

# Suriname Investment Climate & Sector Support

## Suriname Agribusiness Sub-Sector Diagnostic:

A deep dive into horticulture and fisheries and cross-cutting finance  
and logistics constraints

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FCI



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# Suriname Agribusiness Sub-Sector Diagnostic

A deep dive into horticulture and fisheries and cross-cutting  
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November 2018

**CIIP** Competitive Industries and Innovation Program

Finance, Competitiveness and Innovation (FCI) Global Practice

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## Background

- The World Bank Group (WBG) program in Suriname is grounded in the Country Partnership Strategy (CPS) between the WBG and the Government of Suriname (GoS) established in 2015. This CPS has the overarching goal of promoting sustainable, inclusive, and diversified growth in Suriname, including through a focus on creating a conducive environment for private sector development
- As part of its support to the GoS, in 2017, the WBG completed a Suriname Sector Competitiveness Analysis aimed at informing government strategies to diversify its extractive-dependent economy, with a focus on increasing private investment and competitiveness in agribusiness and new extractives industries.
- Detailed more fully in the subsequent slides, the analysis, which was made possible by the generous support of the Competitive Industries and Innovation Program (CIIP), identified high level sector opportunities and investment constraints related to the two sectors (i.e., agribusiness and extractives). Within the agribusiness sector, several sub-sectors were identified as having high potential for new investment, among them, horticulture, cereals/animal feed, aquaculture/fisheries, and pork. Through both stakeholder validation and the application of two additional filtering processes, agribusiness sectors were further narrowed to two potential sub-sectors, namely horticulture and fisheries.
- Identified cross-cutting constraints included access to finance, trade logistics, access to land and regulatory barriers. Two of the cross-cutting constraints (i.e., access to land and regulatory barriers) have been the subject of separate WBG technical assistance efforts.

## Objective of the sub-sector analysis: A deep dive into horticulture and fisheries

- Building upon the earlier completed Sector Competitiveness Analysis, this agribusiness sub-sector deep dive seeks to:
  - Assess the performance of the horticulture and fisheries ecosystems identifying opportunities that best balance investment potential and anticipated development impact;
  - Understand, with respect to horticulture and fisheries, which markets could be competitively targeted by local firms and farmers. This entails: i) exploring what is currently produced and what could be produced based on exploration of offtake demand and market trends; and ii) determining on which markets these products could competitively be sold;
  - Strengthen analysis of access to finance and trade logistics constraints earlier identified as cross-cutting, as well as identify any sector-specific access to finance and trade logistics constraints and opportunities as they relate to the horticulture and fisheries value chains;
  - Inform design of integrated WBG solutions, taking into consideration climate smart adaptation and gender integration, to promote competitive and inclusive value chains and implement policy and investment reforms needed to succeed in targeted agribusiness investor outreach initiatives and commercial financing opportunities in the targeted sub-sectors.
  - In particular, this analysis will inform the design of the Facilitating Competitiveness and Sector Diversification Investment Project Financing being prepared.

## Country Context:

Overview of the Economy, Agriculture's Role in Economic Diversification, and Agro-climatic Conditions

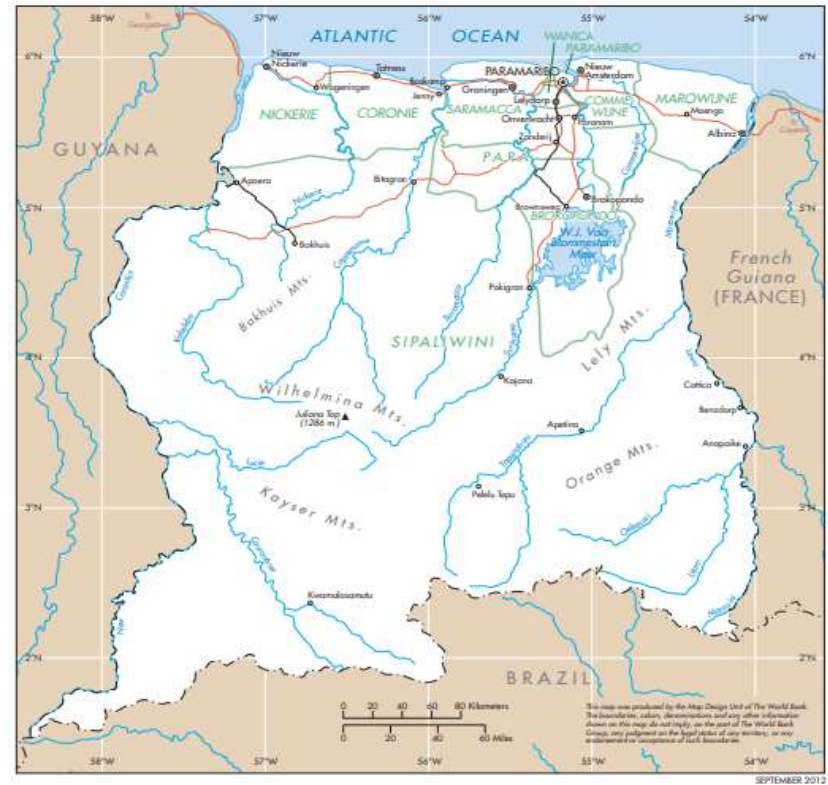
## Basic country context data

Suriname is a small Caribbean economy with abundant land and a relatively large share of agriculture for the region

	Suriname	Caribbean
Land area (km <sup>2</sup> )	156,000	
Population	558,368	
Population density (people per km <sup>2</sup> )	3.58	17.99
GDP (current US\$ Billion)	3.3	69.33
GDP / capita (current US\$)	5,900	9,518
Agriculture's share of GDP (%)	9.97	3.7
Life expectancy at birth (years)	71	73
Human Development Index (2016)	.725	.751
Ease of Doing Business (2018)	46.87 (165 <sup>th</sup> / 190 countries)	58.66*

Source: World Bank DataBank – 2017

\* Regional average for Latin America



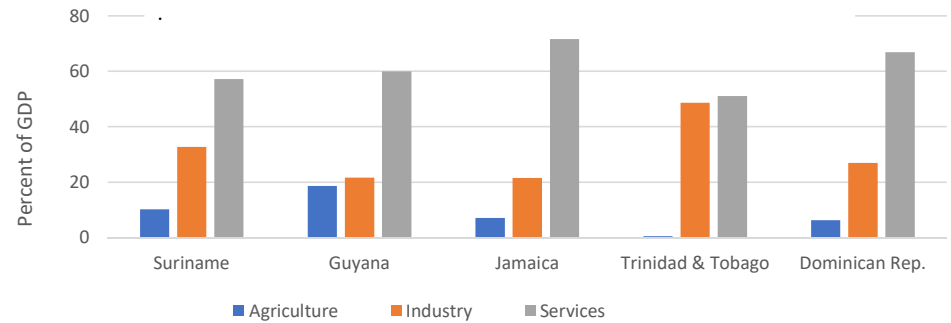
Source: World Bank



# Suriname's economy is heavily driven by extractives

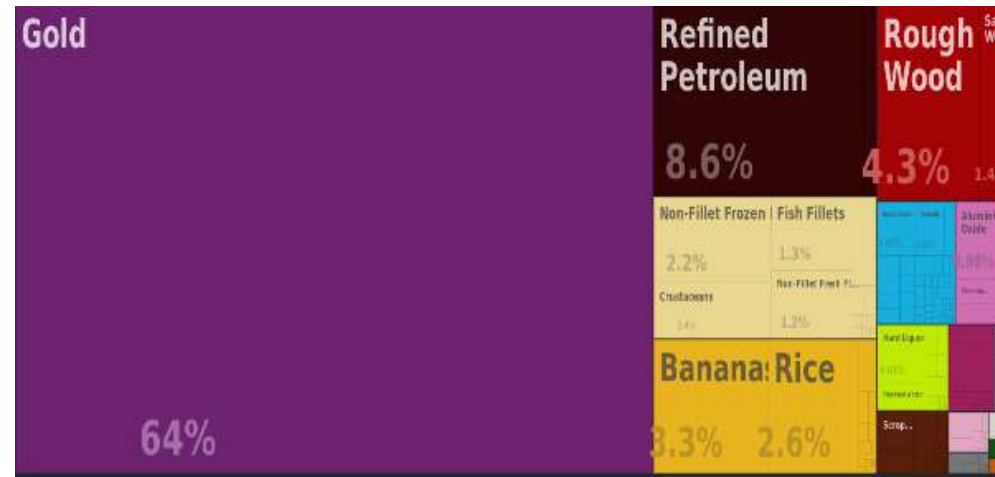
- Suriname is an upper middle income country with abundant natural resources and has an economy that has been historically concentrated in extractives (i.e., bauxite, oil, and gold deposits) which have accounted for approximately 30 percent of GDP (more than compactor economies) and as much as 90 percent of exports. In 2016, extractives represented nearly 75 percent of total exports (OEC 2016).
- Economic activity in other sectors is also linked to extractives – the services sector (including tourism) accounts for nearly 60 percent of the economy and is dominated by construction, retail, trade, and transport activities that are closely linked to income earned from extractives. Agriculture accounts for just 10 per cent of GDP (although this is relatively high for the region).
- Revenues earned from extractives are redistributed by the GoS to support public sector employment, accounting directly for 40 percent of total formal employment and an additional 20 percent in state owned enterprises.

Sectors of the economy in Suriname and comparators  
Measured as value added as percentage of GDP



Source: WDI 2014.

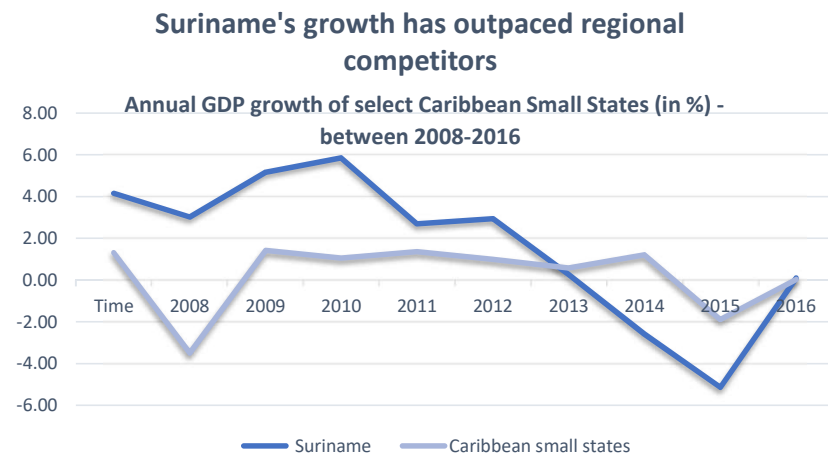
Close to seventy five percent of export basket is in extractive related industries



Source: OEC, 2016

## While focus on extractives has enabled growth, extractive dependency poses macroeconomic and sustainability risks

- Benefitting from favorable export prices for these commodities early this century, real GDP grew by 4.7 percent per year from 2001 to 2013, resulting in a per-capita income of US\$9,680 in 2014 (WDI 2016).
- After growing an average of 4.7 percent per year from 2001 through 2013, the economy began to contract as prices of gold, oil, and alumina fell. Government revenue from mining fell from approximately 10 percent of GDP to just 3 percent in 2015, the currency devalued by half, and government debt as a percent of GDP tripled between 2012 and 2016.
- Notwithstanding the decline in GDP between 2012 and 2016, Suriname's average GDP growth over the past decade (1.64%) has outpaced regional Caribbean competitors (.25%) (WDI 2016)
- While its economy has since stabilized, Suriname's heavily reliance on extractives exposes it to commodity fluctuations which impact macroeconomic stability and threaten depletion of precious natural resources raising issues of environmental sustainability
- With a desire to decrease its dependence on extractives, the GoS has set a goal of promoting private sector-led economic diversification -- including through focus on the agricultural sector -- as reflected in its National Development Plans.



Source: WDI, 2018

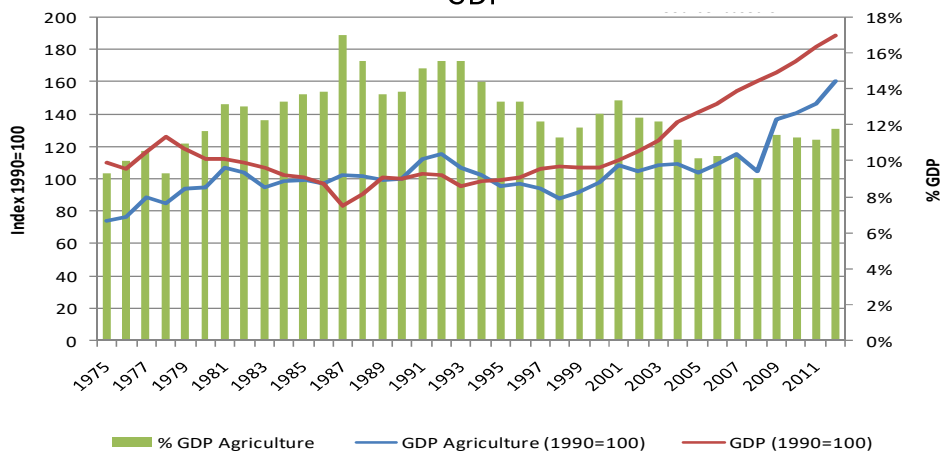
# Agribusiness exports, while relatively small, are an important contributor to Suriname's economy and a means by which the country can diversify

While the economy has traditionally been based upon extractives, agriculture has also been an important contributor, historically accounting for as much as 17 percent of GDP (currently approximately 10 percent). Despite the reduction, agricultural production increased in real terms by more than 50 percent from 2008 to 2012, beating historical output levels

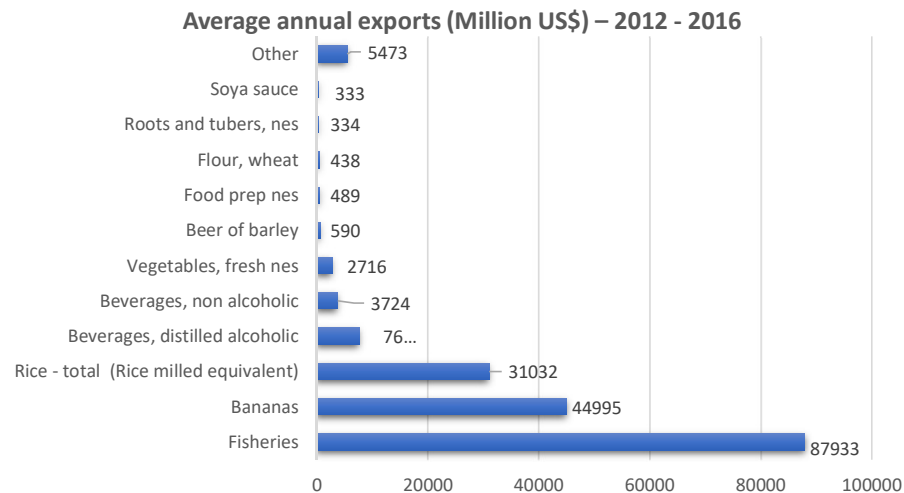
Within the agriculture sector, some commodities (e.g., rice, bananas, and fish and shrimp) are already being shipped to global markets (EU, US and Caribbean)

As it is a member of the Caribbean Community (CARICOM), Suriname enjoys the benefits of free trade within the region. It additionally benefits from access to EU markets through an Economic Partnership Agreement between the EU and CARICOM.

Agriculture Percentage in Real Terms and as a Percentage of GDP



Agri exports are driven by fisheries, bananas and rice



Source: Panadeiros 2014 as referenced in World Bank Sector Competitiveness Analysis, 2017

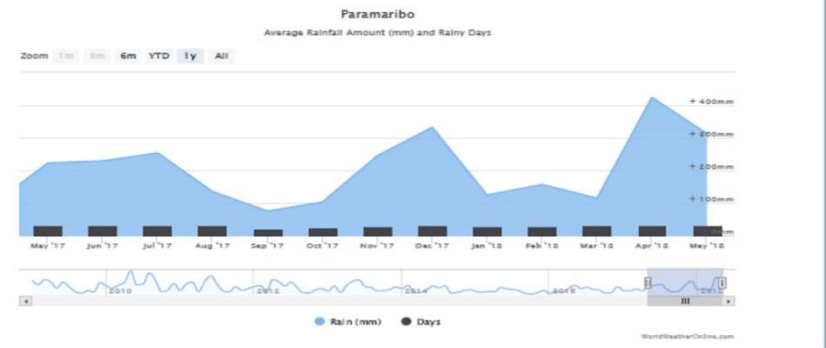
Source: FAO. Note the data on fisheries is from estimated FAO data.

# Agro-climatic conditions in Suriname are nearly ideal for agricultural production

- The country can be divided into two main geographic areas. The northern, lowland coastal area (roughly above the line Albina-Paranam-Wageningen) is the main agricultural and cultivated region, and also where roughly 90% of the population lives. The southern part consists of tropical rainforest and sparsely inhabited savannah along the border with Brazil, covering about 80% of Suriname's land surface.
- Suriname has a tropical climate with an average temperature of 27C (daily ranges between 23 and 33C). There are four official seasons: a long dry season (mid-Aug to early Dec); a short rainy season (early Dec to early Feb); short dry season (early Feb to late Apr); and long rainy season (late Apr to mid-Aug). Despite the name, the dry seasons remain fairly wet: in Paramaribo, there is an average of 2210 mm (87 in) of rainfall per year, or 184.2 mm (7.3 in) per month.
- In addition to significant rainfall, Suriname has abundant water resources -- rivers (some of which are challenged by seasonal salinity), swamps, and groundwater. Notwithstanding water sources, inadequate draining systems and a lack of government coordination result in sub-optimal irrigation systems.
- Arable land area is estimated at 65,000 sq. km (42% of the national land area), approximately eighty five percent of which is located in the coastal plains and 15 percent on the river terraces in the interior. Much of this land is however inaccessible and requires drainage infrastructure.
- Given excellent agro-climatic conditions, Suriname has the potential for cultivating a wide range of agricultural products (food, fisheries and forest products) which can flourish with improved infrastructure (e.g., irrigations systems) and agricultural practices (e.g., use of climate smart technologies, inputs, etc.)

## Abundant rainfall contributes to Suriname's vast fresh water resources

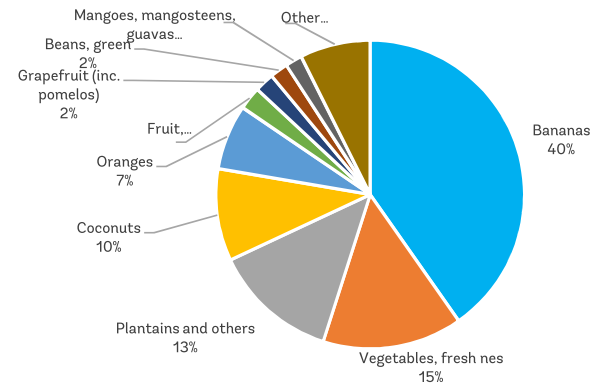
Average rainfall amount (mm) and rainy days in Paramaribo - 2016



Source: World Weather Online

## Suriname produces a wide-range of agricultural products

Agriculture crop production (MT) - 2016



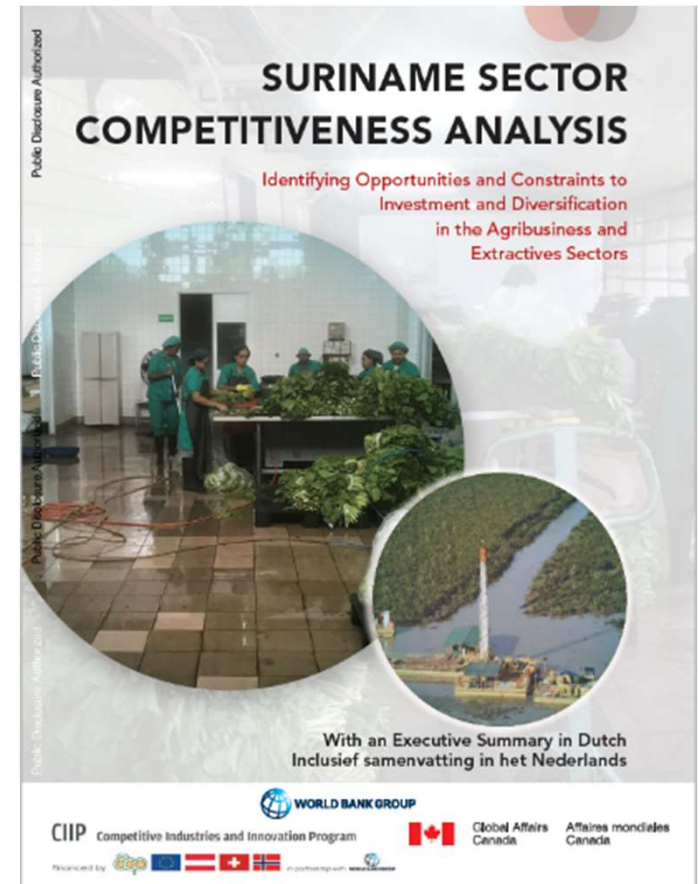
Source: FAO, reflecting only official values

# Suriname Sector Competitiveness Analysis:

An assessment of the broad agribusiness ecosystem

## Analysis of the agribusiness ecosystem and initial sub-sector scans completed to identify cross-sector constraints and prioritize sub-sector selection

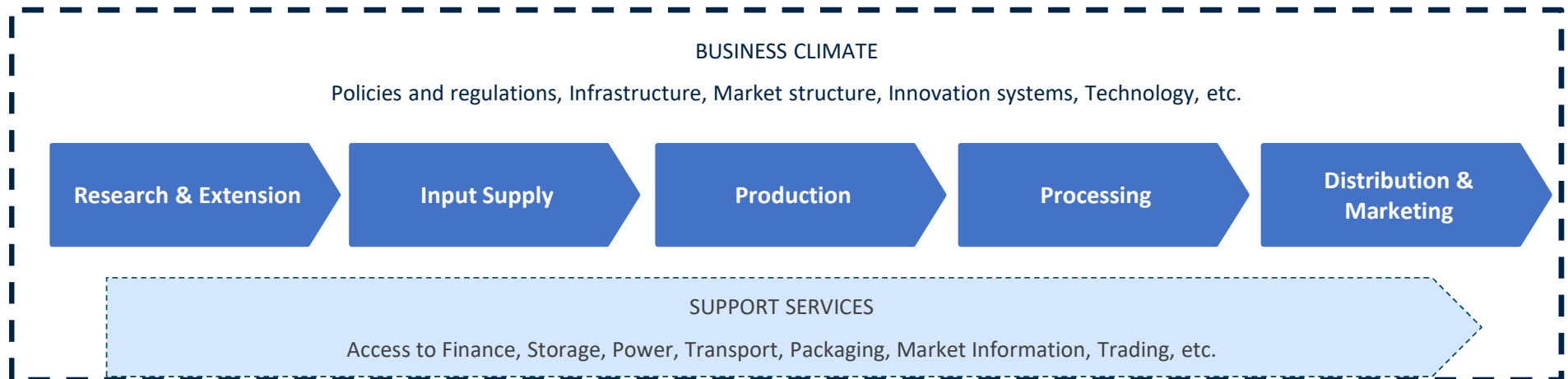
- In support of the GoS' goal of diversifying the extractive-dependent economy, the WBG completed a Suriname Sector Competitiveness Analysis which assessed high level sector opportunities and investment constraints related to agribusiness and extractives.
- As it relates to agribusiness, conducting both a review of available literature and trade data, as well as conducting public and private sector interviews, the team completed a **review of the agribusiness ecosystem** (high level summarized in subsequent slides). In addition to identifying cross-cutting opportunities and challenges for the broader agribusiness sector, the team completed a **high level review of 15 agribusiness sub-sectors** (among them horticulture, cereals/animal feed, aquaculture/fisheries, and pork) to identify high potential sectors for new investment (see summary of key findings on slide 18).
- Through both stakeholder validation and the application of two additional filtering processes, the 15 sub-sectors were further **narrowed to two potential sub-sectors, namely horticulture and fisheries**. Prioritization and scoring of the sub-sectors was completed through applying two additional filtering considerations:
  - Selection of sub-sectors that could benefit from **investment promotion support**. This included an assessment of: a) ability of the sector to demonstrate progress within a 24-month window; b) the export potential revenue; and c) possibilities for income opportunities for local farmers. This validation process resulted in an initial focus on horticulture, which was supported by a Suriname Agribusiness Investment Task Force established by the Government.
  - The second filtering process considered **investment generation and competitiveness upgrading potential** within the established exporting sub-sectors. Fisheries, bananas, and rice each contribute approximately 30-35 percent of current agricultural exports; as aquaculture/fisheries emerged as highest among those established exporting sectors for new investment potential, it was selected for follow-up diagnostic work to understand competitiveness opportunities and constraints.



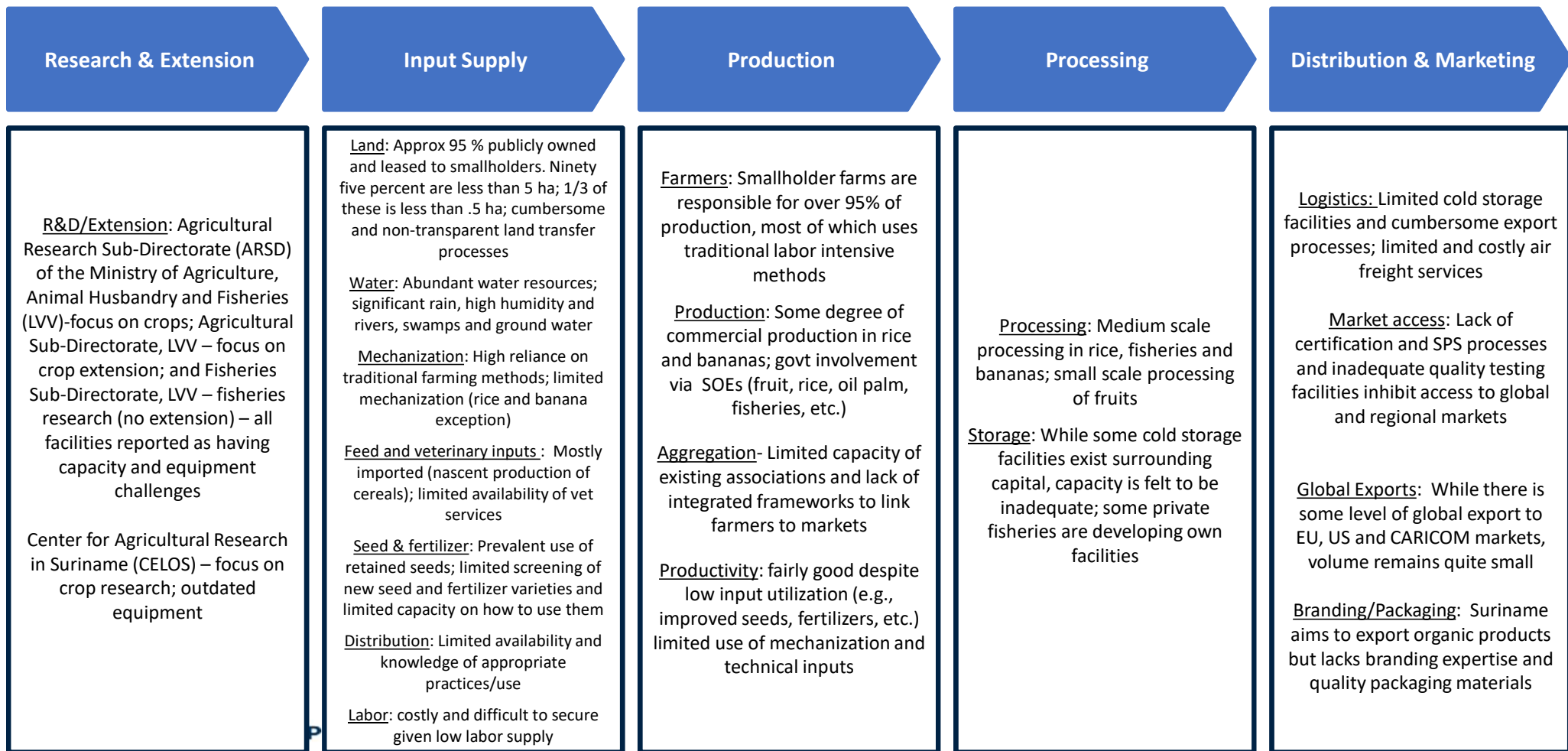
For the full details and analysis, refer to the World Bank Group's SURINAME SECTOR COMPETITIVENESS ANALYSIS

## The framework from which we analyse the agribusiness sector...

*An agribusiness value chain is part of a complex eco-system which encompasses not only the primary nodes but also takes into consideration the enabling environment and support services impacting the chain's performance*

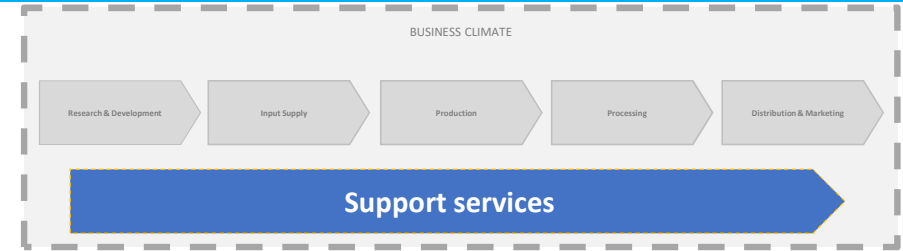
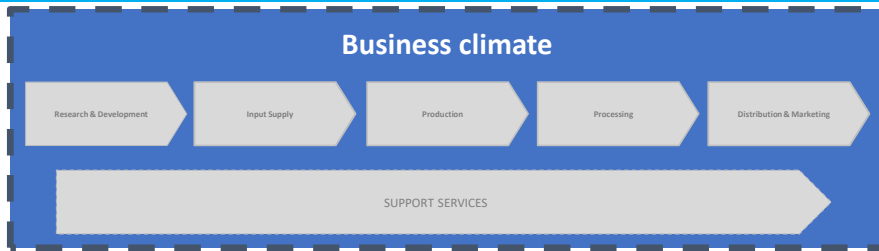


# Summary of key aspects of each primary agribusiness value chain node in Suriname





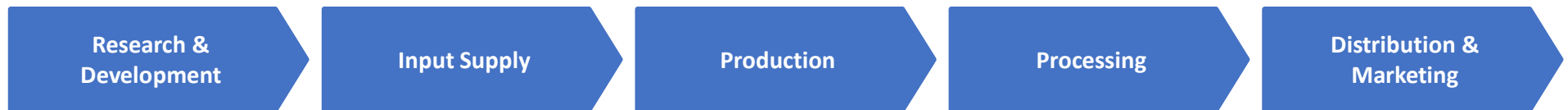
# Summary of key aspects of the business enabling environment and agribusiness support services in Suriname



- **Legal protections:** Suriname's investment code is outdated and fails to offer adequate protections to investors. Building upon recent WBG engagement (CIIP-supported advisory work), a revision of the code could be completed in the near-term
- **Land:** Approx 95% of land is owned by the government. Systems for identifying property owners and registering land titles are underdeveloped, and specific processes and procedural requirements for accessing land are not transparently understood
- **Doing Business Ranking:** 165<sup>rd</sup> out of 190 countries. Low scores across most agribusiness related indicators including Starting a Business (186<sup>th</sup>), Registering Property (156<sup>th</sup>), Enforcing Contracts (187<sup>th</sup>), and Getting Electricity (177<sup>th</sup>)
- Suriname's exports to the EU for bananas and rice depend on trade preferences which are gradually being reduced, thus highlighting the need for improved competitiveness. Fruit exports to CARICOM also enjoy preferential tariff margins of 25 to 30%. Due to non-tariff barriers, however, Suriname has not had meaningful penetration into regional markets

- **Trade Logistics:** Suriname is not yet ranked in the Logistics Performance Indicators. Interviews however confirm costly and cumbersome export processes and limited air freight. Suriname fares fairly well against regional comparators on the Doing Business Trading across Borders indicator (Distance to Frontier rating of 75.02 as compared to 68.71 regional average for LAC).
- **Storage:** no official data on post-harvest losses but interviews confirm need for additional cold storage facilities both at the ports and in key production areas
- Suriname's Getting Electricity ranking is lower than the regional average (Distance to Frontier score of 58.55 vs LAC average of 70.45) with low scores on time required to secure connection and reliability of supply and transparency of tariffs
- Despite significant rainfall, there is a lack of irrigation management systems resulting in inadequate drainage.
- **A2F:** Access to finance is cited as a major constraint by 36.2% of firms in Suriname, above the 30.5 % LAC average (Enterprise Surveys 2010). Also confirmed in interviews

# The private agribusiness sector identified a long list of priority constraints across agribusiness subsectors during the competitiveness assessment (1 of 2)



**Public institutions:** The institutional support system for agriculture (R&D, extension, regulatory agencies, investment support and promotion, etc.) is insufficient to support a transition toward commercial agriculture in Suriname. Moreover, the continued presence of SOEs in multiple value chains is a likely deterrent to private investment.

