

The Agrifood Systems Transformation Accelerator (ASTA)

Joint UN Project on Sustainable Pineapple Value Chain Development in Suriname

Final Mid-Term Project Review Report

July 2025

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Abbreviations

AFI	Artificial Flower Induction
ASTA	Agrifood Systems Transformation Accelerator
FAO	Food and Agriculture Organization of the United Nations
FPIC	Free, Prior and Informed Consent
GAP	Good Agricultural Practices
GDP	Gross Domestic Product
ha	Hectare
HIH	Horticulture Innovation Hub ('the hub')
IPM	Integrated Pest Management
IsDB	Islamic Development Bank
ILO	International Labour Organization
JP	Joint Project
LNOB	Leaving No One Behind (Agenda 2030 principle)
MAAHF	Ministry of Agriculture, Animal Husbandry and Fisheries
MFAIBIC	Ministry of Foreign Affairs, International Business and International Cooperation
MTR	Mid-Term Review
NGO	Non-Governmental Organization
PCD	Pineapple Cooperative Development
PUNO	Participating UN Organization
SDG	Sustainable Development Goal(s)
SMART	Specific, Measurable, Attainable, Relevant, Time-bound
TBA	Trust Bank Amanah
UN	United Nations
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNIDO	United Nations Industrial Development Organization
USD	United States Dollar
VC	Value Chain
VIDS	Association of Indigenous Village Leaders in Suriname (Vereniging voor Inheemse Dorpshoofden in Suriname)

Executive Summary

The Agrifood Systems Transformation Accelerator (ASTA) programme is an innovative joint UN supported intervention that aims to address development challenges encountered by developing countries with an agricultural base. These development challenges include creating sustainable and decent livelihoods, enhancing incomes, improving lives of women and other marginalized groups, and attaining food security. The Sustainable Pineapple Value Chain Development project in Suriname is part of this programme. The value chain and systems approach utilized by the project ensures that risks often associated with agribusiness development are reduced through an establishment of linkages between finance, production, and marketing. Support to finance opportunities allows small-scale producers access to required inputs and technology that can increase productivity while improving quality and consistency in production. This is to lead to meeting the requirements of buyers that can then deliver to markets.

The project supports addressing knowledge, finance and coordination challenges that have been identified in the smallholder pineapple production sector, in the savannah belt of Suriname, primarily conducted by indigenous and tribal farmers who are amongst the most vulnerable groups in the country. Constraints are addressed through the establishment of the Horticulture (earlier called Pineapple) Innovation Hub (the Hub), focused on the knowledge challenge; the Collateral support facility (the Facility), focused on the finance challenge and to promote investments; and the Pineapple Cooperative Development (PCD) Company (the Company), to address the coordination challenge and promote aggregation.

The JP is expected to contribute to enhancing economic diversification as identified in the 2016 National Master Plan for Agricultural Development. At the impact level, the project is to contribute to the improved income levels and livelihoods of small holders and households with a focus on indigenous people. The project also addresses related cross-cutting issues including gender, youth, employment and the environment.

The present MTR is to review project relevance, progress and sustainability and is to contribute to the further implementation of the project. It used a combination of desk review and semi-structured interviews with selected project stakeholders.

The JP experienced delays in implementation due to the delayed establishment of the Horticultural Innovation Hub (HIH). Reasons for the delay were though not directly under the control of the project. The HIH presents the core systemic element of the project, to which the two other structures, the Collateral Support Facility and the Company (designed as a marketing cooperative) are linked. With the HIH and the Facility established and the functions of the Company temporarily subsumed under the HIH, the main system aspects of the project have been put in place.

Notwithstanding these results, targets concerning area covered for pineapple production (Outcome 2 indicator), expected volumes of pineapples that will be delivered to buyers (Outcome 3 indicator), and amount (in USD) of public investments attracted to the value chain (Outcome 1 indicator) cannot be expected to be achieved within the present timeframe of the project. Consequently, this will have an adverse effect on indicators related to reaching the breakeven point and the expected sustainability of the HIH and the Facility towards the end of the project.

The JP has shown to be a relevant, innovative and worthwhile intervention that has the potential of introducing systemic change in Suriname pineapple production through testing and replication of the agronomic and business models developed so far. For this to happen there is a need to showcase the functioning of the models in the remainder of the project period and to attract support for a follow up phase in which the breakeven point for the sustained development of the HIH, collateral facility and the company can be reached. To inform replication of the

models in Suriname and beyond, the monitoring of results will need to be enhanced in a way suitable for the exploring character of the project.

With a focus on the key systemic changes that were needed at the national level for the project to succeed, there has been limited attention so far to the dynamics at household level of the participating farmers in terms of the uptake of improved pineapple farming and the results for the household economy and the well-being of household members. An extension or second phase could more explicitly include such aspects in terms of objectives and risk assessment, as well as in the monitoring and evaluation framework.

Recommendations (for full recommendations see the text of the main report):

- 1. For PUNOs and partners, in the final timeframe of current project implementation, to ensure that the requirements for continuation of support beyond the present project period and future sustainability of results are in place, including: ensuring a sufficient number of farmers get enrolled through the HIH and the Facility, testing the agronomic as well as the business and financial models promoted by the project using enhanced agronomic cultivation practices on upto 50 ha; seeking enhanced public and private investments in the project and its continuation; and adapting the project's scope, budgeting and results framework.**
- 2. For the SDG fund, as the donor to the ASTA project, to consider budget neutral extension of the project till the end of 2026 in order to allow for the project to continue its activities while searching for support for a second phase of the project and further detailing the design of such a phase, including a clear sustainability or exit strategy.**
- 3. For the project to ensure continued engagement with national, provincial and local level government agencies and community organizations, enhancing their ownership and ensuring support at all levels, making use of existing relationships of the RC Office and all participating PUNOs and engaging with additional partners as the project progresses.**
- 4. To enhance monitoring of project results and lesson learning through adaptation of the results framework and in particular targets on indicators for the remainder of the project period and to include additional means of monitoring, like process tracing, and enhance lesson learning, including the documentation of results achieved, barriers and ways in which these were addressed, enabling factors and adaptive practices and to develop a set of baseline indicators for participating farming households, which would allow for the conduct of impact assessment in a follow-up phase.**
- 5. To support establishment of feedback channels as part of the various project communication means including the project newsletter, the digital application and other viable means in order to systematically gather feedback from target groups of pineapple farmers, government officials, civil society agencies, academia and other interested stakeholders in Suriname and beyond in order to inform project management and implementation.**
- 6. Adapt the risk assessment framework and mitigation measures to ensure that all relevant risks are captured and moderation measures to avert them are in place as much as possible, including considering the inclusion of micro insurance as an integral part of the project approach.**
- 7. In the development of an extension / follow up phase to the project, to enhance the approach to indigenous and tribal farming households, explicitly including results in terms of their increased wellbeing as a way of addressing the 'Leaving no one behind' principle of the 2030 Agenda, including monitoring of results in terms of household income and consumption patterns and aspects of household food security.**

1. Introduction

Context

Suriname, located on the Northeast Coast of South America, is part of the Caribbean region. The total population of Suriname amounts to about 629,000 people, which are ethnically and culturally diverse, with the population concentrated in the coastal areas and around the capital Paramaribo. In terms of agriculture, rice is the main crop, representing 54 percent of export value of the agricultural sector in 2020.¹ The Multi-Annual Development Plan 2022-2026 includes the objective of increasing the share of agriculture in the GDP of Suriname and to organize high quality value chains in the agricultural sector along business clusters. It also aims to increase access of small-scale industrial and other enterprises, to financial services, including affordable credit, and their integration into value chains and markets.

Statistical details on the indigenous population of Suriname date back to 2012 when indigenous people represented 3.8 percent of the total population. In terms of location, they are most prevalent in Sipaliwini, Para and Paramaribo districts which together accounted for 71 percent. The indigenous population has grown over time as relative part of the population, as they comprised 1.7 percent of the population in 1950. The four largest Indigenous groups in Suriname are the Kari'na (Carib), Lokono (Arawak), Trio (Tirio, Tareno) and Wayana. Official demographics on the size of each of the communities, however, are lacking. Of the indigenous people, 65.4 percent are assessed as poor, and an additional 18.1 percent as semi-poor. They are the second poorest group in Suriname after the maroon villagers. In 2018, literacy was recorded at 94.4 percent among indigenous women and 96 percent among indigenous men.²

According to the 2012 Census, there were 117,567 people identifying as maroon, representing 21.7 per cent of the total population. This makes maroons the second largest ethnic group in Suriname (after the Indo-Surinamese or East Indian community). Maroon society traces descent through the female line. The central group of a village consists of the descendants of an ancestral mother. Women also play a major role in the economy which has traditionally been based on subsistence horticulture by women, and male hunting and fishing.³

In the Multi-Annual Development Plan 2022-2026, collective land rights of indigenous and maroon people are referred to in the building blocks for Vision 2050. Indigenous and Maroon communities are identified as at risk of the effects of climate change due to their economic situation and location in remote areas where extreme droughts and floods have occurred in the past.⁴

The Project

The Joint UN Project on Sustainable Pineapple Value Chain Development in Suriname is part of the Agrifood Systems Transformation Accelerator (ASTA) programme and concerns a 4-year

¹ Share of rice in total export value including and beyond agriculture amounted to 3.1 percent in 2020. Source: Multi-Annual Development Plan 2022-2026 of the Republic Suriname, Flipthinking, Connecting, Acting, Final Version Approved by The National Assembly on December 20th, 2021.

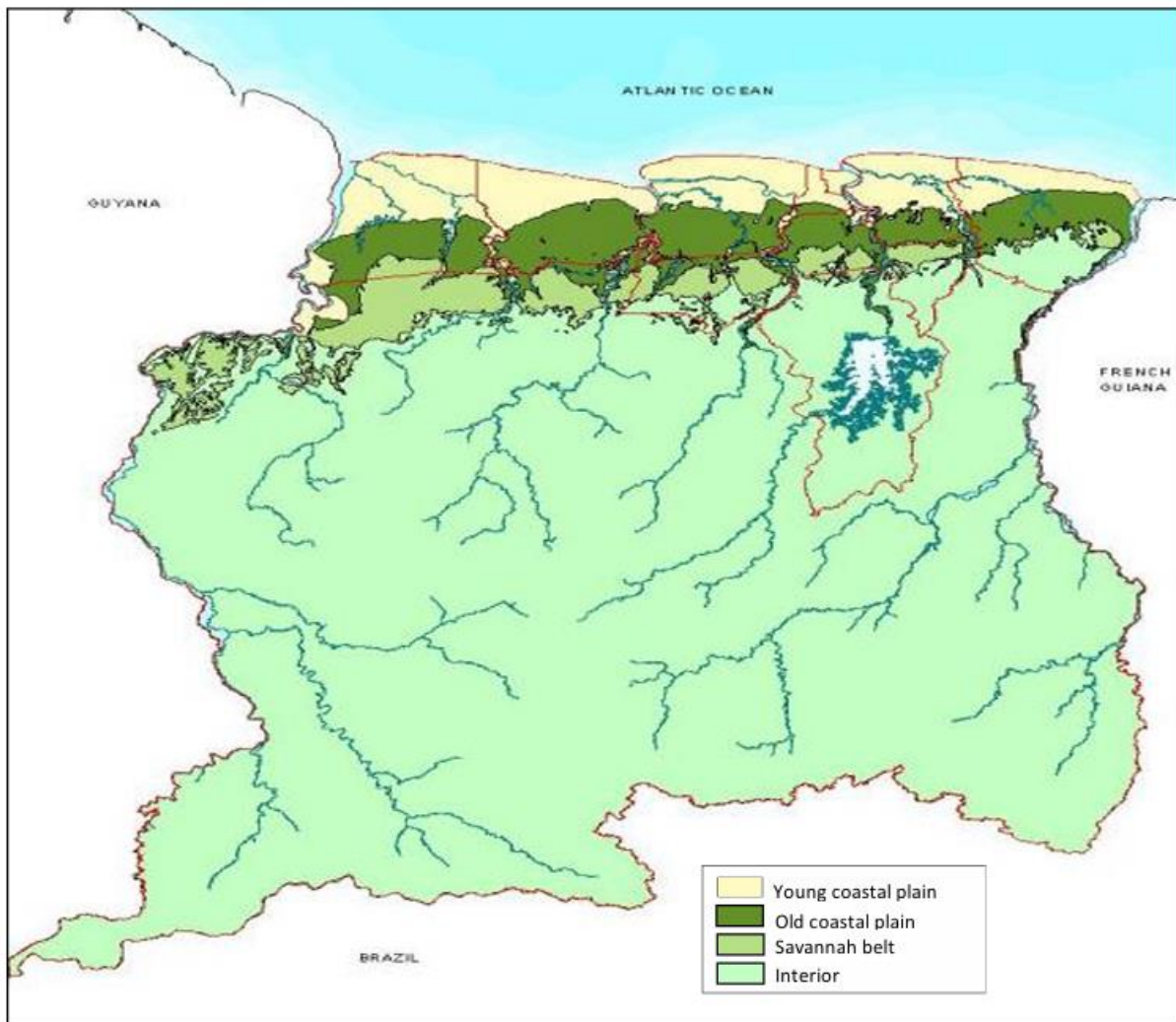
² VIDS, Baseline Report of the Situation of Indigenous Peoples in Suriname 2020, December 2020; VIDS, Fact Sheet Baseline Study of Indigenous Peoples in Suriname.

³ Source: <https://minorityrights.org/communities/maroons/>.

⁴ Multi-Annual Development Plan 2022-2026 of the Republic Suriname, Flipthinking, Connecting, Acting, Final Version Approved by The National Assembly on December 20th, 2021.

project funded by the UN SDG fund and co-led by FAO and UNIDO, with support from UNFPA and ILO, together referred to as the Participating UN Organizations (PUNO). Developed in close collaboration with local pineapple actors and stakeholders, the project aims to transform Suriname into an established producer and exporter of high-quality organic fresh and processed pineapples, using an inclusive and sustainable value chain approach. Pineapples are grown in the Savannah belt in Suriname, which is located inland of both the so-called young and old coastal plains. For details, see Map 1 below.

Map 1: Ecological zones in Suriname



The Joint Project (JP), in terms of its funding, is part of Joint SDG Fund’s Catalytic Investment portfolio. The project started in April 2022 and is scheduled to run till the end of March 2026. The project aims to facilitate the transformation of Suriname from a marginal pineapple producer, characterized by traditional growing practices, little value-addition and no exports, to an established producer and exporter of high quality organic and processed pineapple products. It tries to achieve this through support to three challenges that have been identified with respect to pineapple production in the country:

- **Knowledge challenge** - Limited knowledge on modern technologies, business practices and export markets, and the associated sparse supply and use of modern inputs and support services;

- **Finance challenge** - Lack of investment in modern production, post-harvest handling and processing models due to both demand and supply challenges in finance markets (including missing viable business plans and associated loan products);
- **Coordination challenge** - Insufficient collaboration and integrated structures among value chain actors, with trade taking place only in small volumes for local markets.

The project supports addressing each of these challenges in the following ways:

- **Horticulture (earlier called Pineapple) Innovation Hub** (the Hub), to address the knowledge challenge.
- **Collateral support facility** (the Facility), to address the finance challenge and promote investments.
- **Pineapple Cooperative Development (PCD) Company** (the Company), to address the coordination challenge and promote aggregation.

The project, in terms of its contents, is part of the ASTA global programme, co-led by FAO and UNIDO, that works with countries to transform their agri-food systems⁵. The ASTA programme supports the development of sustainable agricultural value chains and market systems in developing countries, making use of the combined capacities of local, national, regional and global actors. The programme aims for impact at all three aspects of sustainable development, including generating economic, social and environmental results. Suriname is one of the piloting countries, in addition to Bangladesh and Tanzania.

The ASTA programme provides a novel solution which:⁶

- Breaks down silos through broad-based public-private collaborations
- Does away with the traditional top-down support by placing the beneficiaries in the driving seat
- Embodies the ONE UN approach, whereby different UN organizations combine forces to assist countries in synergistic ways
- Shifts away from targeting individual SDG indicators

The ASTA programme helps countries move from broad recommendations and strategies to concrete implementation with measurable impacts. The ASTA model was to be tested in Suriname, where public funding worth \$2 Million was secured to promote \$8 Million in private investments to transform its pineapple value chain. The pilot program has been led jointly by FAO and UNIDO, with support from ILO and UNFPA, in partnership with the Ministry of Agriculture Animal Husbandry and Fisheries and the Ministry of Foreign Affairs, international Business and International Cooperation.

