards and, if applicable, state what environmental permits or regulatory approvals the project might require. Specifically state how the project will meet Suriname's Environmental and Social Management System (ESMS). Section E- compliance with National Technical Standards.

While the proposal acknowledges the AF's Environmental and Social Policy, there is no mention of how it is consistent with Suriname's national technical regulations concerning land use, water quality, and pollution control.

Commented [CL10R9]: CR7: While climate-resilient storage facilities are proposed, the Suriname National Building Code of 2018 is not explicitly cited or integrated in the design specifications. Please address.2. The proposal states the use of 'durable materials,' but makes no reference to Suriname's National Building Code (from Section 4.2 on flood-resistant foundations); please clarify what sections of the code will stoke such construction and how its provisions ensure legal compliance as per standards advised for AF.

1. Please specify how community water systems will conform to the Water Resource Management Act 2020 (such as water quality-testing protocols).

2. There is nothing in the proposal regarding compliance with Suriname's Coastal Zone Land Tenure Regulations of 2021, and this might delay or conflict.

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Law[58] requires all projects with potential impacts to the environment to be screened[59] by the National Environment Authority (NMA). The screening process determines whether the project is categorized as Category A (an Environmental Impact Assessment (EIA[60]) 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[61] as well as the generic guidelines[62]. Based on this initial screening it is expected that the project will fall under category B (limited EIA required)~~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 exact scope of the EIA to be conducted~~path forward~~ to comply with national legislation. From the environmental perspective, it is expected that the topics of use of soil and water use, use of agricultural or other chemicals, and waste will be addressed. The EIA guidelines include procedures for public disclosure, consultation and stakeholder engagement. In communities with ITP, FPIC protocols will be utilized for engagement – although national procedures are not yet endorsed, procedures will be utilized as provided by representative organizations of ITP leaders. Additionally, there are specific guidelines for Social Impact Assessments[63] that need to be followed as part of any EIA for projects that are within an area directly associated with a community/settlement; the actual scope of the assessment is determined during the screening and scoping phases. The EIA also includes assessment of alternative methods and locations (based on land characteristics and tenure), as well as the do-nothing scenario. Based on the findings of the EIA, relevant plans are developed which may include for example an Environmental and Social Management Plan (ESMP), Gender Action Plan (GAP), ITP Plan, Waste Management Plan (WMP), Emergency Management Plan (EMP), etc. These plans will be aligned with legislation, donor and other requirements and best practice. This may include for example building codes (see below) and national water quality testing protocols. 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.

- Building Law and Code: Typically, the EIA procedure includes and assessment of any legislation relevant for the project, which would include the Suriname national building law[64] and code[65]. These prescribe the procedures for acquiring a building license which needs to comply with the building regulations[66]. According to these building regulations, designs of any construction should be done by a recognized architect or engineer and should include details such as a floor plan, foundation and sewerage plan, cross-sections, roof plan, frame state, etc. In terms of energy efficiency, the CARICOM Regional Energy Efficiency Building Code[67] will be assessed and implemented as needed. Finally, recommendations provided by Dasai

[58] Environment Framework Law SB_2020___97.pdf (dna.sr)
[59] Guidance Note NIMOS EIA Process 2023.pdf - Google Drive
[60] The EIA includes a social assessment. There are specific national guidelines for social impact assessments.
[61] MEA Richtlijnen Deel VII-Landbouwprojecten Finaal Mei 2013.pdf - Google Drive
[62] Environmental Assessment Procedures Volume I Generic December 2023.pdf - Google Drive
[63] EA Guidelines Vol IV Social Impact.pdf - Google Drive
[64] Building Law WET van 6 april 1956 strekkende tot vast¬stelling van bouwvoor¬schriften (G
[65] Building code https://gov.sr/wp-content/uploads/2024/01/bouwbesluit_no1.pdf
[66] Building regulations Handleiding-normenboek-Bouwwoningtoezicht-2022.pdf
[67] 2018 CARICOM Regional Energy Efficiency Building Code

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and Nurmohamed[68] regarding roof construction will be taken into account to ensure that any building roofs are designed to withstand high winds.

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, 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/ . A project-level GRM will be formulated, based on studies performed (feasibility, EIA) and continued interactions during full proposal development.

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~~

[68] Redesigning roof construction as a result of climate change https://www.researchgate.net/publication/273122872_Aanpassing_van_de_dakconstructie_van_gebouwen_in_Suriname_nu_en_bij_klimaatverandering

Commented [CL11]: CR8:
1. Please indicate any linkages to the ongoing UNDP project, which has very similar objectives (i.e., training farmers on climate-resilient practices).
2. How the lessons of the Suriname Rice Resilience Project (2020) have been incorporated into this project design.
3. Any other ongoing or past projects from which the project can build on/complement.

CR9: Kindly present a comparative table that illustrates how CR-FST's reconstruction of post-harvest infrastructure complements UNDP's crop-oriented work, rather than duplicates it. Section 2.3, p. 9

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.

Comparative table to show complementarity of the CR-FST project against the large projects mentioned above.