**Investor protection and contract enforcement:** While there has been recent progress in amending business legislation, further reform is required to provide investor protections. Time to enforce contracts more than twice the regional average.

**Knowledge and skills:** Limited technical knowledge of good agriculture practices and limited availability of labor due to country's small population. Labor gaps are filled by migrant workers whose skills are low and whose status is transitional

**Public Private Dialogue:** Limited coordination between the public and private sectors regarding the enabling environment for agribusiness

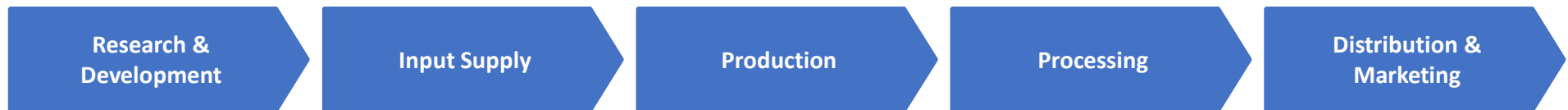
**Inputs:** Limited R&D and limited local availability for improved seeds. Farmers can import their own but there is little to no inspection of imported varieties. Limited knowledge of appropriate use of other agricultural inputs

**Extension services:** Existing services are limited and hampered by weak capacity

Priority

High priority

# The private agribusiness sector identified a long list of priority constraints across agribusiness subsectors during the competitiveness assessment (1 of 2)



**Market linkages:** With the exception of a few structured value chains (rice, cassava) few farms are integrated into the market. Attempts at processing investments face challenges to source locally adequate volumes of products meeting quality requirements, while farmers face access to finance charges and technical knowledge of how to meet requirements.

**Land:** Insecure land titles and inefficient land administration create barriers, especially for commercial investment

**Access to finance:** Lack of adequate collateral and high interest rates are barriers for most farmer inhibiting production (use of improved inputs, mechanization, etc.); High rates similarly affect processors. With limited knowledge of the sector, banks have been reluctant to accept movable collateral.

**Post harvest logistics:** Limited storage infrastructure leads to high post-harvest losses. Limited volumes and lack of farmer and processor organizations inhibit ability to reduce cost/or improve bargaining power

**National Quality Infrastructure:** Lack of availability of certified labs, equipment and qualified technical staff to support producers and exporter in managing SPS issues

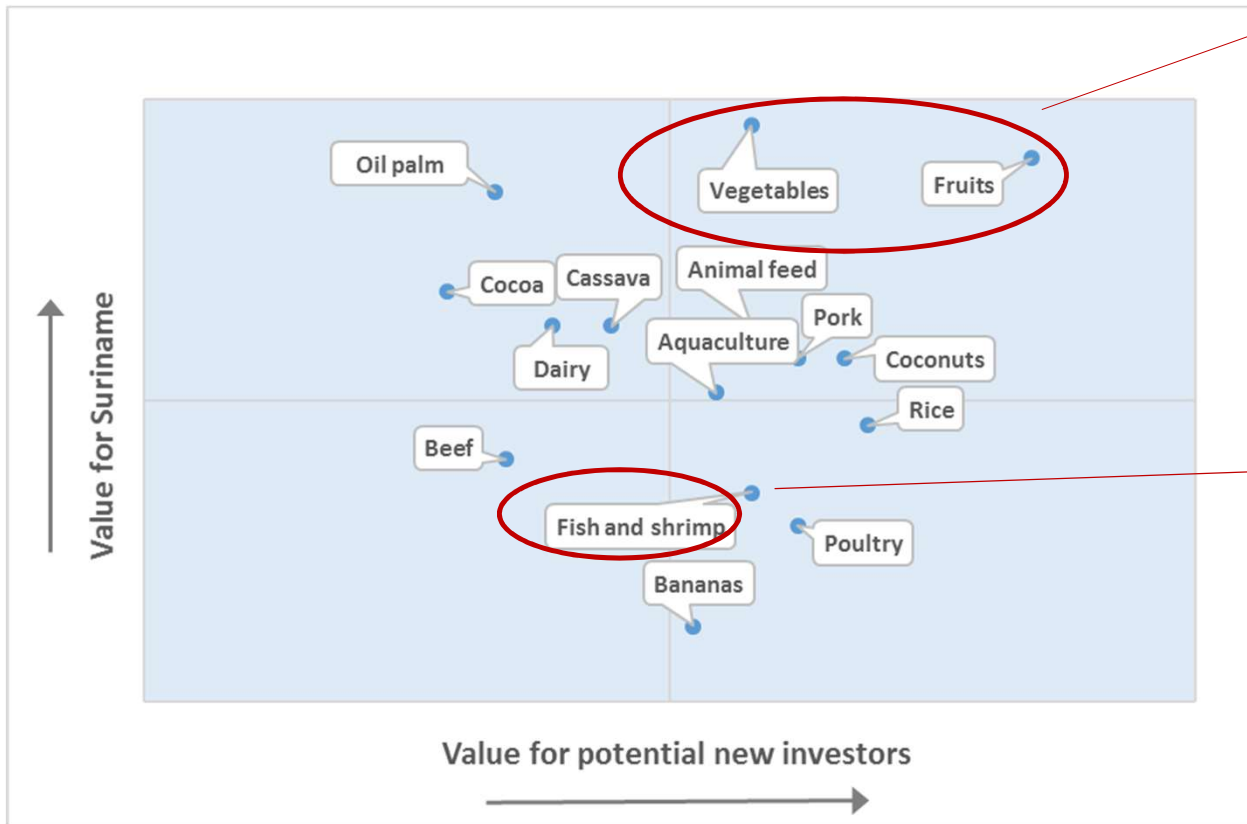
Priority

High priority

# The Sector Competitiveness Analysis reviewed fifteen sub-sectors for potential for new private investment and competitiveness

Sub-sector	Key Findings
Animal feed	High level of existing raw material imports made more costly by recent devaluations. Strong feed industry able to use local production, including from current rice production, or from new feed input products. Existing local interest.
Aquaculture	Strong world demand. Existing fish processing and exporting infrastructure. Abundant land for fish ponds.
Bananas	Loss of preferential access to EU limits export market potential. Supply controlled by one existing company and market would appear to offer limited opportunity for additional investors.
Beef	Domestic demand presently met by existing production. Possible scope to use available land for export to Caribbean if production efficiencies can be improved.
Cassava	New Government-owned factory presently underused. Good evidence of acceptable yields and potential for inclusive production throughout the country. Potential markets identified.
Cocoa	Strong world demand for cocoa. Crop so far unmechanized, which could cause problems on plantations in country with reluctance to do full-time agricultural work. Inclusive if smallholders are prepared to take on the crop.
Coconut	Rapidly growing world demand for both virgin coconut oil and coconut water. Existing coconuts mainly grown by smallholders on a limited scale. Cost and availability of labor a potential constraint and economic viability of new plantings undetermined
Dairy	Potential for privatization of existing state-owned dairy but would need to compete against cheap milk powder imports and address existing deficiencies in milk production.
Fish and shrimp	Controls on fishing limit potential for export expansion and may lead to further declines in harvest. Some potential for extra value addition.
Fruits	Potential Caribbean and European markets for citrus and other fruits. Good growing conditions with harvest mechanization possible. Existing processors who could expand to carry out juicing for export and domestic market.
Oil palm	Good world demand for palm oil and palm kernel oil. Potential need to use primary forest land, raising environmental concerns and reducing market potential as oil could not be certified. Crop not yet mechanized and labor availability problematical.
Pork	Good recent investments in pig production and pork processing, with linkages established between the major companies, suggests that further investments may not be required unless new investor is able to develop strong export markets.
Poultry	Industry expansion constrained by import of cheap offcuts from USA. Existing companies able to supply present domestic demand but investor from Caribbean could facilitate market access in the region.
Rice	Suriname is a relatively high-cost producer. Ongoing efficiency investments by existing mills may be able to expand export market opportunities for existing producers. But subsector is well covered by existing firms, limiting space for additional investors.
Vegetables	Limited scope to increase supply to diaspora market but, with Global GAP certification, good possibilities exist to supply a range of vegetables to mainstream supermarkets in Europe and the Caribbean, if logistics difficulties can be worked out.

## Based on prioritization and stakeholder validation, horticulture and seafood were selected as priority sectors for additional deep-dive analysis



**Horticulture (e.g., fruits, vegetables and high-value natural products)** identified as strong potential sources of new growth and export diversification

- High-value specialty niches such as traditional Surinamese vegetables, organic and fair trade certified fresh and processed tropical fruits and vegetables, processed super fruits (acai, acerola) show accelerating levels of investment, albeit from a low base.
- A recent study on the potential of exotic specialty oils (e.g. Brazil Nut oil) produced from wild harvested nuts from the rainforest indicated strong development potential in Suriname (UC Berkeley and Conservation International).

**Fish & shrimp** identified as secondary in the initial sub-sector selection process, were also retained as priority for consideration given their significant relative contributions to the economy and exports

- Export competitiveness demonstrated by the success and growth of existing companies in the sector.
- Potential for further value addition (e.g., smoked and processed fish)

# HORTICULTURE

## Sub-Sector Analysis

# Horticulture was prioritised as a broad sub-sector offering near-term growth and competitiveness potential

## Scope of the horticulture sector

- In this report, the horticulture sub-sector is identified as a relatively broad sub-sector encompassing a variety of fruits and vegetables that may be marketed as fresh or processed (juiced, dried, candied, etc.).
- Given the very small size of the local market, the market focus used in this study is export markets, both regional and global.
- The value chain focus comprises of the production and delivery, processing or grading, packaging and export.

## Summary of why horticulture was prioritized

- As explained in the agribusiness overview slides above, the prioritization of sub-sectors for this study looks at the attractiveness and feasibility of investing in a sub-sector and the resulting development impact for the country.
- Considered separately in the competitiveness analysis and grouped under horticulture in this report, both fruits and vegetables stand out as offering good near-term prospects for the private sector (favorable market trends and competitive assets in Suriname) and facing lesser constraints than other sub-sectors such as meat or animal feed, as demonstrated by existing private operators in Suriname.<sup>1</sup>

## Structure of the sub-sector analysis

- Industry trends and context
- State of the sub-sector in Suriname
- Suriname's competitiveness drivers
- Market segmentation and key sub-sector constraints to competitiveness

## Global trends in horticulture are favourable for exporters of tropical fruits & vegetables, and Suriname enjoys preferential access to key markets

### Very limited local market (500k inhabitants) but growing regional and global demand for tropical fruits and vegetables

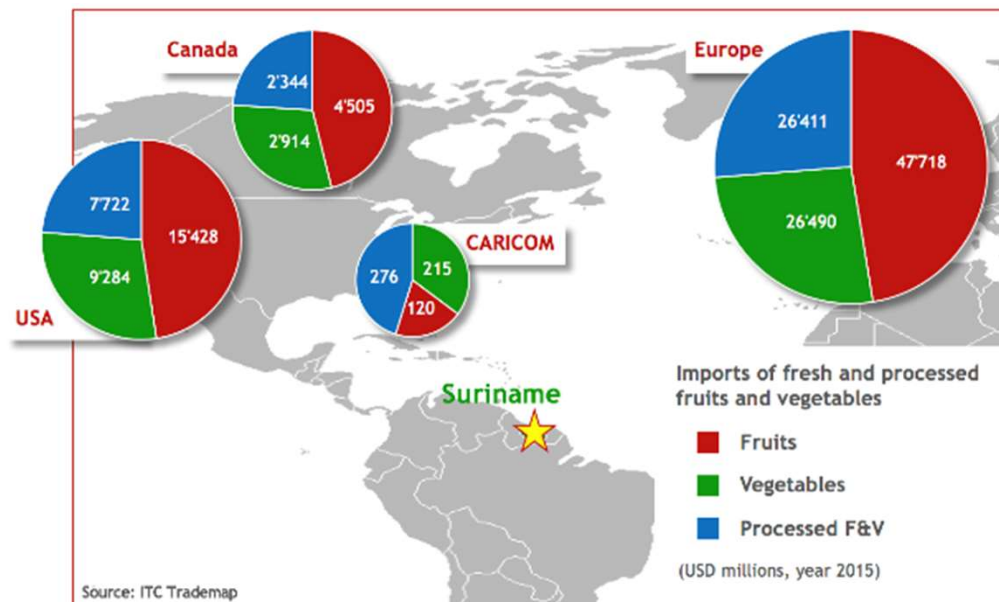
- Despite accelerating trends in European and North American markets for locally produced foods, import trends continue to reveal multi-billion dollar markets for tropical fruits & vegetables, with some products achieving 2-digit growth.

### Pure, organic, nutritious and sustainable products are in favor

- European and North American markets are driving a global trends towards more natural and organic foods with superior nutritional value (e.g. "superfruits"), a trend that Suriname as a new and relatively mysterious origin could harness thanks to its fundamental assets (very natural environment in one of the most biodiverse areas on earth).

### Preferential trade agreements with key markets are in place

- The EU-CARIFORUM Economic Partnership Agreement offers duty- and quota-free access to the EU and its 500+ million consumers; within CARICOM, Suriname has duty- and quota-free access to a protected market of 15 countries, 15+ million consumers, and a large tourism sector.



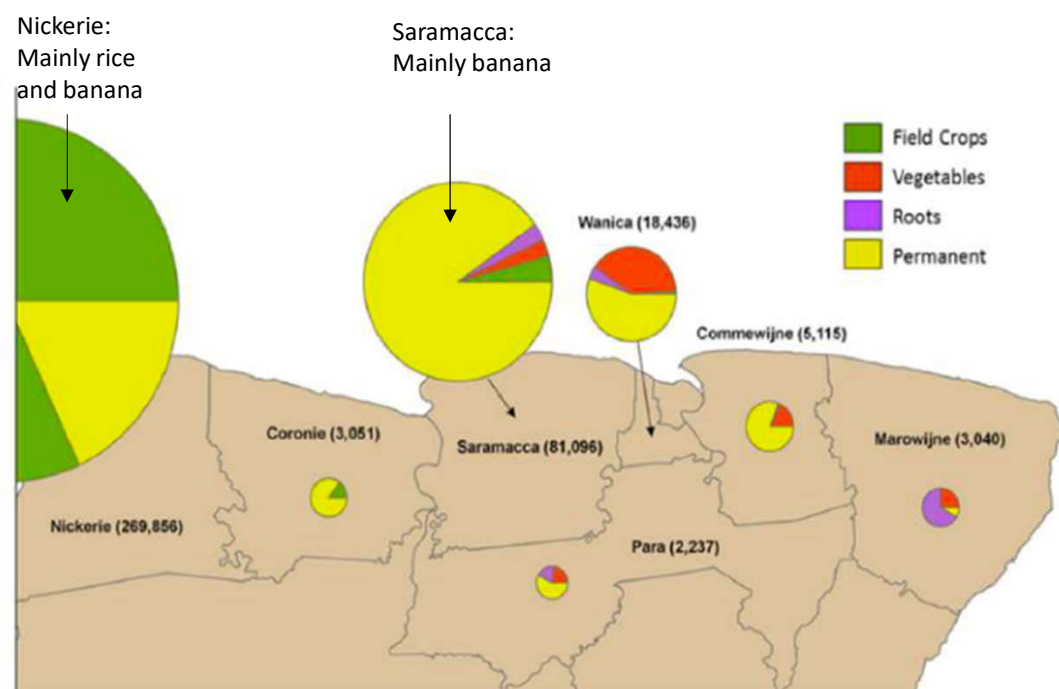


## A snapshot of Suriname's horticulture sub-sector

### Key statistics for fruits & vegetables

Production (FAOstat)	<p>&lt;150,000 MT, including:</p> <ul style="list-style-type: none"> <li>Banana / plantain – 80,000 MT</li> <li>Citrus – 17,000 MT</li> <li>Vegetables – 16,000 MT</li> <li>Pineapple, Papaya, Mango, Beans, Cucumbers are minor, ranging from 1,000 – 3,000 MT</li> </ul>
5 year CAGR (FAOstat)	Stable or slightly negative in the main fruits & vegetable crops listed above, but 10-30% p.a. growth in products such as pineapple, papaya, mangoes, beans, cucumbers
Exports (FAOstat)	\$45m (95% banana) to the EU
Imports (Trademap)	Suriname is essentially self-sufficient in tropical fruits and vegetables and only imports temperate varieties it cannot grow locally
Farmers (WBG 2017)	~ 4,000 small and part-time producers on family farms (excl. banana)

### Most commercial agribusiness in Suriname is concentrated in the coastal strip

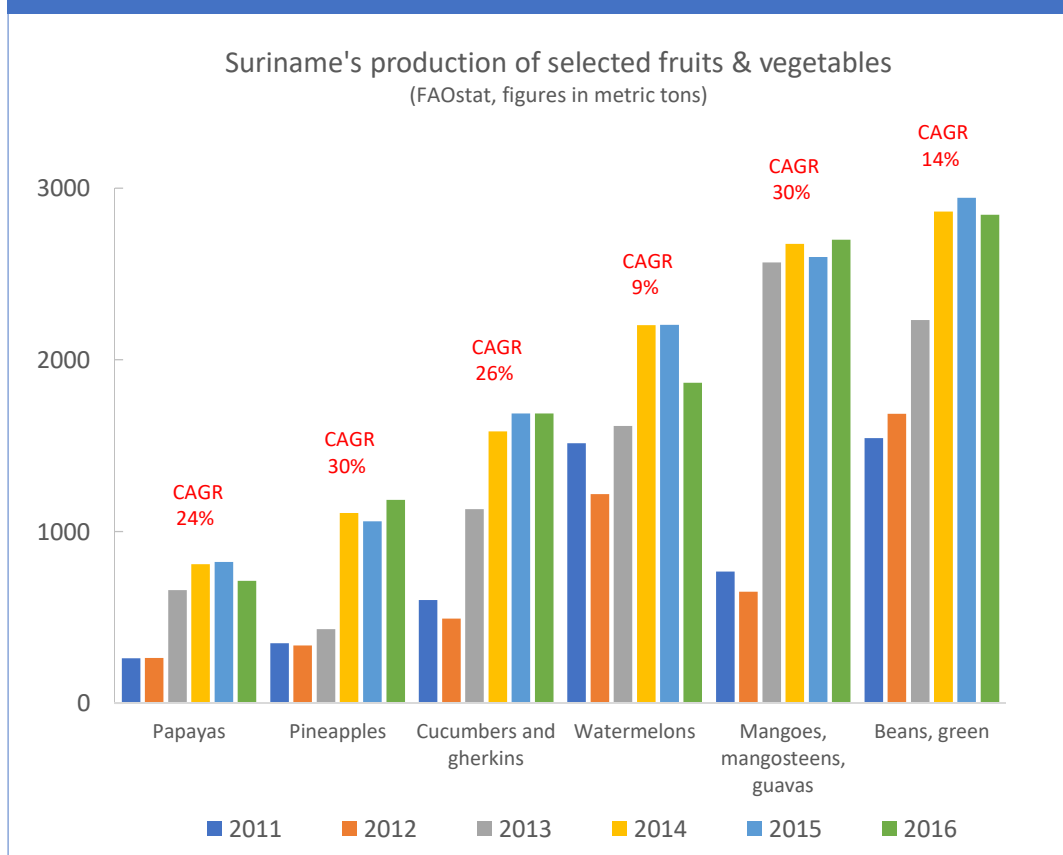


Figures in metric tons for the year 2012, field crops include mainly rice, permanent crops are mainly banana, plantain and citrus.  
Source: Suriname Agricultural Master Plan (2015)

## Suriname is starting to move beyond traditional banana exports towards higher-value fresh and processed fruits and vegetables

- Suriname has a rich history of colonial agriculture dominated by rice, banana, sugar, coffee, cocoa, oil palm and coconut.
- Poor economics of commodity plantation models and loss of tariff preferences caused decline of these traditional sectors (still ongoing in rice and bananas).
- Heavy focus on the extractives sector over the last 4 decades resulted in today's situation of abandoned plantations and general lack of capacity and interest in agribusiness, with labor shortages being one of the biggest obstacles in the sector.
- Yet, family holdings have continued to produce a wide range of fruits and vegetables and an increasing number of entrepreneurs are now investing in higher value (niche, organic) fresh and processed horticulture.
- Exports to regional and overseas markets are nascent but growing (Trademap) and modern export operations (both with and without processing) are sourcing from family farms and are expanding as a viable model in Suriname (e.g., Suriname Candied Fruits).

Production of non-traditional fruits & vegetables has rapidly increased in recent years, although absolute volumes remain small



## Notwithstanding this promising trend, the horticulture sub-sector remains very small (small volumes, few players, limited range)

### FRUITS

- Based on FAOstat (2016 data), the main fruits currently produced in Suriname are bananas / plantains (80,000 tons) and citrus (17,000 tons).
- The only significant fresh fruit exports are banana, produced by the only plantation in Suriname (FAI, 2000 ha), with 42 million USD / 50,000 tons annual exports (FAOstat 2016). Citrus plantations (mainly oranges) are being developed but are not yet producing exportable quantities. Otherwise, fruit production is from family holdings and small farms.
- High potential fruits identified for development in the Suriname Agricultural Master Plan (2015) include: acerola, passion fruit, pineapple, acai, papaya, citrus, pomegranate, avocado, mango, plantain/banana.

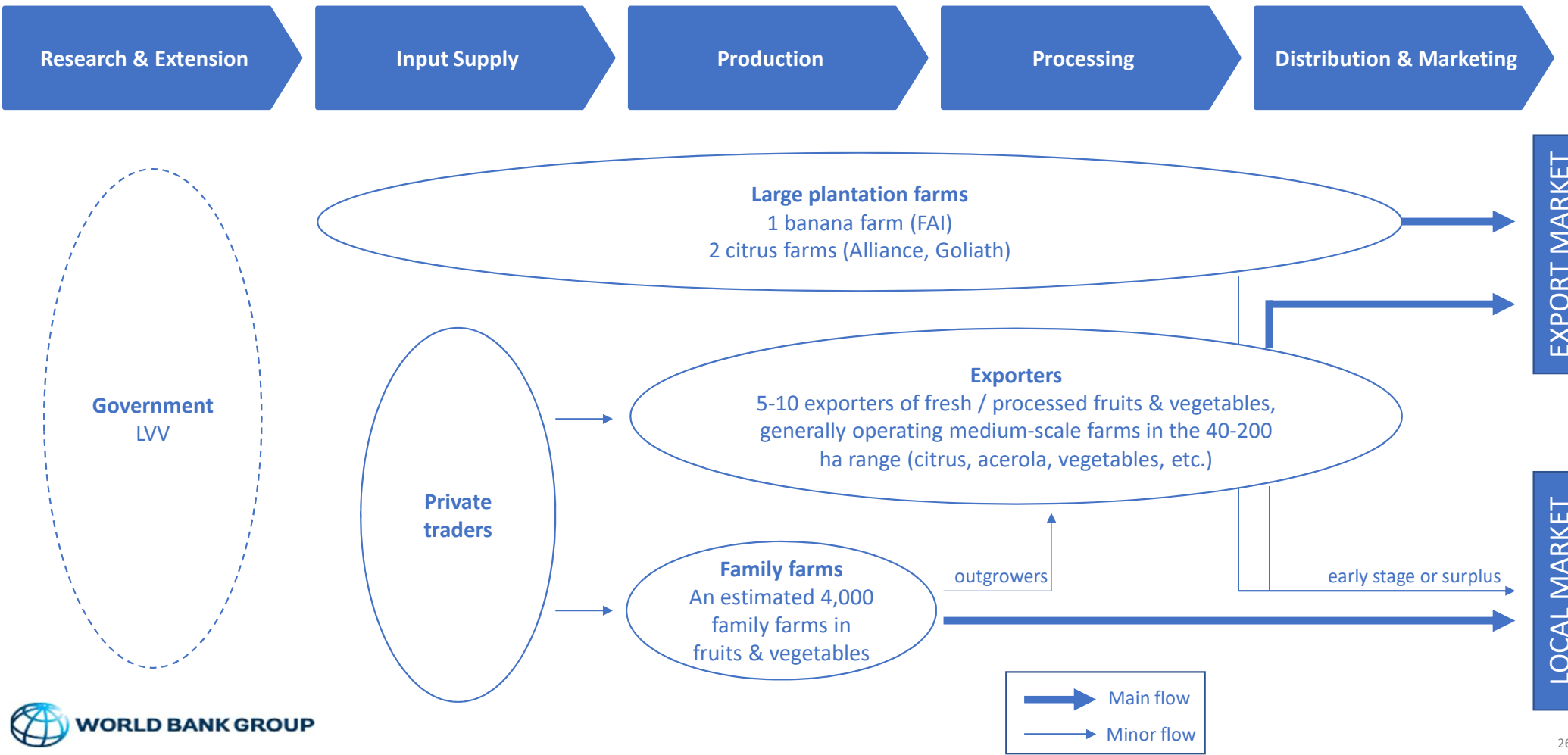
### VEGETABLES

- Vegetable production is estimated at 24,000 tons per annum and roots and tubers at around 7,000 tons (WBG, 2017). About 75% of production occurs in the Wanica and Saramacca Provinces (Suriname Agricultural Master Plan, 2015). All production is from family plots and small farms.
- Value of vegetable exports in 2017 is 840,000 USD for a total of just over 2,500 tons (Trademap) which is mainly composed of traditional Surinamese vegetables (e.g. bitter gourd, string bean, okra, eggplant, arrowleaf, amsoi, paksoi and sweet potato) and destined for the Netherlands.
- High potential vegetables identified for development in the Suriname Agricultural Master Plan (2015) include: tomato, chili pepper, cucumber, eggplant, herbs, sweet potato, okra, bitter gourd.

### PROCESSED FRUITS & VEGETABLES

- The number of vegetable and fruit processors in Suriname is limited. In addition to a few larger processors, there are many small household fruit and vegetable processors catering to the local market.
- Exports of processed fruits & vegetables are dominated by fruit juice to Guyana which largely processed from imported inputs (value of 1.8 million USD in 2017, Trademap).
- Other processed fruits & vegetables exported (in minor amounts) to the EU include: candied fruits, acerola concentrate, acai concentrate and pepper marinade sauce.
- Exporters are working to improve food safety and achieve certifications such as GlobalGap and organic.

# Simplified map of the horticulture value chain in Suriname



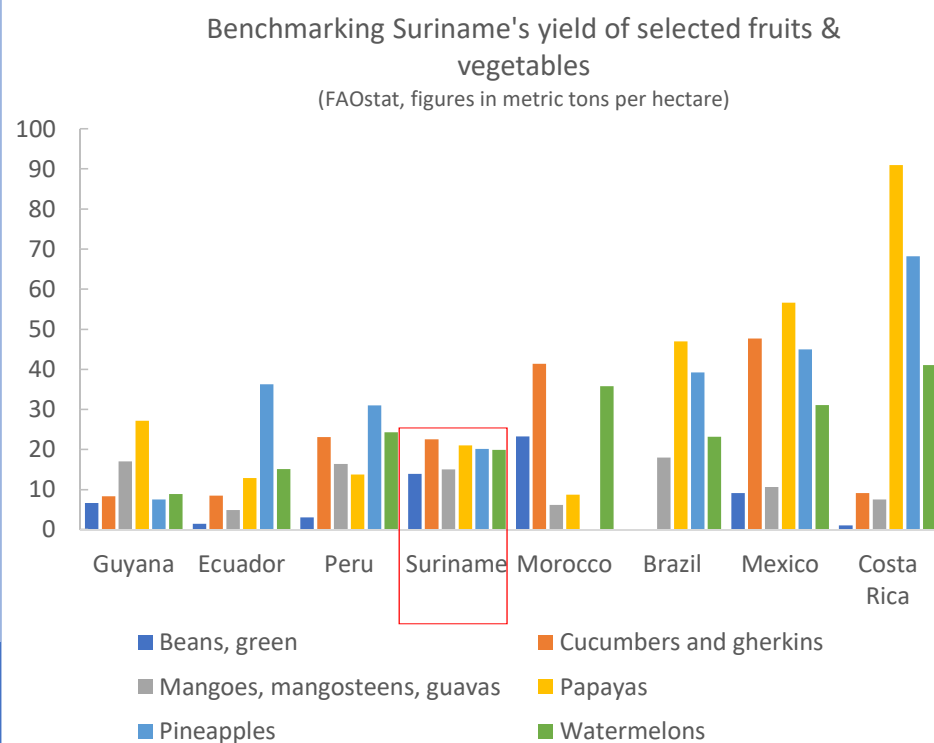
## There are reasons to believe that Suriname has some of the fundamentals required to grow its horticulture exports

### Excellent climatic conditions for horticulture: abundance of highly fertile land, ample supply of fresh water, and stable mild climate year-round

- The diversity of soils in the north of Suriname can accommodate a variety of crops. Yields are naturally high, as suggested by the relatively high yields achieved despite the relative lack of investment in improved production.
- Scarcity of fresh water is increasingly affecting many global tropical suppliers of horticulture produce, constraining supply and raising costs. Suriname has among the best fresh water resources worldwide (freshwater per capita).
- Suriname's climate is mild year-round, with reduced seasonality and no hurricanes. This is a decisive advantage over other CARICOM producers and many global exporting countries, reducing the need for expensive technological solutions and expanding the growing seasons.
- As the country of highest relative forest cover in the world (World Development Indicators 2015), Suriname benefits from superior ecosystem services (pest regulation, pollination, etc.), reducing costs of production (FAI Group, pers. comm.). For processors and exporters, this is an important selling point from which to build a powerful brand in the health / pure food markets.
- **Short internal distances between production areas and the port / airport also provide a strong advantage to Surinamese exporters**

Horticulture is the agribusiness sector that receives most investor interest, with small but expanding companies. One large foreign investment is already in place: UNIVEG group acquired the banana plantation in 2014.