At the mid-term of the project period, a review was conducted. The overall objective of this Mid-Term Review (MTR) was to determine the effectiveness of the Joint Project in terms of its objectives and key results, both in developmental and financial terms. The review performed its assessment based on selected categories, as included in the Terms of Reference (TOR), including (1) design, (2) progress to date, (3) management efficiency, (4) risk management, and (5) sustainability. The review was, moreover, expected to identify what elements of the programme

⁵ The ASTA programme was earlier known as the Accelerator for Agriculture and Agroindustry Development and Innovation (3ADI+) Programme.

⁶ <https://www.fao.org/sustainable-development-goals-helpdesk/champion/article-detail/fao-unido-agrifood-systems-transformation-accelerator/en>.

have worked, what has not worked, and how limitations concerned can be addressed and opportunities further developed for the remainder of the implementation of the programme. The review was to provide evidence-based conclusions and recommendations, including details on 'how to' implement the latter. The MTR consisted of two parts; one conducted in early 2025 with additions made to the draft MTR report in May/June that year.

Key considerations

There are key considerations that were taken into account, based on the nature of the project, that helped to inform the review approach:

1. The design and implementation of the joint project has involved multiple stakeholders from UN agencies, public and private sector partners, and civil society organizations. Though these key stakeholders have agreed on the objectives and details of the project design, they may have different priorities in terms of some of the measures of success. Getting the perspectives of the various stakeholders on success parameters was important to the review process.
2. The results of the project are expected to be taken up and continued by the stakeholders in pineapple production after funding and technical assistance will be phased out by donor agencies. Thus, it is important to understand the critical factors that contribute to success of the programme and the likeliness of the sustainability of the results of the project.
3. The Horticultural Innovation Hub (HIH) has been set up as a transformative agency, targeting initially pineapple production in the country, with the ability to address additional horticultural products in the future when additional support would be provided.
4. The project is supported by multiple UN agencies and is assisting a variety of stakeholders at national and sub-national levels. Moreover, the project is part of larger international initiatives regarding SDG acceleration and support to value chain and market systems in developing countries. The review took note of this complex environment in which the project has been implemented.

2. Methodology

Methods for Data Collection and Analysis

The MTR made use of a theory-based approach, making use of the results chain inherent in the programme results framework and the various levels of results concerned. In addition, the review looked at unexpected and unforeseen results, both in terms of positive and appreciated changes as well as in terms on negative and unwanted changes. This in particular in the complex implementation context of the project, in which the results framework is not necessarily able to capture all the different ways in which stakeholders respond to the incentives as well as to other contextual issues concerned.

For data gathering, use was made of a mixed methods approach, combining qualitative and quantitative methods of data gathering. This in order to assess the qualitative issues in terms of results achieved and the ways in which these were achieved as well as getting an indication on quantitative aspects of results. The use of a variety of methods allowed for the use of triangulation of data across these methods and enhanced validity of findings.

Methods for data gathering included semi-structured interviews, which were conducted mostly with staff members of the participating UN agencies (PUNOs) and desk review of secondary data with the latter including:

- The Project Monitoring Form
- Project Newsletters
- The semi-annual report for June 2024 submitted by the project to the Joint SDG Fund
- Notes from the project Steering Committee meetings
- News and media articles about the project
- Technical documentation developed by the project

In terms of data analysis, content analysis was conducted on the data from semi-structured interviews, semi-annual reports, newsletters, and minutes of meetings of the JP steering committee and other documentation. Moreover, stakeholder and results framework analysis were used. For a list of persons interviewed, see Annex 2.

3. Findings

Design

How the joint project propels the 6 key SDG transitions especially considering the project’s intended focus on unlocking additional resources for the SDGs (for details, see Table 1 below).

Table 1. SDGs and project contributions

SDGs and selected targets	Project Contribution
SDG 2 Target 2.3: By 2030, double the agricultural productivity and incomes of small-scale food producers.	The use of improved methods in pineapple production is expected to increase productivity including quality of produce for indigenous and tribal groups with access to communal land that cannot be used for collateral purposes. As productivity increases and links are established with the appropriate markets, small-scale pineapple producers are expected to increase their incomes while reducing financial risks and enhancing their well-being.
SDG 2 Target 2.4: By 2030, ensure sustainable food production systems and implement resilient agricultural practices.	The adoption of sustainable organic agriculture practices is promoted, making agricultural practices more resilient.
SDG 5 Target 5.5: Ensure women’s full and effective participation and equal opportunities for leadership.	The project prioritizes ensuring that training and mentoring sessions are tailored to address the challenges of gendered roles.
SDG 5 Target 5.a: Undertake reforms to give women equal rights to economic resources.	The project will facilitate effective participation and equal opportunities for women.
SDG 8 Target 8.5: By 2030, achieve full and productive employment and decent work.	The project will promote entrepreneurship to enhance decent work for both men and women as well as youthful community members.
SDG 9 Target 9.3: Increase the access of small-scale industrial and other enterprises to financial services.	Project activities are geared to supporting small-scale enterprises in value addition through processing activities.

SDGs and selected targets	Project Contribution
SDG 12 Target 12.2: By 2030, achieve the sustainable management and efficient use of natural resources.	Improved organic agricultural production techniques are expected to reduce pressures on forests and the wider ecosystem.
SDG 17 Target 17.3: Mobilize additional financial resources for developing countries from multiple sources.	The project will set-up a financial mechanism to attract SDG-compliant investments in the pineapple value chain, facilitate linkages between value chain actors and service providers, strengthen and institutionalize knowledge in local situations, and contribute to a conducive policy environment in order to attract national and international investors.

The project has been a part of the wider ASTA (formerly 3ADI+) programme and has been able to make use of the value proposition of this programme, which have guided the implementation of the project.

Value propositions of ASTA and *linkages to the JP*⁷

- Create partnerships and facilitate linkages (*setup of the programme*)
- Develop an enabling policy environment (*the enabling environment for setup of the hub, facility and company*)
- Leverage and de-risk investments (*collateral facility*)
- Build capacities and share knowledge (*the hub and the company*)

Being part of ASTA, the project has been implemented in 6 steps:⁸

1. First assessment
2. Value chain analysis
3. Project proposal
4. Project delivery
5. Follow-up
6. Global learning

Relevance and effectiveness of the proposed financial instruments and other programmatic interventions.

- The Collateral Support Facility as part of the JP's core structures and the associated activities is expected to reduce the risks on the part of small-scale pineapple farmers. In the inland areas of Suriname this concerns indigenous communities, with communal landholding patterns, which prevents land from acting as collateral. The Collateral Support Facility is meant to provide guarantee capital in order to enable pineapple farmers to take out loans without the use of land as collateral.
- Improved access to production technology through the HIH can help small-scale farmers improve their efficiencies and enhance yields, including through year-round production.
- Other programmatic interventions are also expected to reduce the risks on the part of other actors in the downstream side of the pineapple value chain, including traders and processors of pineapples through the assurance of a stable supply of quality produce grown by farmers. Both the HIH and the Company are expected to provide this assurance to pineapple traders and processors by consolidating the harvests of small-scale farmers.

⁷ ASTA was earlier referred to with the acronym 3ADI+.

⁸ https://www.unido.org/sites/default/files/files/2023-03/Agriculture%20Systems%20Transformation%20Accelerator%20%28ASTA%29.pdf?_token=1939639647

- The digitalization of farm operations using the application⁹ developed by the project adds a means of improving productivity of pineapple growers while at the same time ensuring traceability of products, which can provide vital information to traders and processors.

Country ownership – both from public and/or private sector partners.

- With Suriname’s economy largely dependent on extractive industries, including gold, oil and aluminium, the pineapple value chain is an important opportunity for the Government of Suriname to enhance the diversification of Suriname’s economy. Agriculture and agribusiness have been identified as key development areas, with pineapple earlier listed as a prioritized commodity.¹⁰
- Country ownership from both public and private sector partners can be displayed through their commitment to and meaningful participation in project activities. Local consultations in the design of the programme were conducted through a Multi-Stakeholder Discussion organized by the project and attended by over 70 participants from the government, private sector, and development partners. The discussion focused on enhancing the competitiveness of the pineapple sector of Suriname.
- The Horticulture Innovation Hub (HIH) was established in October 2024 as a not-for-profit organisation (‘Stichting’ in Dutch), based on the joint decision of the FAO, Ministry of Agriculture, Animal Husbandry and Fisheries (MAAHF) and the Ministry of Foreign Affairs, International Business and International Cooperation (MFAIBIC). The first three (3) members of the Board were assigned, and these are Mrs Maitrie Jagroep from the MAAHF as Chair, Mrs Elizabeth Bradley from the MFAIBIC as Secretary, and Mrs Wendolien Sabajo the Captain of the Village of Matta, and pineapple farmer, as member.
- Local trial or demonstration farms were established for the conduct of trials, for development of the new ASTA agronomic model for pineapple cultivation in Suriname (see box on page 17 for details), for demonstration purposes and linked to capacity development activities for farmers in the region. These farms were located in Redi Doti and Matta in Para and Moengo in Marowijne district. At the time of the review the number of demonstration farms amounted to three.
- The pineapple processing plants supported by the project include AMEA Pineapples and Cooperative Asajaka Weno. Support provided by the project was in the form of consulting on access to finance, membership, and marketing. The cooperative Asajaka Weno was already operational at the time of the review, while AMEA Pineapples was in the process of purchasing processing equipment from Brazil.

JP strategy, the national development priorities and the UN Sustainable Development Cooperation Framework of Suriname.

- The JP is expected to contribute to enhancing economic diversification as identified in the 2016 National Master Plan for Agricultural Development. It is also expected to address key development challenges that were identified in the Policy Development Plan 2017 – 2021. The JP is, moreover, expected to contribute to the Decent Work Country Programme 2019-2021, which aims to enhance productivity and generate decent jobs by better equipping

⁹ Key functionalities of the digital application include: farmer registration, crop registration, monitoring of input application, pest and disease control and other required practices, weather risk alerts, interactive map to view plots and crops status, harvest projection, registration of costs and revenues, financial history data to facilitate loan risk assessment, functions related to marketing and quality control of the product (e.g. records of quality, storage and sales) and notification features (email reports, SMS to farmers). An additional feature includes the traceability of produce by which consumers can access the story of the pineapples produced. ASTA Suriname, Internal Agronomic Report for MTR, June 2025.

¹⁰ Neven, David, Hangh Nguyen and Anja Lienert, The pineapple value chain in Suriname, Diagnostics, investment models and plan of action for innovation and development, April 2019.

cooperatives and Micro, Small and Medium Enterprises. This is moreover to be achieved by addressing cross-cutting issues including gender, youth, employment and the environment.

- The National Development Plan Milestones 2017-2021 of the Government of Suriname include the following, to which the programme aligns well:
 - Strengthened national policy and regulatory framework in food and nutrition at national and community level.
 - Economic growth and development.
- The Agriculture Policy of Suriname focuses on the following, to which the programme is expected to contribute:
 - Guarantee food security and food safety for all
 - Develop a sustainable agriculture sector
 - Increase agriculture contribution to the Gross Domestic Product (GDP)

Situation at the farmer / household production level

An assessment conducted in 2019 identified three types of producers of pineapples in Suriname:

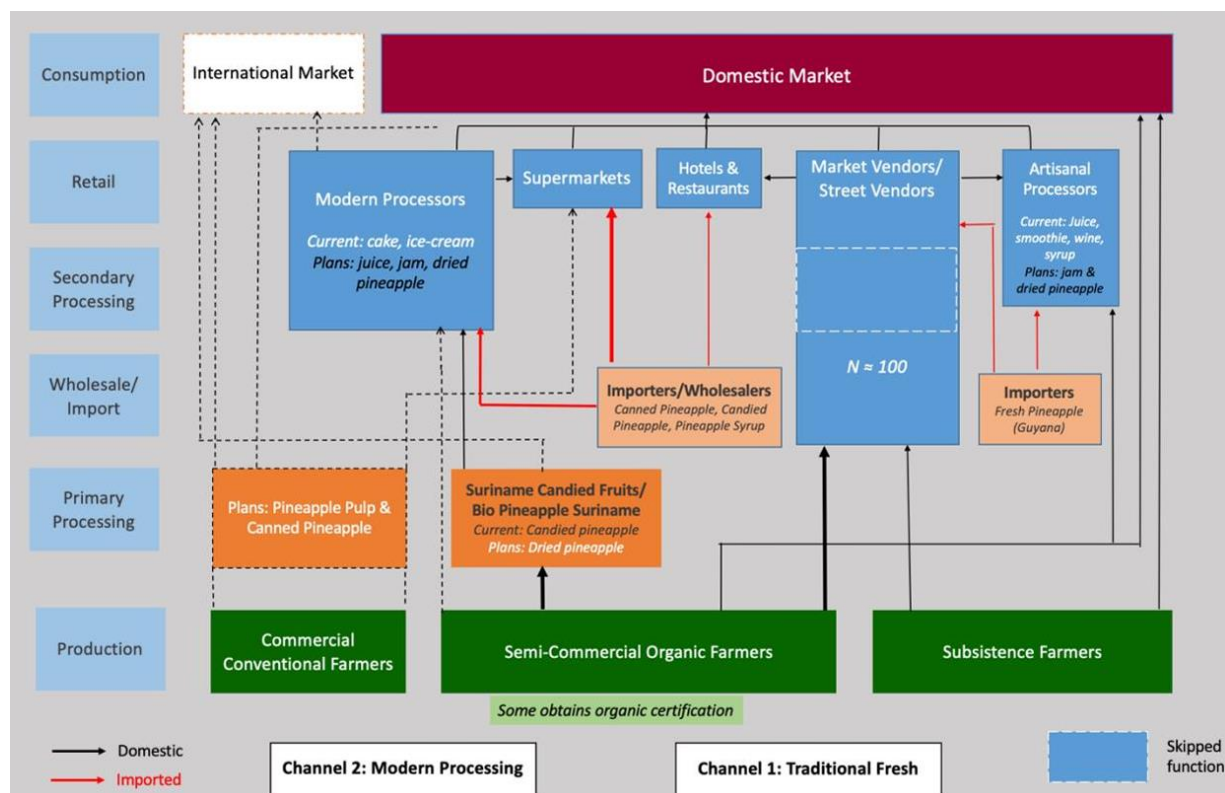
- **Commercial conventional farmers**, a category of farmers that only recently emerged and of which there were only two at the time of the study. These farmers are agricultural entrepreneurs who established production systems that allow year-round supply. They practised permanent land use systems rather than shifting cultivation and used fertilizer and pesticides in pineapple production and cultivated about 6 ha each. They were interested in cultivating varieties from Costa Rica.
- **Semi-commercial organic farmers**, of whom there were over 50 in 2019, who produce on plots from 1 to 4 ha and this group produced most of the pineapples available in the local market. They were located mainly in the Para region. They applied organic agriculture and practiced shifting cultivation using the same plot for three consecutive years after which they left the land fallow for 5 to 8 years. While they cleared their fields, no further land preparation was carried out like removing remaining tree trunks, ploughing or seed bed preparation. Planting was done mainly by hand by family members. Fields tended not to be organized in plots and rows. Only practice after planting concerned weeding, conducted every 3 to 6 months. Since no artificial flower induction was practiced, there was no homogenous ripening of the fruits. Part of these farmers sold their produce to Suriname Candied Fruits, a modern processor. Eighteen of these farmers were awarded European Union Organic Certification. Nevertheless, around 75 percent of production remained sold in the local market. Farmers normally did not hold records and did not use systematic methods to quantify production data. Many farmers had the idea that organic farming was equivalent to no-input agriculture and were not aware of organic fertilizers and composting or mulching practices.
- **Subsistence farmers**, estimated at over 200 in 2019, located in the districts of Sipaliwini, Marowijne and Para. They produced on small plots in agro-forestry systems. They generated some income by selling part of their produce to small market vendors or directly to local consumers. Agricultural practices amongst these farmers varied widely, from shifting cultivation to practicing permanent land use systems. In Para, Mata village, farmers intercropped pineapples traditionally with cassava while practicing shifting cultivation. Some farmers, due to agreements with processing agency Bio Pineapple Suriname, abandoned intercropping and started the same system as semi-commercial organic farmers.

The Value chain for the various types of pineapple farmers is depicted in Figure 1 below, which shows different linkages of the types of pineapple farmers to processing and trading opportunities. Most of the pineapple farmers belonging to indigenous and tribal groups (Amerindians and Maroons) do not have official land titles to the land that they live on and

cultivate. Land registration procedures are lengthy and complicated and need to be arranged in the capital Paramaribo. Access to communal land is usually granted by the village authority. Nevertheless, farmers have no formal right to the land that they cultivate and the nature of customary rights to land in Suriname remain undefined. Lack of property rights has been identified as constraining access to credit by using land as collateral and limiting investments in the land for agricultural production.