Project	**Key focus**	**CR-FST complementarity**
SAMAP	Market access & agro-processing	CR-FST deepens community ownership and climate lens
ASTA	Capacity building of the pineapple sector, establishing partnerships and creating access to finance	CR-FST includes crop diversification, climate resilience, deeper community ownership and a value chain approach
UNDP CSA Project	Crop production, farmer training	CR-FST focuses on processing and value chains
Leaving No One Behind (Rice Resilience) Project	Seed resilience and water management	CR-FST expands to post-harvest and MSMEs
Projects by Tropenbos Suriname	Promoting sustainable livelihoods, primarily through agroforestry and value addition in forest-dependent regions, particularly in Brokopondo and the Upper Suriname River area.	CR-FST deepens community ownership through incorporation of traditional and indigenous knowledge into climate-resilient agroecology training, value chain development, creating access to finance in a multiple geographic areas
Initiatives by Mulokot Foundation	Introduction of alternative agricultural practices to combat climate change impacts	CR-FST incorporates traditional and indigenous knowledge into climate-resilient agroecology training, using traditional crops and strengthening their capacity for processing to ensure long-term (climate resilient) food availability
LVV & MDS Weather	Monthly and seasonal forecast	CR-FST to include advisory

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~~forecasts for farmers~~	~~forecasts for crop development~~	~~messages about preparations and response, crop selection and management, etc. built on Participatory Integrated Climate Services for Agriculture (PICSA) training 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. Furthermore, the workshops should also serve to assess vulnerabilities and capacities (VCA) of the communities to deal with the impacts of climate change~~
~~UNASAT~~		
~~CELOS~~		
~~No Bean Left Behind~~		

Project / Organization	**Key Focus / Contribution**	**CR-FST Complementarity**
FAO – SAMAP	Modernizing production for export; matching grants; value chain platforms for cassava, fruits, vegetables, NTFPs.	CR-FST focuses on climate-resilient, community-scale food systems and value chains (not primarily export). Leverages SAMAP's value chain platforms for inclusive, agroecological market linkages.
FAO – ASTA	Capacity building in pineapple sector, partnerships, access to finance.	CR-FST builds on ASTA by expanding access to finance for MSMEs (especially women/youth) and replicating inclusive models across multiple crops.
FAO – Agricultural Census	Sector-wide data collection to inform policy and strategy.	CR-FST can integrate relevant findings from the census to fine-tune targeting, training content, and infrastructure needs.
FAO/UN Women/UNFPA – ITP Resilience	Livelihood improvement for Indigenous and Tribal Peoples: highland rice, financial literacy, gender, governance.	CR-FST can scale up context-appropriate training, integrate gender-responsive design, and expand financial services to ITPs via knowledge hubs.
FAO - Sustainable and climate-resilient management of the rice sector in Suriname	The project is initiative aimed at enhancing the sustainability and climate resilience of the country's rice sector. It targets rice producers in Nickerie, emphasizing sustainable practices such as water management, improved varieties of seed and other climate smart	CR-FST has a different target group (smallholder farmers), geographical focus (other districts than Nickerie), and overall approach (agroecology versus climate smart practices in industrial rice agriculture)

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	cultivation practices.	
UNDP GCCA+ Contributing towards the provision of new climate information and institutional governance to help support sustainable agriculture productivity and mangrove protection	This project supported inclusive and sustainable solutions to address the main effects of climate change, particularly in the coastal districts of Nickerie and Coronie	CR-FST has a much stronger agriculture focus and will build on more foundational work done withing GCCA+. This would include developing climate services which will benefit from capacity building of MDS and WLA within GCCA+
Tropenbos Suriname – Various	Agroforestry support in Brokopondo and Upper Suriname; processing units; greenhouses; farmer cooperatives.	CR-FST builds on Tropenbos' foundational work, with broader scope: training, horizontal learning, and gender inclusion, plus integration of climate services.
Mulokot Foundation	Low-labor traditional crop systems (e.g., raised beds near homes) in Wayana and Trio communities.	CR-FST complements by co-developing agroecological methods that fit into traditional practices, supporting Indigenous-led innovations.
LVV & MDS – Forecast Systems	Development of monthly/seasonal forecasts for agriculture (temperature, precipitation).	CR-FST integrates these climate forecasts into training, PICSA workshops, and real-time decision support for smallholders.
UNASAT	Hands-on training for fruit/veg farmers, test fields, self-sufficiency pilots.	CR-FST can partner with UNASAT to scale training through localized platforms and expand test plots in underserved regions like Saramacca.
CELOS	Agroforestry training in Brokopondo and Upper Suriname.	CR-FST adds continuity and scaling by incorporating CELOS trainers and test fields into broader learning and extension systems.
Tan Bun Skrati (TBS) – Cacao Circular Economy	Sustainable cacao production via agroforestry, traceability, value-addition, branding.	CR-FST is broader (multi-crop), but can adopt lessons on value chain strengthening, traceability, and circular economy for cacao and beyond.

~~SAMAPMarket access & agro-processingCR-FST deepens community ownership and climate lens~~

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~~

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Commented [CL12]: However additional information is required.

The knowledge-sharing platforms as well as training materials are cited, but the document does give few specifics on how lessons learned will be documented and disseminated beyond the life of the project.

CAR6: Please outline a knowledge management strategy by indicating the mechanism by which learning on adaptation will be captured and stored and how this will be shared across sectors, regions, and future adaptation equity initiatives.