### Suriname shows relatively competitive average yields compared to leading exporters, despite small sector size and limited investments to date



# Focused public and private investments and robust regulatory frameworks are however required to increase volumes and quality and build necessary branding

## Research & Extension

### Almost inexistent public sector R&D dedicated to horticulture:

- Capacity and resources challenges of official public sector institutions responsible for agricultural R&D
- Focus on traditional crops (banana, rice)

### R&D burden left to private sector players at high costs:

- Understanding market requirements (varieties, seasons, standards, etc.) is done by the exporters
- Testing new varieties and optimizing production protocols is often done by (the few and small) exporters on their own production land, or done by outgrowers (with guidance by exporters)

## Input Supply

### Input markets function relatively well:

- No issues reported in terms of harmful government interventions on input markets
- Private sector traders are responsible for the import and marketing of agro-inputs and equipment

### But the government is currently not able to tighten controls on quality:

- As for R&D, the government has insufficient capacity at present to appropriately test and register new varieties and control quality of inputs on the market
- The informal marketing and use of sub-standard seeds and agro-chemicals are therefore left largely unchecked

## Production

### Few professional and specialized producers:

- Existing exporters integrate their own intensive production, usually constrained by labor like any medium/large plantation
- But most of the production is done by an estimated 4,000 part-time / family farmers, some using screenhouses and drip, but not geared towards exports (varieties, quality)

### Result in limited exportable production at present:

- Limited know-how (varieties, technology, standards) and capital among family farmers to certify and supply exports
- Public extension extremely limited in particular in these non-traditional products
- Weak regulatory frameworks and capacity to enforce quality standards

## Processing

### Few companies with the required profile to significantly grow the sector:

- There are less than 10 processors/exporters, small businesses except for the banana plantation
- Typically local (or long-term expatriate) without previous track record in the industry
- Usually stable or expanding, but step growth would require additional players, qualified and with an ambitious vision

### Yet companies have to perform up- and down-stream services:

- Extension support to producers (+ seeds, inputs)
- Certification of production (global gap, organic, etc.)
- Farm-gate collection and port delivery logistics

### Weak regulatory frameworks (or industry group) to enforce quality standards and brand

## Distribution & Marketing

### Export-related procedures and inspections are inefficient:

- High compliance costs: several pieces of paperwork at different locations for each shipment, no automation
- Lack of technology (scanners) at airport result in unhygienic controls (e.g. dogs), or ad-hoc inspections at the factory site (arranged for larger exporters)

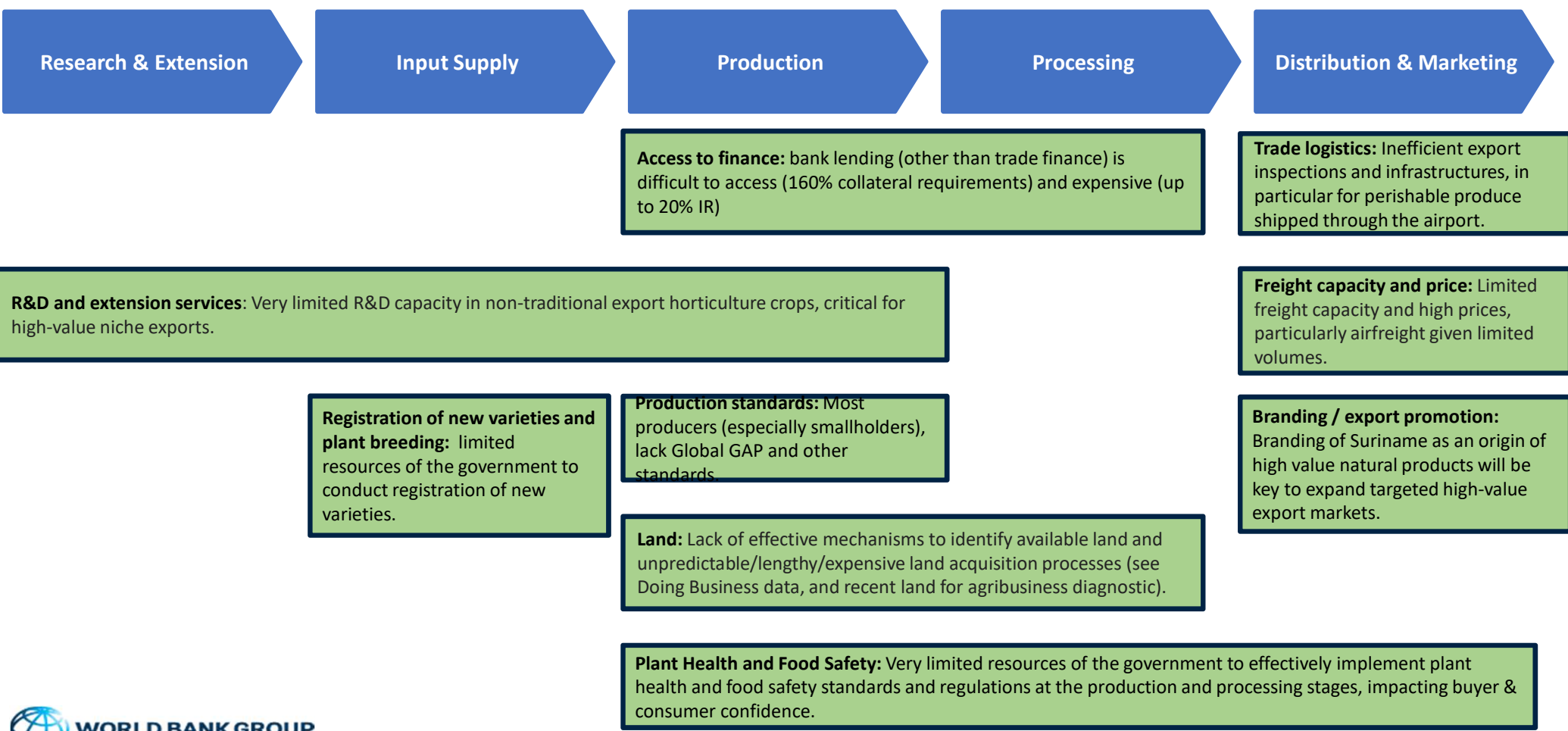
### Air and maritime freight services would need to increase to absorb growth:

- Shipping to CARICOM is limited and usually involves trans-shipment in T&T
- Air freight to EU is limited to passenger planes (unreliable, small capacity)

### Poor brand:

- Suriname is yet virtually unknown on overseas markets
- Focused export promotion and branding are needed

## Summary of key constraints along the horticulture sub-sector



# Simplified global horticulture market segmentation and Suriname’s recommended target markets

- Instead of a traditional segmentation into product categories (e.g. citrus, stone fruit, etc.), we propose a strategic segmentation based on different market segments (demand side) and contrasted product & delivery combinations (supply side). Segmentation is simplified by grouping health, convenience and taste onto a single “specialty” category with similar characteristics.
- Given its strengths and weaknesses described above, Suriname has the best potential to match industry and consumer trends in specialty & perishable products. Examples include fresh passion fruit, okra, Asian or baby vegetables, as well as fresh or processed products that are certified organic, fair trade, etc.

Product & Service	Examples	Consumer Markets	
		Calorie Driven: Low price, serves basic nutrition needs (e.g. banana, potato)	Special properties driven health, convenience, taste (e.g. organic, superfoods, cut, peeled, baby varieties, unique taste, unique story)
Low perishability Infrequent / patient delivery	Processed fruits and vegetables  Low respiration varieties (banana, pineapple, papaya, citrus, mango, carrots, peppers, etc.)	<ul style="list-style-type: none"> <li>• Commoditized</li> <li>• Low brand identity and awareness</li> <li>• High competition, low margins</li> <li>• Economies of scale, mechanization</li> <li>• Vertical integration</li> </ul>	<p><b>Suriname’s target markets</b></p> <ul style="list-style-type: none"> <li>• Higher value, higher margins for producers                             <ul style="list-style-type: none"> <li>• Small scale, high care</li> <li>• Seasonality is key</li> <li>• Logistics are key</li> </ul> </li> <li>• Scope for lead firms training outgrowers, aggregating supply and managing logistics</li> </ul>
High perishability Frequent / urgent delivery	High respiration varieties (passion fruit, avocado, berries, beans, okra, sweet corn, herbs, etc.)		



# Within specialty horticulture products, Suriname has good prospects in the EU & US, as well as within CARICOM

HORTICULTURE		Markets that could be targeted competitively		
		EU & US (fresh)	EU & US (processed)	CARICOM
Competitiveness in terms of:	(i) Cost	<b>Neutral:</b> Limited but stable exports of Surinamese fruits & vegetables indicate Suriname may be competitive, though mainly diaspora market tested (not mainstream)	<b>Positive:</b> Small but growing exports of high value processed fruits & vegetables (candied fruits, acerola and acai concentrate, pepper sauce) suggest Surinamese exports can be competitive	<b>Positive:</b> Very high prices in the CARICOM due to high import costs and 40% tariff on most fruits & vegetables; Suriname is advantaged within the region (land, water, no hurricanes)
	(ii) Quality	<b>Constraint:</b> weak frameworks for food safety and quality standards, inefficient airport export infrastructures and procedures	<b>Constraint:</b> weak frameworks for food safety and quality standards	<b>Constraint:</b> weak frameworks for food safety and quality standards, reports of non-tariff trade barriers
	(iii) Consistency of supply	<b>Neutral:</b> Exiting exporters either source from their own plantation or from a network of outgrowers. Excellent growing conditions but outgrowers must be supported and production increased.	<b>Neutral:</b> Exiting exporters either source from their own plantation or from a network of outgrowers. Excellent growing conditions but outgrowers must be supported and production increased.	<b>Neutral:</b> Exiting exporters either source from their own plantation or from a network of outgrowers. Excellent growing conditions but outgrowers must be supported and production increased.
Commercial investment timeframe		<b>Horticulture (fresh and processed) is one of the agribusiness sectors that currently sees most investor activity</b>	<b>Horticulture (fresh and processed) is one of the agribusiness sectors that currently sees most investor activity</b>	<b>Horticulture (fresh and processed) is one of the agribusiness sectors that currently sees most investor activity</b>
Investment size		Horticulture sector investments are typically small in size (<\$10m)	Horticulture sector investments are typically small in size (<\$10m)	Horticulture sector investments are typically small in size (<\$10m)
Impact / Scale		Small scale in absolute terms but significant relative impact given small size of the sector and urgent need to diversify the economy	Small scale in absolute terms but significant relative impact given small size of the sector and urgent need to diversify the economy	Small scale in absolute terms but significant relative impact given small size of the sector and urgent need to diversify the economy

# Supplemental Sub-Sector Analysis: SPECIALTY OILS

## Specialty oils are also identified as a high potential sub-sector for global exports in specialty market segments

### Scope of the specialty oils sector

- Contrary to horticulture, the specialty oils sector is relatively narrow and is comprised of oils extracted from the fruits of a range of wild-occurring palm trees (e.g., Brazil nut)
- Market focus discussed in this report is the global cosmetics industry, although the food industry may also offer some opportunity
- The value chain focus includes review of collection, processing, refining, packaging and export of the oils.

### Summary of why specialty oils were selected for study

- Specialty oils were not formally reviewed as part of the Suriname Sector Competitiveness Analysis, not being a traditional agriculture subsector.
- But during the deep dive analysis, specialty oils also emerged as having competitive potential, presenting no immediate fatal constraints to competitive exports, unlike many other agribusiness sectors in Suriname.<sup>1</sup> The market for the specialty oils produced in Suriname shows good growth and price prospects. Most importantly, competition is limited to a handful of countries (e.g., Brazil, Malaysia) that have significant concentration of these wild trees in their forests. Suriname therefore holds a unique comparative advantage.
- Considering these characteristics, a supplemental summary subsector analysis of specialty oils is also conducted.

### Structure of the sub-sector analysis

- Industry trends and context
- State of the sub-sector in Suriname
- Suriname's competitiveness drivers
- Market segmentation and key sub-sector constraints to competitiveness

# Global demand for specialty exotic oils, fuelled in part by the cosmetics industry, is booming

## Booming demand for healthy natural products

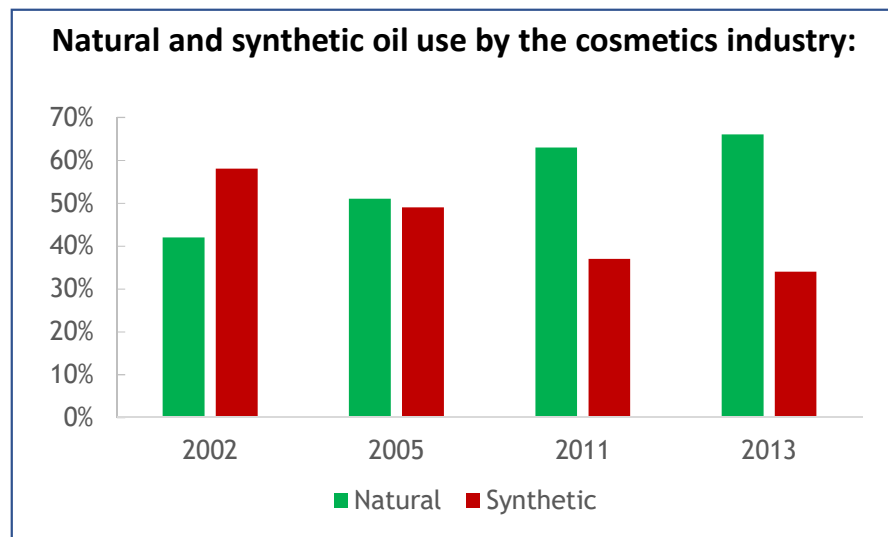
- Consumers’ **changing perceptions of health** is driving demand for natural products which are considered safer than synthetic alternatives.
- As a result, the multi-billion dollar natural products industry (food, beverages, cosmetics, herbal medicines, pharmaceuticals) has grown enormously with an annual growth rate of 15–20%.

## Cosmetics demand shift

- Demand for specialty natural oils used as base carrier oils by the cosmetics industry is thriving as it the industry continues to grow and shifts from synthetic oils to natural oils<sup>1</sup>.

## Main suppliers

- Given that specialty oils are derived from wild forests, global competition is limited to those with existing trees with their forests (e.g., Brazil, Malaysia, and Sri Lanka), as is global supply.
- The market is saturated with ‘natural’ products: a successful brand needs to do more, such as telling the “story” of the product and its origin.
- Successful producers have developed strong standards, certification and marketing of these specialty oils to gain consumer confidence and build branding within the lucrative cosmetics markets.



<sup>1</sup> Source: UC Berkeley and Conservation International Suriname

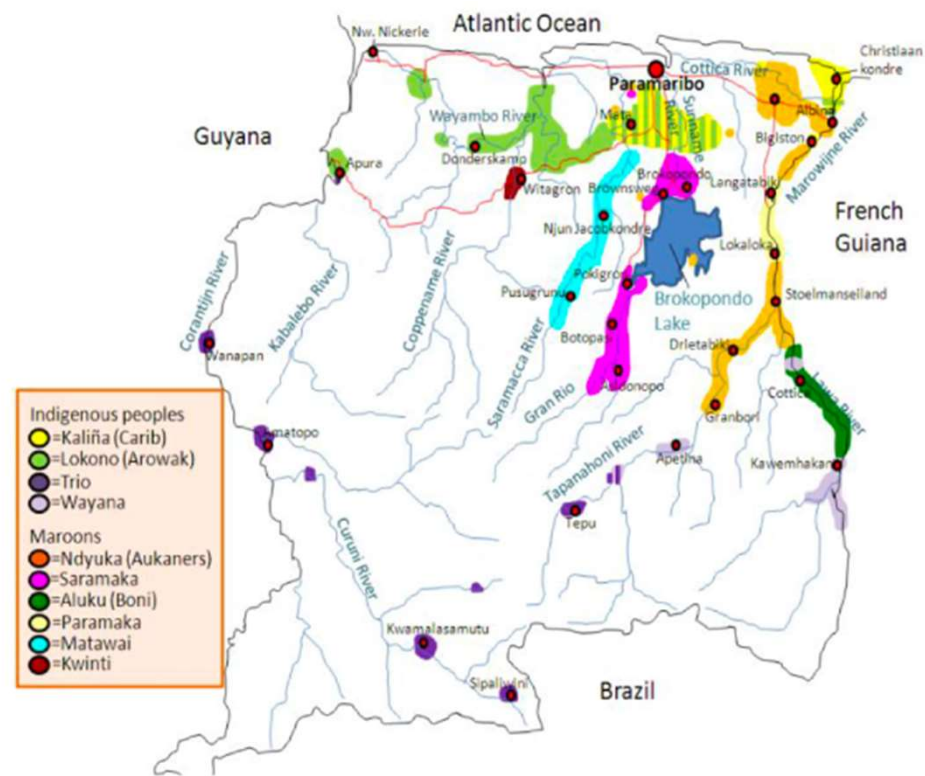


# A snapshot of Suriname's specialty oils sub-sector

## Key statistics for specialty oils

<p>Production (UC Berkeley, Conservation International)</p>	<p>Informal, small volumes, traditional</p> <p>Estimated potential of 1,700 liter / hectare of oil across 15 million hectares of rainforest, including:</p> <ul style="list-style-type: none"> <li>• Babassu oil (<i>Attalea speciosa</i>) – 720 l/ha</li> <li>• Tucuma oil (<i>Astrocaryum vulgare</i>) – 25 l/ha</li> <li>• Bacaba oil (<i>Oenocarpus bacaba</i>) – 22 l/ha</li> <li>• Copaiba oil (<i>Copaifera</i>) – 8 l/ha</li> <li>• Andiroba oil (<i>Carapa</i>) – 20 l/ha</li> <li>• Buriti oil (<i>Mauritia Flexuosa</i>) – 360 l/ha</li> <li>• Brazil nut oil (<i>Bertholletia excels</i>) – 525 l/ha</li> </ul>
<p>CAGR (UC Berkeley, CI)</p>	<p>Stable, given negligible deforestation rate in Suriname</p>
<p>Exports</p>	<p>Negligible to date</p>
<p>Farmers (UC Berkeley, CI)</p>	<p>~ 60,000 indigenous and maroon people in the interior of Suriname</p>

Exotic oils are made from wild nuts collected in the rainforest by indigenous and maroon communities in the interior



Source: UC Berkeley and Conservation International Suriname

# With vast expanses of rainforest, Suriname holds a unique advantage for high-end, specialty exotic oils harvested from the wild

## Unique comparative advantage of Suriname and significant impact potential

- Suriname’s 15m hectares of rainforest are rich with rare high value fruits and nuts. A recent study identified a selection of varieties and estimated combined yields of up to 1,700 liters per hectare (worth a total of 15,000 USD). (See below)
- Suriname has lower power, labor, and fuel costs than Brazil and distances to the final processing (refining) and the port are shorter <sup>1</sup>.
- Done responsibly, investments in specialty exotic oils can link Suriname’s indigenous and maroon communities to lucrative export markets which can also promote improved livelihoods and incentivize protection of the forest ecosystems. <sup>2</sup>

## Sector yet undeveloped beyond artisanal production and local use

- Natural oils are currently processed artisanally by communities with negligible exports. One local company has started investing, supplying communities in the interior with containerized processing equipment for primary processing of the nuts.

Oil	Use	Price (USD/l)	Revenue potential (USD/ha) <sup>2</sup>
Buriti (Mauriti)	Dry skin, eczema, psoriasis, sunburn, repair hair, aging skin	130	7020
Brazil nut	Hair growth, hair strengthening, anti- dandruff, skin care, cooking	122	3203
Babassu (Maripa)	Cooking, hair growth, against rheumatism, skin care, antioxidant	27	2916
Tucuma (Awara)	Skin care, damaged hair, biodiesel, xerophthalmia, sunburn	96	360
Andiroba (Krappa)	Skin care, pain reliever, insect repellent, hair strengthener	114	342
Bacaba (Koemboe)	Hair growth, skin care	96	317
Copaiba (Hoepel)	Biodiesel, kills bacteria & germs, anti-inflammatory, disinfects	140	168



<sup>1</sup> Sources: [www.doingbusiness.org](http://www.doingbusiness.org), [www.globalpetrolprices.com](http://www.globalpetrolprices.com), [www.ilo.org](http://www.ilo.org)

<sup>2</sup> Watch a promotional video by CI: <https://youtu.be/NGbE28lUeZU>

<sup>3</sup> Calculated for one hectare of Suriname rainforest, making conservative assumptions on accessibility and collection rates

Source: UC Berkeley and Conservation International Suriname

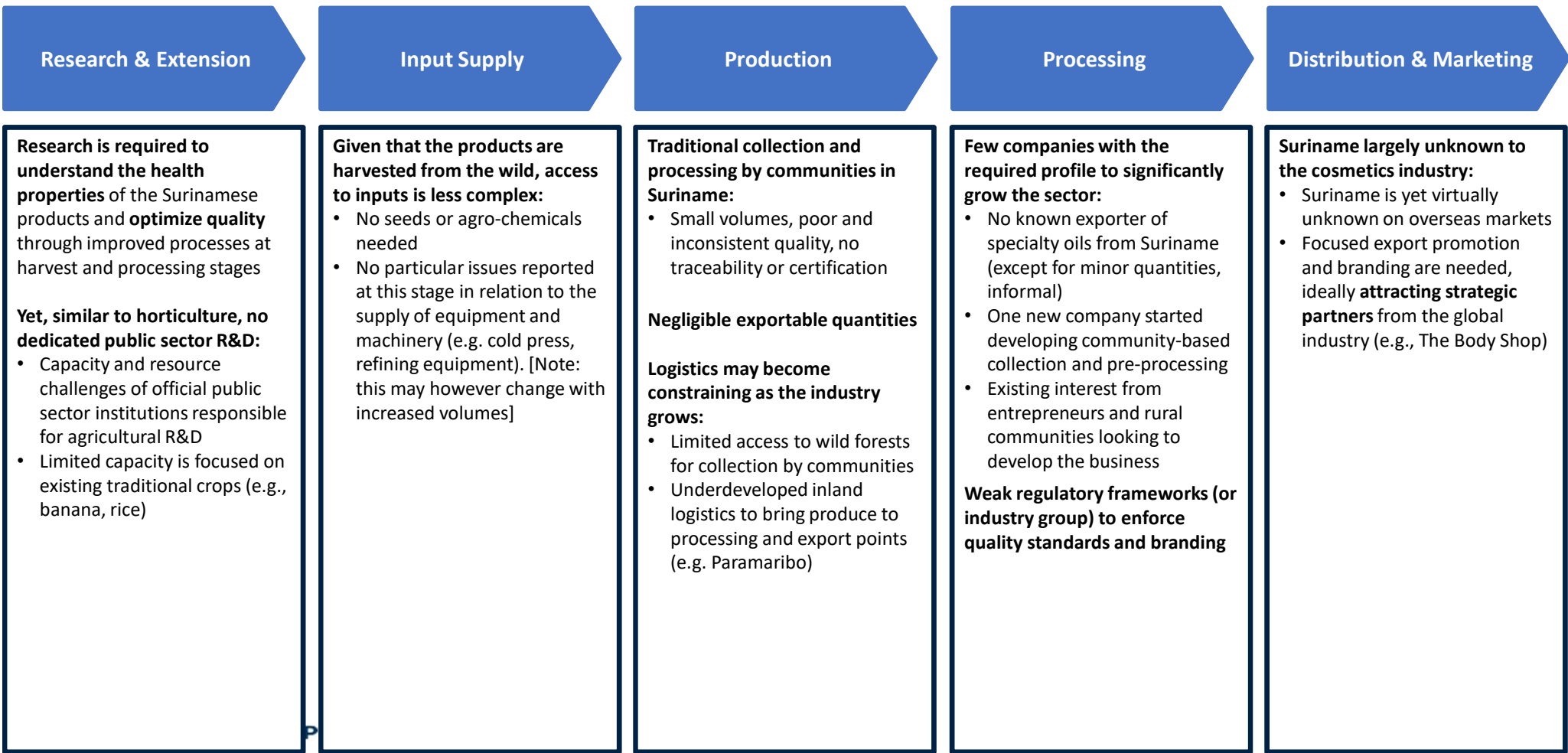
# Suriname has good potential to compete successfully on the specialty exotic oils markets, starting with current trading partners EU & US

SPECIALTY OILS		Markets that could be targeted competitively
		EU, US
Competitiveness in terms of:	(i) Cost	<p><b>Positive:</b> Very high prices for standardized, certified specialty oils and booming demand by the cosmetics industry, likely cost competitive on balance with main global suppliers Brazil, Malaysia, and Sri Lanka</p> <p>Note: Suriname competes favorably against Brazil with lower power, labor, and fuel costs, as well as shorter distances to final processing (refining) and port areas <sup>1</sup>.</p>
	(ii) Quality	<p><b>Constraint:</b> Penetration of targeted high-end markets will require stronger research and development in the detailed properties of Surinamese oils, stronger quality and certification frameworks, and strong branding / export promotion of the Surinamese product.</p>
	(iii) Consistency of supply	<p><b>Positive:</b> Harvest of wild nuts from the rainforest is seasonal but considering the range of nuts available, production may take place year-round through collection and primary processing by indigenous and maroon communities of the interior <sup>2</sup>.</p>
Commercial investment timeframe		<p><b>Embryonic but growing interest by local entrepreneurs to invest in high-quality, certified natural oils for export</b></p>
Investment size		<p>Small-scale investments: oil extraction plants that may be installed in the interior are estimated at USD 100,000 <sup>2</sup>.</p>
Impact / Scale		<p>This sector has the potential to create livelihood opportunities for a significant proportion of the 60,000 indigenous and maroon communities in Suriname and contribute USD 30-50 millions to Suriname’s exports, with some estimates going much higher <sup>2</sup>.</p>

<sup>1</sup> Sources: www.doingbusiness.org, www.globalpetrolprices.com, www.ilo.org

<sup>2</sup> Source: UC Berkeley and Conservation International Suriname

# But Suriname producers need to build market confidence based on high standards of quality and sustainability



**Research & Extension**

**Research is required to understand the health properties** of the Surinamese products and **optimize quality** through improved processes at harvest and processing stages

**Yet, similar to horticulture, no dedicated public sector R&D:**

- Capacity and resource challenges of official public sector institutions responsible for agricultural R&D
- Limited capacity is focused on existing traditional crops (e.g., banana, rice)

**Input Supply**

**Given that the products are harvested from the wild, access to inputs is less complex:**

- No seeds or agro-chemicals needed
- No particular issues reported at this stage in relation to the supply of equipment and machinery (e.g. cold press, refining equipment). [Note: this may however change with increased volumes]

**Production**

**Traditional collection and processing by communities in Suriname:**

- Small volumes, poor and inconsistent quality, no traceability or certification

**Negligible exportable quantities**

**Logistics may become constraining as the industry grows:**

- Limited access to wild forests for collection by communities
- Underdeveloped inland logistics to bring produce to processing and export points (e.g. Paramaribo)

**Processing**

**Few companies with the required profile to significantly grow the sector:**

- No known exporter of specialty oils from Suriname (except for minor quantities, informal)
- One new company started developing community-based collection and pre-processing
- Existing interest from entrepreneurs and rural communities looking to develop the business

**Weak regulatory frameworks (or industry group) to enforce quality standards and branding**

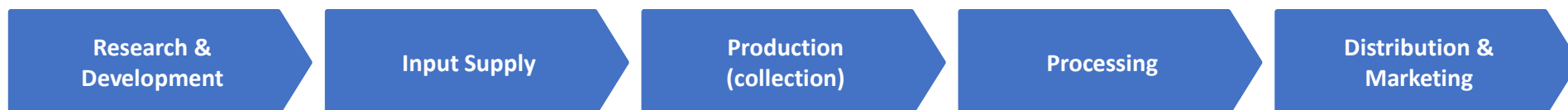
**Distribution & Marketing**

**Suriname largely unknown to the cosmetics industry:**

- Suriname is yet virtually unknown on overseas markets
- Focused export promotion and branding are needed, ideally **attracting strategic partners** from the global industry (e.g., The Body Shop)



# Summary of key constraints along the specialty oils value chain in Suriname



**R&D:** Very limited R&D capacity in the natural exotic oils sector, necessary to build sustainable production practices and inform their promotion in international markets.

**Access to finance:** bank lending (other than trade finance) is difficult to access (160% collateral requirements) and expensive (up to 20% IR)

**Quality standards:** The weakness of institutional and legal frameworks for underpinning quality testing, certification and standards impedes the development of high value products marketable in overseas markets (e.g. in the food, cosmetics, medical sectors).

**Inland logistics:** underdeveloped infrastructure and transport services from the interior communities to the main ports.

**Freight capacity and price:** Limited (air and sea) freight capacity and high prices are a currently a constraint to exports.

**Branding / export promotion:** Branding of Suriname as an origin of high value natural products will be key to expand targeted high-value export markets.

# HORTICULTURE AND SPECIALTY OILS: Conclusions and recommendations

## Suriname can target high-value niche products exports

- Suriname's current exports of non-traditional agribusiness products is extremely limited (only significant food exports are rice, banana, and fish/shrimp).
- Limited scope for large plantations and economies of scale but unique natural assets: Suriname needs to target niche high-value markets (e.g. organic, fair trade, unique taste or health properties, high quality brand).

## To do this, Suriname needs specialized companies with the necessary knowledge, capital, and market access

- High quality products require particular attention at every step along the value chain
- Companies must be able to invest in technology, certification, and branding

## In turn, these companies require conducive regulatory and institutional frameworks to help build a brand and strong trust in the market for high quality and safe ingredients

- An overarching green growth policy and a commercial strategy to direct coordinated efforts around new non-traditional products is needed.
- Focused public sector efforts are required to strengthen critical functions underpinning agribusiness development, including agricultural R&D, extension services, standards and food safety.
- Targeted investment and export promotion efforts will help support emerging companies in the sector (with access to finance, business development services support, trade logistics capabilities, etc.) and attract qualified new entrants (investor outreach, investment site development, investment climate improvements).



# HORTICULTURE AND SPECIALTY OILS: Quick wins & mid to long-term solutions to support investments

Short term

Long term

## Private sector solutions

**Near-term investment opportunities** in fresh and processed fruits & vegetables, e.g.:

- **Bio Pineapples Para N.V.** Production of fresh pineapple, candied pineapple, dried pineapple, canned pineapple for EU/US, organic.
- **Bio Pepper & Spices Suriname N.V.** Processing of products of hot pepper (EU/US).
- **Apodo Bio Fruits N.V.** Acai products (EU, Hong Kong, Canada).
- **Natural Bio Products Suriname N.V.** Specialized in producing specialty for EU/US markets, sourcing crude oil pre-processed from community-based units in the interior.