While commonly men are responsible for clearing the forest and burning down a piece of land for shifting agriculture, women are responsible to cultivate the crops. The division of gender roles is being challenged by the migration of many (young) men to the city, leaving women to conduct all agricultural labour or to hire labour. In areas where pineapple production has become more commercialized, production tend to be dominated by men. Also, intra household decision making tend to lie with men. Women are less mobile than men and less likely to travel outside of their village.¹¹

Figure 1: Value chain aspects for three types of pineapple farmers in Suriname



Source: Neven, David, Hangh Nguyen and Anja Lienert, *The pineapple value chain in Suriname, Diagnostics, investment models and plan of action for innovation and development*, April 2019.

The extent to which relevant gender, youth and other Leaving No One Behind (LNOB) issues were raised in the JP design, including reviewing that the results framework incorporates key considerations and disaggregated data on gender and other LNOB dimensions both in their development and financial results.

- The United Nations Development Programme (UNDP) five-factor framework for leaving no one behind identified the factors of (1) Discrimination, (2) Geography, (3) Vulnerability to

¹¹ Neven, David, Hangh Nguyen and Anja Lienert, *The pineapple value chain in Suriname, Diagnostics, investment models and plan of action for innovation and development*, April 2019.

shocks, (4) Socio-economic status, and (5) Governance (IEO, 2022). Overall, the principle of leaving no one behind is included in the project design through its focus on pineapple farmers, which consist primarily of indigenous and tribal communities which are amongst the poorest groups in the country.

- The issues related to the five UNDP factors regarding the Agenda 2030 principle of leaving no one behind and how these were integrated in the JP results framework are presented in Table 2 below.

Table 2. LNOB factors and joint project outputs

LNOB Factors	Identified outcomes and outputs in results framework
Discrimination: on the basis of assumed or ascribed identity or status	<ul style="list-style-type: none"> • Output 1.2: Pineapple Cooperative Development (PCD) company, whose shareholders are value chain actors, operational and provides support to production, processing, and marketing. • Output 1.3: Pineapple Innovation Hub operational, ensuring improved access to knowledge, inputs and services for value chain actors.
Geography: isolation, risk or exclusion due to location; includes environmental degradation, transport, technology	<ul style="list-style-type: none"> • Output 4.1 Connections between Surinamese value chain actors with the regional and global markets established.
Vulnerability to shocks: includes conflict, climate, environmental	<ul style="list-style-type: none"> • Output 2.1: Improved sustainable production models validated at the Pineapple Innovation Hub. • Output 2.2: Pineapple farms, particularly female-led, supported in implementing improved organic production models, learning from best practices and creating decent jobs. • Output 3.1: Green business models for small-scale processing facilities established. • Output 4.2: Value chain actors supported in meeting international market requirements, including sustainability certifications.
Socio-economic status: multidimensional poverty, inequalities	<ul style="list-style-type: none"> • Output 1.1: Collateral support facility operational de-risking bank loans, enabling access to loans for communal landowners • Output 4.2: Value chain actors supported in meeting international market requirements, including sustainability certifications. • Output 3.2: Interested value chain actors and investors supported in setting-up small-scale processing plants, meeting international standards and providing decent jobs.
Governance: laws, policies, institutions, voice and participation	<ul style="list-style-type: none"> • Output 5.1: Horizontal and vertical linkages between value chain actors established. • Output 5.2: Enabling environment promoted to foster the inclusive development of the pineapple value chain.
Gender Equality	<ul style="list-style-type: none"> • Output 2.2: (Female owned) pineapple farms use improved organic production models, creating decent jobs. • Output 5.2: Enabling environment promoted to foster the inclusive development of the pineapple value chain.

Analysis of the JP's log frame indicators and targets, assess how SMART (Specific, Measurable, Attainable, Relevant, Time-bound) the indicators are, and whether the midterm and end-of-project targets are realistically achievable (see details in Annex 1).

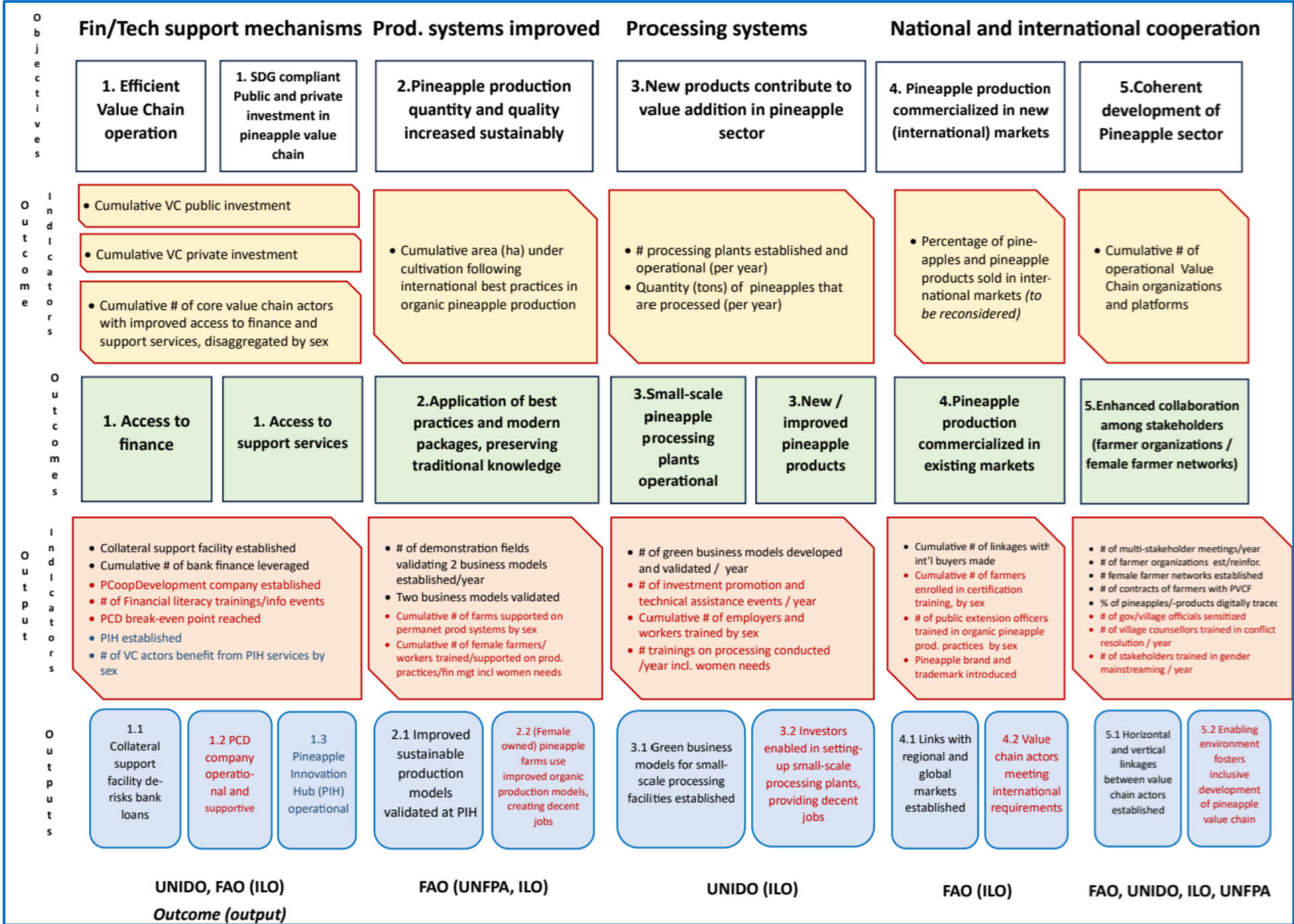
- The pilot characteristic of the project means that it is expected to be a testing ground concerning strategy and approach of support to pineapple producers and the various stages

of the pineapple value change in Suriname and to identify constraints as well as ways to address these. Though a results framework can be useful in terms of monitoring and evaluation, it needs to be applied with sufficient flexibility in order not to undermine the pilot character of the initiative.

- The JP results framework indicators and targets are specific, measurable, attainable, relevant, and time-bound (SMART) based on the assessment of how these are presented in the Project Document. It is assumed that the identification of indicators and targets were based on the combined PUNOs' field experiences and project implementation experiences.
- However, with the delays in the implementation of the project because of the delayed establishment of the Hub, there are targets that cannot be achieved particularly those that are related to pineapple production. Specifically, targets that are about area covered for pineapple production (Outcome 2 indicator), expected volumes that will be delivered to buyers (Outcome 3 indicator), and amount (in USD) of public investments attracted to the pineapple value chain (Outcome 1 indicators). It is also expected to have an adverse effect on indicators related to reaching the breakeven point of the Pineapple Cooperative Development Company (Output 1.2 indicator) and HIH (Output 1.3 indicator). It needs to be seen to what extent these targets will be able to be achieved at the end of the project.
- The use of a results framework is most useful when issues have been tested and there is a shared understanding on how activities, outputs and outcome level changes are interrelated over time. However, in the case of the ASTA joint project in Suriname, this is not necessarily the case. Though there has been a results framework developed with indicators at the various levels of change, these are far from tested. So it is not clear to what extent the results framework reflects the actual practice and to what extent it needed to be adapted to fit the reality. The original results framework, including indicators at outcome and output levels is presented in the Figure presented below.
- With the HIH taken a long time to establish, rather than risking another long development process, it was decided for the HIH for the time being to submerge the functions of the PCD Company. Other aspects of the design that were adapted, included the scaling down of initial trial fields to more manageable size and in line with responses for interest received from indigenous farmers.

Assessment of the JP's implementation timeframe and whether it is sufficient to complete planned activities and achieve envisaged results. Recommendations on programme extension, if relevant, must be added to the Conclusions and Recommendations section.

- Components of the project that are critical for its success are the (1) the establishment of the Pineapple Hub, (2) demonstration and trial farms, (3) establishment of the Collateral Support Facility, (4) the establishment of the Pineapple Cooperative Development. While the establishment of the demonstration and trial farms is particularly important and crucial because this will affect whether farmers are willing to adopt the improved production technologies and methods that are being introduced. The collateral support facility will be crucial for the access of farmers to credit and the establishment while the Hub and the Company are important in order to support their endeavours in changing production methods. Thus, for the success of the project, all these factors need to be in place and delay in any of these is bound to delay results at the level of the farming households and pineapple production on a whole.
- Assessment of the JP targets found that most of the indicators are time-bound. However, related to the above findings, many of the targets at the mid-term of the project were not achieved due to the delayed establishment of the Hub, which affected all the other parts of the project. Particularly those related to pineapple production may no longer be achieved.



- The buyers of pineapples showed interest in linking with the project because it is a potential source of pineapple supply. However, the establishment of the formal link can only happen once the project is able to show that the pineapples produced by the project will meet their quality, volume, and consistency requirements.

Progress and Results to Date

The following are the findings on the assessment of the progress and results achieved to date by the project. Majority of the targets identified during the start of the project were not achieved at the Mid-Term of project implementation and this was mainly due to the delayed establishment of the Horticulture Innovation Hub, which is a prerequisite for many of the project output areas. The details regarding the achievements of the JP at June 2025 is shown in Table 3, pages 21-23 below.

Outcome 1: Access to finance and support services improved to foster efficient value chain operation and increased SDG compliant public and private investment into the pineapple value chain.

Outcome indicator 1: Cumulative amount (USD) of public investment attracted to the Value Chain

- A USD 0.3 Million grant was secured from the Islamic Development Bank (IsDB) and the first instalment of the grant was used to advance agronomic activities through field trials that evaluated the performance of Surinamese pineapple varieties under various agro-ecological conditions. The results of the trials were used to inform comprehensive training sessions for stakeholders, including farmers and field agents, that focused on Artificial Flower Induction (AFI) procedures, Integrated Pest Management (IPM), Good Agricultural Practices, Bio-factory training and installation, and plant growth monitoring..
- FAO inputs on the development of the digital application for pineapple farming related issues received at USD 110,000 from the FAO ELEVATE department.
- Thus, total investments attracted has remained below the target of 2 million USD, i.e. at 20 percent of the target.

Outcome indicator 2: Cumulative amount (USD) of private investment attracted to the value chain, matching PUNO contributions

- As part of the loan scheme setup, farmers are to provide labour and land for pineapple production as well as a percentage of the collateral coverage through their owned assets.¹²

Outcome indicator 3: Cumulative # of core value chain actors with improved access to finance and support services, disaggregated by sex

- The Collateral Support Facility was delayed as this support was to be provided from the hub as implementing facility with the hub not yet fully operational till mid-2024. Both financial and other support services will get operational with the official opening of the hub, expected for June 2025. In the meantime, preparatory activities have been conducted with support obtained from the Trust Bank Amanah (TBA) and further opportunities for the use of the government NOFA loan scheme. The latter with the advantage of lower interest rates at 5 percent rather than the 11-13 percent of the TBA. Mid 2025, support is planned to be provided for the first batch of 6 farmers for pineapple production of 1 ha each which will be able to test both the agronomic and the business model supported by the project (see also output 1.3 below).

¹² The Collateral Loan Facility of the project guarantees half the loan obtained by farmers, with the other half to be guaranteed through some of the assets owned by the farmers (though not the land, which is communal owned).

Constraints to reaching outcome level results

Overall, project results have been severely affected by the delays in establishment of the HIH which in turn affected the other components of the project as these all depended on the functioning of the hub. This delay was caused by factors outside the direct control of the project, including uncertainty about the type of organization required for the hub as well as the level of decision making needed within the Government of Suriname. The Free, Prior and Informed Consent (FPIC) process, required when indigenous and tribal population groups are affected, took a long time and added to delay in implementation. Based on the FPIC process, the VIDS assigned four villages for participation in the project, which further limited project implementation.

OUTPUT 1.1: Collateral support facility operational de-risking bank loans

Output Indicator 1.1.1: Collateral support facility established

- Preparations for the establishment of the Collateral Support Facility have been ongoing with personnel recruitment conducted, including that of a director of the hub (with the Facility included as a service provided through the hub), Standard Operation Procedures for the Facility were established including operational and financial ones. Procurement agreement was put in place to regulate the use of the collateral. Moreover, a survey was conducted to assess the appetite of farmers for loans to enhance pineapple production. A first batch of 6 farmers have been selected (4 men, 2 women) based on selection criteria developed, with a second batch of about 15 farmers and a third of about 30 farmers expected for September 2025 and January 2026 respectively.¹³ Other interviewees expected the inclusion of a total of 25 farmers with a total of 25 ha till the end of the present project phase. For the financial sustainability of the project results, it is in particular the number of ha that will be important as it reflects the amount of pineapples that can be harvested in the near future, in order to show that the HIH can become self-sustained. From a social perspective, one would tend to value the number of farmers involved and their enhanced household economics and well-being.

Output Indicator 1.1.2: Cumulative amount (USD) of bank finance leveraged

- 0.3 million USD secured from the Islamic Development Bank (IsDB).

OUTPUT 1.2: Pineapple Cooperative Development (PCD) company, whose shareholders are value chain actors, operational and support production, processing, and marketing

Output Indicator 1.2.1: PCD company established

- The PCD company will be established once the Hub is operational, and the project has gained insights into the market operations. In the meantime, a background study on the best PCD model to implement was finalized by Wageningen University Research. For the time being PCD functions are planned to be incorporated in the hub in order to avoid further delay in project implementation through separate PCD company establishment.

Output Indicator 1.2.2: # of information events and financial literacy trainings organized (per year)

- With the hub expected to be functional from June 2025 onwards, trainings for farmers on financial issues have started in order to enhance financial literacy which will enable them to go through the financial / administrative process required to obtain a loan. Moreover, ILO started training on cooperatives, enhancing the capacities of Ministry of Labour (incl

¹³ Horticulture Innovation Hub, Selection of farmers to apply for a loan for Pineapple production. Internal Document.

Raad Cooperatie Wezen), Ministry of Agriculture and Ministry of Regional Development as well as some NGOs (Indigenous people organization, Maroon women organization, Tropenbos and WWF) as well as HIH staff. Moreover, ILO has been preparing for entrepreneurial skills training which is ready to start when suitable.

Output Indicator 1.2.3: Breakeven point reached

- Given the delays mentioned above and under output 1.3 below, this has not been reached.