~~between projects. Lessons learnt throughout projects are logged within the CCCCC to improve the project development and implementation in CARICOM Member States.~~

Knowledge management is a core component of the project and is fully addressed under Outcome 4. The strategy goes beyond dissemination during implementation, focusing on mechanisms to ensure ~~the~~ long-term capture, validation, and sharing of lessons learned and adaptation knowledge. A **dedicated knowledge-sharing platform** will serve as a central repository for knowledge products, tools, and lessons learned. This platform will remain accessible beyond the life of the project, ensuring continuity of access and institutional memory. To complement this, a **database of validated practices** will be created through participatory monitoring and evaluation. This will involve local stakeholders and technical experts in assessing the relevance and effectiveness of agricultural, processing, business, and climate resilience practices, ensuring they are grounded in practical experience and scientific rigor. This can be developed in collaboration with local universities and colleges and facilitated through the knowledge centres. **Knowledge centres** will play a key role in dissemination, using brochures, podcasts, and video materials to reach diverse audiences. Outputs will be shared via multiple channels, including radio, television, print, and social media, to ensure accessibility across urban, rural, and Indigenous and Traditional Peoples (ITP) communities. Specific knowledge products will include:

- Podcasts highlighting local innovations and success stories
- Radio segments in local languages to reach rural populations
- Policy briefs to inform decision-makers
- Practical manuals and training guides for farmers and small businesses

The project will also establish **learning partnerships** with ITP organizations and regional universities to support collaborative research, facilitate South-South knowledge exchange, and embed adaptive learning in academic and community institutions. Regionally, the project will be supported by the **Caribbean Community Climate Change Centre (CCCCC)**, which acts as a hub for climate data and adaptation learning in CARICOM Member States. The CCCCC will assist in the integration of lessons learned from this project into broader regional knowledge systems and future project design. Through these integrated mechanisms, the project ensures that knowledge is not only shared during its implementation but also stored, validated, and made available to inform future adaptation initiatives and promote equity in climate resilience efforts.

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. Recommendations and concerns were instrumental in refining the project design, specifically in providing the project context and formulating the theory of change, i.e. outcomes, outputs and activities based on needs expressed by stakeholders. Particular considerations included for example differences in culture, language, crops grown and value chain per region, making an Options by Context approach essential in the project design and implementation. ~~i~~Indigenous and T~~t~~ribal P~~p~~eoples 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. The ITP groups consulted with include the Association of Indigenous Village Heads in Suriname (VIDS), Mulokot

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Commented [CL13]: CR10: On stakeholder engagement, please clarify how the stakeholder feedback changed the design of the project and, particularly, how opportunities for collaboration with ongoing efforts such as SAMAP and ASTA were taken into account, Appendices 2, 3, and 4 (Pages 44-50).

A multi-layered stakeholder engagement process is described, including government representatives, NGOs, and organizations of Indigenous Peoples. However, the methodology for seeking Free, Prior, and Informed Consent is not clearly articulated.

CAR7: Please articulate how the FPIC process has operated, including how consent was secured, the role of Indigenous organizations, and how traditional knowledge would be protected. Also, clarify how stakeholder feedback, particularly that from vulnerable groups, has informed project design and activities.

Commented [CL14R13]: CAR8: Kindly add a subsection specifying consultations with the Ministry of Land Management.

Foundation which represents the Wayana Peoples, KAMPOS Tribal Peoples Partnership (KAMPOS) and the youth organization of the Association of Saramaccan Authorities (VSG-Youth). Both VIDS and KAMPOS are umbrella organizations of ITP authorities, Mulokot ad VSG represent specific tribes relevant to selected project areas (VSG for Brokopondo & Upper-Suriname River; Mulokot for Palumeu). It was agreed with VIDS and KAMPOS that engagement during project preparation and implementation 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. For the purpose of this concept note, engagement with all ITP organizations were directed to provide information during CN formulation, allow them to ask questions, voice concerns and provide inputs / suggestions and agree with the next steps. After consultations, the meeting minutes were shared with ITP organizations for their approval and edits if needed. This entire process is documented in summary in ~~Refer to~~ appendix 2 for the stakeholder engagement reports for stage 1; the detailed meeting minutes can be provided upon request. ~~. Recommendations and concerns wre instrumental in refining the project design. (Be explicit how FPIC was used, mention specific meetings and organizations and that meeting minutes were shared with ITP groups for approval).~~

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. Important inputs received during this stage included for example the private sector perspective, based on conversations had with representatives from the various agriculture value chain platforms. These shaped e.g. the third outcome related to strengthening of value chains and improving access to finance. Furthermore, a deeper understanding was gained about ongoing initiatives, their scope, constraints and opportunities for synergies / collaborations or follow-up through CR-FST. 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. During this validation meeting, VIDS and KAMPOS were represented and could provide concerns and inputs for the formulation of the CN for submission. This validation meeting was an opportunity to refine formulation of outcomes, outputs and activities, but also to collect some additional data from participants per region such as organizations active / existing initiatives in the sector, estimated number of beneficiaries, important crops, agricultural methods, local climate change impacts, aspects related to gender and inclusion, capacity needs, and proposals for specific sites, but also to better understand barriers and assumptions. Attendees were in agreement with the concept note as presented and supplemented with inputs provided during that validation session.
5. The Ministry of Land and Forest Management was invited to this validation session but was not represented. Efforts made to engage with the Ministry have not yet resulted in a meeting. One reason for this may be the fact that 2025 is a year of elections; once the new government in installed, engagement will be sought once more with the Ministry. The environmental impact assessment will include an assessment of land-ownership to safeguard land-ownership of selected sites.