The above projects are at the early stages of development by locally based entrepreneurs: initial pilot processing and exports using outgrower produce, business plans for new factories, financing needs in the USD <1m range.

**Investment and export promotion support** to such near-term opportunities could accelerate the emergence of these non-traditional agribusiness exports.

**Potential investment by newcomers in the industry:** Realizing longer-term opportunities to develop processing /packing and export will require the mobilization of buyers, investors and financiers.

Mobilizing FDI is likely the best way of jumpstarting this new export sector, bringing much needed know-how, capital and market access to what is a new industry for Suriname.

**Investment promotion support** targeting companies in the region, in the Netherlands and globally can be initiated in the short-term, building on recent WBG advisory work supported by CIIP. This promotion should include ad-hoc investment deal preparation (e.g. portfolio of prepared sites).

## Upstream reforms & market failures

**SME strengthening:** SME credit guarantee scheme or matching grants to support agribusiness companies, as well as BDS support for business planning, management, certification, outgrower schemes.

**Institutional capacity building:** support to the government agencies in improving their capacities in R&D, registration of inputs, extension services, and food safety.

**Investment code:** Suriname's investment code is outdated and fails to offer investors competitive protections and incentives. A revision of the investment code is a near-term opportunity, building on recent WBG engagement (CIIP-supported advisory work).

**Improved financial infrastructure:** to increase access to finance, support to the government in for example finalizing and enacting moveable collateral registry legal framework

## Public investment for public or quasi-public goods

**Trade logistics – airport freight infrastructures:** opportunity to develop a new fresh produce export terminal, including cold storage and packhouse, inspections and scanner, and air-side cold storage.

**Export promotion:** Suriname is unknown to most buyers and consumers in target overseas markets. A clear commercial strategy of the government, focused on non-traditional export sectors, and dedicated branding efforts will be critical to bring exports from fringe to mainstream in these sectors.

# HORTICULTURE AND SPECIALTY OILS:

## Summary of potential interventions and alignment with other donor initiatives

	Action area	Initiatives	Relevance	WBG?
IC	Investment code		Horticulture, oils	●
Production	Market research and R&D focused on target non-traditional export products		Horticulture, oils	●
	Education and extension services focused on target non-traditional export products	FAO (partial) <sup>1</sup>	Horticulture	●
	Quality standards and food safety frameworks	IDB, FAO	Horticulture, oils	●
	Farmer access to finance	FAO	Horticulture	●
	Farmer organisation strengthening		Horticulture	●
Processing	Investment promotion for non-traditional export products	IDB (partial) <sup>2</sup>	Horticulture, oils	●
	SME access to finance	IDB (partial) <sup>3</sup>	Horticulture, oils	●
	Business development support (management, technical, certification)		Horticulture, oils	●
	Guidelines for contract farming / sourcing relations		Horticulture, oils	●
	Trade logistics, airport fresh produce export terminal (cold storage, inspections, packinghouse)		Horticulture	●
	Investment opportunity packaging for processors / exporters (site facilitation, last mile infrastructure)		Horticulture	●
Marketing	Commercial strategy for non-traditional export products	FAO (partial) <sup>4</sup>	Horticulture, oils	●
	Export Promotion and targeted product branding	IDB (partial) <sup>2</sup>	Horticulture, oils	●

<sup>1</sup> FAO (EU) will provide training to LVV extension services on value chain mapping, not agronomic training on production aspects

<sup>2</sup> IDB covers the creation and strengthening of InvestSur, leaving room for programatic support to targeted investment and export promotion focused on select non-traditional export products

<sup>3</sup> IDB finances a partial credit guarantee mechanism for SMEs

<sup>4</sup> FAO will conduct market research focused on select non-traditional export products (market segmentation, market requirements), which can be used as a basis for a National Strategy

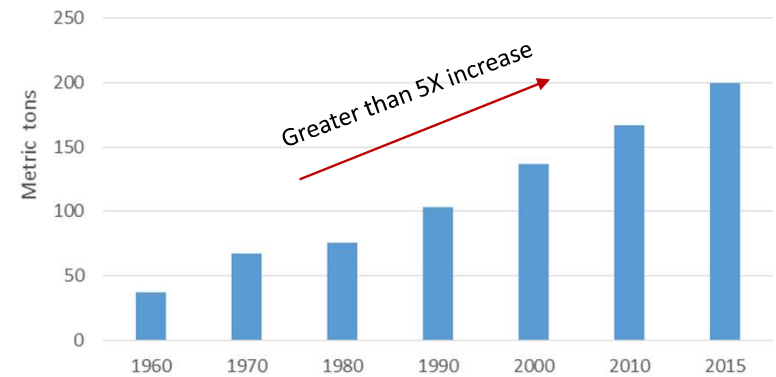
# FISHERIES

## Sub-Sector Analysis

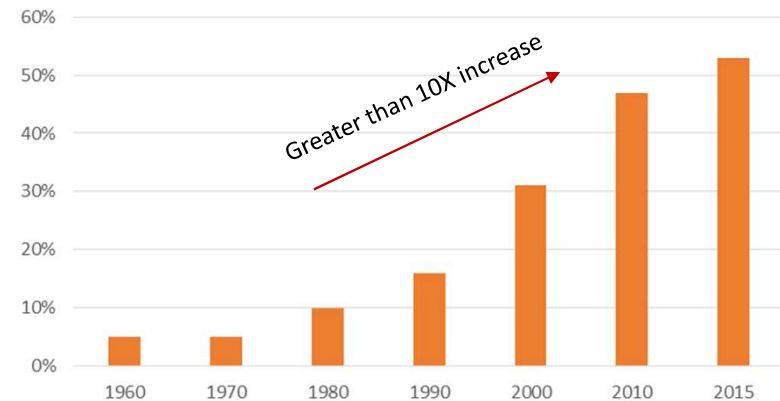
## Global Overview: Increasing Supply...

- The fisheries sector is an important source of revenue, employment, and food security for millions of people around the world. Total first sale value of fish and seafood production in 2016 was estimated at \$362 billion. Fish and fish products are some of the most traded food items in the world. In 2016, approximately 35% of global fish production was traded internationally. In CARICOM the sector was valued at \$420 million in 2016 providing an estimated 116,000 direct and 225,000 indirect jobs (4.4% of CARICOM workforce).
- Significant and sustained growth in aquaculture has supported the sector's continued growth. Whereas capture fishery production has been relatively static since the late 1980s, aquaculture grew by over 10% per annum throughout the 1980s and 1990s. Avg. annual growth declined to 5.8% from 2000-2016; however, aquaculture now accounts over 50% of global fish production. The Caribbean has experienced a steady loss of competitiveness in aquaculture. Its share of global production (in \$ terms) has declined from 1.9% in 2000-2001 to just 0.3% in 2015-2016.
- Growth in production has also been made possible by reduced wastage through improved processing, refrigeration, ice-making, packaging, and transportation. In some developing countries post catch/harvest losses are estimated to be as high as 35%.
- Sustainability is a concern. Per the FAO, the fraction of world marine fish stocks that are within biologically sustainable levels declined from 90% in 1974 to 66.9% in 2015 i.e. 33.1% of fish stocks were estimated as fished at biologically unsustainable levels.

Global Fish Production by Volume in Metric Tons  
(1960-2015)



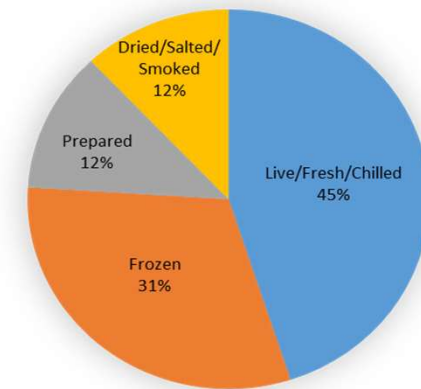
Aquaculture as a % of Total Production (1960-2015)



## ....To Meet Increasing Demand, but Sustainability is a Concern

- Consumer demand for fish and seafood has increased significantly. Per the FAO, between 1961 and 2016, the average annual increase in global food fish consumption (3.2%) outpaced population growth (1.6%) and exceeded that of meat from all terrestrial animals combined (2.8%).
- Demand for fish and seafood products in developed countries has been accompanied by a greater awareness of, and importance attached to, food quality and safety, sustainability, nutritional aspects and waste reduction.
- Increasingly stringent hygiene measures have been adopted at national and international trade levels (e.g. the Codex Code of Practice for Fish and Fishery Products and the HACCP food safety management system along with stringent private standards and certification regimes such as the Marine Stewardship Council (MSC) certification program.
- The risks associated with climate change have created added urgency to developing effective global, regional, and national governance models to better manage ocean resources. Per the Intergovernmental Panel on Climate Change (IPCC, 2014) the main risks for the sector are the migration of species poleward and to deeper waters, which poses a significant threat to coastal based fisheries such as Suriname's.

**Type of Fish & Seafood Products**  
(% by volume)



- Live, fresh or chilled is the most preferred and highly priced form of fish representing the largest share of fish (45%) for direct human consumption, followed by frozen (31%), prepared and preserved (12%) and cured (dried, salted, in brine, fermented smoked) (12%).
- Freezing represents the main method of processing fish for human consumption accounting for 56% of total processed fish for human consumption and 27% total fish production in 2016.

Source: FAO

# Suriname's fisheries sector is well developed and integrated into global markets

## Competitiveness summary:

Suriname's fisheries sector is relatively large and expanding. It is an important source of export earnings, employment and nutrition. Suriname is the only country in the Caribbean that is certified to export fresh fish to the European Union. The fisheries sector has built upon its market access to diversify export sales into a wide range of countries beyond the EU such as the United States, Jamaica, Japan, and China. Catch fisheries (versus farming) account for approximately 100% of production.

**2016 Employment: 6,324 persons**

**7%**  
of total labor force

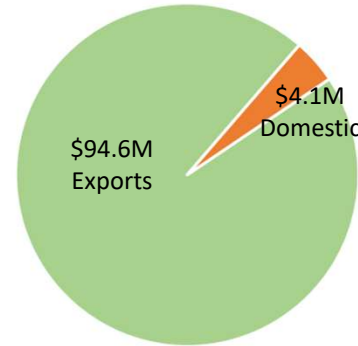
**Fishery product exports: \$94.6M**

**5.9%**  
of total exports

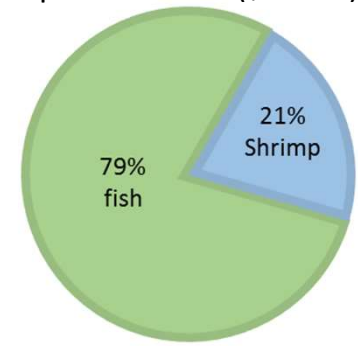
**Domestic consumption  
of fishery products**

**16%**  
of animal protein intake

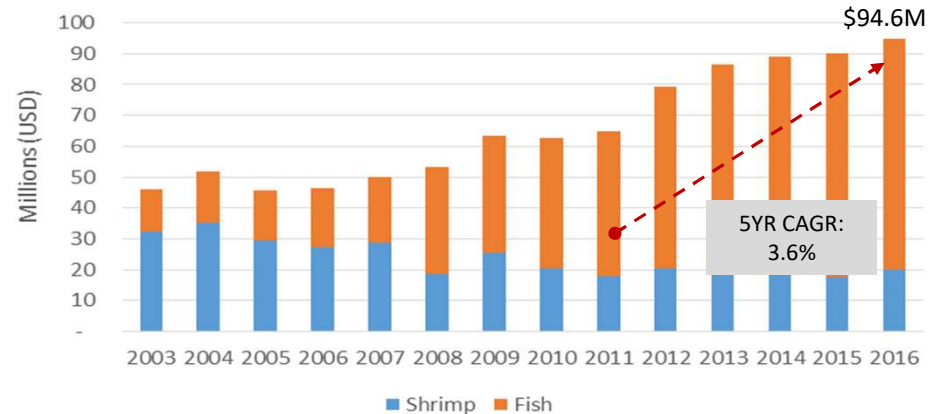
Exports accounted for 96% of total seafood production in 2016



Fish accounted for 79% of seafood exports in 2016 (\$ value)



Suriname Exports of Shrimp & Fish (USD)

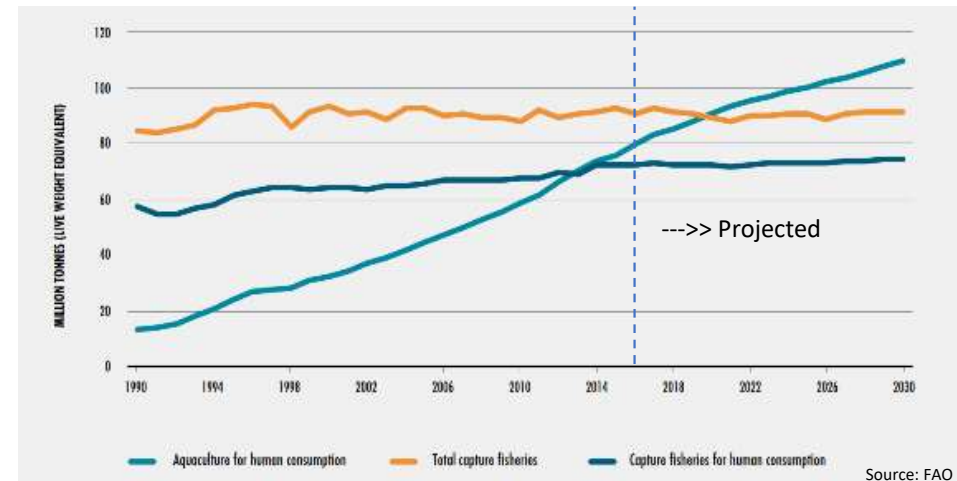




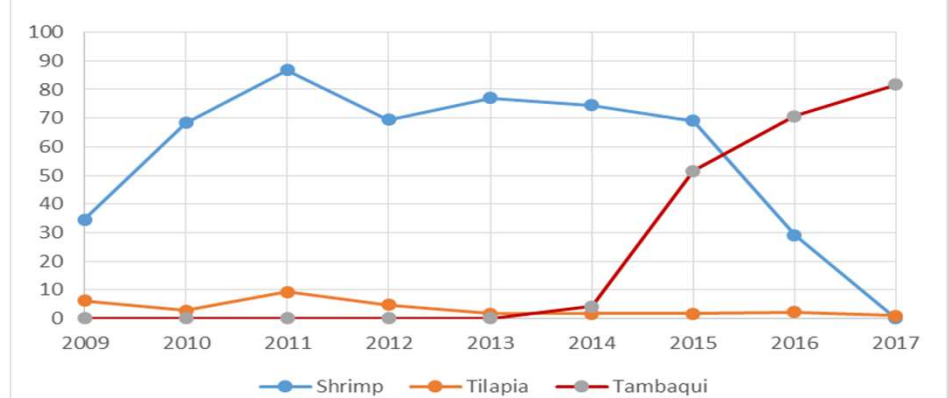
## The aquaculture subsector faces considerable competitiveness constraints

- The global contribution of aquaculture to the global production of fish has risen continuously, reaching 46.8% in 2016, up from 25.7% in 2000. The FAO projects that aquaculture production (by volume) will increase by 36.7% between 2016 and 2030.
- This growth will be led by Asia. China is by far the largest aquaculture producer in the world followed by Indonesia and India. Asia currently accounts for approximately 89% of world aquaculture production.
- The Caribbean's share of the global market is negligible. With the exception of Belize, aquaculture in the Caribbean has experienced modest to negative growth owing to the increasingly commoditized nature of the industry (i.e., low cost high volume).
- Suriname, like the broader region, is not competitive. Just two aquaculture companies remain (Amazone and Suri Fish) neither of which are exporting. Both firms cultivate primarily local fish species (e.g. tambaqui). Shrimp is no longer cultivated. In 2014 total aquaculture production amounted to \$660,000 or less than 1% of Suriname's total production (\$ value).
- The development of aquaculture in Suriname has been impeded by a number of challenges; namely: (1) the high costs of inputs especially feed and seedlings both of which must be imported, (2) the lack of basic infrastructure and specialized machinery such aerators; and perhaps most importantly, (3) the certification regime that supported the growth of the catch sector is not present in aquaculture. Animal health, quarantine and inspection services are additionally all lacking.

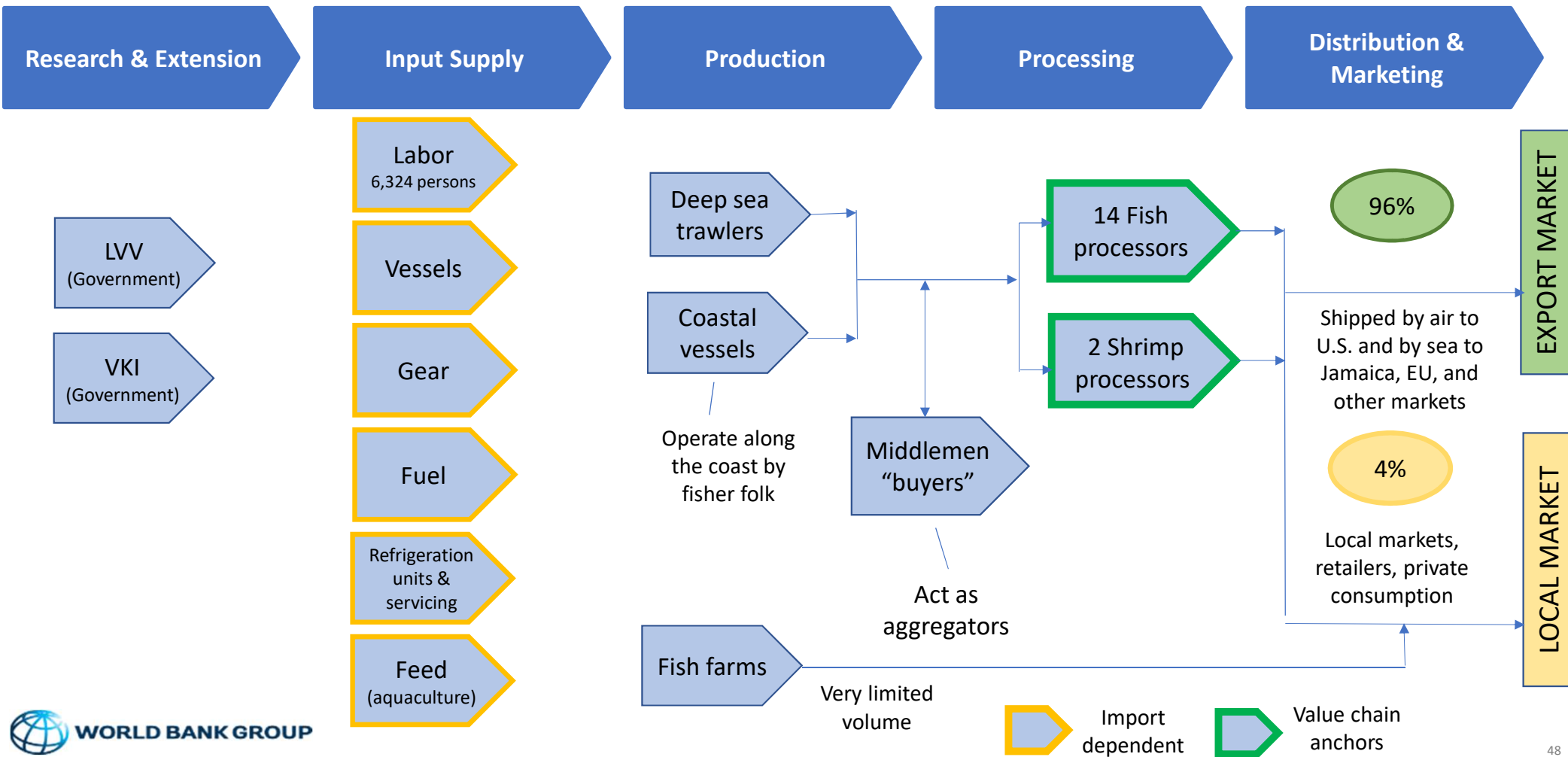
Actual and Projected Global Growth of Aquaculture (FAO)



Suriname Aquaculture Production (tons)

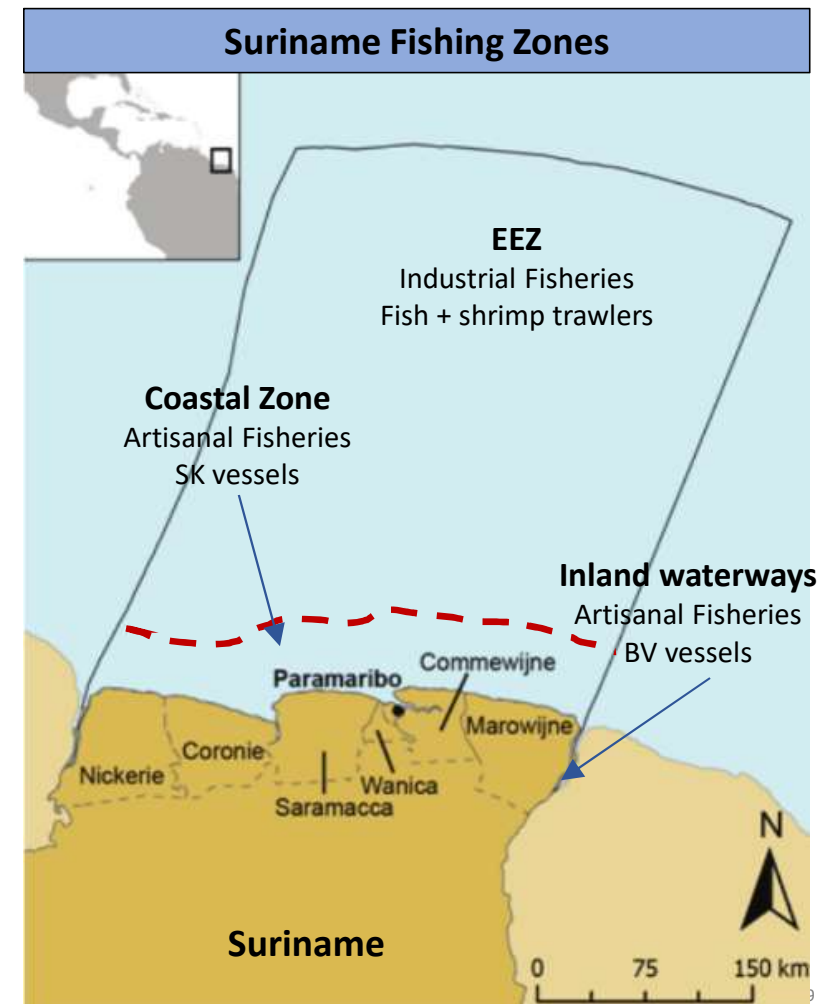


# A simplified map of the fisheries value chain in Suriname



## Vertical integration is a key factor to Suriname's expanding fish and shrimp sectors

- In 2016 Suriname produced 31.1M tons of fish and 7M tons of shrimp placing it second only to Guyana within CARICOM (based on weight and value of catch).
- Suriname produces 40+ varieties of fish (e.g., red snapper, tuna, shark, mackerel, king fish, and barracuda) as well as marine and seabob shrimp.
- Catch fisheries account for essentially 100% of production. Suriname's exclusive economic zone (EEZ) covers 128,318km<sup>2</sup>; however, the majority of the catch occurs in the country's coastal zone, which extends out 12km from shore. The country's vast inland waterways (7,820km<sup>2</sup>) are second only to Guyana in size within CARICOM but accounted for less than 1% of total production in 2014. (CFRM 2014). Fisheries in Suriname may be divided into two sectors:
  1. The artisanal sector (also referred to as the small scale sector or as fisher folk) has historically accounted for 75% of fish production using smaller vessels (SK and BV) and traditional fishing methods.
  2. The industrial sector is made-up of shrimp and fish trawling, fishing on species like red snapper, mackerel and longline fishing for larger open sea fish species such as yellow fin tuna.
- A extensive network of middlemen (also referred to as brokers or buyers) serve to link the fisher folk to the much larger processors. The middle men consolidate the catch of the fisher folk and sell on to the processors. Some middlemen have developed supplier networks made-up of 100+ vessels. Middlemen typically pay fisher folk for their catch within 1 or 2 days whereas they will wait several weeks for payment from the processors. In some cases the middle men will finance the cost of fuel for the vessel. The majority of middle men are community based. No written contracts govern any of the transactions referenced above.



## Primary processing industry is however driving the sector's growth

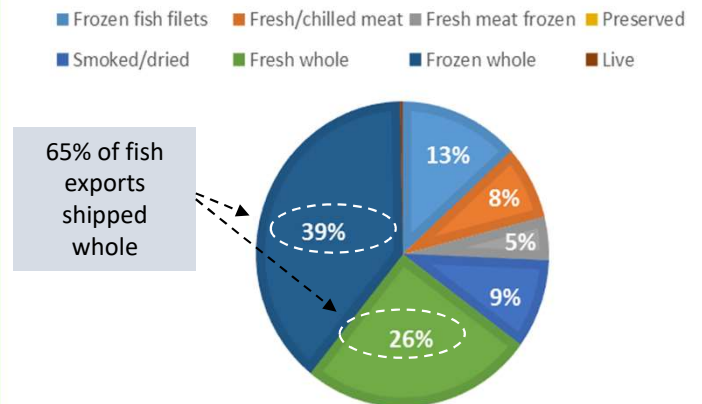
### Overview

- There are 16 seafood processors in Suriname; 14 focused on fish and 2 on shrimp.
- The industry is expanding. The majority of processors interviewed have initiated major expansions to their processing facilities. Others are looking to expand product lines to increase utilization of existing physical capacity.
- All 16 processors are HACCP certified. Many of them have secured additional certifications to comply with both national and private standards including BRC (UK), ISO 2200, and SQF (U.S.).
- Suriname's Seabob Shrimp industry was certified *Green* by the Marine Stewardship Council (MSC) in 2011 – one of only two countries in the world to have done so.

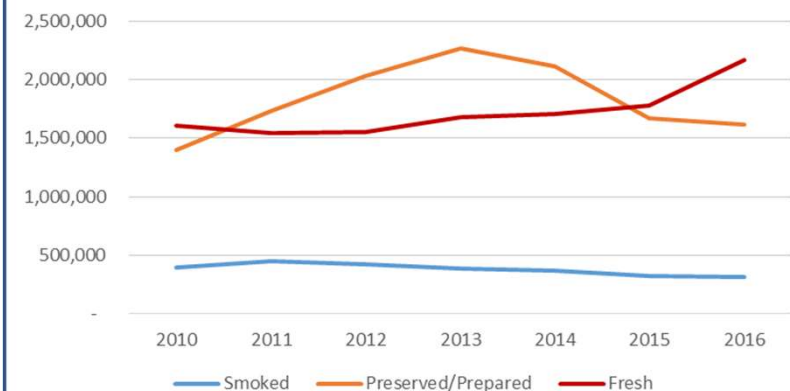
### Value addition

- In more advanced economies, fish processing has diversified primarily into high-value fresh and processed products and ready and/or portion controlled, uniform-quality meals.
- Fish processing in many developing countries is evolving from whole fish and simple filets to more advanced value-adding processes such as breading, cooking and individual quick-freezing; however, the degree of value addition in Suriname remains relatively limited with whole fish accounting for 65% of exports (by \$ value).
- Suriname's exports of more value added fish products in the form of dried, smoked, or preserved fish are modest and have decreased since 2013. Exact reasons could not be confirmed but this is likely due to costs: given lack of equipment at VKI (regulator), all samples must be shipped (at processor costs) to the EU for testing.
- 57% of Suriname's fish exports and approx. 100% of shrimp exports (by \$ value) are shipped frozen; however, higher value fresh fish exports have increased 40% since 2011.

### FISH EXPORTS BY PRODUCT (2016)



### Exports of higher value fish products (USD)



Source: FAO FishStat

## The predominance of primary processing reflects relatively low value added in Suriname's seafood subsector

Majority of seafood processors in Suriname are *primary processors*; 3 or 4 processors may be classified as *mixed* with a very limited range and volume of dried/smoked seafood products.

Type	Primary processor	Secondary processor	Mixed processor
<b>Activities</b>	Primary processing includes: cutting, filleting, picking, peeling, washing, chilling, packing, heading and gutting.	Secondary processing includes: brining, smoking, cooking, freezing, canning, deboning, breading, vacuum and controlled packaging, production of ready meals.	Processing operations that carry out a mix of primary and secondary processes are called mixed processors.
<b>Characteristics</b>	<ul style="list-style-type: none"> <li>• Adding limited alterations to the raw material brought to them</li> <li>• Low margins but high volume</li> <li>• Primarily serving live and chilled market outlets</li> <li>• e.g. Suvveb NV</li> </ul>	<ul style="list-style-type: none"> <li>• Adding more to the original raw materials</li> <li>• Primary processing is done elsewhere (boat or primary processor)</li> <li>• Some secondary processors maintain primary processing capabilities to manage operational risk.</li> <li>• e.g. Rainbow Seafoods (Jamaica)</li> </ul>	<ul style="list-style-type: none"> <li>• Both primary and secondary activity undertaken in-house</li> <li>• Both secondary and mixed processors may undertake additional business activities of branding/packaging and product design.</li> <li>• e.g. Nisad NV</li> </ul>

With no real limits placed on the existing volume-based model, government policy does not incentivize processors to develop higher value processing. Ultimately, the risk adjusted cost of adding value is higher than the unadjusted cost of continuing to catch as much fish as possible with minimal processing.

## Improved waste management has the potential of unlocking increased value

### Waste Management:

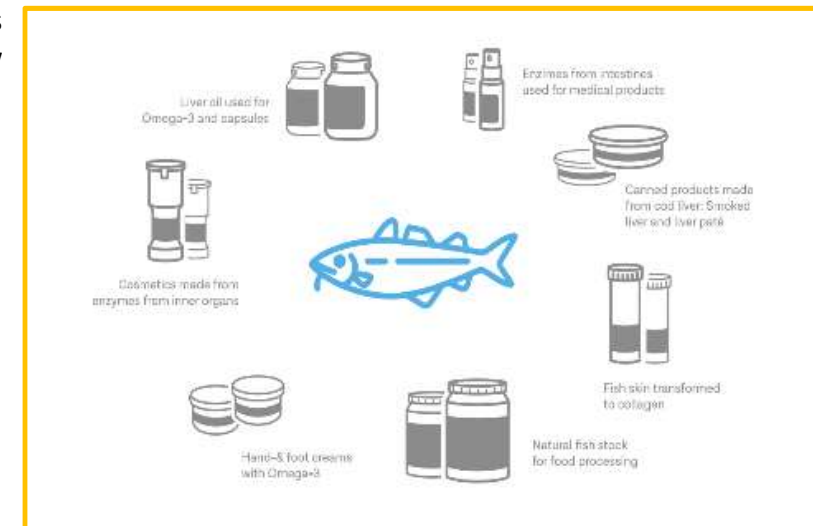
- New methods for processing fish are creating increasing quantities of offal and other by-products, which may constitute up to 70% of fish used in industrial processing.
- Fish by-products can serve a wide range of purposes: heads, frames and fillet cut-offs and skin can be used directly as food or processed into fish sausages, cakes, snacks, gelatin, sauces and other products for human consumption/nutrition. By-products are also used in the production of animal feed, fertilizer, dietetic products (chitosan), pharmaceuticals (including oils), natural pigments, and cosmetics.
- An increasing number of countries are retaining by-products for further processing. Surinamese processors however presently treat 100% of the by-product as waste. Much of this waste is dumped back into the ocean or nearby rivers. In the absence of an environmental law and management plan, the current practice is legal. It however potentially poses environmental and reputational risks.
- Although not yet a formal requirement for export, buyers have raised concerns about Suriname's lack of waste management systems. In response, at least one processor (i.e., Bera Fisheries) has begun exploring how it might reduce levels of waste by processing by-products into animal feed.