OUTPUT 1.3: Pineapple Innovation Hub operational, ensuring improved access to knowledge, inputs and services for value chain actors

Output Indicator 1.3.1: Pineapple Innovation Hub established

- Though the Hub was established in Q4 2024, it has not yet been operational, and it is expected to be officially started in June 2025. The establishment of the Hub needed the approval of the Government of Suriname. As this was a new type of entity, it was unclear what level of decision making would be involved, including whether a Presidential decree would be required. In the end, the form of a ‘Stichting’ was opted for, which concerns a foundation (not-for-profit entity). The process caused a considerable delay to the establishment of the Hub and the operationalization of it. The official opening of the Hub was scheduled to take place in May 2025 but due to agenda issues, was postponed to June 2025. Once the hub is officially established, this will speed up the implementation of both the hub activities, as well as those of the other parts of the project. The first three members of the Board of Directors of the hub were identified and included Mrs Maitrue Jagroep (MAAHF) as Chair, Mrs Elizabeth Bradley (MFAIBIC) as Secretary, and Mrs Wendolien Sabajo (Captain of the Village of Matta and pineapple farmer) as member. Moreover, the hiring of a director has been concluded with a full-time contract for the Hub director from March until September 2025. While the hub was initially foreseen as a Pineapple Innovation Hub, this was adapted to the Horticulture Innovation Hub (HIH), with the ability to support additional horticultural products in the near future.
- The HIH has been staffed including for its three divisions: agronomic division, business division and admin and finance division. As part of the HIH staff, there are three field agents stationed at village level who support farmers at the local level.

Output Indicator 1.3.2: Cumulative # of value chain actors benefiting from services provided by the hub, disaggregated by sex

- Three trial farmers (all men) have benefitted from the support of the Hub team so far and two farmers advanced their pineapple production with equipment advice from the hub team. Once the hub is fully established and the financial scheme in place, the project is expected to be able to scale up to 25 pilot farmers till March 2026, in three consecutive batches of 6, 8 and 11 farmers (with others expecting higher numbers of upto 51 farmers).
- A total of about 250 farmers, including women and youth, have benefitted from trainings and events provided by the project, including people from the four selected villages and beyond those in terms of farmers that showed interest in participation and joined the trainings and events organized.

Output Indicator 1.3.3: Breakeven point reached

- Due to the delay in getting the hub in place and the knock-on effect for the Collateral Support Facility and the Pineapple Cooperation Development Company, the breakeven point remains far from being reached.

Outcome 2: Pineapple production quantity and quality increased in a sustainable manner, through the application of best practices and modern packages while preserving traditional knowledge

Outcome 2 indicator : Cumulative area (ha) under cultivation following international best practices in organic pineapple production

- A total of 0.12 ha of trial farm was planted with 3,000 Stuger and Ingni Nasi pineapple seeds. Two other trial farms were established in Matta (0.06 ha) and Moengo (0.13 ha). This while the planned target for 2022 was 25 ha and for 2023 was 140 ha. This has left a significant gap in terms of area planted so far.

OUTPUT 2.1: Improved sustainable production models validated at the Pineapple Innovation Hub

Output Indicator 2.1.1: # of demonstration fields established (per year) to validate two business models following best practices in organic pineapple production

- Three demonstration fields have been established, two in 2022 and one in 2024, in Para (Mr. Tawjoeram and Mr. Sabajo) Para using the Red Round Ingi Nasi variety and Moengo (plot from Ministry of Agriculture) using Stuger, Ingi Nasi, and Djogo varieties. Land preparations have been initiated; however, the set-up of the trials was delayed due to heavy rainfall and high levels of clay content in the soil in Moengo and not enough seeds available in Matta. It was noted that the Matta and Moengo trial farms had strong participation of women farmers.
- Agricultural practices were tested with success, including artificial flowering enabling year-round production, planting in rows increasing the number of pineapple plants per ha, production and use of organic fertilizer and other bio-inputs through 'bio factories' and planting on permanent farmland (rather than practicing rotational slash and burn cultivation). In order to provide shade for the pineapple plants, intercropping has been included in the agricultural model, which was already practiced by some farmers. Trials showed positive results in development of the new ASTA agronomic model for pineapple cultivation in Suriname (see Box below) and in terms of farmer participation, informed by technical support from the project. It was noted that the Matta and Moengo trial farms had strong participation of women.
- Farmers were supported with relevant information through an application that has been developed with additional FAO funding and which in turn provided information of farmers to the HIH.

Output Indicator 2.1.2: two business models validated

- For the validation of pineapple production models, inputs from Costa Rica were delivered to Suriname and the project started using these in the trial plots. The investment in the advanced production model has already been explained to farmers. Results of the models will be known only at the time of the harvesting period of the pineapples later in 2025.
- The actual implementation of the business models still needs to take place, with the first batch of 6 farmers about to start at the time of the present MTR. While the number of farmers that use the business model is small, a much larger number of 250 farmers have been trained in the enhanced agricultural practices, and joined in project events, learnings which they can apply on their fields.

Box: The new ASTA agronomic model for pineapple cultivation in Suriname

Field trials

Objective of the trials was to assess the performance of various Surinamese pineapple varieties under modern production methods across different agroecological zones, including application of organic fertilizer, organic fungicides, application of ethylene for artificial flower induction and year-round production feasibility. In Matta and Moengo, intercropping was introduced of pineapple with banana, cassava and lemongrass. The trials were to identify optimal management practices for each variety, enabling the provision of tailored technical guidance to farmers adopting the upgraded model and the development of a growers' manual. Trial plots, moreover, served as demonstration and training sites for local pineapple producers. Soil analysis for each of the selected trial plots informed the productive potential of each of the plots and management practices to maintain and improve productivity. Based on field trials, baseline data were informed on the physiological development of locally selected pineapple varieties.

The agronomic model developed was based on a learning-by-doing approach, resulting in incremental development of good practices. Plots were selected in cooperation with OSIP ('Organisatie Samenwerkende Inheemse Dorpen') and community leaders. With Suriname being home to 15 local pineapple varieties, three varieties were selected for trials: Stuger, Ingi Nasi and Djogo with Ingi Rode Ronde added in Matta on the request of local farmers.

The three field trials assessed the response of the selected pineapple varieties to the proposed nutritional protocol and generated data that supported the adjustment of the management protocol to local conditions and informed the development of the new ASTA agronomic model for enhanced pineapple production in Suriname.

Agronomic model

The resulting agronomic model was based on artificial flower induction allowing for year-round pineapple production, following a staggered planting model. Enhanced land preparation included harrowing, planting in beds and improving irrigation and drainage. Seed selection allowed for more plant uniformity and improved sowing practices enabled increased plant density to about 25,000 plants per hectare. With continued production on the same land area (rather than practicing rotating slash-and-burn agriculture) the model included the application of organic fertilizer and integrated pest management. The nutritional and phytosanitary application protocols aimed to produce higher-quality fruit, with larger sizes and in a shorter time frame while at the same time enhancing the quantity and quality of planting material required for staggered planting and ensuring year-round pineapple production.

Agricultural practices in the model include

- Land preparation, including clearing of a plot, harrowing, subsoiling, bedding, drainage and application of liming as well as organic matter (produced in local 'bio-factories')
- Bio-factories to produce organic inputs as fertilizers and support integrated pest management reducing dependence on (chemical) imports
- Planting, including seed selection, sowing and plant density
- Harvesting and assessment of results

Source: ASTA Suriname, Internal Agronomic Report for MTR, June 2025, Key Informant Interviews.

- The business and financial models developed by the project make use of clusters of farmers, which are supported by a lead farmer who acts as a coordinator with multiple clusters and their lead farmer assisted by a field agent. Farmers can cultivate different land sizes, varying between 1, 2.5 and 5 ha with the production of a main as well as a ratoon crop. Over the years the number of farmers starting with the main crop is planned to be doubled with the ratoon crop following a similar pattern lagging one year. This will tentatively result in 2030 with a total of 160 farmers starting their main crop while 80

farmers will harvest a ratoon crop. The farmer profitability analysis shows the benefits for participating farmers, with the ratoon crop actually more profitable given the reduced production and input costs. The model includes a full-cost model and a reduced-cost model, with the latter for small-scale farmers using family labour only.

- Limitation in terms of loan repayment concerns the long gestation period of pineapple with the first yield to occur in month 15 while the longest grace period for the loan would be 12 months, meaning that the first loan repayment would be required before the first pineapple harvest.¹⁴

OUTPUT 2.2: Pineapple farms, particularly female-led, supported in implementing improved organic production models, learning from best practices and creating decent jobs

Output Indicator 2.2.1: Cumulative # of female-led farms supported in the implementation of upgrading to permanent production system, disaggregated by sex

- 6 farmers scheduled to start in June 2025 of which 4 men and 2 women
- Preparations have started including 42 farmers were surveyed in 4 villages which were agreed by VIDS. After finalizing the financial mechanisms and once farmers have agreed on the terms a second in-field interview needs to be conducted to check if the farmers meet the in-field criteria to become a pilot farmer.

Output Indicator 2.2.2: Cumulative # of female farmers and workers trained and supported on production practices and financial management, taking into account women's needs and constraints

- 116 female farmers participated in farmer workshops conducted so far, with 45 in 2022, 49 in 2023 and 22 in the first half of 2024, which was above the target of 95 over this period of the project.

Outcome 3: Small-scale pineapple processing plants operational, which contribute to value addition through new and improved pineapple products.

Outcome 3 indicator 1: # processing plants established and operational (per year)

- With the establishment of a new processing plant requiring significant investment and time, the project team focused support on existing companies including AMEA Pineapples and Cooperative Asajaka Weno. The support that these companies received included consulting on access to finance, membership, and marketing.

Outcome 3 indicator 2: Quantity (tons) of pineapple that are processed (per year)

Support has not yet resulted in quantities of pineapple produced or processed.

OUTPUT 3.1: Green business models for small-scale processing facilities established

Output Indicator 3.1.1: # of green business models developed and validated (per year)

- These activities needed to wait till the establishment of the Hub and the Collateral Support Facility was finalized and the resources concerned from the SDG Fund could be released.

¹⁴ FAO, Suriname Pineapple Value Chain Development, Report on Business and Financial Model for the Suriname Horticulture Innovation Hub including Investment Plan for the Establishment of a Packhouse Facility, March 2025; Full cost Innovation Hub Financial Model, 1 Mar 2025, Internal Excel Spreadsheet.

OUTPUT 3.2: Interested value chain actors and investors supported in setting-up small-scale processing plants, meeting international standards and providing decent jobs

Output Indicator 3.2.1: # of investment promotion and technical assistance events organized (per year)

- ASTA facilitated the participation of ASTA National Agronomist and a Representative of Ecomax N.V. Biodegradable Food Boxes in the training and roundtable event titled Enabling Sustainable Industrial Development of the Food Packaging Industry to Reduce Food Loss and Waste in Latin America and the Caribbean. It focused on fostering innovation, efficiency, and quality compliance in the food packaging industry. Participants received targeted training on key areas, including packaging fundamentals, quality infrastructure, hygiene practices, and the use of packaging as a marketing tool. The event underscored the critical role of packaging in improving food safety, reducing losses, and enhancing value addition throughout the supply chain.
- Target was for 4 in 2022 and another 4 in 2023 but due to delay in HIH establishment these results were not yet reached.

Output Indicator 3.2.2: Cumulative # of employers and workers trained, disaggregated by sex

- No funds were released to execute this activity (awaiting establishment of the Hub and set up of collateral facility so SDG Fund can release the related instalment)

Output Indicator 3.2.3: # trainings on processing conducted (per year) taking into account women's need and constraints

- No funds were released to execute this activity (awaiting establishment of the Hub and set up of collateral facility so SDG Fund can release the related instalment)

Outcome 4: Pineapple products effectively commercialized in new and existing markets. Producers and processors gain access to local, regional and global markets.

Outcome 4 indicator 1: Percentage of pineapples and pineapple products sold in the international markets

- As planting in trial plots commenced in late 2023, harvesting of the trial plots will be ready in 2025. A market readiness assessment is planned for the second half of 2025, with funding from IsDB.

OUTPUT 4.1: Connections between Surinamese value chain actors with the regional and global markets established

Output Indicator 1.1.1: Cumulative # of linkages with international buyers established

- A representative of Massey Supermarket Chain in Barbados, Mr. David Moore, visited the project to explore importing fresh fruits and vegetables from Suriname. This visit highlighted Suriname's potential as a supplier of high-quality organic pineapples to Massey Stores and other Caribbean markets. It also showed the opportunities of the project for local pineapple farmers and communities in Suriname, such as better market access, increased income, and sustainable farming practices. (Target was 2).

OUTPUT 4.2: Value chain actors supported in meeting international market requirements, including sustainability certifications

Output Indicator 4.2.1: Cumulative # of farmers enrolled in the certification training program, disaggregated by sex

- None so far. Once the financial mechanism under the hub is in place, and farmers agree on the terms, pilot farmers can be selected through a second in-field interview and will start producing organic pineapples and enroll in a certification program.

Output Indicator 4.2.2: # of public extension officers trained in organic pineapple production practices (per year), disaggregated by sex

- During farmers workshop in May 2024, staff of Ministry of Agriculture joined and learned on the advanced pineapple production. More workshops together with the Ministry of Agriculture are planned.

Output Indicator 4.2.3: Pineapple brand and trademark introduced

- Potential service providers have been identified. Pineapple brand and trademark is planned to be introduced afterwards.

Outcome 5: Collaboration amongst stakeholders reinforced for a coherent development of the pineapple sector.

Outcome 5 indicator: Cumulative # of operational value chain organizations and platforms

- Pineapple Value Chain WhatsApp group established. In April 2024, ASTA received USD 110,000 from the FAO ELEVATE department to develop a digital platform in local language to help farmers overcome market barriers, improve operations, and access regional and global markets for indigenous farmers in Suriname. The Hub was established and operational, but the PCD company was not yet established.
- One meeting, hosted by the ASTA project, involving project stakeholders included the PSC meeting, held on the 2nd of May 2024.
- In terms of developing networks, an informal female farmer network was established through a WhatsApp group in relation to the comprehensive gender and gender-based violence related training. Leadership and business skills and gender training were provided to the farmer networks Cooperatief Platform Agrarische Ontwikkeling Marowijne and Marron Vrouwen, and also to the key persons of the cooperation of Matta and Pierre Kondre.
- The Digital Platform for Pineapple Farmers in Suriname has been developed with the main partner Dimitra, a global agriculture tech company. The app for the digital platform is developed in the Dutch language. The digital platform features product traceability and a fully working version is available, which will need to be field tested.

OUTPUT 5.1: Horizontal and vertical linkages between value chain actors established

Output Indicator 5.1.1: # of multi-stakeholder meetings (per year)

- One meeting, hosted by the ASTA project, involving project stakeholders included the PSC meeting, held on the 2nd of May 2024.

Output Indicator 5.1.2: Cumulative # of farmer organizations established/reinforced

- The Farmer network Cooperatief Platform Agrarische Ontwikkeling Marowijne and Marron Vrouwen Network but also the key persons of the cooperation of Matta and Pierre Kondre were reinforced with leadership and business skills and gender training

Output Indicator 5.1.3: Cumulative # female farmer networks established

- Two networks established so far, as well as an informal female farmer networks through the WhatsApp group.

Output Indicator 5.1.4: Cumulative # of contracts between farmers and the Pineapple Value Chain Fund signed

- Expected for 5 or 6 farmers in the first batch in early July 2025.

Output Indicator 5.1.5: % of pineapples and pineapple products digitally traced

- A Digital Platform, for Pineapple Farmers in Suriname, is currently in the development stage. A main partner of this initiative is Dimitra, a global agriculture tech company that will develop the application in the local language (Dutch), implement a train-the-trainers approach for data collection and app use, and enable product traceability. The local Government, various small-scale producers, along with different regional and international buyers, are all expected to benefit from this initiative.

OUTPUT 5.2: Enabling environment promoted to foster the inclusive development of the pineapple value chain

Output Indicator 5.2.1: # of government and village officials sensitized to support implementation (per year)

- The project made important contributions to SDG 5 on gender equality by providing Gender Capacity Building training to 196 government and village officials.

Output Indicator 5.2.2: # of village counsellors trained in conflict resolution (per year)

- 150 women, youth, village leaders, farmers and key person trained in conflict resolution.

Output Indicator 5.2.3: # of stakeholders trained in gender mainstreaming (per year)

- Specifically for the gender training 87 persons (73 F/15 M) were trained. Yet the overall participation in all the 3-training blocks of Leadership, Business Skills and Gender & Abuse, 156 people participated. Total reported number of trainees amounted to 571.