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

Full implementation of this proposed adaptation project will be possible based on the budget requested from the Adaptation Fund. To ensure all activities can be implemented and all outcomes can be achieved, the project budget requested from the Adaptation Fund includes:

To achieve outcome 1:

- Designing and retrofitting buildings per location to establish farmers resource centres, purchasing of equipment and software for each centre and stakeholder engagement & capacity building needed. Depending on the location, these building may be government owned (Ministry of Agriculture or Ministry of Regional Development and Sport) or owned by an organization active in these regions. Specific buildings and locations will be determined based on studies and stakeholder engagements that will inform full proposal development. In case specific buildings and land cannot be identified for certain project areas, a larger project budget will be allocated for these areas to secure implementation (construction of buildings).
- Hiring a firm to develop training material in collaboration with community members, organizing training of extension officers and training of community members.
- Hiring a firm to facilitate PICSA training workshops, logistical and material costs related to workshop costs per community.
- Hiring a firm to develop a climate information system, development & purchasing of material for training of farmers to use the system, and providing training to farmers in each community on a yearly basis.

To achieve outcome 2:

- Designing and retrofitting buildings per location to establish processing resource centres, purchasing of equipment for each centre and stakeholder engagement & capacity building needed.
- Hiring a firm to develop training material in collaboration with community members, and training of community members.

To achieve outcome 3:

- Assessing capacity needs for financial inclusion at community level, developing and providing training to MSMEs in each selected area
- Assigning a facilitator and intern per selected area to provide support through the community level resource centres and logistical arrangements for extension services and monitoring of project progress within each community
- Development of a trading platform and provision of training of its use in each community on a yearly basis for three years
- Developing material and providing training in business skills in each community on a yearly basis for three years.
- Hiring a firm to work with FSPs to assess their financial products and develop an enabling environment for financial inclusion, training of FSP personnel and engaging with stakeholders from each area.
- Facilitating decentralization of financial services through community level resource centres
- Developing material and providing training to community members to improve their financial access on a yearly basis for three years.

To achieve outcome 4:

- Hiring a firm and communication specialist, digital marketer and audio-visual firm to develop and populate a knowledge sharing platform with inclusive training material as developed as part of all components within the project.
- Facilitate community level resource centres with equipment and material to ensure availability and distribution of all training material and knowledge products.

Commented [CL15]: While the proposal fails to make a clear distinction between climate adaptation interventions and general development activities, such a distinction is necessary to justify the requested funding. Some activities, for instance, value chain strengthening, may be interpreted as business-as-usual development rather than adaptation interventions.

CAR9: please justify the requested financing by showing how climate change imposes added costs on each activity clarify why these costs would not be offset.

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- Utilize traditional media to disseminate training material, knowledge products as well as other interactive programs to enable nationwide availability of material and awareness raising.
- Organize agricultural fairs, farmers, food and cultural fairs to enable knowledge exchange, promotion of local/traditional foods, strengthening of value chains, etc. This will be done once a year for at least 2 years in each project area.

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~~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. To ensure long-term sustainability of the agriculture and processing resource centres, the project will establish clear governance structures led by local management committees composed of cooperatives, NGOs, CBOs, traditional authorities, and private sector partners. These committees will manage the centres based on inclusive, community-approved charters outlining roles and responsibilities. Each centre will operate under a tailored business plan to ensure financial viability, generating income through services such as training, seedling and compost sales, and equipment rental. They will function as social enterprises, reinvesting earnings into operations and maintenance while building local capacity through training in cooperative business management and financial literacy. Financial sustainability will be further supported through partnerships with financial institutions and the creation of blended financing models, including in-kind contributions and revolving funds. The centres will be embedded within district-level development frameworks and linked with national extension services, research institutes, and vocational training providers to ensure continued access to technical support. Local governments will be engaged for formal recognition and to facilitate services like land access and licensing. A monitoring and learning system will enable adaptive management and continuous improvement, ensuring the centres remain responsive and resilient beyond the life of the project.~~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	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance

Commented [CL16]: The proposal does not explicitly indicate the strength of the linkages between project activities and the contribution to priority sectors of agriculture, food security, and climate resilience.

CAR10: please add more detail on how project activities support the achievement of Suriname's adaptation targets, particularly in relation to agriculture, water, and forestry, by specifying the expected impact pathways'. p.26-28.

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Commented [CL17]: The proposal has sustainability mechanisms such as agricultural resource centers and knowledge-sharing platforms, yet the very critical and specific details on task and structure that would ensure the sustainability and viability of these project initiatives after the completion is very vague.

CR13:Please provide further details on how these agricultural resource centers and value chain initiatives will be sustained after the project, also please detailed sustainability framework highlights governance, financing, and institutional arrangements that would ensure long-term sustainability,

Commented [CL18]: CR14: Please clearly outline the plan for procuring Free, Prior and Informed Consent (FPIC) and clarify what concrete steps will be taken to ensure environmental and social safeguards, with particular reference, albeit not limited to, pollution minimization and biodiversity conservation.

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principles		
Compliance with the Law		**Low risk:** Non-compliance with national technical standards regarding EIA, water quality requirements, land tenure, building codes and other applicable legislation to be identified during the EIA process. Development of the proposal and implementation of the project with and by the government deems this a low risk. **Measure:** The preliminary studies to formulate the full proposal will include a legislative review to ensure identification of applicable legislation and how to ensure compliance. The project will be implemented based on the ESMP which will include measures to ensure compliance with law. This process will include identification of all permits required before project implementation. See national requirements under question E above.~~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		**Medium risk:** the large geographical extent of Suriname (size of districts and long travel routes between communities) can pose a risk to access to opportunities. Furthermore, cultural and gender norms can limit access of women, youth and marginalized groups to project benefits. **Measure:** The studies that will inform full proposal development will include the formulation of systems to put in place to ensure equal distribution of male and female participants / beneficiaries to capacity building programs, with the ambition to achieve at least 50% youth participation and significant participation of ITP in specific areas (i.e. 100% in Palumeu; participation levels of ITP in other districts will be determined based on studies that will inform the full proposal). These studies will incorporate close engagement with intended beneficiaries with special emphasis on women, youth, marginalized and vulnerable groups to inform formulation of required systems to be established for project implementation.