### Inputs:

- Sourcing local labor for processing can be challenging and many processors supplement their work force with Guyanese and Haitian workers. Some firms additionally source expat senior management.
- Historically, electricity required to power fish processing plants and their cooling facilities has been relatively reliable. Several processors however noted recently added generators to support expansion of their facilities.

Countries such as Iceland have made a concerted effort to maximize fish utilization rates (i.e., increase use of by-products and reduction of waste). Iceland's utilization rates for some species have increased to approximately 70% (FAO 2016).

### Examples of fish by-products

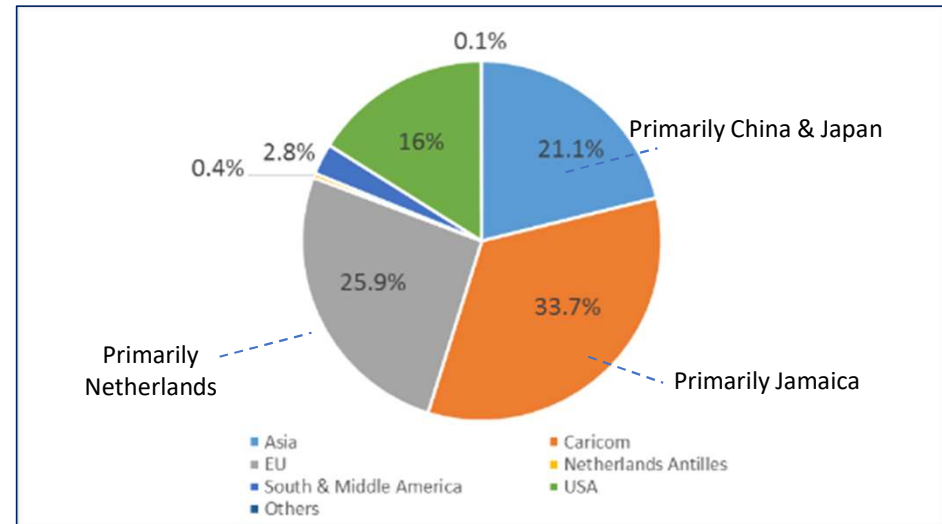


Source: U.S. Seafood Industry and Utilization of By-Products (2017)

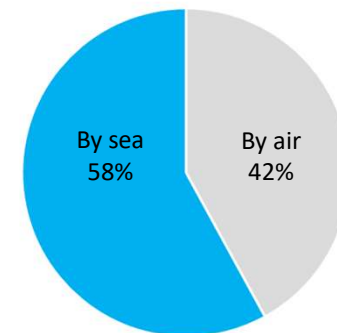
## Distribution and marketing: Many markets, but downstream presence is very limited

- Suriname’s fisheries sub-sector is almost entirely export oriented owing to the market access it secured through certification and the small size of its domestic market. In 2016, exports of fish and shrimp accounted for 96% of total production (based on market value).
- Export permits are issued by Suriname’s Fish Inspection Institute (VKI), which is the competent authority tasked with inspecting the quality of fish products and ensuring caught fish follows food health regulations (as proscribed by HACCP) under the Fish Inspection Act of 2000. Established in 2007, VKI is a semi-autonomous agency under LVV. It is funded by \$2 per kilo exported fee charged to exporters.
- Suriname’s processors sell primarily to overseas seafood distributors for additional processing, re-packaging, and onward sale to the retail or food service industry (e.g., Rainforest Seafoods in Jamaica).
- Seafood distributors have moved to work more closely with retailers in key export markets such as the EU and US to respond to increasing consumer demand for easy-to-prepare, convenient, healthy, and flavorful meals. As such, the trend is towards portioned/pre-cut to size, seasoned/ marinated offerings that include multiple components, ingredients, and sides into a single packaging.
- Essentially all frozen fish and shrimp are shipped via sea freight. All fresh fish is shipped via air freight.

Destination of Exports of Fish & Fish Products 2017 (kg)

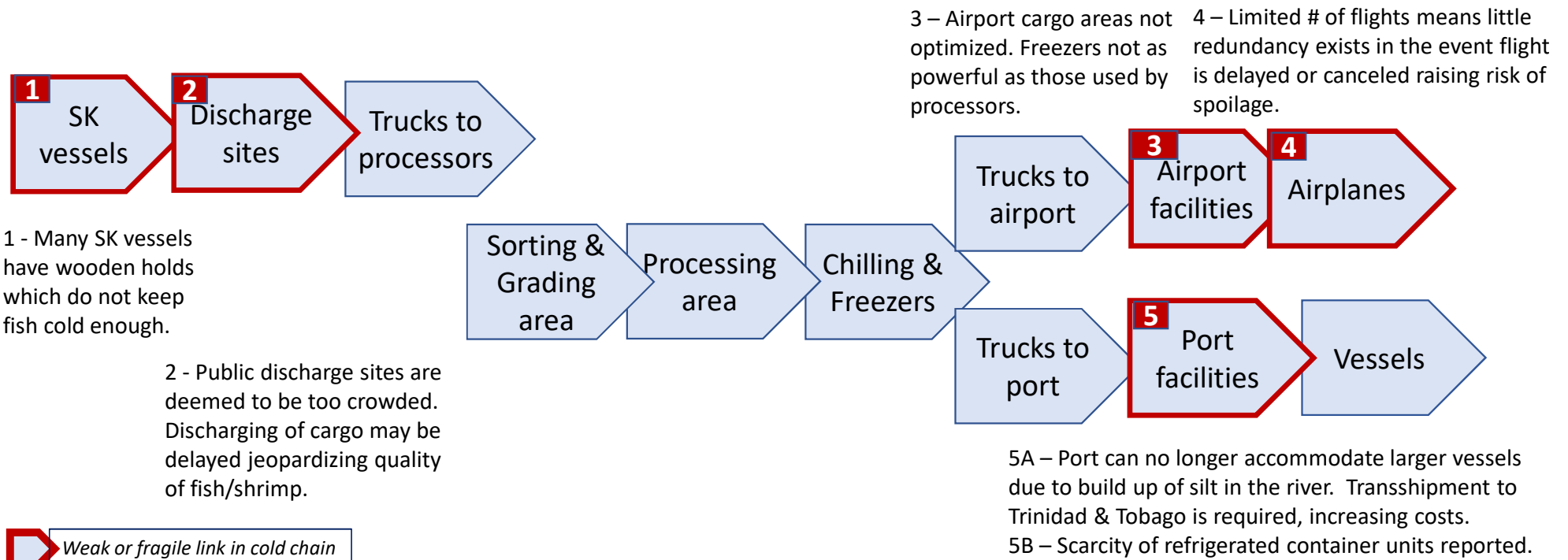


Mode of Transport of Exports 2017 (kg)



## Cold chain is relatively strong but could be strengthened

Fish and shrimp are highly perishable products. A strong and well integrated cold chain is critical to minimizing post catch losses and to maximizing the quality of the product to be sold. One weak link could undermine the entire cold chain. No study of post catch losses has been conducted in Suriname; however, studies conducted in other countries estimate post catch losses to be as high as 35% (FAO).



INBOUND

PROCESSING

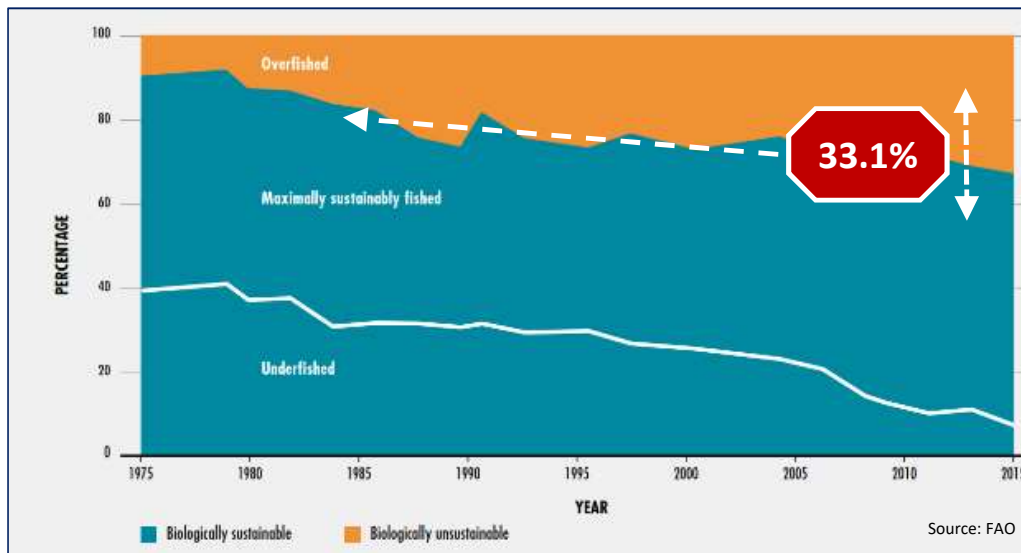
OUTBOUND



## Sustainability of the industry could be at risk...

- The UN's Sustainable Development Goal 14: *Conserve and sustainably use the oceans, seas and marine resources for sustainable development* highlights the increasing importance public and private sector interests attach to the development of sustainable fisheries.

Percentage of global fish stocks fished in a biologically sustainable vs unsustainable way



- Per the FAO, the fraction of world marine fish stocks that are within biologically sustainable levels declined from 90% in 1974 to 66.9% in 2015. Thus, 33.1% of fish stocks were estimated as fished at biologically unsustainable levels i.e. overfished.
- The **specific risks to Suriname's fisheries sector are reasonably well understood:**
  - A number of fish species, depending on their mobility and habitat connection, are shifting their distributions poleward and to deeper waters. This change in distribution is significant given that Suriname is essentially a coastal fishery.
  - The increased uptake of carbon dioxide by oceans, resulting in higher water acidity, can impede the ability of calcifying organisms, such as shrimp, to form shells.
- Climate Change represents an added risk to the sustainability of Suriname's fisheries sector: the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC 2014) cites competition for water, changes in the water cycle, increased frequency of storms and sea level rise as adversely impacting both inland fisheries and aquaculture industries.

## ...due to lack of sound regulatory practices and gaps in enforcement

Regulation of the industry is not science-based. The most recent biomass study of Suriname/CARICOM'S stock of fish and other marine organisms dates to the 1980s.

- The Caribbean Regional Fisheries Mechanism (CRFM) was established in 2003 to promote and facilitate the sustainable management and development of the region's fisheries and aquaculture resources. The CRFM has elaborated a Caribbean Community Common Fisheries Policy; however, to date no agency has been empowered to effect its implementation.
- Nationally, Suriname does not presently have an approved law on environmental management or an approved master plan for fisheries.
- The fisheries sub-sector in Suriname is primarily regulated through a number of licensing schemes that regulate who can fish where, in what type of vessel, with what type of gear, and for what species of fish.
- The Ministry of Agriculture (LVV) issues licenses by vessel, which in turn are only deemed to be seaworthy in certain fishery zones.
- Licenses are issued (or not renewed) at the discretion of the Minister of Agriculture in consultation with the fisheries industry represented by the Suriname Seafood Association and SUNHO, which represents the artisanal fisheries sector (i.e. fisher folk).
- Adherence to the fishery zones proscribed by the license type is monitored by a GPS-based Vessel Management System.
- In addition to Suriname's national regulations the industry complies with a number of international and private regulations such as The International Commission for the Conservation of Atlantic Tunas (ICCAT), the U.S. FDA's turtle excluder device certification (TED), and in the case of seabob shrimp the Marine Stewardship Council (MSC) certification.

# Sustainability and the licensing regime are among the most critical issues impeding the sector's growth

## Sustainability

- No assessment of fishing stocks has been undertaken since 1988. Updated regional study has been proposed and funding secured but is still awaiting approval by all members of the CRFM.
- A National Fisheries Management Plan was elaborated but never signed into approval. Fisheries Act of 2001 and Fish protection Act of 1960 currently under revision.
- Questions posed by firms as to whether LVV possesses technical expertise required to set catch limits. No data or models are currently in use to determine sustainable catch limits.
- SUNHO and at least one processor expressed concern at sustainability of current catch volumes. Some stakeholders reported a decline in fish size/volumes.
- SUNHO believes increased use of trawlers will result in higher volumes of by-catch and waste.
- Decline in marine shrimp catch since 2008 attributed to over fishing. (WWF 2017)
- Informal nature of industry (no written purchase agreements between fishermen, middle men and processors) compounds difficulty of monitoring and control of catch limits.

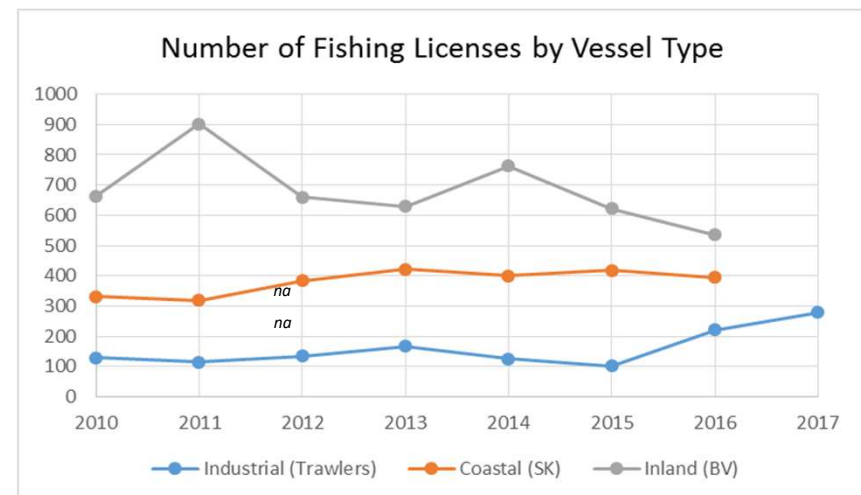
## Licensing Regime

Not science based, which increases the risk that too many licenses will be issued and fishing stocks will be depleted.

Enforcement of licensing regime contains gaps, e.g. SK boats and vessels from Venezuela operating legally in Suriname waters, are not equipped with VMS technology so where they actually fish cannot be tracked. Vessels with VMS are not tracked 24/7.

Number of licenses issued to trawlers has increased 172% since 2015, which has significantly increased catch capacity of Suriname's licensed fisheries fleet.

Processors and fisher folk complain that licenses are being issued beyond agreed allowances and without consultation with industry. Some believe risk to industry has become existential



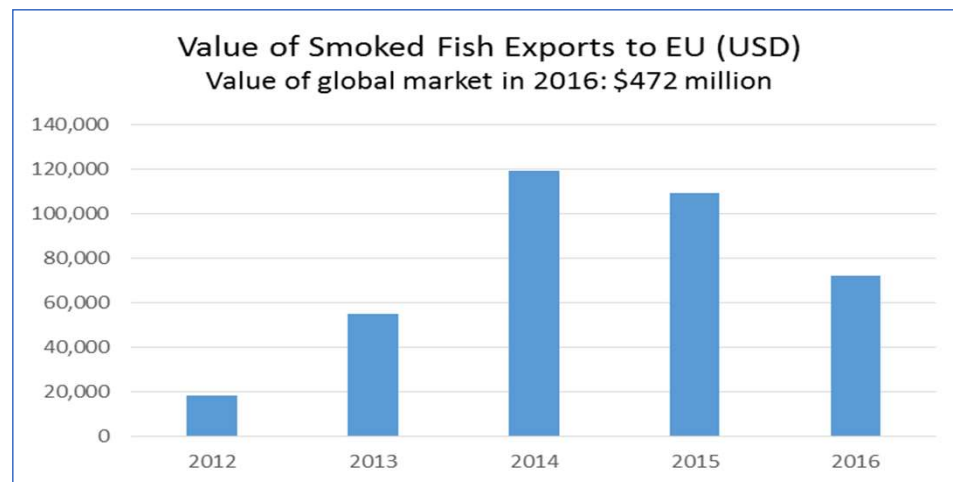
# To drive the sector’s growth, attention is required to upgrade SK vessels and incentivize primary processors to upscale value addition

## SK Vessel Upgrading


- Surinaamse Kust (SK) vessels, so named because they fish along Suriname’s coastal zone, account for majority of catch (as much as 75%).
- SK fishers use two types of boats:
  - Decked wooden vessels commonly referred to as ‘closed type Guyanese’ or ‘inboard’ vessels. This type of boat typically measures 15 meters in length and stays at sea for 2 to 3 weeks.
  - Open wooden vessels also referred to as ‘open type Guyanese’ or ‘cabin cruiser’ vessels. Open wooden vessels typically measure 12 to 14 meters long and can stay at sea for approximately 2 weeks.
- Hygiene issues have been raised regarding the open wooden vessels given the lack of proper washroom facilities. Rigor of SPS-related inspections weak due to capacity constraints at LVV.
- Additionally, the hold where fish are kept is wooden and therefore not cold enough to optimally preserve the fish thereby reducing quality and increasing post catch losses.
- LVV and processors would like to see the holds in the open wooden vessels upgraded to stainless steel or the vessels themselves replaced altogether in favor of closed type models.

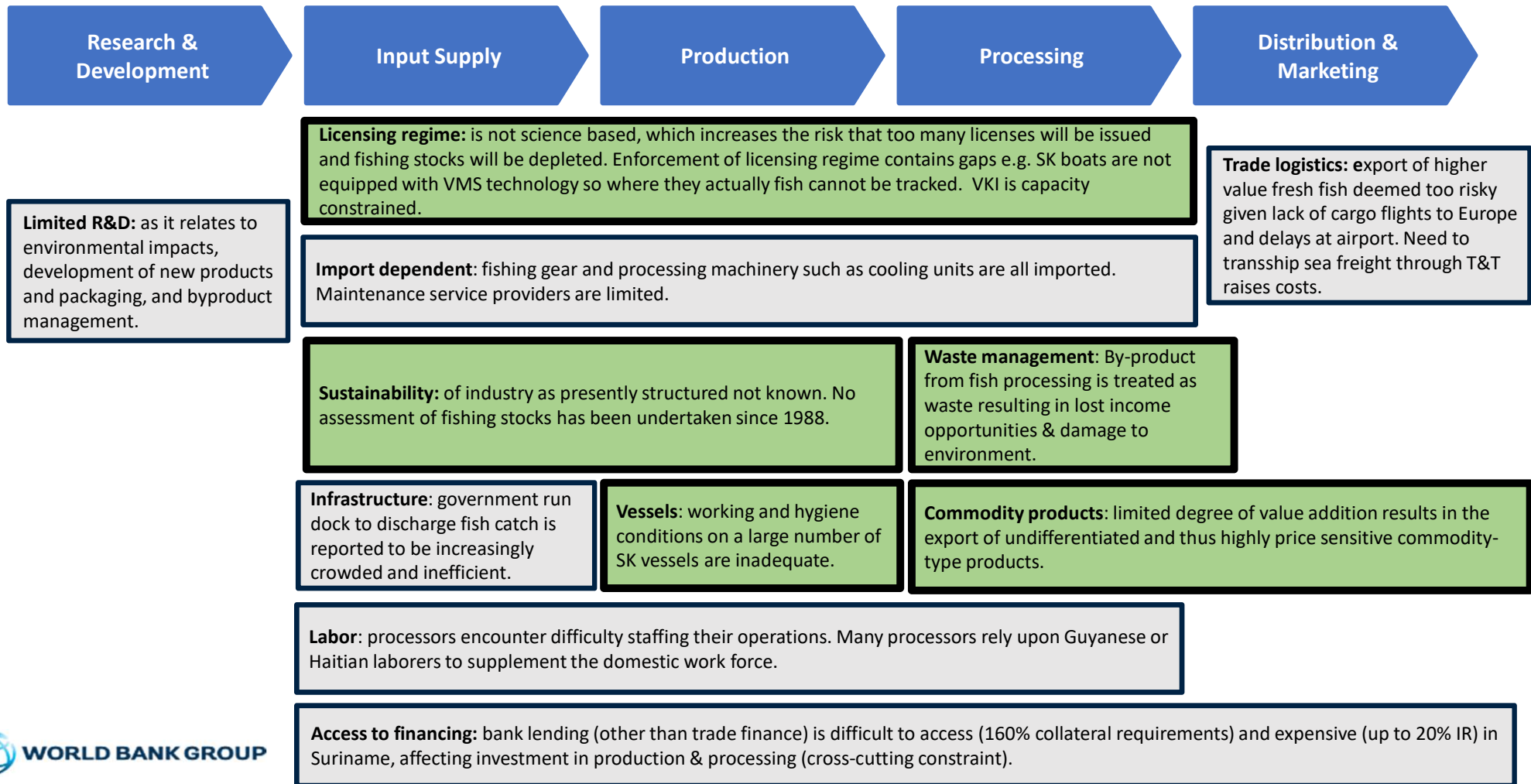
## More Value Added Processing

- The majority of processors in Suriname are *primary processors* (relatively limited value addition), which positions the sector in the highly price sensitive commodity segment of the industry
- Lack of waste management represents:
  - Lost income opportunity (e.g. sales to feed companies) and/or new products;
  - Reputational risk to buyers of fish from Suriname. Distributors increasingly want to know if suppliers have a waste management policy;
  - Risk to the environmental and sustainability of the industry.
- Very little R&D is being done into opportunities for secondary processing, waste management, diversification of fish species, and reduction of post catch losses (levels of post catch loss are not presently tracked).



# Summary of critical constraints impacting fisheries sector

 Most critical Constraints



# The success of Suriname's fisheries sector will rest upon its ability to address sustainability issues and move to higher-value processing

FISHERIES	Markets that could be targeted competitively				
	USA (FRESH)	EU (FROZEN)	EU (VALUE ADDED) [Smoked fish]	CARICOM (FROZEN)	
Competitiveness in terms of:	(i) Cost	Positive: industry is cost competitive in both fish and shrimp	Positive: industry is cost competitive in both fish and shrimp	Positive: industry appears to be cost competitive in some segments of EU market for smoked fish.	Positive: industry is cost competitive in both fish and shrimp
	(ii) Quality	Positive: processors are HACCP/SPS certified	Positive: processors are HACCP/SPS certified	<b>Constraint: VKI has not been approved by EU to certify smoked fish as compliant with EU food safety regulations.</b>	Positive: processors are HACCP/SPS certified
	(iii) Sustainability	<b>Constraint: catch limits are not scientifically determined. No assessment of fishing stock has been undertaken since 1988.</b>	<b>Constraint: catch limits are not scientifically determined. No assessment of fishing stock has been undertaken since 1988.</b>	Positive: emphasis on value addition could help to reduce industry's volume driven revenue model thereby enhancing its sustainability.	<b>Constraint: catch limits are not scientifically determined. No assessment of fishing stock has been undertaken since 1988.</b>
Commercial investment timeframe	Positive: numerous examples of buyers based in EU and Asia willing to finance purchase of processing equipment.	Positive: numerous examples of buyers based in EU and Asia willing to finance purchase of processing equipment.	Positive: numerous examples of buyers based in EU and Asia willing to finance purchase of processing equipment.	Positive: numerous examples of buyers based in EU and Asia willing to finance purchase of processing equipment.	
Investment size	Fisheries sector investments are typically small in size (<\$10m)	Fisheries sector investments are typically small in size (<\$10m)	Fisheries sector investments are typically small in size (<\$10m)	Fisheries sector investments are typically small in size (<\$10m)	
Impact / Scale	Unknown. Commercial impact could be significant; however, environmental impact could be quite adverse.	Unknown. Commercial impact could be significant; however, environmental impact could be quite adverse.	Commercial impact would likely be modest over short term; however, could help transition industry to a more environmentally sustainable model.	Unknown. Commercial impact could be significant; however, environmental impact could be quite adverse.	

# FISHERIES: QUICK WINS & MID TO LONG-TERM SOLUTIONS TO SUPPORT INVESTMENTS

	Short term	Long term
Private sector solutions	<p><b>Processing:</b> improve waste management capabilities to reduce waste, expand product line, and ensure full compliance with relevant certification regimes.</p> <p><b>Production:</b> upgrade SK open deck vessels. Convert wooden holds to stainless steel to improve refrigeration (i.e. strengthen cold chain) and/or convert entire vessel to more hygienic closed deck model.</p> <p><b>Capacity building:</b> build institutional capacity of 6 fisher folk cooperatives to enhance food safety conditions and improve productivity and earnings of their 600+ members.</p>	<p><b>Processing:</b> work with current/new seafood distributors to develop more value-added higher margin fish products (and related packaging) response to demand side trends.</p>
Upstream reforms & market failures	<p><b>Access to finance:</b> support development of <u>matching grants program</u> and <u>collateral registry framework</u> to improve access to finance for fisher folk that would enable them to upgrade fleet, secure required GPS equipment, etc.)</p> <p><b>Sector Strategy and Master Plan</b> – support development of sector strategy to guide public and private investment in the sector</p> <p><b>Environment Plan</b> – support development of an environmental plan to guide treatment of by-products</p>	<p><b>Sustainability:</b> improving monitoring capacity of fishing vessels (e.g., upgrading GPS technology and requiring its use by all of the fleet)</p>
Public investment for public or quasi-public goods	<p><b>Infrastructure:</b> upgrade public landing sites to reduce congestion</p> <p><b>Sustainability:</b></p> <ul style="list-style-type: none"> <li>• Conduct Biomass Study to assess health of fish/shrimp stocks</li> <li>• Update and approve Fisheries Management Plan</li> <li>• Tighten issuance and enforcement of vessel licenses</li> </ul> <p><b>Processing:</b> secure equipment and technical training required for VKI to test smoked fish products for prohibited residues.</p>	<p><b>Sustainability:</b> build technical capacity of LVV to determine sustainable fish/shrimp catch limits.</p> <p><b>Trade logistics:</b> Support upgrading of infrastructure (scanners, cold storage facilities, extension of land sites/ports)</p>

## FISHERIES: ALIGNMENT OF POTENTIAL WBG INTERVENTIONS WITH OTHER DONOR PROGRAMS

Segment of value chain	Action area	Donor Initiatives	Priority for LVV	WBG?
Production	Conduct biomass study to ascertain health of fish/shrimp stocks in the region		●	●
	Formation and institutional strengthening of fisherfolk (artisanal) organizations	FAO, IDB <sup>1</sup>	●	●
	Support development of matching grants program and collateral registry framework to improve access to finance for fisher folk			●
	Waste reduction through reduced levels of trawler by-catch and increased by-catch utilisation (e.g. through use of TEDs and BRDs)	FAO		
	Strengthening collaboration with Coast Guard to ensure effective fisheries inspections at sea	FAO		
	Upgrade SK open deck vessels. Convert wooden holds to stainless steel to improve refrigeration (i.e. strengthen cold chain) and/or convert entire vessel to more hygienic closed deck model.	FAO	●	●
	Upgrade infrastructure to reduce congestion at public landing sites			●
	Improve capacity to monitor fishing vessels by upgrading GPS technology and requiring its use by all of the fleet			●
Processing & outbound logistics	Support market linkages between processors & seafood distributors to develop more value-added products			●
	Provide technical assistance and related equipment to help firms reduce waste during processing			●
	Secure equipment & training required for VKI to test smoked fish products for prohibited residues.	IDB <sup>2</sup>		●
	Support development of an environmental plan to reduce waste and improve treatment of by-products			●
	Support upgrading of logistics-related infrastructure (scanners, cold storage facilities at airport, ports)			●
Marketing	Export/Investment promotion to facilitate partnerships to develop more value added products			●
Governance (Sustainability)	Update of the fisheries management plan	FAO, IDB <sup>2</sup>	●	●
	Ensuring correct stakeholder participation in drafting of new natl. fisheries legislation	FAO, IDB <sup>1</sup>		
	Improving the national fisheries data collection system	FAO		
	Strengthening institutional capacity of LVV especially as it relates to licensing, setting catch limits, and enforcement	IDB <sup>2</sup>	●	●



### Donor programs

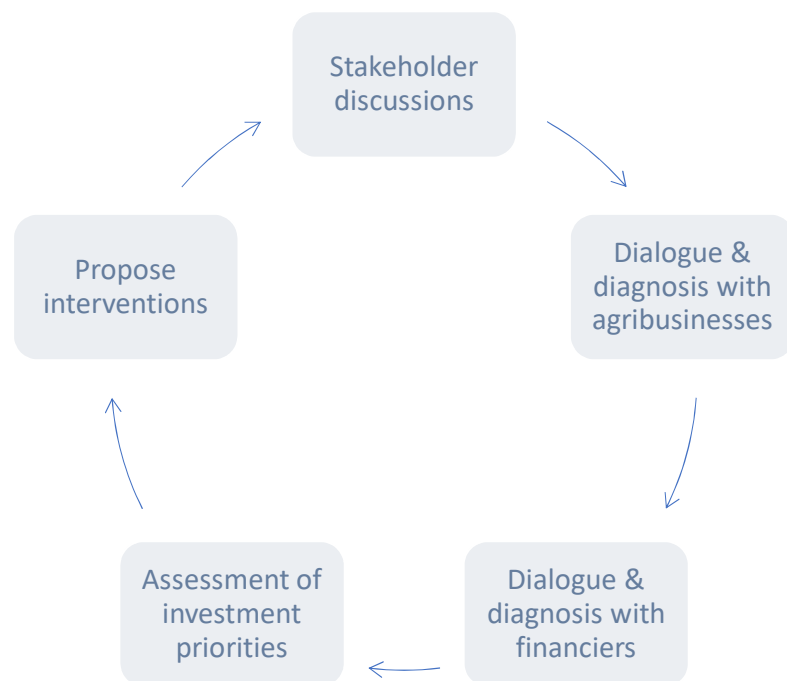
FAO: REBYC-II LAC Sustainable Management of Bycatch in Latin America and Caribbean Trawl Fisheries (implementation phase)  
 IDB 1: RG-T3162 : Sustainable development of the fisheries sector in the Wider Caribbean region (preparation phase)  
 IDB 2: SU-L1020 : Agricultural Competitiveness Program (implementation phase)  
 LVV Priorities as highlighted in 2018 Strategy Presentation (prepared by Acting Director Bapp)