Table 3. Overview of achievements of the JP June 2025

Indicator details	PUNO	Target	Results so far
OUTCOME 1: Access to finance and support services improved to foster efficient value chain operation and increased SDG compliant public and private investment into the pineapple value chain			
Outcome indicator 1: Cumulative amount (USD) of public investment attracted to the Value Chain	UNIDO FAO	2.0 million USD	0.4 million USD or 20 % achieved
Outcome indicator 2: Cumulative amount (USD) of private investment attracted to the Value Chain	UNIDO FAO	2.4 million USD	Inputs in kind of participating farmers and parts of collateral through own assets
Outcome indicator 3: Cumulative # of core value chain actors with improved access to finance and support services, disaggregated by sex	UNIDO FAO	100	6 scheduled to start in June 2025 (4 men, 2 women)
Output1.1: Collateral support facility operational de-risking bank loans			
Output Indicator 1.1.1: Collateral support facility established	UNIDO	Fund established and operational	Fund established and operational
Output Indicator 1.1.2: Cumulative amount (USD) of bank finance leveraged	UNIDO	2 million USD	0.3 million USD
Output 1.2: Pineapple Cooperative Development (PCD) company, whose shareholders are VC actors, operational and support production, processing, and marketing			

Indicator details	PUNO	Target	Results so far
Output Indicator 1.2.1: PCD company established	UNIDO	PCD company established and operational	PCD company functions for the time being to be incorporated in the HIH
Output Indicator 1.2.2: # of information events and financial literacy trainings organized (per year)	FAO ILO	17	1
Output Indicator 1.2.3: Breakeven point reached	FAO	Breakeven point reached	Breakeven point so far not reached
Output 1.3: Pineapple Innovation Hub operational, ensuring improved access to knowledge, inputs and services for value chain actors			
Output Indicator 1.3.1: Pineapple Innovation Hub established	FAO	HIH established and operational	HIH established and operational
Output Indicator 1.3.2: Cumulative # of VC actors benefiting from services provided by the hub, disaggregated by sex	FAO ILO	100	250 farmers through training; 6 farmers scheduled to start production in June 2025 (4 men, 2 women)
Output Indicator 1.3.3: Breakeven point reached	FAO	Breakeven point reached	Breakeven point so far not reached
OUTCOME 2: Pineapple production quantity and quality increased in a sustainable manner, through the application of best practices and modern packages while preserving traditional knowledge			
Outcome 2 indicator : Cumulative area (ha) under cultivation following international best practices in organic pineapple production	FAO	165	0.31
Output 2.1: Improved sustainable production models validated at the Pineapple Innovation Hub			
Output Indicator 2.1.1: # of demonstration fields established (per year) to validate two business models following best practices in organic pineapple production	FAO	6	3
Output Indicator 2.1.2: two business models validated	FAO	Validated	Partially validated
Output 2.2: Pineapple farms, particularly female-led, supported in implementing improved organic production models, learning from best practices and creating decent jobs			
Output Indicator 2.2.1: Cumulative # of female-led farms supported in the implementation of upgrading to permanent production system, disaggregated by sex	FAO	97	2
Output Indicator 2.2.2: Cumulative # of female farmers and workers trained and supported on production practices and financial management, taking into account women ´s needs and constraints	FAO UNFPA ILO	95	116
OUTCOME 3: Small-scale pineapple processing plants operational, which contribute to value addition through new and improved pineapple products			
Outcome 3 indicator 1: # processing plants established and operational (per year)	UNIDO	unclear	Existing plants have been supported
Outcome 3 indicator 2: Quantity (tons) of pineapple that are processed (per year)	UNIDO	unclear	0
Output 3.1: Green business models for small-scale processing facilities established			
Output Indicator 3.1.1: # of green business models developed and validated (per year)	UNIDO	3	0
Output 3.2: Interested value chain actors and investors supported in setting-up small-scale processing plants, meeting international standards and providing decent jobs			
Output Indicator 3.2.1: # of investment promotion and technical assistance events organized (per year)	UNIDO ILO	8	0 events organized Participation in one event
Output Indicator 3.2.2: Cumulative # of employers and workers trained, disaggregated by sex	ILO	unclear	0
Output Indicator 3.2.3: # trainings on processing conducted (per year) incl women ´s need and constraints	ILO	4	0
OUTCOME 4: Pineapple products effectively commercialized in new and existing markets. Producers and processors gain access to local, regional and global markets			

Indicator details	PUNO	Target	Results so far
Outcome 4 indicator: Percentage of pineapples and pineapple products sold in the international markets	FAO	unclear	0
Output 4.1: Connections between Surinamese value chain actors with the regional and global markets established			
Output Indicator 4.1.1: Cumulative # of linkages with international buyers established	FAO ILO	2	1
Output 4.2: Value chain actors supported in meeting international market requirements, including sustainability certifications			
Output Indicator 4.2.1: Cumulative # of farmers enrolled in the certification training program, disaggregated by sex	FAO	72	0
Output Indicator 4.2.2: # of public extension officers trained in organic pineapple production practices (per year), disaggregated by sex	FAO	55	17
Output Indicator 4.2.3: Pineapple brand and trademark introduced	FAO	Brand and trademark developed	No existing brand and trademark
OUTCOME 5: Collaboration amongst stakeholders reinforced for a coherent development of the pineapple sector			
Outcome 5 indicator: Cumulative # of operational VC organizations and platforms	FAO UNIDO ILO UNFPA	13	3
Output 5.1: Horizontal and vertical linkages between value chain actors established			
Output Indicator 5.1.1: # of multi-stakeholder meetings	FAO UNIDO ILO UNFPA	16	5
Output Indicator 5.1.2: Cumulative # of farmer organizations established/reinforced	UNFPA FAO ILO	10	4
Output Indicator 5.1.3: Cumulative # female farmer networks established	UNFPA FAO ILO	2	2
Output Indicator 5.1.4: Cumulative # of contracts between farmers and the Pineapple Value Chain Fund signed	FAO UNIDO	87	Expected for 5 or 6 farmers in the first batch in early July 2025
Output Indicator 5.1.5: Percentage of pineapples and pineapple products digitally traced	FAO	unclear	0
Output 5.2: Enabling environment promoted to foster the inclusive development of the pineapple value chain			
Output Indicator 5.2.1: # of government and village officials sensitized to support implementation (per year)	UNFPA FAO UNIDO ILO	130	196
Output Indicator 5.2.2: # of village counsellors trained in conflict resolution (per year)	UNFPA	108	150
Output Indicator 5.2.3: # of stakeholders trained in gender mainstreaming (per year)	UNFPA	380	571

Legenda: **Dark Green**: achieved; **Yellow**: limited results; **Red**: no achievements; **Grey**: Issue adapted

Spillovers / Unexpected results

In addition to the results as identified in the results framework, several other results could be achieved which were not necessarily foreseen and included in the framework. These concern:

- Trainings have focused on a wider range of participants beyond pineapple farmers and have included also women and youth, generating a broader interest in pineapple farming using enhanced agricultural practices
- Learnings on enhanced agricultural practices for pineapple farming can also inform farming practices of other crops with slight adaptations

- While the project has worked with four villages assigned by the VIDS, in terms of training, farmers beyond these four villages have been included as they were interested and requested to participate in the training
- For the production of organic fertilizer and other organic inputs bio-factories have been used with these practices applicable beyond pineapple production
- The setup of the collateral support facility and related trainings have enhanced the interest in financial institutions and access to capital to enhance production practices
- ILO has worked on the possibility of including micro insurance in terms of addressing some of the risk factors that pineapple farmers as well as future pineapple processors will face and to enhance their resilience

Enabling factors

- The establishment of the demonstration farms, though delayed, has been crucial, as it is through the demonstration farms that the effectiveness of new technologies will be tested and used as an example for small-scale pineapple producers. The demonstration farms are critical in this sense for farmers in the area to be convinced that the new approach to pineapple farming can work and provide for their livelihoods.
- The functional operation of the Hub from June 2025 onwards is an important enabler for the success of the project. This bearing in mind that the Hub is to temporarily take on the additional role of the PCD company.

The extent to which the solution(s) developed to date could be scaled to other countries/regions or economic sectors.

- The joint project is focused on de-risking investments in the agriculture value chains and the suggested business and financial model enables stakeholders to participate. Sustainable agriculture production is developed among small-scale producers through support to improved pineapple production technologies. Access to an assured market on the part of small-scale pineapple producers will be supported, linking producers with processors, and domestic and international markets. Processors and suppliers will be assured of a stable supply of quality organic pineapple through their links with small-scale producers.
- The business and financial model adopted by the project can be scaled to other commodities and countries with few product and country specific adaptations. However, the success of the model is still subject to having the right conditions and participation of stakeholders.
- While a business model has been developed at the level of the Hub, this has not yet been the case for a business model at the level of the individual households, focusing on what are the capital and labour requirements over time and how does cultivation of one ha of pineapple fit into their entire household economic business plan. Moreover, how could pineapple production be conducted by different types of households, with different types of dependency on agriculture or based on other socio-economic differences like size of households and access to household and hired labour.

Scope and scale of additional financing leveraged by the JP has been limited so far. For details see Table 4 below.

- Financing leveraged by the JP was limited because of the delayed establishment of the Hub, the Collateral Support Facility and the Company. Without these elements of the JP, there were no operations related to the value chain that could be supported. However, with the hub established and the preparations of the Collateral Support Facility in place, this has the opportunity to change now, which is a requirement for the success of the project.

Table 4. Financial Leverage Monitoring

Source of financing (e.g. public, private, IFI, bilateral, etc.)	Name of investor	Type of financing (e.g. grant, loan, bond, guarantee, equity, etc.)	Actual amount leveraged at MTR (US\$)	Note on supporting documents, targets and linkages to specific financial instruments
FAO ELEVATE	Innovation Grant	Grant	110,000	Used for development of the digital platform.
Public	IsDB	Grant	294,930	Agreement between IsDB and UNIDO. Part of grant used for advancing agronomic practices.
TOTAL			US \$ 404,930	20% of target *

*Based on 2024 Cumulative amount of public investment attracted to the VC.

- A positive development has been the establishment of the NOFA fund by the Government of Suriname, which is a credit fund for small producers with an interest rate at 5 percent. This means a lower rate than could be provided by the TBA bank that the project has so far been working with. While indigenous pineapple farmers would usually not be eligible for NOFA fund, given the communal land ownership of their communities, the Collateral Support Facility could work with the NOFA fund to make such credit opportunities available to pineapple producers supported by the project.

Potential of results/progress to date to achieve systemic change and/or demonstrative impact in the future beyond the JP to catalyse change, innovation and evolution in the financial sector – either public, private or developmental – in the country to devise new means or solutions to unlock additional financing for the SDGs.

- The joint project aims to support systemic change at several levels. This includes a focus on the entire value chain of pineapples, from production to processing and marketing with all these various aspects of the value chain interrelated. A second systemic aspect concerns the establishment and development of key enabling entities to support aspects of the value chain, including the HIH, the Collateral Support Facility and the Company (thought off as a cooperative). A third aspects concerns the household economy of participating households, which need to be transformed into pineapple cash crop-oriented entities, with consequences for the integrated aspects of capital investment, land use, labour division, income opportunities and consumption patterns. While these changes will in part be dependent on the present characteristics of the households concerned, changes are also likely to affect intra household dynamics and gender relations.
- The JP experienced delays in implementation and therefore the demonstrated potential so far has been limited in terms of size of plots and number of farmers concerned. However, with the establishment of the hub and the collateral support facility in place this has the potential to change dramatically over the coming years affecting systemic change at all levels identified.
- The business model adopted by the JP has the potential to achieve systemic change in terms not only of the position of pineapple farming in Suriname, but in particular in terms of the household economics of participating farming households who will be moving towards an enhanced access to cash crop production and marketing of their produce, moving away from a more subsistence oriented production pattern. While this concerns opportunities, it also exposes participating households to several risks which will need to be monitored. There

could be a variety of ways to do this. Adverse results identified through household level monitoring would need to be addressed through the Hub board.

Review whether the financial solutions/instruments developed have led to (or have the potential to lead to) developmental impact for the local communities and population as well as the environment in terms of accelerating SDG achievements. Suggestions for improvement of instrument's impact strategy, if relevant, must be added to the Conclusions and Recommendations section.

- The financial instruments (the Collateral Support Facility and the associated interventions) developed under the project have a strong potential to support change for local farmers participating in the programme and in the medium term for their communities. With the establishment of the core structures, including the Hub and the collateral support mechanisms, the deployment of these support mechanisms in the remainder of 2025 and early 2026 will directly affect the success of the project.

Management Efficiency

Management arrangements

Efficiency of JP management as outlined in the Project Document.

- The Project Document clearly identified the roles of PUNOs in the project, including specific responsibilities in terms of delivering outcomes and outputs of the project. FAO was identified to be the lead agency providing overall management and taking on promoting investment in the primary production segment of the value chain. UNIDO is the co-lead agency, and responsible for taking the lead in establishing the Collateral support facility and facilitating investment in agro-industrial development. It was identified that ILO would focus on promoting working conditions in line with decent work requirements, promoting the respect to fundamental principles and rights at work and supporting capacity building on quality and safety standards. UNFPA was identified to be responsible for facilitating dialogue between rural communities, the public and private sectors, with a particular focus on gender participation and building capacities on gender mainstreaming as well as conflict resolution. The UN Resident Coordinator was to ensure the coordination of all UN organizations dealing with operational activities for development. In practice, organizations worked well together and complemented one another without overlapping support.
- The project has been governed by a project Steering Committee that has been chaired by the UN Resident Coordinator and co-chaired with MAIBIC and MFAIBIC. The Steering Committee meetings were held semi-annually and during these meeting the PUNOs have presented the updates of their support in the output areas of the programme. During these meetings, issues and challenges were raised and joint decisions on how to address these made.

The **Quality of execution of the PUNOs and Implementing Partner(s)** is based on the number of targets that were achieved at the output level in the period under review. It is noted that in reaching of output level results there has been a shared responsibility between PUNOs without indication of a lead party in terms of reaching of the target on the indicator. The project experienced significant delays in terms of achieving the majority of the mid-term targets, largely due to the delays in the establishment of the Hub which affected all other output areas of the programme.

It was mentioned in the JP semi-annual report 2024 that the RCO was instrumental in pushing the establishment of the Hub through coordinating with the Ministry of Agriculture and Ministry

of Foreign Affairs. This resulted in a Presidential Decree that assigned the first three members of the Board of the Hub. The time-consuming decision-making process of the governmental approval of the establishment of the Hub including the specifics in terms of the modalities of the hub, and the need for FPIC processes, were the main reasons for the delay in the establishment of the HIH, which in turn negatively affected the implementation in the various output areas of the project.

Reporting and communications

Assess how well the JP team and partners undertake and fulfil Joint SDG Fund reporting requirements.

- The semi-annual report for 2024 that was submitted to Joint SDG Fund was prepared by the FAO with inputs from UNIDO, ILO and UNFPA. Based on the report, there is evidence that there is coordination among the PUNOs in developing the report.

Assess how **results and lessons derived from the JP have been documented**, shared with key partners, and internalized by partners.

- The progress of the project and accomplishments were reported by the PMU through newsletters that were prepared in both English and Dutch languages to reach a wider audience with a particular focus on local stakeholders. There were four (4) newsletters produced during the period covered by the MTR, and these were produced in July 2023, January 2024, November 2024, and January 2025. The January 2025 edition of the newsletter features the Horticulture Innovation Hub logo reflecting the establishment of the Hub. To inform the MTR process, an overview report of the field trials and the resulting agronomic approach was developed.

External communication: Are proper means of communication established or being established to inform the JP progress and intended impact to the stakeholders and the public at large? Was a JP communication strategy developed and is it being followed? Do communications products reflect the “joint” nature of the programme

- A communication plan was developed as part of the Project Document and it identified that the JP would use various communication approaches that include social advocacy, community engagement, face-to-face meetings or focus groups, social marketing, media relations and social media. The selection of the approach to use would depend on the target audience concerned. The selected media channels are the following:
 - Printed material on programme content and structures such as, brochures, infographics, leaflets and others.
 - Visibility events that include (1) field visits for technical personnel, journalists, farmers, and donors; (2) project launch at the start of the project; (3) knowledge sharing and dissemination workshops for the media; (4) hand-over ceremonies at community level.
 - Publishing of partnership arrangements between the SDG fund, PUNOs, and the Government of Suriname on websites and social media channels.
 - Preparation and dissemination of action videos and development of impact-oriented storytelling.
 - Branding of project materials.
- Progress was communicated by the JP to stakeholders through various channels including newsletters (produced by the PMU), national press releases, government websites, and the Joint SDG Fund website. The articles that directly or indirectly referred to the project include the following:

- The Trinidad and Tobago Guardian ([link to article](#)). This article made mention of the grant that the IsDB provided to the project.
 - StarNieuws ([link to article](#)). This is same article that was featured in the Trinidad and Tobago Guardian.
 - Ministry of Agriculture of Suriname Facebook Page ([link to page](#)). Contained a video that featured the JP Sustainable Pineapple Value Chain Development project.
 - LinkedIn Post made by Vincent Martin, Director of the Office of Innovation of FAO ([link to post](#)). Made mention of indigenous pineapple farming support platforms but no direct mention on the project.
 - Joint SDG Fund Website ([link to article](#)). The webpage features the background and activities of the project.
- Of the communications products that were observed to have featured the JP, it was the Joint SDG Fund website and Ministry of Agriculture Facebook Page that featured the joint UN nature of the programme. The articles that were featured in the Trinidad and Tobago Guardian and StarNieuws were similar, and in these articles, it was only mentioned that the IsDB will provide a grant to the Pineapple Value Chain programme and UNIDO will provide the technical assistance. There was no mention of the other PUNOs including FAO, ILO and UNFPA.
 - A project brochure was prepared by the UNFPA in Dutch that featured the other PUNOs showing the joint nature of the programme. The UNFPA also developed a Business Planning Manual and a Leadership Training Manual (Gender Capacity Strengthening Program) for the project that was also written in the Dutch Language.