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		Any proposed approaches will be captured in the Gender Action Plan (GAP) and ITP Plan. ~~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~~See access and equity & human rights
Human Rights		**Low risk:** there is a small risk of discrimination, creating inequal access to opportunities and resources. **Measure:** Access and equity will be arranged based on a deeper understanding of socio-economic dimensions, which will be studied prior to formulating the full proposal. During stakeholder engagements, communities will be involved in formulating measures to ensure access and equity, considering intersectionality.~~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		**Low risk:** There is a risk of unequal distribution of benefits to women (also see access and equity above). **Measure:** Gender Assessment and Gender Action Plan (GAP) will inform full proposal development and ensure equitable distribution of benefits within identified communities, and to maximize benefits small scale women farmers and food processors. The M&E framework to be included in the full proposal, will include metrics to monitor reduction in gender disparities in land access and financial services.~~Gender Assessment to ensure equitable distribution of benefits within identified communities, and to maximize benefits small scale women~~

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		~~farmers and food processors.~~
Core Labour Rights		**Medium risk:** Use of agriculture and food processing equipment and pose a safety threat to users and bystanders. There is a risk of child labour at farm level in an agro-processing since children are usually involved with these activities at household level. **Measure:** The project will include procurement of equipment that comply with safety standards. Users of equipment will receive safety training based on SOPs, PPE will be provided and necessary signage will be placed in or near workspaces. In terms of child labour, the preliminary studies informing full proposal development will include legislative studies, incl. labour laws. Based on findings, specific recommendations will be made and systems put in place to ensure project compliance with labour laws.~~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		**Medium risk:** the large geographical extent of Suriname (size of districts and long travel routes between communities) can pose a risk to access to opportunities especially for ITP who usually live in remote areas. Furthermore, language, cultural and gender norms can limit access to project benefits. **Measure:** The studies that will inform full proposal development will comply with CCCCC PS-7 Indigenous Peoples and will include the formulation of systems to put in place to ensure equal significant participation of ITP in specific areas (i.e. 100% in Palumeu; participation levels of ITP in other districts will be determined based on studies that will inform the full proposal). These studies will incorporate close engagement with ITP and any proposed approaches will be captured in

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		the ITP Plan. The approaches will incorporate at least translation of material into local languages and incorporate cultural norms. ~~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 risk:** No involuntary resettlement will occur under the project. All project activities will be implemented in areas that are agreed upon with government, local and beneficiary communities. Furthermore, selected locations for community resource centres will be selected from existing establishment through collaboration with government and or organizations active in the selected areas. This will be done in a collaborative manner to build on existing efforts, avoid resettlement and ensure operational sustainability	
Protection of Natural Habitats		**Low risk:** project activities will be established on existing developed lands and therefore outside of natural areas. However, there might still be risks to natural habitats in the vicinity of project locations. **Measure:** The EIA that will inform the full proposal, will include a baseline assessment highlighting natural habitats with specific attention for nationally protected areas, internationally recognized World Heritage Sites and Ramsar sites, and natural habitats f conservation concern. The EIA will include a risk assessment and development of mitigation measures to combat any identified risks. The ESMP will include any mitigation measures identified and a monitoring plan to track implementation. ~~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~~

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		~~communities. Identify appropriate mitigation measures that are cost effective and sustainable.~~
Conservation of Biological Diversity		**Low risk:** project activities will be established on existing developed lands and therefore outside of natural areas. However, there might still be risks to biodiversity in the vicinity of project locations, and there is a chance of human-wildlife conflict on farm level. **Measure:** The EIA that will inform the full proposal, will include a baseline assessment highlighting ~~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~~ species under protection of national legislation (i.e. Hunting Law) as well as ~~protection status under~~ the International Union for Conservation of Nature (IUCN~~), World Heritage Sites, Ramsar Convention on Wetlands, where they apply~~) red list. The EIA will include a risk assessment and development of mitigation measures to combat any identified risks, including potential human-wildlife conflicts. The ESMP will include any mitigation measures identified and a monitoring plan to track implementation.~~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	**No risk:** No anticipated risk identified related to unknown climate change impacts. Measure will be put in place to deal with existing (known) impacts as identified under other principles such as for example compliance with national	~~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.~~

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	standards (incl. building codes) to ensure resilience of project buildings.	
Pollution Prevention and Resource Efficiency		**Low risk:** agricultural activities and agro-processing facilities produce pollution (soil, water and air), especially if agricultural chemicals are used (pesticides and chemical fertilizers) and due to production of water products (water water), and emissions from equipment. **Measure:** The EIA will assess any potential risks and mitigation measures will be formulated as part of the ESMP which will be monitored for implementation. This will include a waste management plan. ~~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		**Medium risk:** agro-processing facilities and activities may pose a risk to public health because of food safety, and waste products coming out of the facilities. **Measure:** Food safety will be safeguarded by incorporating specific trainings on this topic. Water quality of processing facilities will be monitored to ensure compliance with national standards for consumption water. Environmental health risks will be assessed as part of the EIA process. Mitigation measures will be developed based on identified risks e.g. related to wastewater and organic waste coming out of the processing facilities. These measures will be captured in Environmental and Social Management Plan (ESMP) and Waste Management Plan (WMP).~~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~~