# Cross-cutting constraint: Agrifinance in Suriname

## Agribusiness finance: State of practice in Suriname

Agrifinance services to horticulture and fisheries agribusinesses are low or even absent in some industries. Improving access to and quality of financing begins with understanding the bottlenecks confronting both demand and supply and engaging participants to determine improvements needed and investment opportunities for change. The following approach was used to conduct the following diagnostic:



# Demand for agrifinance

**Farmers, fisherfolk, and agricultural SMEs are among the most financially excluded in Suriname, limiting their opportunities for growth**

## Cross-cutting challenges for accessing agricultural finance

- ❑ **Agriculture plays an important role in the economy, accounting for 10% of GDP:**
  - ✓ **10,000 farmers** (often part-time), and 72 agri-processors (with most in rice)
  - ✓ **4,000 primary fisherfolk**, 190 boat owners, 10 middlemen, 16 fish and shrimp companies, with 3 large ones
  
- ❑ **However agriculture accounts for less than 1% of bank credit, limiting growth opportunities in agriculture:**
  - ✓ A draft IDB survey assesses that total financing demand from agricultural SMEs in the next 5 years is about **15 million USD**
  
- ❑ **Some of the key demand-side challenges for accessing finance include lack of acceptable collateral, lack of stable markets, lack of organization, informal, often non-competitive operations, and a lack of trust towards financial institutions:**
  - ✓ **Most farms are small**, with less than 0.5 ha, with three to four different crops/fruits. Returns from farming are irregular, and too low to be depended on.
  - ✓ **With the exception of rice and the fishing industry, the agricultural sector is largely informal and disorganized with very few strong value chain linkages between.** The existence of well-functioning organizations in agriculture is also not common making it even harder to structure value chains and to facilitate financing. According to LVV, there are 32 established cooperatives, and 10 in the process of registration, only a few are really functioning. There are many more informal producer associations
  - ✓ **Only 10% of land is privately owned land with titles;** Leasehold and land lease titles make up “restricted” land market and if properly registered can be used as collateral but with limited value; community lands are not taken as collateral
  - ✓ **Most farmers do not have an account at a formal financial institution and use cash for all of their transactions**
  - ✓ **Farmers are reluctant to save at a financial institution** (due to the limited rural presence of financial institutions and concern with risks of facing taxes) **or to pledge collateral** (e.g. land or house) **to take a loan due to risk aversion.**

# Demand for finance for horticulture: for high-value fruits and vegetables, increased financing can unlock significant value addition for exports and import substitution

❑ Financing opportunities for growth in horticulture

- ✓ SME agribusinesses have **unmet export markets** for high value fruit and products to Europe and must grow to be competitive
- ✓ **CARICOM** provides a market opportunity for growth
- ✓ The **local market** demands more and higher quality fresh fruit and vegetables for the hotels and tourist markets, thus reducing imported products

❑ Identified financing needs and illustrative financing demand:

Financing needs	Farmers	SMEs
<b>Working capital</b>	For improved seeds/plants and inputs: range of (\$1,000 – 2,000 annually)	For procurement, outgrower advances, inventory: range of \$30,000 - \$100,000
<b>Equipment and technology</b>	For tilling and mulching equipment: range of \$5,000 - \$25,000	For specialized processing equipment, machinery, new technology: range of \$25,000 - \$150,000
<b>Infrastructure investment</b>	For irrigation, drainage, local storage: range of \$5,000 - \$15,000	For storage facilities, plant expansion, land upgrading and expansion: range of \$40,000 - \$1,000,000

## Agribusiness financing for high-value fruits and vegetables requires a “finance plus” approach, including value chain and SME development (1 of 2)

### ❑ Value chains in fruits and vegetables are not well developed

- ✓ Growth in agriculture lending depends upon reliable value chains with strong relationships between producers, suppliers and buyers – at present this is rarely present causing lenders to rely on collateral-based lending which is very limited
- ✓ Strengthening of **value chain systems** for outgrower sourcing is one important aspect for value chain development
- ✓ Market development, with governmental and private sector collaboration is also required to develop strong value chains
  - ✓ Priority selection is needed to direct support to the value chains with highest potential
  - ✓ Support to improved infrastructure is also needed to improve cost efficiency and competitiveness
- ✓ Fruit and vegetable value chains are relatively high risk and growth in these is contingent on reduced costs or mitigating these risks
  - ✓ Increased financing toward these value chains will not happen without stimulus, including partial guarantees to banks to be willing to provide them financing

## Agribusiness financing for high-value fruits and vegetables requires a “finance plus” approach, including value chain and SME development (2 of 2)

### □ Increased access and use of finance is contingent on improved capacity development to SMEs

- ✓ **Business development** is needed to improve the agribusiness SMEs and their value chain partners' capacity to meet quality and compliance standards, especially for higher-end export markets
  - ✓ Management planning and responsibility to meet timeliness and production commitments, best practices production and processing requirements, etc.
- ✓ **New or strengthened market development** is needed for some opportunities to become scalable
  - ✓ Agri-tourism, niche market products and the local/regional hotel industry are areas where increased SME capacity could attract increased financing
  - ✓ Non-timber forest product SMEs need access to improved market systems to be viable for financing

## Small horticulture farmers and isolated SMEs need improved financial literacy and competitive business practices to be bankable

- ❑ **Small horticulture farmers are often weak in financial literacy**
  - ✓ **Microfinance and banking services are very under-developed** leading to reliance on informal financing arrangement and lack of understanding and engagement for improved opportunities for financing growth in their activities
  - ✓ **Financial linkages and financial literacy** are very limited
- ❑ **Small farmers need to be more competitive in their business activities before increased financing can provide significant benefits**
  - ✓ Stronger value chain linkages and upgrading of productivity and standards are needed
  - ✓ **Group organization** of farmers is needed to have sufficient economies of scale and coordination within value chains
  - ✓ Special attention is needed to develop bankable opportunities for youth and women
  - ✓ **Technical guidance** with TA mentoring and finance is a recommended “package” of services needed – for example, LVV notes large potential to restore old plantation irrigation systems for small-scale horticulture and aquaculture, but requires strong guidance with financing
- ❑ **Non-timber forest product SMEs need access to banking services**
  - ❑ **Agent banking** to reach SMEs in remote rural communities is needed
  - ❑ **Collaboration with NGOs** to provide guidance and mentoring is required to implement financial services to these communities



## Within fisheries, primary fisherfolk have limited access to finance, especially longer term financing

### Fisherfolk:

- ✓ Medium and long-term financing is more needed than working capital needs
- ✓ **Fishing boat and equipment upgrading** are most needed and financing is not available
  - ✓ **Outboard motors and better nets** are a key equipment upgrade
  - ✓ Many fisherfolk need to upgrade their **catch containers** to aluminum ones for MSC certification requirements and to install Global Positioning Devices on their boats.
    - Governmental requirements and GAP compliance is expected to force such changes in the near future.
    - Positioning devices are important not only for control of fishing zones, but also for reducing risks of piracy of boats and aid in location in times of distress.
- ✓ However, cost has kept most of them from making the investments, both due to a **lack of finance and/or a willingness to spend the money** with their day-to-day .
  - These upgrade investments costing \$10,000, are beyond the cash flow repayment capacity of most small boat owners

## Medium and larger seafood enterprises generally have access to sufficient working capital but lack capital for larger and riskier investments such as recycling

- ✓ **Large fish SMEs indicate they are profitable** with adequate sales prices and low fuel prices although have concern of sustainability and price changes.
- ✓ **Fish enterprises borrow for some capital investments** of processing equipment and infrastructure from the banks in Suriname or from international partners or buyers.
  - E.g. new landing jetty, new boat or a new facility investment needs
  - Enterprise owners are conservative in borrowing due to market risks and Surinamese loans are considered too high cost.
- ✓ **Fish enterprises work on a cash basis**
  - They do not provide cash advances to the fisherfolk
  - Some of the middlemen do provide occasional advances to the fisherfolk.
- ✓ **A common need identified across the industry was long-term capital for fish recycling/waste management facilities**
  - Finance is requested for building of a fish recycling center that could help all fisheries and would improve environment and profit
  - Recycled fishmeal could help feed poultry and other industries

# Supply of agrifinance

**A lack of appetite for financing agriculture given the risks and financial products offered**

## Financial products offered in Suriname are mainly restricted to mortgage and salary based lending

- **The financial sector is small, concentrated, and has been negatively impacted by a severe economic crisis since 2015, with several institutions having high non-performing loan ratios:**
  - **Financial intermediation is low\*** relative to comparator countries in the region
  - **High government borrowing crowds out** private investment.
  - The financial sector comprises **three large banks** with 80% market share, plus six smaller banks, including 3 private ones.
  - Inflation has dropped to a present 9%; however, recent high inflation and a 50% currency devaluation in 2017, increased interest rates which remain high (18-22% in SRD)
- **Financial products offered mostly include mortgage and salary based lending:**
  - **Value chain financing and microfinance lending**, both of which offer alternative financing and development of credit and transaction histories are rarely used
  - **Interest in savings products is stifled** by recent history of high inflation but the commercial banks without problems of arrears do have sufficient liquidity for the type of lending they currently do.
  - **There are almost no payment systems**, with exception of direct loan payments from worker paychecks from government or company paychecks for salary-secured loans
  - **Insurance and financial leasing** are not available to reduce risks in financing
  - There is some **incipient bank innovation** - one bank with mobile banking; one starting factoring; one starting Islamic/shared risk lend and one expanding into the interior of the country.

## Funding for agrifinance is limited to established agribusinesses and farmers with strong linkages to markets and collateral

### Financiers cater to specific known sub-sectors and target groups; others agribusiness SMEs are left out

	Banks	MFIs	Value Chain players
<b>Type of customers in agriculture served by different financial institutions:</b>	<ul style="list-style-type: none"> <li>• Rice millers, agribusinesses (e.g. fisheries, banana)</li> <li>• large farmers with hard collateral</li> <li>• 1-2 organized farmer groups</li> </ul>	<ul style="list-style-type: none"> <li>• Farmers involved with cooperatives and linked to buyers (e.g. rice, poultry, horticulture, fisheries) and with collateral</li> <li>• Agri-vendors, microprocessors</li> </ul>	<ul style="list-style-type: none"> <li>• Rice producers, plus other organized groups of producers</li> </ul>
<b>Type of products offered:</b>	Working capital/overdraft lines of credit, equipment and term investment	Short-term loans with monthly repayment, secured by savings, salary or peers	Inputs for rice producers and contract farmers, plus short-term harvest advances
<b>Average loan size</b>	<b>\$200,000</b> (\$20,000 – \$2 million)	<b>\$1,000</b> (\$100 – 5,000)	<b>\$500</b> (\$100 – 1,000)
<b>Average interest rate</b>	<b>19% in SRD</b> (18 – 24% with fee) 9% in USD (8 – 12% with fee)	<b>24% in SRD</b> (18% - 30%)	<b>18-22%</b> in rice or more often interest rates embedded into purchase prices (e.g. fish buyers)
<b>Volume of financing</b>	0 – 5% of total loan portfolio	0 – 5% of total loan portfolio, unless part of a subsidized external loan program	Value chain finance volume is low due to uncertainties and often off-farm salary income



## Value chain financing is not well developed in Suriname

**The lack of well-structured value chains inhibits growth and financing** (with exception in the rice sector)

- ✓ Procurement **uncertainty increases SME business risk and curtails financing** available for SMEs
- ✓ **The lack of well structured value chains in horticulture limits the flow of financing** from SMEs to potential outgrower producers in the value chain.
  - A few small SMEs do have structured value chains but lack capacity to provide financing to their outgrowers
- ✓ **Farmers and fisherfolk** work in a cash-based arrangement with buyers, with occasional financing from middlemen under higher cost and/or disadvantaged market opportunities.
- ✓ Most **agri-processors pay their suppliers in cash**

**The value chain challenge:**

- ✓ For full-time farmers and fisherfolk who lack mortgage collateral or salaries to satisfy the banks, **value chain finance offers alternative financing arrangements**; the challenge is a lack of developed value chain arrangements
- ✓ Know-your-customer is also not possible for bankers to achieve when there is **no transaction history or business data**, limiting access to finance; banks also cannot take advantage of value chain leaders to assess client risk and capacity
- ✓ Cash transactions raise **safety challenges** for all parties (large amounts of cash to carry) and logistical costs

## Some of the key challenges for agriculture finance include lack of skills, risks, and costs to expand into agriculture and rural lending

### *Skills*

- **Financial institutions lack know-how on agriculture finance and value chain financing**
  - ✓ Several financial institutions indicate interest in learning more about agriculture lending methodologies (such as value chain financing, leasing, cash flow based agri-loan analysis)

### *Risks*

- **Financial institutions are used to collateral-based lending and perceive agriculture finance as risky**
  - ✓ Institutions are interested in partial guarantees, blended finance and more secure use of contracts in lending.

### *Costs to innovate and expand in rural areas*

- **Rural presence of financial institutions is limited.**
  - ✓ **Most FIs only have branches or ATM access in Paramaribo** and some in the Nickerie region.
  - ✓ One public bank has reach across the north and one small bank has some branch and ATM outreach into the interior of the country.
  - ✓ Costs due to lack of economies of scale of financing that limit FI interest and outreach innovation **require public support.**

# Financial sector regulation, public institutions and donor-supported programs



## Credit infrastructure and laws on financial products and distribution channels are lacking, while reserve requirements restrict capacity to lend

### Gaps

- **Basic credit infrastructure, such as credit information sharing and a secured transaction framework and registry for moveable collateral, has been lacking.** Bills have been drafted to address these deficiencies, but they have not yet been passed by the National Assembly.
- The **insolvency regime is also outdated** with an insolvency law from the 1930s that would need to be significantly revised to increase willingness of financial institutions to provide SME finance.
- **There is no specific leasing or warehouse-receipts law**
- **There is no framework for agent banking,** which limits the capacity of financial institutions to expand their rural presence

### Lending limitations

- **High reserve requirements stand at 35% for SRD and 50% for FC loans limit banks' capacity to lend .** In other countries, these requirements are generally below 20%.
- Central Bank regulations allow without lending without hard collateral, but **bankers have stated that central bank auditors have been not been comfortable in allowing for this.** Board members from one of main financial institutions indicated that they could not lend without hard collateral due to Central Bank restrictions.

# The National Development Bank (NOB) is undergoing significant institutional reform to seek to be the centrepiece of Government support to financial sector

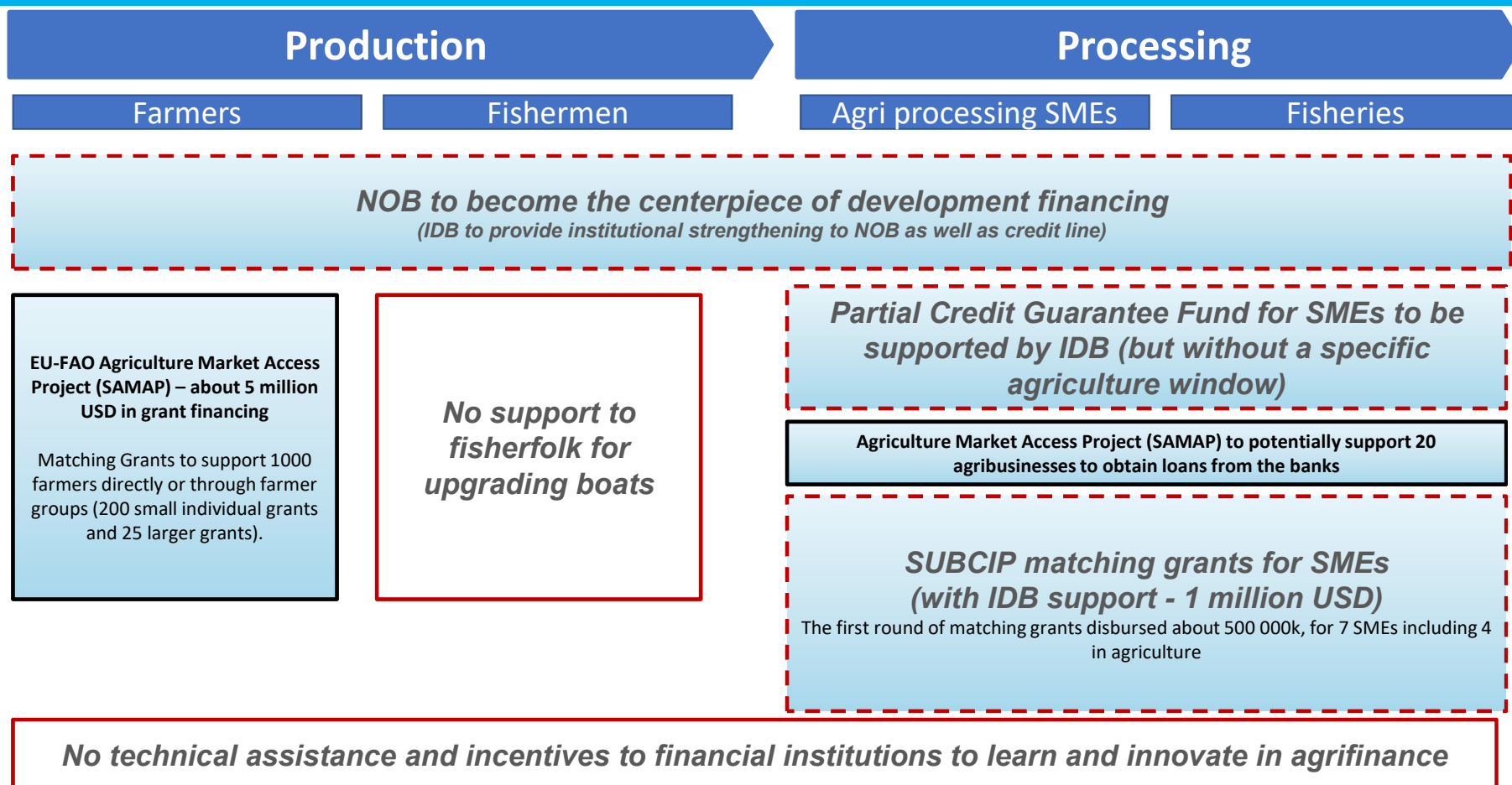
## Current structure

- **NOB is currently a first-tier development bank offering loans to underserved segments including agriculture**
  - **State-owned bank established in 1963, with 65% of the portfolio in agriculture** for an amount of SRD140m
  - **It also has a small \$1 million guarantee fund for SMEs**, which is a separate legal entity but administered by NOB, and its use by other financial institutions is very limited.
    - The NOB is the manager and the administrator of the fund. The supervisory board counts 5 persons, 3 from the Ministry of Finance and 2 from the Suriname Business Forum and reports to the Ministry of Finance.
    - Since 2016, 7 guarantees have been granted, including 3 for NOB loans (in agriculture). Financial institutions mentioned that they are not using this guarantee perceived as too bureaucratic

## Upcoming reforms

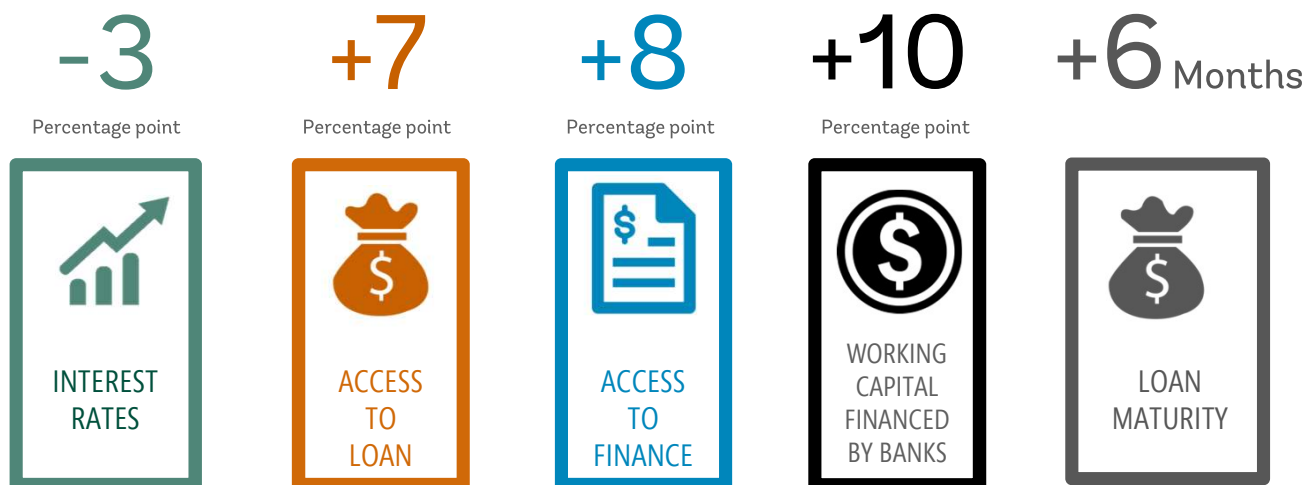
- **The Government's vision is for NOB to manage all development funds currently managed by various entities**
  - **Ag Credit Fund** (about 2 million SRD – for loans below 200 000 SRD - 245 loans outstanding): previously managed by Landbouwbank, and currently managed by VCB
  - **DSB microfinance Suritrust** - Currently managed by DSB (with initial endowment of 6 million EUR – for loans below 10 000 SRD) and with repayment challenges.
  - **SME fund** (about 5 million SRD - currently managed by the Ministry of Trade) – to be potentially converted into a guarantee
- **The IDB plans to support NOB through various interventions**
  - **Institutional strengthening of NOB**, as well as capacity building of SMEs applying for NOB loans (1 million USD)
  - **Credit line and guarantee fund** (14 million USD). The guarantee fund would be established as a separate entity (Chinese wall)
  - However there might be a need for **supporting the Government in managing the transfer of funds, setting rules and monitoring and evaluating their use**

# Upcoming Government and donor-supported programs aim at addressing some of the key challenges in agriculture finance, but leave important gaps



# Secured transactions regime for moveable asset-based agrifinance

## Why secured transactions? Proven global track record of collateral registries for movable assets in strengthening firms' access to finance



Research (Love, Martinez Peria, Singh, 2013) also provides evidence that [the impact of the introduction of movable registries on firms' access to finance is larger among smaller firms](#), which also report a reduction in subjective, perception-based measure of financial access obstacles.

## Global experience with types of movable collateral successfully used for lending in developed and some developing markets



## Moveable asset-based lending (MABL) is currently very limited in Suriname

- Legal and Institutional Constraints
  - There is no legal and institutional framework in place for secured transactions and financial institutions (FIs). Strict Central Bank provisioning rules treat MABL lending as insecure so any loans need to be fully capitalized
- Supply-side constraints
  - FIs, because of the lack of legal and institutional framework, and limited know-how among its staff view movable collateral as very risky assets to lend against. They prefer lending to large companies, using immovable assets as collateral. Movable assets are leveraged sparingly, mostly as a back-up, secondary collateral in the loan agreements.
  - FIs tend to be conservative and do not offer specific MABL products so even heavy agricultural machinery and vehicles are only rarely used as collateral for lending despite the existence of strong secondary markets in the country.
  - In the agriculture sector outside Paramaribo existing client relationships, farmer reputation and recommendations of large buyers play a much more prominent role in deciding to extend credit than possession of movable collateral.
- Demand-side constraints
  - SMEs are not aware of the possibilities related to MABL, and that they might be able to borrow using their movable collateral.
  - As a result, informal unregulated lending is reported to be a significant source of finance for small businesses.
- There are some examples of MABL: While this is not a significant part of its portfolio, FINA Bank offers factoring as one of its services, and lends on tractors as a collateral but without registration.

## Global experiences and stakeholders in Suriname recognize MABL as important potential to improve access to finance, especially for SMEs

- In developed countries more than 70% of all loans are secured by movable collateral, especially accounts receivable and inventory.
  - Some developing countries such as China, Columbia and Nigeria have effectively leveraged the collateral registry reform to improve the access to finance using MABL.
- The Suriname government and donor community acknowledged the enactment of secured transactions law and establishment of the collateral registry as one of the priorities in the financial sector reform space already in 2014.
  - Donors supported the government through financing and advice to draft the law and develop the collateral registry design in 2015 and 2016 respectively.
- Some FIs are expressing interest in exploring and developing their MABL offering, particularly accounts receivable and heavy equipment.
  - After a good practice legal and institutional framework is put in place, experiences from other countries show that FIs tend to initially focus on sectors where they have the highest level of familiarity and where secondary markets for movable collateral exist. Thus, some well organized value chains such as rice and poultry could be well suited for MABL considering a high level of lender familiarity and comfort.
  - There are developed secondary markets for the mining and farming equipment, as well as the fishing vessels that could be leveraged for MABL.
  - Larger agro-processors could also be potential users of the registry to more effectively manage their relationships with farmers.
- In addition to establishing the good practice legal and institutional framework, other aspects of MABL “eco-system” would have to be strengthened:
  - Much awareness and capacity building is still needed including both on the supply (FIs) and demand side (SMEs)
  - FIs expressed concerns about control and enforcement over non-possessory movable collateral as well as the technical prowess, management capacity and integrity of SMEs



## Much of the legal groundwork for supporting MABL is in place

- Draft Law on Security Rights over Movable Assets was prepared in 2015.
  - The draft is based on the Book IX on Proprietary Security in Movables of the European Draft Common Frame of Reference.
  - WBG-financed expert assessment in 2016 found the draft to be of high quality and taking into account latest thinking and good practices on secured transactions with movable collateral.
- The draft went through the Council of Ministers and the State Council.
  - It was well received, and only some limited issues were raised such as the need for adequate stakeholder engagement, institutional competence and data privacy protection.
  - The draft law now needs to be adjusted accordingly and submitted to Parliament. Could be discussed in early 2019.
  - There is a need for further harmonization with the Civil Law and repeal of some other conflicting legislation.
- Early draft exists of the Implementing Regulations.
  - It would have to be adjusted and finalized in the context of the passage of the law.

## The institutional framework for MABL is also mostly in place – with a final push required to initiate implementation of a MABL regime

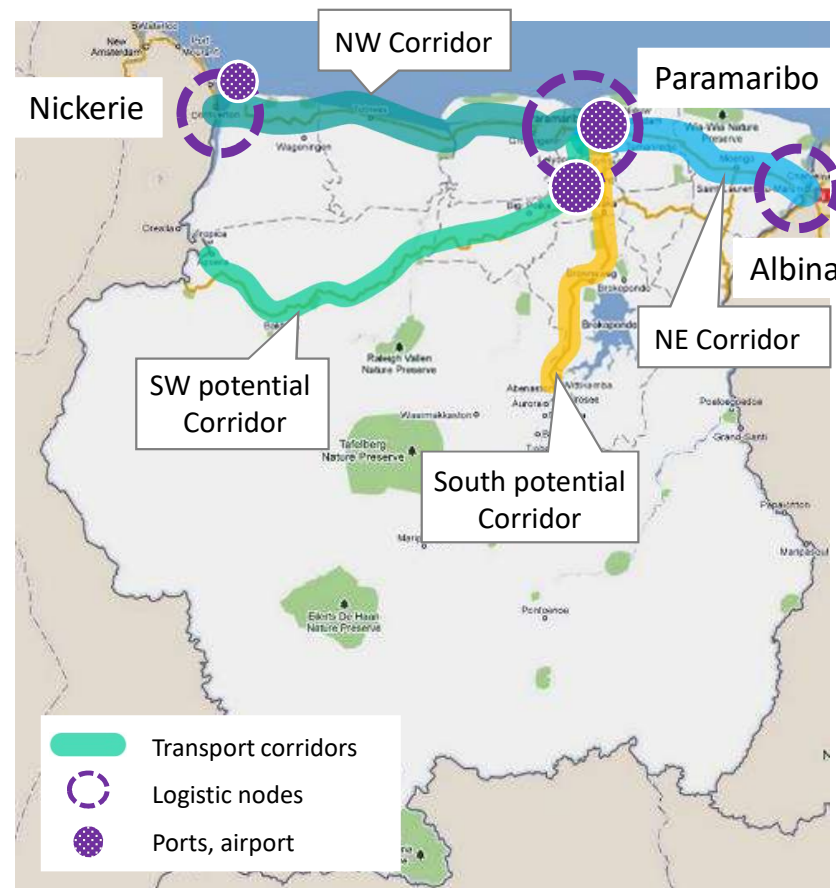
- Draft Law provides for a modern electronic collateral registry for movable assets which contributes to:
  - Reducing legal risk in secured financing transactions by publicizing notice of a charge over assets in the possession of the debtor to interested third parties, such as subsequent buyers or the debtor’s other secured and unsecured creditors.
  - Providing a coherent framework for ordering priorities among competing claimants to the same item of charged collateral by adopting an objective public act—registration—to establish the effective priority date of a charge.
- Donor-financed consultants have already designed the registry.
  - The registry solution was developed in November 2016 by IOS Partners, experienced providers of collateral registries with a global footprint.
  - The registry design is currently sitting on the solution provider’s servers, and sustainable local hosting option would need to be identified.
  - Ongoing contractual maintenance period (nominal as the system is not live) until November 2019.
    - Could be leveraged to finalize the registry and launch the system.
- Some feasibility analysis was done on the possible agencies/institutions to house the registry, but the final decision has not been made.
  - Institutions considered: Competitiveness Unit of Suriname (CUS), Mortgage Registry, Central Bank, Chamber of Commerce.