Risk Management

The Project Document identified the risks that the project may encounter and these are listed in Table along with the assessments of the identified risks included in the table below.

Table 5. Overview of Risks identified, and levels concerned

Risks	Risk level ¹⁵	Comments
Contextual risks		
Lack of financial literacy and lack of trust in proposed financial mechanism reduces willingness of VC actors to participate and sign contracts with the PCD company.	16 (4*4)	This risk is appropriate and is valid until the end of the project while addressed through the establishment of the collateral support facility and training in financial management
Attacks from pests, diseases, or natural disasters; farmers' reluctance to change production methods.	15 (3*5)	This risk is appropriate and is valid until the end of the project while addressed as part of the training on enhanced organic agricultural practices. Risk could be further reduced through support to micro insurance
Climate / weather related risks, including heigh levels of rainfall, floods, drought and others relevant to the region	8 (2*4)	This risk is appropriate and is valid until the end of the project. The project can address this risk through the inclusion of climate related insurance support
Programmatic risks		
Overlooking existing gender inequalities by, for example, not addressing existing discrimination against women and girls	6 (2*3)	This risk is appropriate and is valid until the end of the project. The project is conducting gender analysis and working with women through capacity building and leadership training as part of gender mainstreaming.

¹⁵ Risk level is composed of Likelihood of the risk (on a scale of 1 to 5), multiplied by the expected level of impact (on a scale of 1 to 5), resulting in a possible variation of risk levels from 1 (lowest) to 25 (highest).

Risks	Risk level ¹⁵	Comments
and not taking into account the different needs of men and women.		
Introduction of commercialization, contracts, and intensified employer-employee relations may spark tension in the pineapple growing communities.	9 (3*3)	This risk is appropriate and is valid until the end of the project while it is mitigated through the inclusion of conflict training for village counsellors.
Unaddressed misunderstanding between beneficiaries and project team on objectives, expectations and underlying motivation can lead to insufficient participation or withdrawal from specific project outputs or the project as whole.	4 (1*4)	This risk is appropriate and is valid until the end of the project. The delays in the implementation of project activities such as the Hub, the collateral support facility and the PCD Company may reduce the interest of small-scale farmers and buyers. Recent establishment of the Hub and progress on collateral support facility can mitigate and can be expected to significantly reduce this risk to occur.
Pineapple production is increased in an unsustainable way through the adoption of poor agricultural practices entailing negative environmental impacts.	8 (2*4)	This risk is appropriate and is valid until the end of the project. An increase in demand for pineapples due to the upgrading of value chains and opening new market opportunities may encourage production that is unsustainable and rapidly open new areas for production. Expansion of production will be constrained by the limitations of the Collateral support facility, which can in this respect add as a safety valve, preventing rapid and unsustainable expansion.
Management constraints in programme implementation affect, delay or prevent results from being achieved	8 (2*4)	This risk is appropriate though will reduce once the Hub is installed and Hub board and management are in place.
Market risks due to external competition (e.g., cheaper pineapple suppliers from other regions)	12 (3*4)	This risk is appropriate and is valid until the end of the project. It will be mitigated through exploring commercial opportunities for sales in local, national and international markets.
Institutional risks		
Value chain actors are not willing to participate in the multi-stakeholder platform (MSP), which may lose momentum after an initial phase.	6 (2*3)	This risk is appropriate and is valid until the end of the project. Initial engagements were conducted with the private sector including buyers; however, trial farms are in the early stages of production.
Previous negative experiences with other development initiatives, underlying conflict and predominantly family relations in the indigenous communities may result in reluctance to institutional development and change.	9 (3*3)	This risk is appropriate and is valid until the end of the project. Constant engagement and involvement of these communities in the implementation of activities is needed to mitigate this risk. Enhanced understanding of indigenous and tribal communities including gender analysis can inform programme design and implementation and mitigate the risk.
Fiduciary risks		
Farmers do not use the loans acquired through the project as foreseen and agreed upon.	10 (2*5)	This is a valid risk that can be experienced in projects in a developing country setting. An option to address this risk is by providing inputs as loans rather than cash. This is addressed through the setup of the collateral loan facility system.
Project funds allocated to the Hub, Collateral Support Facility and PDC Company are not used as foreseen and agreed upon.	10 (2*5)	This risk is appropriate and is valid until the end of the project. Unforeseen events and changes in the operating environment may pose a risk on expenditures made. However, appropriate management controls and collective decision making among stakeholders are to mitigate this risk.
Farmers sell produce outside of the company	8 (2*4)	This risk is appropriate and is valid until the end of the project. Reduced through introduction of contract farming.

- The set-up of the trials was delayed in Moengo because of heavy rains and high clay content of soil. It was delayed in Matta because there were not enough pineapple seeds. These are risks experienced in the implementation of the project that were not identified in the risk management plan.

- In the second meeting of the JP Steering Committee, it was mentioned that delays were experienced in the process of importing specialized organic farming equipment and inputs from Costa Rica due to lengthy procurement procedures. These inputs cannot be sourced locally and had to be brought into Suriname. There were also delays experienced in finalizing the Free, Prior and Informed Consent (FPIC) agreement with the Association of Indigenous Village Leaders (VIDS) which process took a long time.

Socio-economic, political or other risks that may jeopardize sustainability of the JP outcomes.

- As raised in the reporting framework, one of the challenges is convincing pineapple farmers to sell to the cooperative or Company. Another risk that may emerge is that pineapple farmers may engage in side-selling or pole-vaulting activities. This is the situation where pineapple farmers may decide to sell their pineapples to other buyers even though they have an existing contract with the Company. There is also a risk that the quality of pineapples delivered to the Company can be of lower quality and the ones with higher quality are sold to buyers who offer better prices.
- The sustainable pineapple value chain that is being developed by the JP is exposed to external factors including price volatility in markets and the threats of new entrants to the market who may offer alternative supplies or products. There can be other processors and buyers that may emerge, or who have not partnered with the JP, that can disrupt the developed sustainable pineapple value chain.
- The Hub was established through the support of a Presidential Decree, and it was raised during a coordination meeting that this can be revoked by the succeeding administration. However, it was noted in the Project Document that the functions of the Hub will eventually be absorbed by the Company as soon as it has achieved maturity and financial sustainability.
- The risk of experience extreme weather conditions and flooding is a possibility in Suriname (World Bank, 2021), and this may cause disruptions in the operations of the pineapple value chain not only in production, but also in processing and transportation activities. Micro-insurance has been identified as a possible added intervention to reduce these risks.

Sustainability

Likelihood of financial sustainability of the financial solutions/instruments devised and launched once the Joint SDG Fund support ends.

- The structures that will be organized as part of the JP includes the Horticulture Innovation Hub (the Hub), the Collateral Support Facility (the Facility), and the Pineapple Cooperative Development Company (the Company). During the implementation of the project, the Hub will be financially supported by the JP and eventually will be funded by fees charged to farmers for the provided services. The Collateral Support Facility will be transferred to the Hub and some of the functions of the Hub will be transferred to the Company. The financial sustainability of the financial solutions/instruments will depend on the productivity of the sustainable pineapple value chain.
- During the period covered by the MTR, the hub and the facility had been established but only recently become operational so that neither of these structures had been operating for a substantial period to determine whether these are operating within availability of funds, and whether these will be able to reach a breakeven point (see further details below).
- The sustainability of the hub depends to a large extent on the capacity for the hub to pay for its staff from the income that it generates through the sale of inputs and the provision of other services. For this to happen, there is the need for a certain number of farmers to engage in the enhanced pineapple production practices and for a certain amount of area (ha) to be

planted with pineapple and harvested. To inform this process, a detailed business and financial model have been developed.¹⁶ With the step-by-step approach applied by the project in terms of the inclusion of numbers of farmers in the business plan, this will take some time to be realized and is unlikely to be achieved within the present project period, i.e. till March 2026. This in particular with the first harvest of pineapple occurring only 15 months after the start of cultivation, meaning that starting in mid-2025 would result in a first harvest in the second half of 2026, beyond the present project period.

Does the financial solution/instrument have sufficient **country buy-in from the relevant public and private partners**, from the demand and supply sides, to ensure sustainability following the completion of the JP?

- Buy-in from the country includes a reference to the national level, where buy in of the government has been established, though nevertheless, it took a long time for the agreements on in particular the hub to be established. Partly this can be explained by the unfamiliarity with the kind of organization that the hub represented. On the other hand, the type of decision required was unclear for a substantial amount of time.
- At the local level, ownership has been building and increased over time with farmers getting to know the project and what it aims to achieve. This has generated increased interest in several of the districts at the sub-national level. Also, some of the changes promoted in agricultural practices for pineapple cultivation have received enhanced interest. This includes the intercropping of pineapple with other crops as well as the bio-factories, producing organic inputs, which is a new feature in the context of Suriname and has got farmers' interest.
- The project has also assessed the interest in the demand side for pineapples and related products in terms of a supermarket chain and has probed other parties on the demand side. A study regarding marketing opportunities has been planned for the end of 2025, in order to inform the sale of pineapples once produced.

Feasibility of programme exit strategy and approach to phase out assistance.

- The exit strategy of the JP is anchored on achieving scale for the Hub to be operational through fees for services provided. The assumption for the feasibility of the Hub was at the initial project target of covering 355 hectares of pineapple. This figure may be at the high end, while it is estimated that with strategic cost management, a financial breakeven point may be reached at as low as 50 hectares.¹⁷ The adapted target for the remaining project period was set at realization of 25 - 51 hectares, depending on the actual number of participating farmers. Whether the project reaches financial sustainability thus depends on whether a sufficient number of participating farmers can be realized and a sufficient amount of hectares covered, together with the implementation of strategic cost management. It will be important for the project to document the issues concerned to inform a possible extension or second phase of the project.

Has the JP **developed and leveraged the necessary and appropriate partnerships** – both public/private and developmental – to achieve its intended results and ensure sustainability of actions?

¹⁶ FAO, Suriname Pineapple Value Chain Development, Report on Business and Financial Model for the Suriname Horticulture Innovation Hub including Investment Plan for the Establishment of a Packhouse Facility, March 2025; Full cost Innovation Hub Financial Model, 1 Mar 2025, Internal Excel Spreadsheet (for details see page 17 -18 above).

¹⁷ The breakeven point for the HIH was reassessed recently as around 50 ha with these results presented to a meeting of project staff. Though this number was shared with the evaluator, the PowerPoint of the reassessment was not available to the evaluator at the time of finalizing the present report.

- The JP's intended outcomes require participation from financial service providers, technology providers, pineapple buyers, and support service providers that add value to the pineapples production process by farmers. These services include increasing the traceability of the pineapples grown by small-scale farmers, including through the digital platform, and enhancing credibility in terms of quality delivered. The participation of the various actors in the sustainable pineapple value chain is expected to provide the support needed to reduce the risks on the part of small-scale farmers and other pineapple stakeholders.
- The JP approached and engaged financial service providers who can potentially partner with the project. The financial institutions partnered with so far are Trust Bank Amanah (TBA) and NOFA fund with preparatory work for the setup of the Collateral Support Facility done in parallel with the preparations for the Hub and with both now established and operational.
- Potential buyers were also approached and engaged by the JP which included buyers of fresh pineapples and pineapple processors including Gopex NV and Massey Supermarket Chain.
- Individual farmers engaged in trial farms have been crucial to the project in terms of providing proof to the benefits of adopting improved production technologies. These farmers included those based in Para, Moengo, and Marowijne.
- Community leaders that represented Indigenous People were crucial for the inclusion of the Free Prior and Informed Consent (FPIC) procedure that is required in Suriname, to inform the appropriate way of implementing projects recognizing the rights of Indigenous and Tribal People.
- The digital platform is being developed in partnerships with Dimitra, a private agricultural technology company.
- Wageningen University and Research (WUR) was approached by the project to develop the business model for the project. This has harnessed the expertise of WUR in agribusiness and rural development, and value chains upgrading.

What are the key **factors that will require attention to improve prospects** of sustainability, scalability, or replication of project outcomes/outputs/results?

- It can be considered at this stage that the most important factor is to prove that the production technology is effective at the level of small-scale farmers in terms of cost efficiency, quality, and stability of supply through year-round production. This is then followed by proof that links with buyers at the domestic and international markets are established with both buyers and small-scale processors.
- Another factor that will be important is to prove that the Hub functions efficiently in terms of providing support to farmers in terms of technology. Commitment and participation of involved stakeholders particularly the indigenous, tribal and small-scale farmers will be essential.
- Evidence must be shown that the HIH is also functioning to encourage increased participation from small-scale pineapple farmers with growing participation an important indication of sustained results.
- The collateral support facility will need to be fully operational with few and declining rates of defaulting on loans provided, enhancing the coverage of the facility.

In terms of reaching of results of the project, there have been several constraining as well as enabling factors. In terms of constraints, the following stand out:

- Changes of staff in some of the key Ministries that the project has worked with as well as changes in government after elections, requiring additional relation building and promotion of the project and its objectives in order to gain and maintain support.

- The focus on indigenous people and tribal groups required specific processes regarding Free Prior and Informed Consent (FPIC) procedures, which needed to be agreed, and which resulted in the limitation of the project to four selected villages for the present project period by the VIDS.
- The establishment of the HIH was delayed due to reasons explained earlier above, which in turn delayed the implementation of the other parts of the project, including the establishment of the Collateral Support Facility and the Marketing Cooperative (also referred to as the Company).
- The agricultural cycle of pineapple is with 15 and 22 months of first and second harvests relatively long which requires long periods between support to pineapple planting and harvesting of the crop.
- The number of planting materials available is not necessarily sufficient to cover all farmers who would want to participate in the upcoming implementation cycles till March 2026.
- Much of the economy in Suriname is dominated by the mining, oil and gas sectors which limits opportunities for government support to agriculture.
- Project staff salaries have to compete with opportunities in the oil and gas sector which are relatively high.

On the other hand, several enabling factors have enhanced the reaching of results. These have included the following:

- Good working relations amongst the PUNOs and with the UN Resident Coordinator's office with project support of each of the agencies based on their comparative advantage and the specific remit of each of the agencies.
- The SDG fund as donor has been very supportive to the project and to accommodate the constraints faced while maintaining support notwithstanding relatively low levels of initial results on the indicators of the project results framework.
- The project has seen good visibility and support from a variety of stakeholders, including the President of Suriname present at the launch of the project.
- The participatory approach applied in terms of project implementation with regular consultation with target groups in the selected villages.

4. Conclusions

The ASTA Suriname Sustainable Pineapple Value Chain Development Project or the JP is an innovative intervention that can potentially address development challenges of Suriname and developing countries with an agricultural base. These development challenges include creating sustainable and decent livelihoods, enhancing incomes, improving lives of women and other marginalized groups, and attaining food security.

The JP has been innovative in its design with the intervention addressing several development challenges in the country, contributing to achieving multiple selected SDG Targets. The JP results framework identified the expected outcomes, outputs, and indicators with their baselines and targets. The indicators of the framework were found to be specific, measurable, attainable, realistic, and time bound. However, based on the delay in getting the HIH in place and operational, with knock on effects for the establishment of the collateral support facility, several of the targets on the indicators of the results framework could not be achieved with several of the targets assessed as unattainable within the remaining timeframe of the project.

The project aligns with the policy of the Government of Suriname, which regards production of pineapple and other horticultural crops as important opportunities to reinforce the agricultural sector. The rationale of the project, moreover, relates to the realization of the SDGs as well as the ASTA programme, which aims at developing and testing ways to accelerate value chain development. As such, the learnings of the project will feed into the programme and can be of use to initiatives in other countries.

The combined systemic aspects of the project, including its focus on the entire pineapple value chain, the establishment of enabling organizational structures and the transformation of the household economy of participating farming households, resulted in a 'complex' system-based approach.

The value chain approach utilized by the project ensures that risks often associated with agribusiness value chains are reduced through the establishment of linkages between finance, production and marketing. Access to finance can allow small-scale producers access to required inputs and technology that can increase productivity while improving quality and consistency in production. This can lead to meeting the requirements of buyers that can then deliver to markets. As such, the setup of the project has been valid.

Facilitating the value chain linkages required the establishment of formal structures, which in the joint programme has included the HIH, the Collateral Support Facility, and the PCD Company, keeping in mind that the Company functions have temporarily been subsumed under the HIH. These structures can effectively facilitate access to services that can support the establishment of the required linkages between small-scale farmers and the buyers of their produce. Thus, these are structure that are crucial to the success of the project, which will need to be demonstrated for a limited number of farmers in the remaining project period.