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		communities by emergency services and the necessity of an Emergency Preparedness Plan.
Physical and Cultural Heritage		**Medium risk:** The project will elevate the use of traditional knowledge in climate change adaptation. This poses a risk for the misuse of indigenous traditional knowledge (cultural heritage). To understand the extent of this risk, ITP organizations have been consulted about their experience with similar projects and arrangements, and which process needs to be followed and provisions to be made in project development and implementation. Excavations during construction and agricultural activities may expose physical 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. **Measure:** 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 ITP organizations proposed the following: Knowledge that 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. Chance find procedures will be developed for any accidental finds of structures/ artefacts during excavations or similar works in accordance with guidance from the Archaeology Department of the Ministry of Education, Science and Culture.
Land and Soil Conservation	**No risk:** Only land that has ve been previously farmed or impacted will be utilized under the project. However, as part of	Describe the existing characteristics of land and soil specifically within the areas of the participating communities. Identify and assess the risk and impacts specific

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Commented [CL19]: Partial response to CR14: This is what has been agreed with ITP representative organizations, regarding FPIC related to any material developed based on traditional knowledge. Consultations were held with VIDS, KAMPOS and Mulokot.

VIDS: Organization representing Indigenous village Chiefs in Suriname

KAMPOS: Organization representing Indigenous village Chiefs in Suriname

Mulokot Foundation: Representative organization of the Wayana Tribe (indigenous tribe in Southern Suriname, including Palumeu)

VSG Jongeren: Youth organization representing the Saamaka tribe in Suriname (Upper Surinam-River area)

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	the full proposal development measures will be identified in the ESMP on how the project can mitigate any risk through risk assessment ensuring compliance to the AF environmental and Social Policy ~~Land that has not been previously impacted will not be utilized in any of the participating areas including the communities~~	~~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~~ 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

The overall project 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. This objective will contribute towards increased resiliency at the community, national, and regional levels to climate variability and change. **Strategic indicators** for measurement of its implementation will include the **number of beneficiaries (direct and indirect)** and **assets produced, developed, improved, or strengthened.** The total output grant amount of USD8,416,000 will contribute towards these indicators.

~~A.~~

Project Objective(s)[1]	Project ~~Objective~~ Outcome 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 climate services	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.	1,360,000 ~~115,000~~
	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	470,000
Community level processing capacity strengthened	Percentage of target communities adopting adapted	4: Increased adaptive capacity within relevant	4.1. Responsiveness of development sector	5,466,000 ~~100,000~~

Commented [CL20]: Although the project meets numerous AF strategic objectives - objectives 1, 2, and 3 - further: CR2, please state clearly which adaptation indicators will be used to track impact and align them with the AF results framework on p6:

CR3: Page 6: Please clearly state which AF indicators will be used to track adaptation impact and ensure alignment with the AF results framework

Commented [CL21R20]: Project outcomes need to be aligned with AF indicators. And then per outcome and indicator, show how much of the outcome budget would contribute to that. If there are multiple indicators per outcome, an estimated division has to be made, based on outcome budget from table 'project component and financing'

Commented [CL22R20]: Core indicators like benefoiciaries can be in benefiary section and elaborated in FP

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Commented [CL24]: Please separate grant amount by the various AF indicators for example if one project outcome is aligned to 2 AF indicators the last column should separate the costs per AF indicator.

Commented [CL23]: The second row commences this information for the various project components. The top have of the table at outcome level, the lower half for the output level.

to secure food availability	practices in response to changing and variable climate	development sector services and infrastructure assets	services to evolving needs from changing and variable climate	
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	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	1,120,000 ~~100,000~~
Project Outcome(s)	**Project ~~Outcome~~ Output Indicator(s)**	**Fund Output**	**Fund Output Indicator**	**Grant Amount (USD)**
1. Smallholders adopt diversified agroecological practices adapted to local ecologies and cultural knowledge~~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~~y~~	6.1.1 No. And type of adaptation assets (physical as well as knowledge) created in support of individual or community-livelihood strategies	790,000~~50,000~~
	Number of ~~farmers~~ s 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	1,040,000 ~~50,000~~

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2. Local processing capacity enhances community-level food security and value retention~~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. o~~O~~f physical assets strengthened or constructed to withstand conditions resulting from climate variability and change	~~115,000~~1,290,000
	Number of ~~farmers~~ smallholders 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	570,000
3. Inclusive, climate-resilient value chains strengthen rural livelihoods~~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~~3,606,000
4. Climate knowledge sharing via horizontal learning systems~~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	1,120,000 ~~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:*

Mrs. Ivette Pengel-Patterzon, Deputy Permanent Secretary Climate Change, Ministry of Spatial Planning and Environment ~~(Enter Name, Position, Ministry)~~	Date*: ~~(Month, day, year)~~20 January 2025*

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 (NAP 2019-2029), the 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, ~~(……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 Implementing Entity Coordinator Mark Bynoe, PhD.	
Date: ~~(Month, Day, Year)~~25 January 2025	Tel. and email: +5926200559 / mbynoe@caribbeanclimate.org
Project Contact Person: Chantal Landburg	
Tel. And Email: +5016279139 / clandburg@caribbeanclimate.org	

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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

Revised PFG Submission Form[1] (additions in red)

Project Formulation Grant (PFG)

Submission Date:7 February 2025

Adaptation Fund Project ID:
Country/ies: Suriname
Title of Project/Programme: Climate Resilient Food System Transformation in Suriname (CR-FST)
Type of IE (NIE/RIE/MIE): Regional Implementing Entity
Implementing Entity: Caribbean Community Climate Change Centre (CCCCC)
Executing Entity/ies: Ministry of Agriculture, Animal Husbandry and Fisheries (in Suriname)