# Cross-cutting constraint: Agri-logistics in Suriname

## Logistics context in Suriname entails a simplified structure centered in Paramaribo and constrained by a limited network of roads and transport nodal infrastructures

- Suriname logistics is concentrated in the coastal strip along the East-West national road, which links Paramaribo with the border cities of Nickerie (Guyana) and Albina (French Guiana)
- Paramaribo is the origin of a number of secondary roads that provide access to the main agri-production areas in the southwest and southern part of the country
- Paramaribo also houses the national port and is 50km from the international airport (Johan Adolf Pengel) in Zanderij
- The dominance of Paramaribo and the constraints imposed by the limited number of bridges to cross the Suriname River determined the logistics structure of the country:
  - Two main transport corridors can be identified to the East and West of Paramaribo. A continuous operation along both corridors does not exist
  - Two additional corridors linking Paramaribo with the South and the South West agri-productive regions have potential to be consolidated in the mid term

### National corridors and logistic nodes



# Suriname's logistic performance is currently below potential, but can be significantly improved in the short term by specific actions in customs, infrastructure, and services

Although Suriname is not included in the LPI, a consistent approximation of its logistics performance can be done using a benchmark with other countries in a similar context

## LPI Benchmark



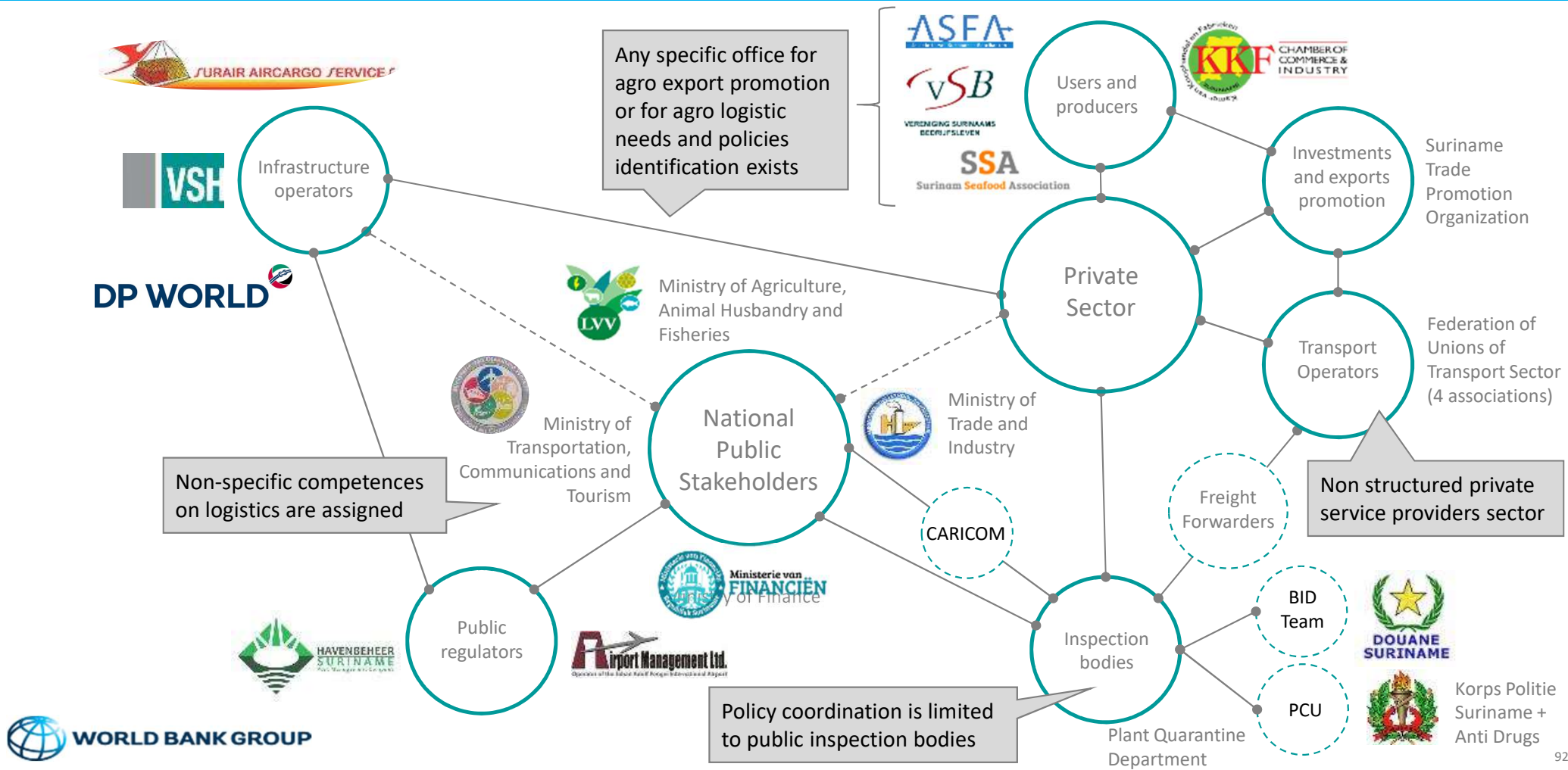
## Estimate LPI ranking for Suriname

■ Estimated current score  
■ Target score to reach

Country	LPI Rank	LPI Score	Customs	Infrastructure	International shipments	Logistics competence	Tracking & tracing	Timeliness
Suriname	Current	2.32	2.42	2.09	2.17	2.24	2.48	2.53
	Target Short Term	2.5	2.63	2.32	2.2	2.42	2.78	2.65
Chile	34	3.32	3.27	3.21	3.27	3.13	3.20	3.80
Costa Rica	73	2.79	2.63	2.49	2.78	2.70	2.96	3.16
Uruguay	85	2.69	2.51	2.43	2.73	2.71	2.78	2.91
Dominican Rep.	87	2.66	2.41	2.36	2.77	2.44	2.97	2.98
Sri Lanka	94	2.60	2.58	2.49	2.51	2.42	2.79	2.79
Jamaica	113	2.52	2.42	2.32	2.53	2.54	2.48	2.79
Trinidad & Tobago	124	2.42	2.42	2.38	2.59	2.27	2.27	2.53
Guyana	132	2.36	2.55	2.09	2.17	2.24	2.44	2.65
Guatemala	125	2.41	2.16	2.20	2.33	2.25	2.42	3.11

Current Suriname LPI position is slightly below Guyana, mainly due to underperformance in customs procedures, port and airport freight infrastructure, and the progressive dependence of Surinamese shipping on Port of Spain maritime hub. Specific actions would improve dramatically the LPI potential, situating Suriname performance over Guyana and Trinidad

# Logistic players' structure has also to be reinforced and adapted to a competitiveness approach for the agri-logistics sector

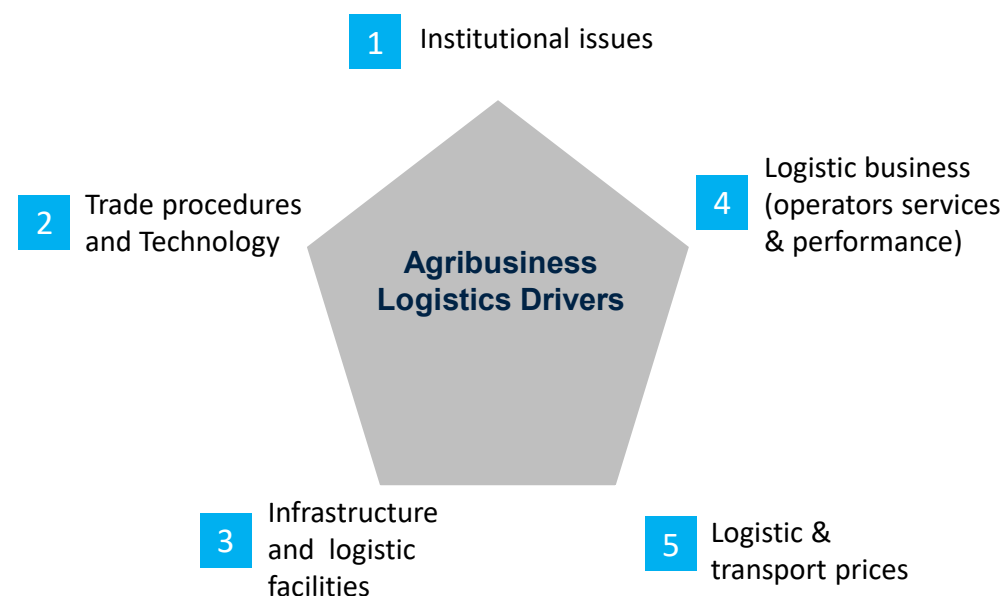


## Surinamese logistics is focused on imports and does not promote agri-exports due to the low production and the lack of accessibility, facilities, and specialized services

- Current logistics structure is concentrated on imports and does not help to promote agri-exports due to the reduced volumes of production, bad accessibility, inadequate facilities, and absence of specialized services
- Logistics is currently a constraint for exports but can be a solution whether the costs are reduced by increasing the opportunities for the agri-producers through specific actions in the identified LPI issues
- Actions should be implemented on the main drivers of logistics performance in Suriname
- The final result of the action plan should allow the agri-producers to upgrade their competitiveness through a higher connectivity, a scale aggregation of volumes that give them a better position for price negotiations and more transparency in the international market access
- On the supply side the transport and logistic operators should also adequate their services to the real demand needs

### Suriname's Agribusiness Logistics Drivers

Understanding current situation of Surinam agribusiness logistics can be addressed through the analysis of 5 main topics:



The following slides review these five logistics drivers

# 1. Institutional issues are mainly related to limited logistic coordination, lack of policy implementation, and lack of branding <sup>1</sup>



## In relation to the logistics of Suriname and its performance:

- Neither the Ministry of Transport and Communications nor the Ministry of Trade, Industry & Tourism has a specific bureau for logistics issues such as evaluation, formulation of policies, implementation of required actions and results monitoring
- There is an excessive number of institutions related to logistics and trade for the agri sector (2 ministries, 5 inspection bodies, STPO, port and airport authorities, and a number of private service providers, operators and producers), but these are not efficiently coordinated: a national logistics coordination board will help to coordinate procedures, policies and actions.
- There currently are some coordination mechanisms between stakeholders, such as a National Trade Facilitation Committee that was officially established per WTO TFA, but no permanent inter-institutional coordination mechanisms and the results of joint work are often not implemented
- There is no planning in the logistics sector. The public sector has not evaluated the national logistic needs, nor the strategies and actions that must be carried out to improve current performance and to reduce costs

## In relation to the projection of Suriname's exports and foreign trade:

- There is no coordinated branding. There is no decision on how to promote Surinamese agri products, nor in which market destinations and at what price and range of quality. Agri products branding could be aligned with tourism brand messages.
- Suriname has an image of an exotic country in Europe and USA that is not being used for the sale of agricultural crops. A “tropical-European country” is a clear image easy very to sell. Drivers of branding and main messages are still to be defined
- It is also necessary to identify an anchor product, staying away from traditional products (such as coconut, cassava, banana, or rice) and identifying more unique niche product such as acai, acerola or passion fruit.
- Product promotion should be complemented with some public support for exporters in outside countries



## 2. Trade procedures are still highly discretionary and affect the competitiveness of fish and agricultural product competitiveness



### **There is deficient coordination in the inspection procedures, both in the port and airport operations**

- In the case of airports, the BID Team (a drug control team created for exports to Europe) and some informal working groups between the authorities are operative, but no formal coordination is in place
- In the port case there is the PCU (Port Control Unit), a special task force integrated by Customs and the Anti-Drugs Police, in charge of inspecting the import containers
- Customs usually re-inspect the container already inspected by PCU in the Port's exit gate. These re-inspections produce delays of up to 5 hours at the gate
- Exporters and importers identify the lack of standard procedures and the arbitrariness with which they are applied as constraints

### **Despite the recurrence of importers and exporters, 100% of all agri products and fish are being inspected**

- The percentage of findings is minimal. For example, at the airport nothing was founded during the last 14 months
- To avoid affecting the cold chain, export inspections are usually carried out in the exporter's warehouse. This practice generates costs and just can be done while the number of exporters is limited. To the extent that this number increases, it must be maintained only for the frozen export cargo through the Port
- EAO (Economic Authorized Operators) mechanisms that would reduce the number of inspections and facilitate export trade have not been implemented
- The banana exports are the only one that has a special procedure because FAI (Food and Agriculture Industries) has the status of official exporter, and the merchandise is only inspected in the country of destination. This procedure, however, allows Customs Suriname to inspect the container, without checking the load inside it

## 2. Lack of non intrusive technology for inspections is causing cargo damage and delays in trade procedures

2



### **Excessive diligence in inspections causes severe damage to cargo and delays**

- At present, non-intrusive inspection (NII) in the Port is not carried out systematically due to lack of equipment: the two fixed scanners for containers are not operative (they are 9 years old and have already been repaired 2 times). It is expected to have 3 new scanners in 2020, although it has not been possible to clarify if they will be financed by the Public Sector through the IDB, or directly acquired by the main port operator (DPW) and assigned to Customs
- At the airport, the terminal operated by Surair has two scanners of small size and problems of operation (one is not currently operative) with no capacity to detect the presence of drugs. This situation obliges the anti-drugs police to randomly pre-inspect the entire load of perishable goods (mainly horticultural products) with trained dogs
- The inspection is carried out with low safety measures and part of the product is lost
- Despite the excess of diligence, there are imported goods with potential risk - like seeds - that are not inspected. A thorough review of the procedures and the object of the inspection by risk segments is necessary
- The national transit cargo is also 100% inspected. For example, containers destined for Nickerie are opened at the Port of Paramaribo and inspected. Subsequently, importers buy a new seal and can continue their journey

### **Deficiencies in resources are affecting the efficiency of trade procedures**

- There is an understaffing problem in all inspection agencies. The main limitations of resources occur in the personal field, due to the excessive effort in resources to do inspections at the point of production
- The preparation of officials is limited and sometimes causes damage to the load
- The lack of resources and standard procedures means that the Port sometimes stops operating due to the decision of Customs or the police without apparent cause. This causes severe damage to users due to delays and damage to the cargo

## 2. Technology use for trade procedures is limited both in the public and private sectors



### Low utilization of technological resources in foreign trade operations

- The ASYCUDA World Customs System does not work regularly. Shuts down occur almost daily, which require 3-4 hours of waiting for the System to be re-established
- There are no technological platforms to support exporters
- The Maritime Authority has a VMS for fleet control and port access management, which will be fully operational in 2018
- Currently, the Port does not have a PCS System. Its development will be contracted in 2019
- The penetration of technology in the private sector is also very limited. The transport operators do not have GPS

### 3. Logistic infrastructure and facilities in Suriname are limited to the ports and airport premises

3



The main logistics infrastructures in the country related to agribusiness are the ports of Paramaribo and Nickerie, the international airport PBM, and the Central Market.

#### **The port of Paramaribo is congested and its future development and accessibility is constrained by the urban growth**

- The container terminal is operated by 2 companies: Dubai Ports World (DPW with 5.3 Ha assigned) and VSH (1.1 Ha). DPS bought 60% of IPS and 100% of SPS in 2011
- The maneuvering space in berth is 0.6 Ha, of which DPW uses 80% and 20% is operated by VSH. The length of the dock is 600 m, enough to serve 3 vessels simultaneously
- The equipment is suitable for ships in service: currently DPW has 3 mobile cranes, 3 RTG and 7 reach stackers
- The storage capacity in the Port is 6,000 TEU
- The usual time to process an import or export cargo at the Port is 5-6 days
- The main shipping lines are CMA / CGM, Caribbean Feeder Services (CFS) and SeaTrade, which operates a direct service to Nederland every 3 weeks
- Due to its location within the metropolitan area of Paramaribo, the Port affects urban mobility and is affected by the city's congestion. This particularly affects access to the south and west of the country. The government is in discussions with the IDB about a possible lending project to improve road and traffic congestion near the port.
- Nickerie has its own port terminal, but only has a -2m draft

### 3. The Paramaribo port faces severe operation constraints due to its draft limitations

3



**Current operational situation of the port is critical and is affecting its position in the international trade routes**

- The draft situation is the main problem of the Port. Currently the draft is -4m in low tide. + 2.5m at high tide
- The maintenance of the access channel on the river is under the responsibility of the Maritime Authority. The situation is currently critical in a section of 1,000 m on the 39 km of channel (2 hours for accessing the Port), but has effects on the whole of the port operations
- The direct effects of the draft restrictions already begin to affect the country's international trade. The maritime companies are taking measures to reduce the risks of passage through the canal and, as a result, in the first semester of 2018 the import cargo has been reduced by 30%
- Among the measures adopted by the shipowners are the conversion of Paramaribo into a port feeder of Port of Spain and, more recently, the modification of routes: ships from Port of Spain no longer travel directly to Paramaribo, but stop first in Georgetown to reduce the average load on board. Currently ships' ETA are no longer reliable
- If the draft situation persists, it is likely that the shipping companies will further reduce the size of the ships on the route to Paramaribo, and even that some will stop scaling or raise prices significantly
- The reduction of import traffic is also having a direct effect on the operational rotation of containers. Currently, empty containers that shipowners do not evacuate are being accumulated in the Port. This situation is creating that 80% of storage containers in Port are empty, while traditionally they represented just 20%
- The conversion of Paramaribo into a temporary container depot can be beneficial for the shipping companies (they do not pay extra cost), but it will affect the positioning of the Port in the Caribbean routes
- The Government of Suriname has an offer from a company specialized in dredging for 30 M USD. The high value of dredging costs could justify the construction of a new complementary terminal closer to the coast and with less risk of draft



### 3. Airport infrastructure and facilities can be upgraded to increase the reliability of export procedures for perishable products

#### **Airport logistics infrastructure is separated in 2 air cargo terminals (public and private) in competition**

- The airport has 2 air cargo terminals. The historic terminal is operated by Surair and, more recently, a new terminal specialized in cargo is being operated by the airport itself
- The runway of the airport has 3.48 km and capacity to operate any type of freighter. The track connects directly with the apron of passengers and the cargo terminal operated by Surair. The new cargo terminal does not have direct access to the apron and the cargo must travel 600 m to be transported to the plane, without any protection in case of storms
- Both loading terminals have cold rooms and space for handling merchandise and consolidation in air pallets
- Exporters do not usually use cooling services to avoid the associated cost. Normally they are only used if there is a delay in the flight
- The service time for exports is 6 hours for the Netherlands, and between 8 and 9 hours for shipments to the USA

#### **Complementary logistics infrastructure such as markets and border posts are obsolete and inefficient**

- Suriname does not have logistics infrastructure complementary to national transport or distribution services, nor for cargo in transit or to third countries (French Guiana, Guyana). There are no truck centers or multi-user logistics distribution platforms
- Exporters have their own areas for consolidation, but their facilities are basic and not very operational
- The Central Market of Paramaribo also has an old infrastructure and inadequate for the service of the logistics of distribution of perishable products



## 4. Logistic & transport business in Suriname is poorly developed, limited to transporting products to and from the Port and the PBM Airport

### Road transport service is characterized by individual truck owners operating an old second hand fleet of small vehicles

- Road transportation services are expensive, informal and of relatively low quality
- The transport sector is very fragmented and very little organized (there are 4 associations with a very incipient coordination), there is no leadership between private agents and the Government does not participate
- Most transporters are family companies with 2-3 trucks. There are about 1,000 general cargo trucks, including 200 for mining
- The fleet available is old (more than 20 years on average) and low capacity. 90% are imported second-hand vehicles
- The transport sector has a limited number of big players: there are three fuel distribution companies and two large companies that engage in beverage distribution (Parbo, Fernandes), but they do not participate in the general freight services
- The refrigerated products (especially fish) are shipped in very old thermo king trucks in deficient condition (they use ice and are low powered) to go to the airport, and for the Port they go in refrigerated containers. The vegetables and fruits are mobilized in small trucks of 2-3 tons.
- A technological approach through the implementation of a Freight Stock Exchange can help to optimize the fleet use and operator's revenues as a way to control final prices to users and increase benefits that can be invested in fleet renewal

### Logistic needs do not require sophisticated upgrades

- Currently, the main problem for the export of perishables is the expensive packaging and the lack of air capacity. Normally freight lines do not have enough space and do not accept shipments unless it is not a preferred customer (> 100 kg)
- Current logistics needs entail mainly transportation (given lack of consolidation, no management of references or warehousing, no packing or labeling, no agents coordination, etc). Plans to strengthen production of crops in greenhouses (a Ministry of Agriculture project implemented by FAO) will require a better coordinated cold chain and shared facilities to reduce storage costs and increase consolidation capacities. At least 3 points in the country are eligible to develop pilot hubs

## 5. Logistic & international transport prices are high due to the limited consolidation practices of agri-producers

5



### Port costs

- THC 150 USD 20' and 200-270 40'
- Storage port 6 USD / day for imports, no cost for exports
- Stuff containers 150-200 USD
- Reefer area 75-95 USD / day (fisheries use it when they do not have plugs)

### Maritime freight prices

- To AMS: 3,000 USD 40' y 900 20'. 5,000 reefer container
- To MIA: 2,800 dry container, 4,000 reefer
- To China: 4,000 export, 2,6000 import

### Airport costs

- Handling airport 90-130 USD (including security) + fuel charge 0.18 USD / kg

### Air freight rate

- 2.3 USD / kg (can go down to 1.95 USD / kg for more than 6 tons). Routing to South America is 3.2 USD / kg

Port handling costs are relatively expensive (over USD 120/TEU), but the maritime services prices are much higher than usual in the region due to double port hubbing

### Customs & taxes

- Administrative costs 0.5 USD / ton
- Sealing cost 50 USD
- Export tax (0.6% value), 170 handling cost, local haulage 100 USD
- Paperwork 200-250 USD
- 8% VAT over invoices

Customs paperwork costs should be reduced in half in line with similar countries

### Transport costs

- Internal port handling cost 170 USD
- Local haulage (<10km) 100-300 USD
- 1,000 USD to Nickerie and back empty (client pays all). The formal, the informal wait for clients
- Truck to airport 200 USD

Air Freight rates and airport costs are aligned with similar countries with low production volumes in Central America or the Caribbean Region

National haulage costs (USD 4,3/km) are under the regional standards



## Synthesis of key constraints and opportunities

### Most relevant logistics constraints

- Suriname's limited logistics operations affect its trade, transport structure, logistics performance and service prices
- Limited experience in block/cooperative farming to achieve agglomeration
- High prices for international transport and logistics are a direct consequence of low volumes
- The agri perishable chains are very long. Too many agents intervene, which results in low yields for farmers, and greater losses of the products due to excess handling in successive logistic chain sections
- Lack of a national commercial / trade / branding strategy
- Port draft and capacity limitations limit outside connectivity
- Weak institutions and private operator organizations
- Informal transport services
- No pro-facilitation attitude in Customs inspections

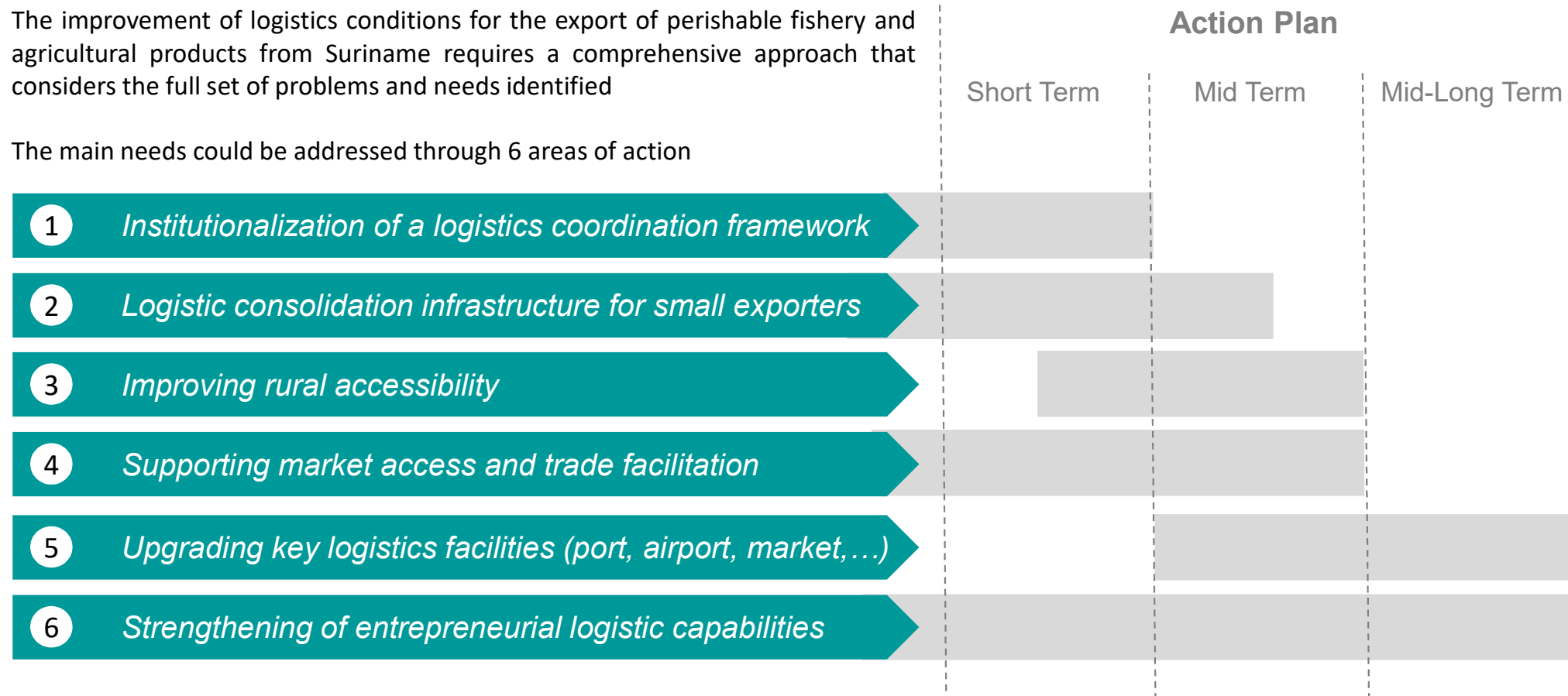
### Logistics opportunities

- Significant trade opportunities in the Caricom trade area, as well as to markets in EU, US, and nearby in Venezuela
- Small production volumes but concentrated in a few number of aggregators
- Geographic concentration of production in the coastal strip
- A new airport project will create a new passengers terminal and a complete reorganization of operational spaces as well as the opportunity to consolidate only one air cargo terminal
- Competitive air cargo fares, but reduced air capacity
- Several products are candidates to be branding anchor. A limited number of such projects should be selected

## Way forward: A strategic approach for a logistics development action plan

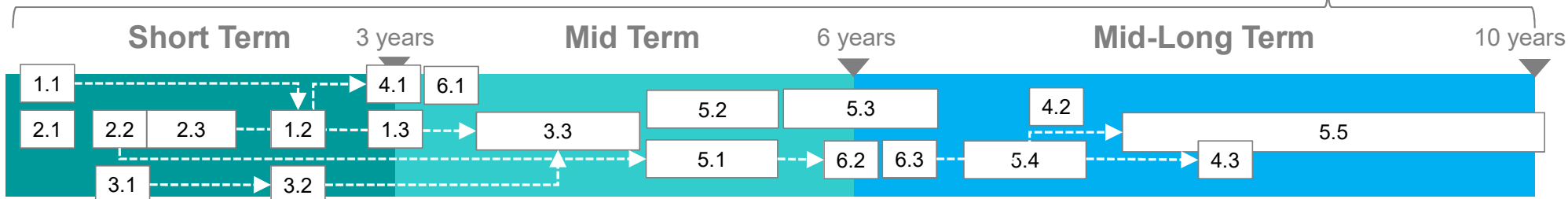
The improvement of logistics conditions for the export of perishable fishery and agricultural products from Suriname requires a comprehensive approach that considers the full set of problems and needs identified

The main needs could be addressed through 6 areas of action



# Summary of six groups of reforms/investments to address logistics development needs

- 1 Logistics institutional framework**
  - 1.1 Analysis of institutional competences
  - 1.2 Creation of a permanent inter-institutional coordination board for logistics
  - 1.3 National Logistics Master Plan preparation
- 4 Market access and higher trade procedures efficiency**
  - 4.1 Training programs for farmers
  - 4.2 Border posts improvements
  - 4.3 NII implementation at port
- 6 Logistics entrepreneurship**
  - 6.1 Training programs for transport operators
  - 6.2 Freight Stock Exchange
  - 6.3 Port Community System



- 2 Farmer hubs**
  - 2.1 Market studies for 3 pilot areas
  - 2.2 Analysis of PPP feasibility
  - 2.3 Design and construction
- 3 Rural accessibility improvement**
  - 3.1 Evaluation of specific needs in pilot areas
  - 3.2 Engineering design
  - 3.3 Implementation
- 5 Logistics infrastructure**
  - 5.1 New central distribution cargo / central market in Paramaribo
  - 5.2 Consolidation of one air cargo terminal and cargo apron
  - 5.3 Creation of Cargo Packing House
  - 5.4 Pre-port area in Paramaribo
  - 5.5 New outer port terminal

# Recommendations and suggested interventions

## **Conclusion: investment and reform recommendations to improve horticulture and fisheries competitiveness, sustainability, and growth potential**

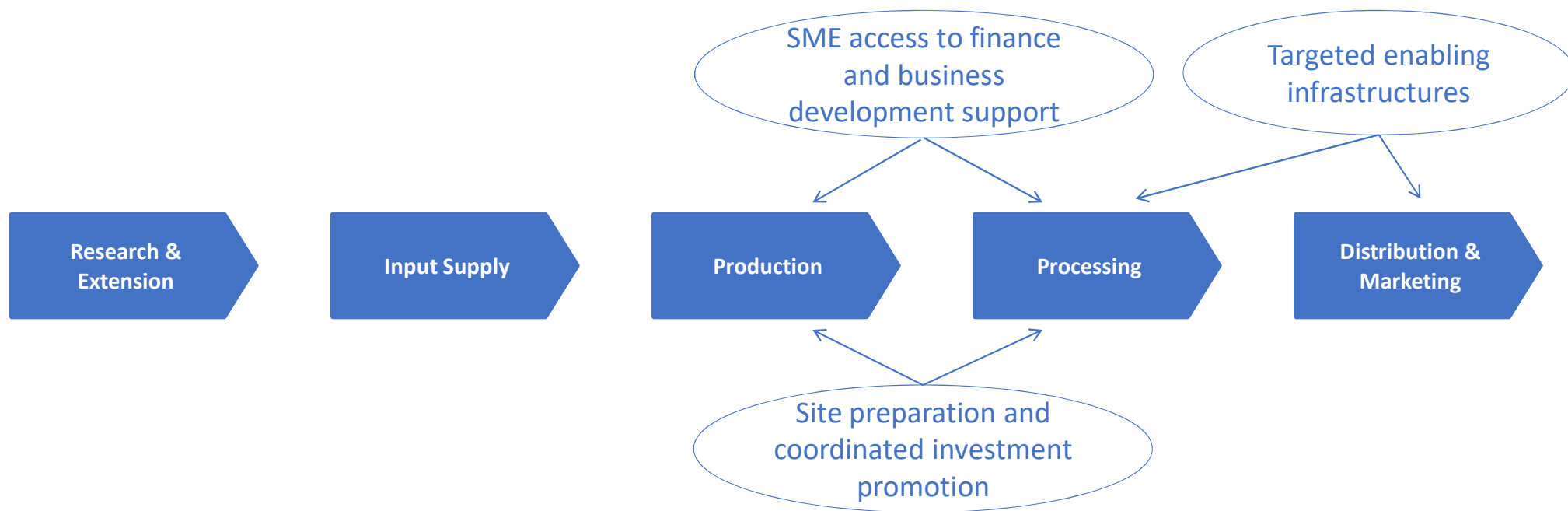
- This section recommends ways forward, drawing on the diagnostic findings from the horticulture and fisheries deep dives and the agrifinance and logistics constraint assessments
- Recommended interventions include legal, policy, and institutional reforms as well as public sector investments that can stimulate competitiveness and sustainable growth in agribusiness in Suriname
- The recommendations explicitly consider current or planned interventions of the government or other donor partners, to focus on gaps where additional reform or investment support is needed
- These recommendations seek to directly inform World Bank investment financing, such as through the Facilitating Competitiveness and Sector Diversification project under preparation
- They also intend to inform other WBG, GoS, or other development partner interventions

# Overview of recommended interventions to strengthen horticulture and fisheries value chains

## Cross-cutting investment climate improvements

Investment law reform

## Targeted interventions



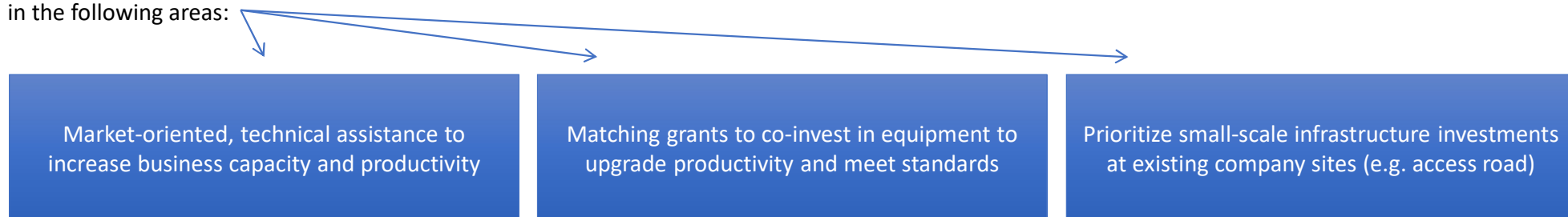
# Specific Recommended Action 1 for horticulture as well as specialty oils: SME support through BDS and co-investment

## Rationale

- A few export-focused SMEs are already operating at the production and processing stages of the value chain, at small scale and despite the high costs associated with early industry development (small scale, costly logistics, lack of brand image, lack of dedicated public sector support, difficult access to finance).
- By proving initial concepts, these pioneer investors already play a key role: forging export market linkages, promoting new varieties and technologies, integrating or coordinating upstream with the producers, bringing certification (GlobalGap, organic, etc.).
- By showing resilience and success, they send a strong signal to potential local agro-entrepreneurs and to qualified foreign companies alike, thereby not only serving as the engine for growth in the sector but also as the ambassadors of Surinamese products on these new export markets.
- Yet most of these SME-sized exporters are constrained in their growth by a lack of capacity and access to finance.
- Supporting these companies as they seek to professionalize and expand therefore can help boost short-term exports and jobs in the sector, but also build the Suriname brand and attract new buyers and investors.

## Proposed interventions

- Key Ministries and InvestSur can jointly launch an aftercare survey of existing companies in the horticulture and specialty oils sectors to understand their priority support needs and prioritize actions. The existing Suriname Agribusiness Investment Task Force may be used as a platform.
- Deploy targeted, firm-level public sector support in the following areas:



# Specific Recommended Action 2 for horticulture as well as specialty oils: Targeted mid-size enabling infrastructure

## Rationale

- In these competitive export markets, particularly in horticulture exports, efficient and cost-competitive logistics are critical.
- As a small country, Suriname offers opportunities for processors and exporters to locate relatively close to both port / airport and production areas.
- Enhancing efficiencies along the value chain is key to help existing companies improve competitiveness, boost exports and to make the enabling environment more attractive to potential new investors.
- Targeted enabling infrastructures may include collection centers (in production areas) and improved port / airport infrastructure (especially for fresh produce). In particular, the current airport infrastructure and services are not adequate for highly perishable food products:

Small scale infrastructure - 2 different terminals for different destinations

Lack of effective and competitive cold storage solutions at intake (pre-check)

Outdated technologies (scanners) and inadequate inspections capacity

## Proposed interventions

- Consult existing companies in the sector (and potential new investors and buyers) on the value chain infrastructure priorities, test the idea of a new fresh produce terminal at Paramaribo airport and evaluate fit with planned airport renovations.
- Design and build priority enabling infrastructure:

Airport fresh produce terminal: pre-check area with cold storage and pack-house facilities, integrated export inspections and scanner, post-check cold storage solutions

Other mid-size enabling infrastructures: collection centers, equipped village-level processing sites



# Specific Recommended Action 3 for horticulture as well as specialty oils: Investment site preparation, coordinated investment promotion

## Rationale

- To breach into new high-value export markets with the required volumes, consistency and quality, it is critical to develop a cluster of companies with the knowledge and capital to jointly lobby locally (enabling conditions, quality standards, shared infrastructures) and in export markets (brand, market presence).
- At present, very few companies are active in the sector in Suriname, with limited knowledge, capital and recognition in international markets.
- Similar to most exporting countries in this sector, Suriname should work to mobilize additional local entrepreneurs and attract qualified foreign companies with strong market access, that can partner to increase quality, volumes and improve market recognition.
- As the (new) institution in charge of investment promotion in Suriname, InvestSur needs the support of the broader government stakeholders to develop the Suriname “product” for potential investors, including an offer of potential sites for investment.

## Proposed intervention

- Key Ministries and InvestSur can jointly launch a coordinated investment promotion campaign focused on horticulture and specialty oils sectors. The existing Suriname Agribusiness Investment Task Force may be used as a platform.
- In addition to international investor (and buyer) outreach, the campaign should consider the development of potential investment sites that can offer new companies with attractive turn-key site solutions. This may involve:



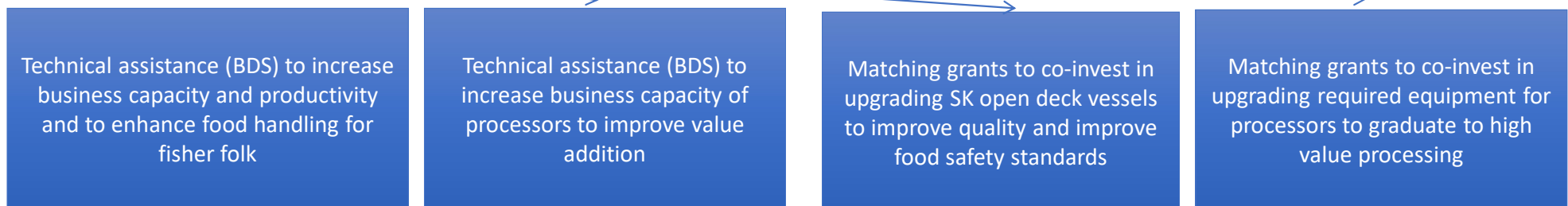
# Specific Recommended Action 1 for Fisheries: SME support through BDS and co-investment

## Rationale

- The majority of Suriname's fishing vessels (75%) are Surinaamse Kust (SK) vessels which fish along the coastal zone. Most of the fleet have wooden decks which can be open or closed. The open deck vessels, which do not contain adequate washroom facilities, pose particular challenges. Given the lack of facilities, hygiene issues have been raised which impact food handling and safety.
- Moreover, the hold where fish is stored in the open vessels is also wooden and not cold enough to optimally preserve the fish for the typical two weeks the vessels stay at sea.
- Fisher folk lack knowledge of proper food safety practices surrounding the handling and storage of fresh fish
- The majority of Suriname's exports are primary processors and currently export low value fish products. To support a graduation to higher value processing, technical capacity and equipment (for processing, packaging, etc.) will be required for both the public and private sectors
- Upgrading of the logistics infrastructure will also be required to reduce congestions and streamline export costs

## Proposed interventions

- Support fishing SME technical capacity to increase management of food handling and improve food safety and to increase value added processing
- Deploy targeted, firm-level public sector support in the following areas:



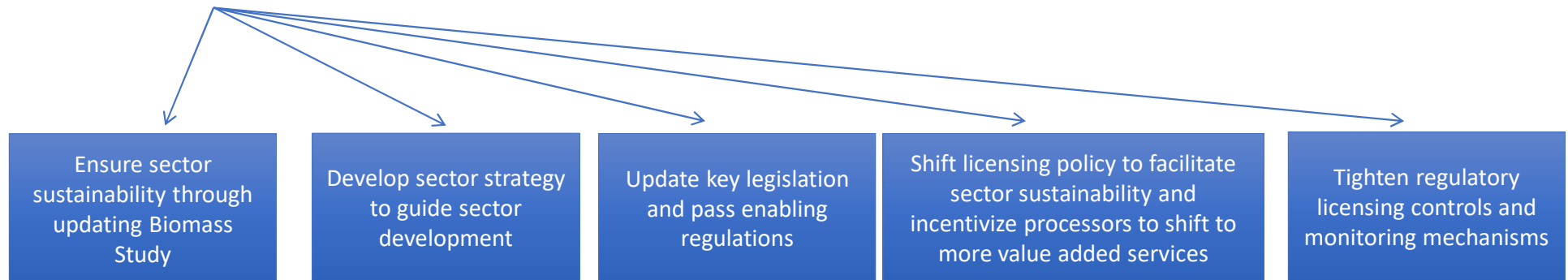
# Specific Recommended Action 2 for Fisheries: Enhance policy and regulatory controls

## Rationale

- No assessment of Suriname’s fishing stocks has been undertaken since 1988. Absent an understanding of the existing fishing stocks, annual issued permits could compromise the sector’s sustainability
- The licensing regime, aimed at controlling for the depletion of fish stocks, is not scientific. Licenses are issued based upon informal discussions with the sector. Enforcement is primarily through VMS technology which allows for vessel tracking. However, not all vessels are equipped with VMS technology
- Complaints by fisher folk that number of licenses issued by regulators are in excess of agreed allowances with the sector
- A National Fisheries Management Plan was drafted but has not been signed. Other key pieces of legislation (e.g., Fisheries Act of 2001 and Fish Protection Act of 1960) are under revision
- The relaxed licensing regime may encourage processors to overfish rather than incentivizing them to upgrade processing to more valued added services

## Proposed interventions

- Address enabling environment challenges to improve sector competitiveness
- Specific, targeted actions include:



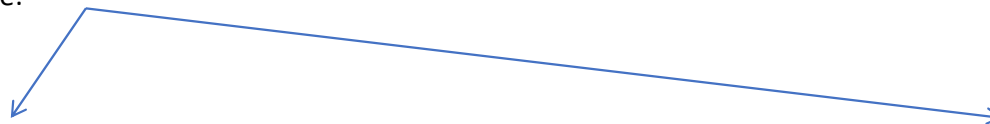
# Specific Recommended Action 3 for Fisheries: Infrastructure improvements to improve competitiveness

## Rationale

- An increasing number of countries are retaining by-products for further processing. New methods for processing fish are creating increasing quantities of offal and other by-products, which may constitute up to 70% of fish used in industrial processing.
- Surinamese processors however presently treat 100% of the by-product as waste. Much of this waste is dumped back into the ocean or nearby rivers. In the absence of an environmental law and management plan, the current practice is legal. It however potentially poses environmental and reputational risks.
- Fish and shrimp are highly perishable products. A strong and well integrated cold chain is critical to minimizing post catch losses and to maximizing the quality of the product to be sold -- a single weak link could undermine the entire cold chain.
- To improve competitiveness, infrastructure enhancements are required to address gaps in public discharge sites, optimize controls at cargo handling facilities, increase cold storage facilities available to the private sector, upgrade port facilities to handle larger vessels.

## Proposed interventions

- Invest in essential infrastructure upgrades required to improve competitiveness
- Specific, targeted actions include:



Consider public investment in shared waste management facilities to increase offal usage and enhance compliance with relevant certification regimes

Prioritize export logistics infrastructure upgrades (e.g., scanners, cold storage facilities, extension of land/port sites)

# Facilitating access to finance: recommendations to support bankable demand

## Key demand-side constraints

***Financial education and awareness***

***Skills***

***Equipment***

***Limited access to markets***

***Limited access to finance***

## Suggested interventions

### **Financial education and awareness campaigns**

- Support Central Bank and Banking association in promoting financial education among farmers and fisherfolk

### **Specific matching grant incentives for firm upgrades and extending of financial services in the interior of Suriname**

- Matching grants for example to small fisherfolk to upgrade their boats with EU approved fish catch containers, nets and VTS (approximately \$10,000 investment per firm)
- Research incentive for design of a fishery recycling plant: \$100,000

### The design of these matching grants should promote access to markets and finance:

- Productive alliance approach where grants are offered to beneficiaries who, with support of the grant, will be able to fulfill the requirements of buyers/ or have contracts with buyers.
- Financial institutions are involved through various ways (e.g. beneficiaries need to save at a financial institution, financial institutions participate to selection committee etc..)

# Supporting financial institutions to expand agriculture finance

Key supply-side constraints	Suggested interventions
<p><i>Skills</i></p>	<p><b>Technical assistance to financial institutions willing to expand in agriculture financing:</b></p> <ul style="list-style-type: none"> <li>✓ <b>National training program</b> on agriculture finance products, methodologies including cash-flow based lending, value chain financing, receivables-based financing, warehouse receipts, and agent banking</li> <li>✓ <b>Matching grants or other co-financing for financial institutions for on-site technical assistance</b> in credit risk assessment, product design and pilot projects – for example competitive grants to banks to encourage innovation and development of new agrifinance products</li> </ul>
<p><i>Risks</i></p>	<p><b>Agriculture window within upcoming IDB-supported Partial Credit Guarantee</b></p> <ul style="list-style-type: none"> <li>✓ <b>Support the design of PCG</b> (governance structure, rules of operation etc.)</li> <li>✓ <b>Capitalization of agriculture window</b> with specific criteria (e.g. eligibility criteria, coverage ratio etc..)</li> </ul>
<p><i>Incentives to innovate and expand in rural areas</i></p>	<p><b>Matching grants for innovative pilot projects:</b></p> <ul style="list-style-type: none"> <li>✓ <b>Digitization of agriculture payments of large buyers</b></li> <li>✓ <b>Using agents in rural areas</b> (ex: with communities engaged with NTFP in South Suriname- The support to NTFPs also serve to promote the green tourist of Suriname and be a model for replication in multiple communities)</li> </ul>

# Recommendations to improve public sector regulations, policies, and programs

1

## Most regulatory gaps can be addressed in the short term through guidelines, training and piloting under a provisional legal framework

- Basic credit infrastructure, such as credit information sharing and a secured transaction framework and registry for moveable collateral, has been lacking. Bills have been drafted to address these deficiencies, but they have not yet been passed by Parliament
- There is no specific leasing or warehouse-receipts law

High reserve requirements stand at 35% for SRD and 50% for FC loans limit banks' capacity to lend. In other countries, these requirements are generally below 20%.

Central Bank regulations allow without lending without hard collateral, but bankers have stated that central bank auditors have been not been comfortable in allowing for this.

There is not framework for agent banking, which limits the capacity of financial institutions to expand their rural presence

**Create awareness on collateral registries** to promote the use of movable collateral  
**Draft specific guidelines on warehouse receipts and leasing**, based on the secured transaction law

**Gradually lower Central Bank reserve requirements** in order to improve financial institutions capacity to lend

**Technical assistance and training to Central Bank** on regulation and policy needs, new products, training of trainers and convening/overseeing training for financial institutions, etc.

**Initial steps to promote agent banking include applied research, piloting and testing under a provisional legal framework** (see slide 15). Once it is operational and growing, a proper regulatory framework will be required.

2

## The Governments efforts to transfer and oversee various funds can be strengthened

Variety of funds with limited impact (ex: Agriculture Credit, DSB Suritrust, SME fund). The Government has a vision for transferring them to NOB but currently lacks plan for overseeing their transfer, setting rules and supervision their use.

**Provide technical assistance to Government with transfer of funds, setting rules and monitoring and evaluating their use**

## Recommended steps to establish and launch MABL through an effective secured transactions regime

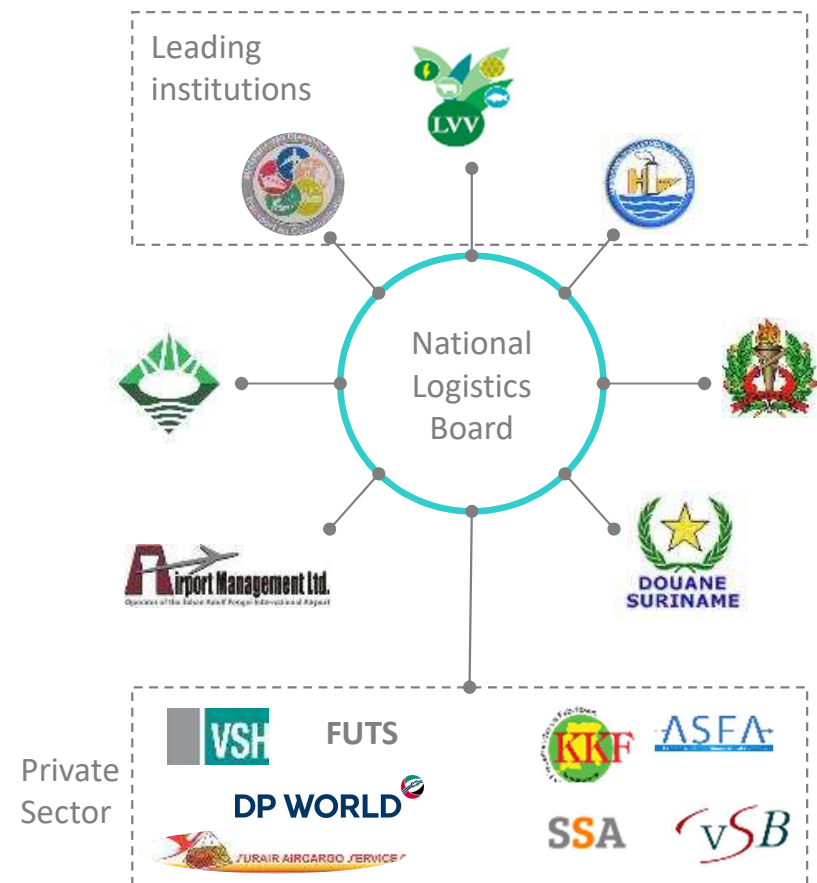
- The Government can benefit from targeted legal expertise support for drafting the implementing regulations following the passage of the secured transactions law and harmonization with other legislation
- Development and implementation of a communications and public awareness campaign to ensure awareness:
  - Effective awareness campaign is an important element for successful launch and medium term success of the collateral registry adoption and MABL development
- Capacity building and training activities for key stakeholders of the MABL eco-system:
  - Training for financial institutions' legal, credit and operations officers; simplified course for FI CEOs
  - Capacity support to the Central Bank supervision department in MABL
  - Direct support to SMEs in developing asset-based financing plans, such as through BDS
  - Legal professionals and judiciary
- Specialized targeted support for FIs and SMEs committed to piloting MABL
  - Early entrants into MABL market from both supply and demand side could warrant support such as financial prize or incentive in the context of establishing a market demonstration effect



# Short-term institutional reform options to improve logistics: creation of a permanent national logistics board

- The creation of an inter-institutional mechanism to allow permanent coordination and clear assignment of responsibilities in logistics and trade facilitation would improve policy definition and enable advancing reforms to address the identified logistics challenges
- The formalization of a national logistics board requires an analysis of the institutional competences and capacities, to guarantee the consensus and the adaptation of the proposal to Suriname conditions
- As a starting proposal, the logistics board could be organized as an inter-institutional entity formed by the ministries of Transport and Communication, Agriculture, and Trade. Additionally, the participation of the inspection bodies (Customs, Policy and Phytosanitary) and of the authorities of ports and airports must be considered
- Individual working groups should have the participation of private sector representatives, both transporters and producers
- The logistics board must include among its main responsibilities the preparation of a National Logistics Plan with special attention to agricultural and fisheries production and export needs

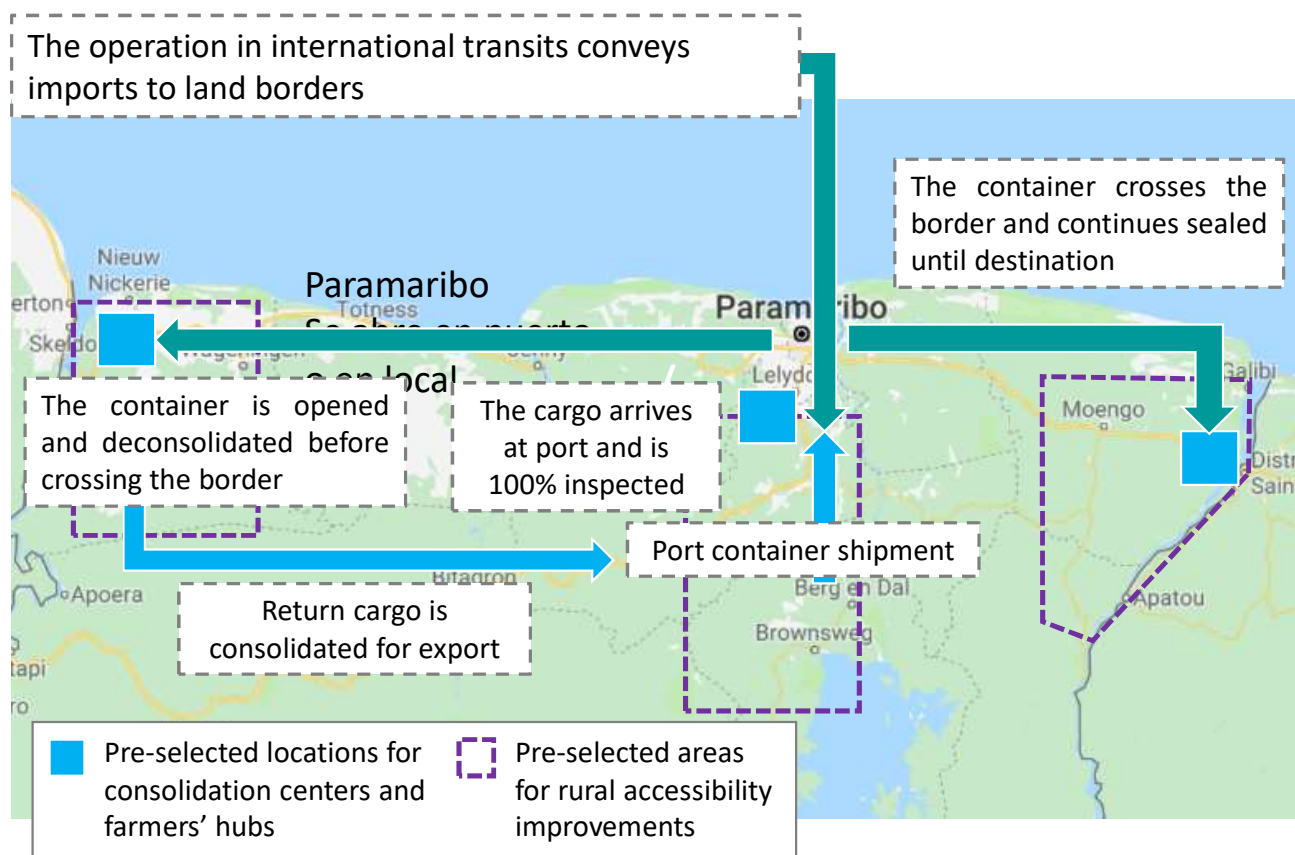
## Proposed inter-institutional framework



## Short term investment option for logistics improvement: finance establishment of agri-consolidation centers and farmers' hubs

- Suriname has conditions to take advantage of the combination of potential demand for concentration of perishable agricultural products to improve export prices, while improving service to cargo in border transit, increasing the options of return cargo for transporters, and urban distribution of goods in Paramaribo and Nickerie
- The creation of 3 pilot distribution centers and farmer hubs would help to boost the export opportunities of the SME agri-producers in Nickerie, Albina and south of Paramaribo
- The distribution centers would also serve as a base for training programs and for operating a cargo stock exchange platform for the carriers that transport the imported containers in international transit
- Further improvements of border posts will enhance integrated logistic transit operations

Logistic circuit with consolidation centers and accessibility improvements



## Additional investment options for logistics improvement: improving airport logistics, such as through packing house in short term

- Improving the infrastructure and operation conditions at the airport starts from the need to extend the public cargo terminal due to the planned demolition of the old building for the construction of the new passenger airport terminal
- The elements of the upgrade needs include:
  - Create a single air cargo terminal (one stop shop) by extending the public terminal to the east
  - Expand the maneuvering area in front of the terminal, creating bays in heights conditioned for the direct discharge of the trucks
  - Construction of a new apron for aircraft in front of the cargo terminal
  - Creation of a complementary packing house for the consolidation of perishable crops on the land in front of the terminal

### Proposals for improvement of air cargo facilities

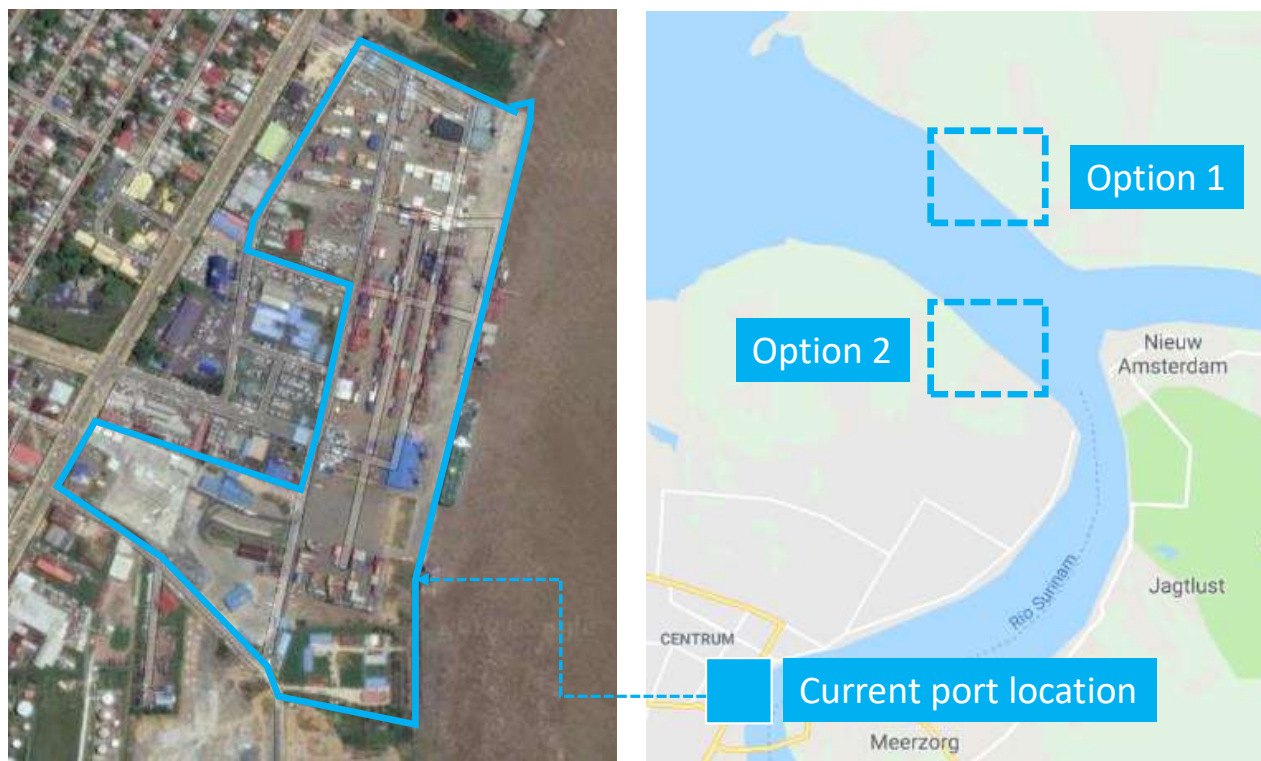


The construction of a packing house with its own access and space for the consolidation of agri-crops for export requires a specific market study, which will determine the sizing of the demand and facilities, and will define if the best location is the airport or it is preferable to place it in Paramaribo

## Medium to long-term logistics investment options: port logistics upgrading

- Improving port operations would require an evaluation of the opportunity to build a new port terminal in an area with a lower risk of sedimentation
- It is necessary to carry out a comparative evaluation of the cost of building a new Port in relation to the investment in maintenance dredging of the current Port
- A new Port could be built in two alternative locations closer to the coast
- The new terminal would concentrate on services to larger vessels, fishing activity (as the proliferation of private jetties can compromise the navigability and safety in the river) and cruises for tourism
- The implementation of a pre-port area, together with non intrusive inspection equipment and a PCS, platform would enhance port operations and efficiency

### Proposals for upgrading port operations



The maintenance of the current port requires a reorganization study of the available spaces, and begin the preparation of concession contracts that end in 2024

## Complementary logistics proposals for tourism sector development

In addition to logistics needs for agribusiness, the growth of the tourism sector in Suriname – another priority of the government – requires adequate infrastructure and a logistics support system to link arrival locations, accommodations, and tourism product locations, thereby enhancing the attractiveness of the country.

Possible logistics-related development needs include:

- Old Town Paramaribo accessibility  
The pedestrianization of the Old Town and the improvement of the internal transport system would increase the attractiveness of the UNESCO protected area as a tourism product
- River trail services and access roads  
Additional road and transport service linkages between river/port locations and nearby destinations such as the Old Town and nearby tourism products would enhance the visitor experience
- Cruise port terminal  
In the longer term, the possibility of creating a new port terminal for cargo in the northern section of the Suriname river could also be used to have a complementary cruise ship dock

### Illustrative logistics considerations for tourism sector



# Annex 1 – Acknowledgements and Sources

## Acknowledgements

This output was produced by a World Bank Group team including John Anderson (Senior Economist and Task Team Leader), Maria Miller (Senior Private Sector Specialist), Julien Haarman (Agribusiness Consultant), Ken Hynes (Agribusiness Consultant), Rachel Sberro (Financial Sector Specialist), Calvin Miller (Agri-finance Consultant), Bartol Letica (Senior Financial Sector Specialist), and Jose Pérez (Agri-logistics Consultant). The team thanks Cecile Niang (Lead Economist) and Henry Bagazonzya (Agri-finance Consultant) for their guidance in the scope of the diagnostic. The team also thanks the Competitive Industries and Innovation Program Trust Fund for the financing and guidance for this work, including the Program Manager Michael Wong.

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The WBG thanks all additional contributors who are inadvertently not acknowledged above.

## Sources – Data and Reports

- Reports/Data:

- European Union, 2017. Project concept note - Suriname Agriculture Market Access Project (SAMAP)
- European Union, 2016. Final Audit Report on Control Systems related to Production of Fishery Products intended for Export to EU,
- Government of Suriname, 2013. The National Agricultural Innovation Strategy of the Republic of Suriname
- IDB/FAO, 2013. Agricultural Sector Support in Suriname
- IDB, 2017. Analysis of Agricultural Policies in Suriname
- Johannesson and Sigfusson, 2017. The U.S. Seafood Industry and Utilization of By-Products
- Kaplan, 2015. National Master Plan for Agricultural Development in Suriname, Kaplan Planners, Ltd
- Noble, Quintana and Curtis, 2016. Seafood Processing Industry Report (funded by Seafish)
- Panadeiros, Monica, 2014. Productive Development Policies in Suriname
- UC Berkeley MDP Team Consultancy, undated presentation: An analysis of base carrier oil market and economic feasibility (sponsored by Conservation International Suriname)
- World Wildlife, 2017. Socio-Economic Study of Fisheries Sector in Suriname

- World Bank Project documents:

- Doing Business, 2018
- Industry-Specific Licensing Requirements in Suriname: Analysis of the Fruit Processing and Tourism Industries, 2017
- Invest in Suriname's Fruits, Vegetables & High Value Natural Products, 2017
- The Potential of the Blue Economy, 2017
- Suriname Sector Competitiveness Analysis, 2017

- Primary data sources:\*

- FAOSTAT, FAO FishStat, World Bank DataBank

**\*Disclaimer:** Many of the sources used in the desk review reference the challenge in the availability and reliability of data for Suriname. Data presented here should therefore be understood in this context. Efforts to cross-check the data have been made during the field stage