The project has so far primarily focused on the transformation of pineapple farmers in Suriname, from seasonal and marginal production of pineapples to year-round production for the market, generating decent household incomes. The project has succeeded in terms of the development of agricultural practices and protocols for enhanced organic pineapple farming which have been tested in pilot plots in three locations in the savannah belt of the country. The project has also put in place the HIH and the Collateral Support Facility and developed business and financial models for farmers to engage in enhanced pineapple cultivation, making use of varies sizes of communal land. What has not yet been achieved, but what can happen now any moment, is the actual practice of the agricultural farming methods and business model being realized by a first group of farmers, making use of the support of the HIH and the collateral support facility. Given the long gestation period of pineapple, results in terms of pineapple harvest and farmer incomes can only be obtained at the earliest at the first pineapple harvest, which is 15 months after planting. Moreover, preparations have been made in terms of the functions to be provided by a marketing cooperative including aspects of marketing for a local, national and international market as well as opportunities for small and larger scale processing opportunities for a variety of pineapple products.

An important aspect that the project supports is the transformation of the household economy of the participating farming households. So far focus, in terms of social aspects of the programme, has been on establishing farmer groups, women groups and training of participants on conflict resolution. Changes can be expected to be most pronounced for households that presently primarily produce for subsistence and who get increasingly involved in cash crop production through pineapple farming. Risks concerned in terms of changes in livelihoods and in

particular household food security will need to be monitored as part of the project at the level of the communities and households involved.

Like any other intervention, the JP was not immune to challenges that can delay the implementation of activities and meet targets. Even though the Project Document identified certain risks that may delay the implementation of the project, some risks appear to have been overlooked. Critical to the success of the project are the trial or demonstration farms to test and localize production technology and the establishment of the Horticulture Innovation Hub. The establishment of trial farms was delayed due to (1) the lack of inputs including pineapple seeds and imported equipment and machinery designed for sustainable organic pineapple production, (2) heavy rains during implementation, and (3) the agronomic conditions of demo farms. The data and information that will be collected in the trial farms will be used as localized production information that can be fed into pineapple production technology that will be disseminated by the Hub. The other importance of trial farms is that these can exhibit the feasibility and benefits of adopting improved production technologies that can encourage small-scale farmers to follow suit. The produce of these trial farms can also demonstrate to buyers whether the quality of pineapples grown using improved technology can meet market requirements, including those of fresh markets and of processing facilities.

The delay in the establishment of the HIH has affected the other components of the project, including the work on the Collateral Support Facility, support to the processing and marketing of pineapples produced and the establishment of marketing cooperatives at national and local levels. Though preparations were made for all these additional support functions to get in place, they can only become operational now that the HIH is in place and the first batch of farmers will start making use of the new business model and enhanced agronomic practices.

The setup of the project with the support of four UN agencies and overall guidance by the UN Resident Coordinator's office has proved to be an effective approach. The comparative advantage of each of the agencies has enabled the provision of different types of assistance as needed based on the complexities involved with the development of pineapple value chain in Suriname. This has included support on agriculture and food security, credit provision and collateral support, pineapple processing, financial literacy and business skills development, gender aspects of pineapple production and other social aspects around the development process of pineapple producing indigenous and maroon communities in Suriname.

There were no observed constraints in the management and governance of the JP concerning the PUNOs. Reporting lines and responsibilities were clear, and coordination of UN agencies and partners were supported by the Resident Coordinator's Office. The delays observed in the project can be attributed primarily to external factors that were not within the management control of the project and the PUNOs.

While actual results in terms of pineapples produced could not yet be realized, the project so far has shown to be able to reach results and to put into place the necessary conditions for reaching of results. With the present project period ending in March 2026, the results so far cannot be expected to be sufficiently sustainable without further support. This includes the HIH which cannot yet be expected to be fully self-sufficient at that time including the collateral support facility and, once pineapples are being produced using improved agronomy, support to processing and marketing opportunities will need further support.

When making use of a dynamic and pilot-oriented approach as practiced in the project, the use of a fixed results framework with selected indicators and stringent targets has shown to be less

functional and may need substantial adaptation over time. This would in particular be relevant for an extension and/or second phase of the project.

For the success of the JP the following factors will be crucial:

- Ensuring the continued interest and support from Government and private sector partners as well as participating communities.
- Showcasing the workings of the agricultural methods and business model of the project, which will require a substantial acceleration of project activities and recruitment of farmers to participate in the programme with an additional two rounds after the one planned so far, which could involve upto 25 – 51 farmers with a possible total of upto 50 ha planted with pineapples.
- Attract support for a follow up phase to the project in which the breakeven point for the sustained development of the HIH, collateral facility and the company can be reached.
- Expand the monitoring approach of the project, including assessment of results in terms of pineapple production for a variety of farming households with different types of other sources of household income, so that the programme will be able to show the ways in which the new agricultural production and business model can work under different household conditions in terms of economic and social benefits for the participating households.

It will be critical for the project to maintain the support of the National and sub national government agencies and community organizations, including the VIDS in terms of working with indigenous and tribal communities as the project is operating within their domains. This will in particular be important for the expansion of the project beyond the four villages initially identified as the focus of the project in terms of enhanced pineapple cultivation, while the training activities have already included farmers beyond the four villages.

The JP, at its mid-term, has not achieved a fair number of its targets at this stage. Revisions to some of the targets were made to increase their realism, including the (1) the amount of public and private investments attracted to the value chain and (2) area in terms of hectares to be covered by the project. Lowering the targets of the project can make accomplishing these for the remainder of the JP feasible. However, lowering the targets also has implications on providing the evidence on the feasibility of the endeavour, and ultimately the business and financial model of the innovation that the JP is trying to introduce. The success of the JP is crucial as this can provide an exhibit of innovative approaches to reducing risks in agribusiness value chains in horticultural production that can enhance sustainability in livelihoods of small-scale farmers and surrounding communities in Suriname and beyond.

There are various reasons for the project to extend its timeframe. This as the delay in the establishment of the HIH has taken over half of the project implementation period. Moreover, for the initiative to become financially viable and reach its breakeven point, additional time will be required.¹⁸ Also, working with indigenous and tribal communities has meant that the programme has had to tailor its approach to the specifics of this target group in the context of Suriname, including the requirement of the FPIC process.

Based on the findings and conclusion, the next section will outline the recommendations moving forward with the project.

¹⁸ A concept for a follow up phase was developed by the PUNOs and partners.

5. Recommendations

Recommendation #1:	For PUNOs and partners, in the final timeframe of current project implementation, to ensure that the requirements for continuation of support beyond the present project period and future sustainability of results are in place, including: ensuring a sufficient number of farmers get enrolled through the HIH and the Facility, testing the agronomic as well as the business and financial models promoted by the project using enhanced agronomic cultivation practices on upto 50 ha; seeking enhanced public and private investments in the project and its continuation; and adapting the project’s scope, budgeting and results framework.
Challenge/problem to be addressed by the recommendation:	The ASTA Suriname project has shown to be a relevant approach to support indigenous and tribal people in enhanced pineapple production making use of an improved agronomic model adapted to the context of Suriname. With the project period about to terminate in March 2026 and with substantial delays experienced in project implementation, the results obtained so far are unlikely to be sustained in the near future. Nevertheless, the main systems for project success have been put in place. Therefore, it is important for the project to make use of the remaining project period to enhance support and increase the likelihood of sustained support to the initiative, for the benefit of Suriname, as well as for the wider applicability of the ASTA approach in developing countries.
Priority Level:	High priority
Responsibility:	PUNOs and partners
Proposed implementation timeframe:	Till March 2026

Recommendation #2:	For the SDG fund, as the donor to the ASTA project, to consider budget neutral extension of the project till the end of 2026 in order to allow for the project to continue its activities while searching for support for a second phase of the project and further detailing the design of such a phase, including a clear sustainability or exit strategy.
Challenge/problem to be addressed by the recommendation:	While the project has not reached a substantial number of indicators of its results framework, it has managed to get into place a system for the support to indigenous and tribal pineapple farmers in Suriname, which concerns groups that have been largely left behind in the development process. The HIH and the Collateral Support Facility put in place appear viable means to enhance pineapple production and support the well being of participating households. However, results are unlikely to be sustainable once the project is to be terminated at the end of March 2026. While the PUNOs have been developing a concept for a second project phase together with partners, the required donor support may not yet be realized by the end of the project period. A budget neutral extension could provide the project with the time required to realize support for a second phase. This would be viable given that much of the

	funding for the Collateral Support Facility will not yet have been used at the end of the present project period.
Priority Level:	High priority
Responsibility:	SDG Fund, PUNOs and partners
Proposed implementation timeframe:	During the present project phase

Recommendation #3:	For the project to ensure continued engagement with national, administrative district and local level government agencies and community organizations, enhancing their ownership and ensuring support at all levels, making use of existing relationships of the RC Office and all participating PUNOs and engaging with additional partners as the project progresses.
Challenge/problem to be addressed by the recommendation:	A key constraint in terms of project implementation has been the delay in the establishment of the HIH, which depended on the support of the Government of Suriname. This showed the importance of strong relationships with the Administration at a variety of levels. With staff changes within the Administration, there is a need for continued attention to these relationships. This needs to build on the existing relationships of the RC Office and the PUNOs with Government agencies at national and sub-national levels. With the development of the project to include pineapple processing issues, relationships with Government and other relevant partners will need to be further expanded.
Priority Level:	High priority
Responsibility:	PUNOs and partners
Proposed implementation timeframe:	During the present project phase and beyond

Recommendation #4:	To enhance monitoring of project results and lesson learning through adaptation of the results framework and in particular targets on indicators for the remainder of the project period and to include additional means of monitoring, like process tracing, and enhance lesson learning, including the documentation of results achieved, barriers and ways in which these were addressed, enabling factors and adaptive practices and to develop a set of baseline indicators for participating farming households, which would allow for the conduct of impact assessment in a follow-up phase.
Challenge/problem to be addressed by the recommendation:	The ASTA project has an extensive results framework. While this concerns a useful approach in development programming, the results framework has proved to be less useful in practice due to the many delays in implementation and related changes required in particular in targets on indicators of the framework. This limitation relates to the

	character of the project, which is meant to explore ways in which to enhance pineapple farming results for indigenous and tribal pineapple farmers and the pineapple sector at large in Suriname. The inclusion of more open-ended ways of monitoring project implementation and results can enhance the ability of the project to show progress as well as reasons for delay and ways to address challenges as well as document learnings, identify spillover effects which were not included in the results framework and inform future support to the scaling up of the agronomic and business approaches developed for pineapple cultivation. Such monitoring data will be important in support to scaling up to other regions of the country and beyond, as these data will need to show the extent to which the approach taken by the project has worked and the results that it has delivered for farmers and their households.
Priority Level:	High priority
Responsibility:	ASTA project team, PUNOs and partners
Proposed implementation timeframe:	Initially for the period till March 2026 as well as for a possible extension or second phase of project implementation

Recommendation #5:	To support establishment of feedback channels as part of the various project communication means including the project newsletter, the digital application and other viable means in order to systematically gather feedback from target groups of pineapple farmers, government officials, civil society organizations, academia and other interested stakeholders in Suriname and beyond in order to inform project management and implementation.
Challenge/problem to be addressed by the recommendation:	The project has established important means of communication with the various types of stakeholders, including the project newsletter and the digital application. An important addition to these communication means will be the provision of opportunities to provide feedback from the various stakeholder groups concerned in order to inform project implementation. While such feedback may have been gathered in informal ways so far, once the project enhances the number of farmers that it supports, more formal means of feedback will become increasingly important.
Priority Level:	Opportunity for improvement
Responsibility:	Project team and PUNOs
Proposed implementation timeframe:	For the remainder project period as well as any extension / second project phase

Recommendation #6:	Adapt the risk assessment framework and mitigation measures to ensure that all relevant risks are captured and moderation measures to avert them are in place as much as possible, including considering the inclusion of micro insurance as an integral part of the project approach.
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Challenge/problem to be addressed by the recommendation:	While a risk management framework was part of the project design there have been several other risks emerging during the implementation of the project, including adverse weather conditions, unfavorable or less favorable soil conditions for pineapple cultivation, lack of available inputs, including lack of sufficient pineapple seeds, opportunities for farmers to side selling produce notwithstanding contractual obligations and other new entrants to pineapple growing outside of Suriname affecting the international market for pineapples. Mitigating measures need to be informed by a clear understanding of the issues concerned including the attitudes and behavior of local farmers towards aspects of pineapple cultivation and contract growing arrangements.
Priority Level:	Opportunity for improvement
Responsibility:	Project team, PUNOs and partners
Proposed implementation timeframe:	For the remainder project period as well as any extension / second project phase

Recommendation #7:	In the development of an extension / follow up phase to the project, to enhance the approach to indigenous and tribal farming households, explicitly including results in terms of their increased wellbeing as a way of addressing the 'Leaving no one behind' principle of the 2030 Agenda, including monitoring of results in terms of household income and consumption patterns and aspects of household food security.
Challenge/problem to be addressed by the recommendation:	The project has been supporting one of the most deprived groups in Suriname, being the indigenous and tribal people in the more inland areas of the country. However, this is done without inclusion of the monitoring of results for these groups in terms of their wellbeing over time. This is in particular important for those groups that through the support of the project shift from subsistence to commercial agriculture which shift concerns a variety of related household economic aspects, including income, expenditure and consumption patterns and gender related issues, as well as some risks, including those affecting household food security. In a second phase of the project, such aspects can be dealt with through the inclusion of well-being and food security as well as other relevant aspects of change explicitly in the objectives as well as the monitoring and evaluation framework of the project.
Priority Level:	Important recommendation
Responsibility:	PUNOs and partners
Proposed implementation timeframe:	For the remainder of the project period with a focus on the design of a proposal for an extension / second phase of the project

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Annex 1: Review of JP Results framework Indicators

Results Indicator	Indicator	S	M	A	R	T	Comments and Suggestions
Outcome 1: Access to finance and support services improved to foster efficient value chain operation and increased SDG compliant public and private investment into the pineapple value chain.							
Outcome 1 Indicator: Cumulative amount (USD) of public investment attracted to the VC.	2.3 Million						Reaching of this target no longer realistic with the delays in the implementation of the JP and reduced area of pineapple farms using improved production technologies. The area was reduced from 335 ha to 25 – 50 ha, with more attention paid to the systemic change of getting the HIH in place and functioning (see under output 1.3 below).
Outcome 1 Indicator: Cumulative amount (USD) of private investment attracted to the VC.	8.8 Million						Reaching of target no longer realistic with the delays in the implementation of the JP and reduced area of pineapple farms using improved production technologies. The area was reduced from 335 ha to 25 ha.
Outcome 1 Indicator: Cumulative number of core value chain actors with improved access to finance and support services.	110 (30% women)						The target can be achieved if the structures including the Hub and Collateral Support Facility become operational and farmers are willing to participate.
Output 1.1: Collateral support facility operational de-risking bank loans							
Output 1.1 Indicator: Collateral support facility established.	Fund operational						-
Output 1.1 Indicator: Cumulative amount (USD) of bank finance leveraged	2.5 Million						Reaching of target no longer realistic with the delays in the implementation of the JP and reduced area of pineapple farms using improved production technologies. The area was reduced from 335 ha to 25 ha.
Output 1.2: Pineapple Cooperative Development (PCD) company, whose shareholders are VC actors, operational and support production, processing and marketing							
Output 1.2 Indicator: PCD Company established	PCD Company established						-
Output 1.2 Indicator: Number of information events and financial literacy trainings organized (per year)	26						This target can still be achieved depending on the number of farmers who are willing to participate and events organized by the JP.

Results Indicator	Indicator	S	M	A	R	T	Comments and Suggestions
Output 1.2 Indicator: Break-even point reached.	BEP Reached						This indicator is dependent on the scale of pineapple production. The forecasted area under improved production practices was reduced. Feasibility of reaching this target may no longer be realistic in the present project period.
Output 1.3: Pineapple Innovation Hub operational, ensuring improved access to knowledge, inputs and services for Value Chain actors.							
Output 1.3 Indicator: Pineapple Innovation Hub established.	Hub established and operational						-
Output 1.3 Indicator: Cumulative number of VC actors benefitting from services provided by the Hub, disaggregated by sex.	110 (40% women)						The target can be achieved if the structures including the Hub and Collateral Support Facility become operational and farmers are willing to participate.
Output 1.3 Indicator: Break-even point reached	BEP Reached						This indicator is dependent on the scale of pineapple production. The forecasted area under improved production practices was reduced. Reaching of target no longer realistic in the present project period.
Outcome 2: Pineapple production quantity and quality increased in a sustainable manner, through the application of best practices and modern packages while preserving traditional knowledge.							
Outcome 2 Indicator: Cumulative area (ha) under cultivation following international best practices in organic pineapple production.	25 (Revised from 335)						The revised target can be achieved if inputs are available and there are willing farmers and institutions to participate.
Output 2.1 Indicator: Improved sustainable production models validated at the Pineapple Innovation Hub.							
Output 2.1 Indicator: Number of demonstration fields established (per year) to validate two business models following best practices in organic pineapple production.	4						The target can be achieved if inputs are available and there are willing farmers and institutions to participate.
Output 2.1 Indicator: Two business models validated.	Fully validated						The parameters for the full validation will have to be outlined.
Output 2.2: Pineapple farms, particularly female-led, supported in implementing improved organic production models, learning from best practices and creating decent jobs.							
Output 2.2 Indicator: Cumulative number of farms supported in the implementation of upgrading to	110						Target of farmers trained has been reached beyond 110.