A. Project Preparation Timeframe

Start date of PFG	April 2025
Completion date of PFG	January 2026

B. Proposed Project Preparation Activities ($)

List of Proposed Project Preparation Activities	Output of the PFG Activities	US$ Amount	Budget note[2]
Feasibility study	Feasibility assessment report	44,000	Consultancy firm for the feasibility assessment at 55 days X US$600/day. Logistical costs at 5 locations X US$2200 per location
Environmental & Social Assessment	1. Environmental and Social Impact Assessment 2. Environmental and Social Management Plan 3. Indigenous Peoples Plan	57,000	Consultancy firm for Environmental & Social Assessment at 70 days X US$600/day. Logistical costs at 5 locations X US$3000 per location
Gender and Social Inclusion Assessment and Action Plan	1. Gender and Social Inclusion Assessment and Action Plan	37,000	Consultancy firm for the gender and social inclusion assessment and action plan at

[1] As presented in AFB/PPRC.33/40 Annex 1.
[2] The proposal should include a detailed budget with budget notes indicating the break- down of costs at the activity level. It should also include a budget on the Implementing Entity management fee use.

	2. Project Specific Grievance Redress Mechanism		45 days X US$600/day. Logistical costs at 5 locations X US$2000 per location
Implementing Entity Management Fee (8%)		12,000	Lumpsum for coordination of consultants, travel, consultations, etc.
Total Project Formulation Grant		150,000	

Please describe below each of the PFG activities and provide justifications for their need and for the amount of funding required:

All studies will address information gaps identified during the concept note formulation in terms of requirements by the Adaptation Fund, CCCCC and at national level. The exact scope of these studies might expand beyond what is described below, depending on e.g. desk studies, national requirements (incl. scoping phase of the Environmental and Social Assessment), etc.

Feasibility study

- Determination of exact project locations and identify partner organizations for each
- Baseline analysis of selected locations to:
    - Characterize existing practices within and extent of the agriculture supply chain
    - Characterize existing initiatives
    - Identify and describe stakeholders and beneficiaries
    - Assess vulnerabilities and capacities of beneficiary communities
    - Inventory and characterization of infrastructure, accessibility, amenities
- Analysis of location specific needs, required interventions and assess feasibility of interventions and alternatives per location

Output / deliverable: Feasibility assessment report

Environmental & Social Assessment

- 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
- Characterize the labor situation in each of the beneficiary villages (communities collectively). What is the 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 labor and status of working the environment
- The project is addressing risk and impacts specifically associated with indigenous and tribal peoples in compliance with the CCCCC PS-7 Indigenous Peoples
- 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.
- 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.

- Identification and assessment of nature and extent of land preparation 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.
- 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.
- 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.
- 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.
- 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 favorable, indicate the advantages and disadvantages for various soils identified and how the drawbacks will be overcome.
- Additional requirements which may arise from the screening and scoping phase as required by Suriname's Environmental Framework Law[3]

Output / deliverable:

1. Environmental and Social Impact Assessment
2. Environmental and Social Management Plan
3. Indigenous Peoples Plan

Gender and Social Inclusion Assessment and Action Plan

This assessment will include at least the following:

- 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.
- 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.

[3] Environment Framework Law SB_2020___97.pdf (dna.sr)

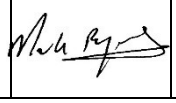
- Gender Assessment to ensure equitable distribution of benefits within identified communities, and to maximize benefits small scale women farmers and food processors.
- Formulate how the project will elevate the use of traditional knowledge in climate change adaptation. Knowledge management will need 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.
- Formulate a project specific Grievance Redress Mechanism that builds on requirements of the Adaptation Fund and CCCCC, and takes into account the local context of beneficiary communities.

Output / deliverable:

1. Gender and Social Inclusion Assessment and Action Plan
2. Project Specific Grievance Redress Mechanism

C. Implementing Entity

This request has been prepared in accordance with the Adaptation Fund Board's procedures and meets the Adaptation Fund's criteria for project identification and formulation

Implementing Entity Coordinator, IE Name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
Mark Bynoe		2/7/2025	Chantal Landburg	(+501)6279139	clandburg@caribbeanclimate.org

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[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.

Appendices

Appendix 1. Preliminary Gender Assessment

Context

Suriname has a multi-ethnic population and is home to four Indigenous and six maroon tribes[69]. 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).[70,] 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[71]. The following framework documents outline the country's commitment to gender equality[72]:

- 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[73]. 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".[74]

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

69 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

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

71 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

72 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

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

74 *ibid*

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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"[75].

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"[76]. 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[77]. 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[78]. Women and men in traditional Indigenous and tribal

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

76 *ibid*

77 *ibid*

78 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[79]. 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[80].

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". [81] 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[82]. 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[83]. Following disasters, it is reported that geographic isolation impacts women more due to cultural practices that place restrictions on their movement[84].

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 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 Disadvantage: can't accommodate everyone Advantage: central location, so you reach most people	Long term drought, Transport can be challenging	70% are men 30% of women own a business

79 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

80 *Ibid*

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

82 ibid

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

84 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[85] 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 11:00-13:00 ROM Office, Paramaribo	Ministry of Spatial Planning and Environment (ROM). Nasser Rodjan, Acting Deputy Director Living Environment & Ecosystems, iemdaad.rodjan@gov.sr Ivette Patterzon, Deputy Director Climate Change, ivette.patterzon@gov.sr 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 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

[85] 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 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 11:00-12:00 FAO Office, Paramaribo	Food and Agriculture Organization (FAO). 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 9:30-10:30 LVV Office, Paramaribo	Ministry of Agriculture, Animal Husbandry and Fisheries (LVV). 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 13:30-14:30 IDB Office, Paramaribo	Inter-American Development Bank (IDB). Steven Hofwijks, Operations Associate, shofwijks@iadb.org Anaitee Mills, Climate Change Sector Specialist, anaiteem@iadb.org 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 10:00-11:00 UNDP Environment Office, Paramaribo	United Nations Development Programme (UNDP). Bryan Drakenstein, Programme Specialist Energy and Environment, bryan.drakenstein@undp.org 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 9:00-11:00 Commewijne	Practitioner and Trainer Regenerative Agriculture Methods. 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 14:00-15:00 Tropenbos Office, Paramaribo	Tropenbos Suriname. Rudi van Kanten, Director, r.vankanten@tropenbos.sr Ivan Karnadi, Project coordinator, i.karnadi@tropenbos.sr Davita Obergh, Project coordinator, d.obergh@tropenbos.sr 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.

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14 May 24 10:30-11:30 Mulokot Office, Paramaribo	Foundation Mulokot. Jupta Itoewaki, Chairperson and co-founder, juptaitoewaki@mulokot.com 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 Office MDS & WLA, Paramaribo	Meteorological Service Suriname (MDS): Dwight Samuel, Head MDS, dwightsamuel82@gmail.com Shavelli Bardan, Department of Climatology George Paiman, Department of Instruments (Installations and Repairs) Lorenzo Kasmani, Project Assistant Hydraulic Service (WLA): Frits Kosso, Acting Head, frkosso@gmail.com 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 14:00-15:00 Teams	University of Applied Sciences and Technology (UNASAT). Trevie Feurich, Chairperson UNASAT Board, tfeurich@yahoo.com 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 9:00-10:00 Teams	Center for Agricultural Research in Suriname (CELOS). 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 11:00-12:00 Teams	Association of Indigenous Village Heads in Suriname (VIDS): Josee Artist, staff member Bureau VIDS, josee.artist@vids.sr Max Ooft, Policy Advisor, max.ooft@vids.sr KAMPOS Tribal Peoples Partnership (KAMPOS): 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.

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20 May 24 13:00-14:00 ROM Office, Paramaribo	ROM. Ritesh Sardjoe, Permanent Secretary, ritesh.sardjoe@gov.sr 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 13:00-14:00 CAHFSA Office, Paramaribo	Caribbean Agricultural Health and Food Agency (CAHFSA). Gavin Peters, CEO, gavin.peters@cahfsa.org 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 11:00-12:00 Torarica, Paramaribo	Ministry of Regional Development and Sport (ROS). 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 10:00-11:00 TBS Facility, Paramaribo	Tan Bun Skrati (TBS), Cacao Cluster and NTFP Value Chain Platform (NTFP VCP). Ellen Ligteringen, co-owner TBS, Board member and lead Cacao Cluster tanbunskrati@gmail.com 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 14:00-15:00 SAMAP Office, Paramaribo	Suriname Agriculture Market Access Project (SAMAP). 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 8:00-9:30 Teams	Agriculture Value Chain Platforms (VCP). Fruits and Vegetables: Lucien Bourne, Chairperson, customs.specs@gmail.com Wendel Margaret, Boardmember & Director Paralab N.V., wfmargaret@gmail.com Christine Wirokromo, Deputy Director Paralab NV, cwirokromo.paralabnv@gmail.com 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 Non-Timber Forest Products: Cyrano Asoiti, Voorzitter, casoiti@gmail.com Cassava: Shequita Claver, Boardmember & representative Ministry of Economic Affairs	
2 Oct 24 9:00-10:00 Teams	Anton de Kom University of Suriname (AdeKUS)– Department of Agriculture. Joan Muller, lecturer, joan.muller@uvs.edu 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 8:00-9:00 Teams	Bureau of Gender Affairs (BGA). Shiefania Jahangier, Head, bgasuriname@gmail.com Yvonne Towikromo, Policy Advisor and responsible for priority areas climate change, and GBV, hanacaraca@gmail.com Shiffion Alimoestar, Responsible for the priority area Environment & Climate Change, shiffy92@hotmail.com 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 10:00- 11:00 Teams	Association of Saramaccan Authorities (VSG) Youth. Samunda Jabini, Youth Coordinator, samundajabini6@gmail.com 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 15:00- 16:00 Teams	LVV. Niraj Parsadi, Climate Change unit, 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 10:00- 11:00 Teams	Surinamese Standards Bureau (SSB). 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 9:00-10:00 Teams	ROM. Jerrol Renfurm SIDAR Project Development Consultant Suriname projectdevelopersur@ 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 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). Clarence Tokromo, Head of Agribusiness and Institutional Relations. clarence.tokromo@trustbankamanah.com Roshnie Gangapershad, Coordinator Agribusiness roshnie.gangapershad@trustbankamanah.com Eduard Kidjo, Group Head of Operations eduard.kidjo@trustbankamanah.com 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	Agriculture value	Secretary

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Name	Organization	Position / Title
Majokko	chain platforms (VCP): NTFP	
Ashitesh Bhagole	Ministry of Finance and the Ministry of Economic Affairs, Entrepreneurship and Technological Innovation (EZOTI)	ECD
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	CELOS	Scientist

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Name	Organization	Position / Title
Ouboter		
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

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