Results Indicator	Indicator	S	M	A	R	T	Comments and Suggestions
permanent production system, disaggregated by sex.							
Output 2.2 Indicator: Cumulative number of female farmers and workers trained and supported on production practices and financial management, taking into account women's needs and constraints.	70						Target of women farmers and workers trained was reached.
Outcome 3: Small-scale pineapple processing plants operational, which contribute to value addition through new and improved pineapple products.							
Outcome 3 Indicator: Number of processing plants established and operational (per year).	1						The establishment of a processing plant requires significant investment. The scale of pineapple production supported by the JP may not justify the establishment of a processing plant. Similar to the approach that was taken by the JP, an existing processing plant may be supported instead.
Outcome 3 indicator: Quantity (tons) of pineapple that are processed (per year).	1,250						Assuming a yield of 50 tons per hectare, achieving this will require 25 hectares of pineapple farm which is forecast to be covered by the JP. However, the gestation period for the pineapple to fruit and ready for harvesting is too long for this to be reached within the present project period.
Output 3.1: Green business models for small-scale processing facilities established.							
Output 3.1 Indicator: Number of green business models developed and validated (per year).	5						This may have to be revised given that the area covered by the project was reduced.
Output 3.2: Interested value chain actors and investors supported in setting up small-scale processing plants, meeting international standards and providing decent jobs.							
Output 3.2 Indicator: Number of investment promotion and technical assistance events organized (per year)	16						Conducting the training is subject to the implementation of the Hub.
Output 3.2 Indicator: Cumulative number of employers and workers trained, disaggregated by sex.	46						Conducting the training is subject to the implementation of the Hub.

Results Indicator	Indicator	S	M	A	R	T	Comments and Suggestions
Output 3.2 Indicator: Number of trainings on processing conducted (per year) taking into account women's need and constraints.	6						Conducting the training is subject to the implementation of the Hub.
Outcome 4: Pineapple products effectively commercialized in new and existing markets. Producers and processors gain access to local, regional and global markets.							
Outcome 4 Indicator: Percent (%) of pineapples and pineapple products sold in the international markets.	20%						This is dependent on the realization of linking of farmers with international buyers. Massey Supermarket Chain in Barbados explored the potential of Suriname as a supplier.
Output 4.1: Connections between Surinamese value chain actors with the regional and global markets established.							
Outcome 4.1 Indicator: Cumulative number of linkages with international buyers established.	3						Engagements with possible buyers outside of Suriname were started by the JP.
Output 4.2: Value chain actors supported in meeting international market requirements, including sustainability certifications.							
Output 4.2 Indicator: Cumulative number of farmers enrolled in the certification training program, disaggregated by sex.	110						This can be achieved depending on the willingness of farmers to participate in the training program.
Output 4.2 Indicator: Number of public extension officers trained in organic pineapple production practices (per year), disaggregated by sex.	110						This can be achieved with participation from extension officers. However, the exact number of present extension officers needs to be verified.
Output 4.2 Indicator: Pineapple brand and trademark introduction.	Brand and trademark developed, validated and introduced.						-
Outcome 5: Collaboration amongst stakeholders reinforced for a coherent development of the pineapple sector.							
Outcome 5 Indicator: Cumulative number of operational VC organizations and platforms.	7						This can be achieved if there is sufficient participation of value chain actors.
Output 5.1: Horizontal and vertical linkages between value chain actors established.							
Output 5.1 Indicator: Number of multi-stakeholder meetings (per year)	24						This can be achieved if meetings are regularly organized.

Results Indicator	Indicator	S	M	A	R	T	Comments and Suggestions
Output 5.1 Indicator: Cumulative number of farmer organizations established/reinforced	6						This can be achieved subject to the participation of small-scale farmers.
Output 5.1 Indicator: Cumulative number of female farmer networks established.	2						The project was able to establish WhatsApp group for female farmers.
Output 5.1 Indicator: Cumulative number of contracts between farmers and the Pineapple Value Chain Fund signed.	110						Reaching of target no longer realistic in the present project period.
Output 5.1 Indicator: Percent (%) pf pineapples and pineapple products digitally traced.	30%						This can be achieved as it is percentage and not absolute values. However, this will be subject to using developed digital platform for pineapple farmers.
Output 5.2: Enabling environment promoted to foster the inclusive development of the pineapple value chain.							
Output 5.2 Indicator: Number of government and village officials sensitized to support implementation (per year)	200						Comments in the progress monitoring indicated that this target is over-reached and needs to be revised based on actual situation.
Output 5.2 Indicator: Number of village counsellors trained in conflict resolution (per year)	56						Targets were reached.
Output 5.2 Indicator: Number of stakeholders trained in gender mainstreaming (per year)	400						Targets were reached.

Annex 2: Persons interviewed in MTR Revision

1. Margherita Bavagnoli, FAO
2. Vanity Horne, FAO
3. David Neven, FAO
4. Swamy Girdhari, FAO
5. Rana Fakhoury, UNIDO
6. Marina Chubrina, UNIDO
7. John Blied, ILO
8. Judith Brillo, UNFPA
9. Astrid Runs, UNFPA
10. Jamaa Maalim, UN Joint SDG Fund
11. Maria Berenguer, UN Joint SDG Fund
12. Freddy Gamboa Quiros, Consultant

Annex 3: ASTA Suriname Newsletters



ASTA Ananas Project In Suriname Nieuwsbrief # 1 – Januari-Juni 2023

Wat is de afgelopen maanden gebeurd?

Betrokkenheid van boeren: In Februari en Maart 2023 werden trainingen gehouden voor ananasboeren in Marowijne en Para op het gebied van bodemvruchtbaarheid. Dit werd gedaan onder leiding van ASTA's internationale agronoom Freddy Gamba, om de kennis van ananas boeren te verhogen. In Mei 2023 werkte nationaal agronoom Hemwatie Goepart samen met boeren in Marowijne om een derde ananasvariëteit te kiezen voor veldproeven. De ananasvariëteit Djogo werd geselecteerd via een rangschikings- en beoordelingsprocedure. Tijdens deze workshops leerden boeren ook over intellectuele eigendomsrechten, FPIC, veilig gebruik van chemicaliën en investeringsmodellen. In dezelfde maand werd ook een snelle proef uitgevoerd op de boerderij van H. Tempo in Marowijne om de invloed van calciumbemesting op de bodem-pH te meten.



Bodemvruchtbaarheidsproef in Pierre Kondre op 28 Februari 2023. Bron: Freddy Gamba



Snelle proef op het veld van M. Desi Tempo op 31 Mei 2023. Bron: Hemwatie Goepart

Gender capaciteitsopbouw en versterkingsworkshop: Na de agronomische trainingen in Februari en Maart 2023 werden sessies onder leiding van mevrouw Astrid Runs, UNFPA-projectofficier voor het gezamenlijke project, en vertegenwoordigers van de Youth Advisory Group (YAG), Sjaenda Pita, Chathera Adrai en Zdena Pelswijk, gehouden om gemeenschappen te informeren over het Gender Capaciteitsopbouwplan dat gedurende de hele projectperiode zal worden uitgevoerd.

Technische analyse en datacollectie: Een digitale applicatie werd ontwikkeld en getest om boeren te ondersteunen bij het verzamelen en beheeren van data gerelateerd aan duurzame landbouwpraktijken. Wageningen University (WUR) heeft richtlijnen gegeven voor het opzetten van een verpakkingsstation en bedrijfsmodellen voor een Ananas Innovatie Hub en Coöperatie. Surinaamse juridische dienstverlenende bedrijven werden geïdentificeerd om de oprichting van de Hub en Krediet Faciliteiten te ondersteunen. Selectiecriteria voor pilot boeren die een nieuw ananas bedrijfsmodel gaan implementeren, werden opgesteld. Voorbereidingen voor veldproeven werden gemaakt, inclusief de import van organische input en apparatuur vanuit Costa Rica en beschikbaarheid van plantmateriaal. In April 2023 bezocht het team een Soil Health Workshop georganiseerd door WUR Biologie, waarin het ASTA-project werd gepresenteerd en de rol van bodemgezondheid in biologische ananaslandbouw werd besproken. Samen met bodemexperts van WUR werden veldbezoeken gebracht aan boeren met verschillende bodemtypes om samen te werken aan het ontwikkelen van een bodemgezondheidsmonitoringsplan. In Mei 2023 vond een veldbezoek bij de zaadleverancier in Marowijne en werd de kwaliteit van het plantmateriaal onderzocht.



Veld bezoek aan zaadleverancier M. Marius Pinas op 31 Mei 2023. Bron: Hemwatie Goepart



Maden van de subsoiler, hawoo zong en beeder in Costa Rica op 17 Mei 2023. Bron: Freddy Gamba



ASTA kantoor aan de Heerenstraat 14, Paramaribo, Suriname. Bron: Davinjon Okunjonoy

Nieuwe projectleden en kantoorruimte: De nationale agronoom van ASTA, Mw. Hemwatie Goepart, werd voorgesteld aan de ananasboerengemeenschap. Ze wordt getrand door de internationale agronoom Freddy Gamba om haar kennis op het gebied van bodemgezondheid, organoleptische analyses, ontwikkeling van voedingsprotocollen en data verzameling te versterken. Hr. Davinjon Okunjonoy werd aangesteld als Internationaal Bedrijfs- en Management Specialist van ASTA, om het project ter plaatse te beheren en de bedrijfsaanpak van ananaslandbouw te versterken. Het ASTA-kantoor is officieel geopend aan de Heerenstraat 14, Paramaribo, Suriname.

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ASTA Pineapple Project In Suriname Newsletter # 3 – January 2024

What happened in the past quarter?

Farmer engagement: In October 2023, farmers joined in-field workshops during the establishment of the field trial in Redi Doti, Para. The in-field workshops covered topics like land preparation, soil fertility management and seed collection and planting. Beside the field trial establishment in November 2023, the liquid activation of the Mountain Microorganism (MM) fertilizer, made in February 2023, took place in both districts Para and Marowijne. Farmers got instruction on how to use the fertilizer on pineapples and other crops. In total 52 farmers participated in the workshops in October and November 2023, from which 62 % women. In the months October and November 2024, the team continued interviewing farmers in Marowijne and Para to create baseline data on pineapple farming that will assist team to select pilot farmers and introduce advanced production model for higher yields and year-round production. Empowering farmers with knowledge and resources through such initiatives can positively transform their lives by promoting sustainable and economically viable agricultural practices. This not only improves crop yields but also contributes to increased income and food security for the village communities.



In field farmer training in Para, Redi Doti, during the field trial launch in October 2023. Source: Freddy Gamba



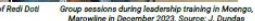
Farmer training in Moengo, Marowijne on producing of MM fertilizer in November 2023. Source: H. Goepart

Gender capacity building

In December 2023, the UNFPA conducted the first Gender Capacity Building training sessions in five locations, including Moengo, Redi Doti, Pierre Kondre (Kumbasi), Matta, and Pikin Poika. The trainings are led by Ms. Jachinta Dundas and the topics to cover during these sessions was on Gender, Leadership, and Business Skills, aiming to empower women and young people in these communities to actively participate in the pineapple production chain. Leadership training sessions have already taken place in Moengo, Redi Doti and Pikin Poika, involving a total of 75 participants (58 women and 17 men).



Certificate presentation for leadership participation in the village of Redi Doti in Para in December 2023. Source: J. Dundas



Group sessions during leadership training in Moengo, Marowijne in December 2023. Source: J. Dundas

In November, an online seminar titled *Gender-sensitive value chains in action: The Agrifood Sustainable Transformation Accelerator (ASTA) Initiative of FAO and UNIDO to address gender challenges in the Pineapple Value Chain in Suriname* was organized within the FAO Technical Network on Sustainable Food Value Chains - Development & Finance (SPVC D&F) to bring visibility on the project's activities, with focus on gender inclusion, at international level. During the seminar captain Wendoline Sabajo of the village Matta in Para to share her knowledge and experience on the ASTA project in supporting the establishment of a more inclusive and sustainable pineapple value chain, where women have equal access to resources, information, and markets.



ASTA Pineapple Project In Suriname Newsletter # 1 – January 2025

What happened in the past half year?

Farmer engagement:
Establishment of field trials: Within the ASTA program field trials are the foundation in engaging pineapple farmers through hands on learning, to unlock opportunities for value chain transformation, supported by a new agronomic model. The demonstration fields aim to feature year round production, higher density planting, and modern practices emphasizing organic inputs and services. While the first trial field was already established in November 2023 in Redi Doti, Para with the farmer August Tawoporan, the second and third were established in the last year of 2024. In August 2024, a field trial using the Red Round Ingi Nisi variety was launched in the Matta, Para, followed by a third trial in Moengo, Marowijne in November 2024, featuring Sugar, Ingi Nisi, and Djogo varieties. These trials not only provide pineapple farmers with practical knowledge but also unlock opportunities for increased yields, enhanced incomes, and strengthened community collaboration.

Farmer's workshop: In the last part of 2024 capacity building of pineapple farmers continued not only by hands-on learning trainings through the field trials but also by workshops engaging farmers from Matta, Marowijne, Brownsaweg, Pierre Kondre, and representatives from the Ministry of Agriculture and Regional Affairs. These sessions focused on capacity building on soil health, artificial flower induction (AFI), digitalization, modern techniques and community driven initiatives like Bio Factories.

Bio Factories: Bio Factories, introduced by the project, promote community-led production of organic inputs, empowering women and youth while fostering climate resilient farming. Practical sessions included making bio-fertilizer from fermented grass, natural insect repellents from locally available aromatic plants, and production of Mountain Microorganisms (MMs) to enhance soil health. These efforts aim to unlock greater independence and sustainability for farmers, enabling them to reduce input costs, boost yields, and strengthen community collaboration for long-term success.

In total 119 individuals, of which 68% women, were trained in modern organic pineapple farming practices, strengthening community development and sustainable agriculture.



The established field trial in Matta, Para in August 2024. Source: F. Gamba



Established field trial in Moengo, Marowijne in November 2024. Source: F. Gamba



Active participation of farmers during the bio factory workshop in Matta, Para in August 2024. Source: F. Gamba



Field Agent, Jeanne Pitra sharing her experience with digitalization in Moengo, Marowijne, in November 2024. Source: A. Moenjoan



ASTA Pineapple Project In Suriname Newsletter # 5 – July 2024

What happened in the past quarter?

Farmer engagement:

Establishment of field trial in Matta: In August 2024, a second field trial featuring the Red Round Ingi Nisi pineapple was launched in the Matta community to showcase modern organic pineapple production methods. The trial was a success, thanks to strong community support and involvement, including contributions from local women and the captain of Matta, Ms. Wendoline Sabajo.

Farmer's workshop: In August 2024, while setting up the field trial in Matta, in-field training sessions were held for local farmers to introduce essential techniques for organic pineapple cultivation. The training covered topics like seed sorting and grading, the importance of high quality seeds, planting in rows and beds, and applying organic matter and lime. To build on this initiative, a one-day workshop titled 'From Soil Health to Food Security' took place on August 22, 2024, bringing together farmers from Matta, Marowijne, Brownsaweg, Pierre Kondre, and representatives from the Ministry of Agriculture.

The workshop provided an update, including a manual, on soil testing sampling from October 2022, sharing key findings with participants. Attendees discussed the importance of a technical newsletter to stay informed about agronomic practices, then explored the new concept of Bio Factories. These centers, introduced by the project, focus on community-driven organic input production, encouraging involvement from women and youth. By integrating science with local knowledge, Bio Factories support a circular economy and strengthen ties across agriculture, communities, and consumers, laying the foundation for a sustainable and resilient production model. In the practical session, participants were guided in making fermented grass as an alternative to animal manure, preparing insect repellent to manage various pests, and cultivating Mountain Microorganisms to boost soil biological activity. A follow up workshop on the Bio Factory initiative is planned for later this year.

Gender capacity building: