Modernization of Public Agricultural Services Program: A Policy Analysis

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Report for the Inter-American Development Bank, December 2012

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# Executive summary

Despite its enormous agricultural potential, Suriname is running a major deficit on its agro-food trade balance. Relative neglect of the agricultural sector by the government, counter-productive direct interventions, and strong crowding out effects due to the boom in the mining industry have all contributed to very sluggish growth in the agricultural sector. Yields are far below their potential and markets are underdeveloped. The aim of the Government of Suriname is to turn around this state of affairs (‘Suriname should become the food basket of the Caribbean’) and realize a greater contribution of the agricultural sector to the overall economy.

This policy analysis paper describes the state-of-affairs in the agricultural sector of Suriname and analyses the various policy interventions underway (largely based on a series of white papers published by the Ministry of Agriculture in 2011), identifies possible shortcomings, and prioritizes which policy interventions to be supported by IDB. Most of these policy interventions do not stand alone, but have to be seen as a package that work together. For example, for export promotion to be successful it has to go hand-in-hand with enhanced productivity through innovation and adequate agricultural health and food safety control.

At the macro level the proposed interventions aim at a stronger contribution of the agricultural sector to the overall economy. This is best captured by aiming at a higher agricultural growth rate (in the 3-6% range), a reduction of the agro-food trade deficit (and possibly turning it into a surplus in the long run), and a steady increase in labour productivity in order to raise the income of farmers and farm workers.

At the government level the proposed interventions aim at: (i) reorienting government activities towards truly public goods by phasing out public agricultural enterprises; (ii) generating better results with the same resources by introducing new public management ideas and concepts (including results-based budgeting and contracting out of policy interventions); and (iii) realizing greater participation by the private sector in collective action within the agricultural sector and the strengthening of agricultural value chains.

Of the proposed specific government interventions, four aim at creating benefits across all agricultural sub-sectors (innovation, agricultural health and food safety, export promotion, and commodity boards) and two target specific subsectors (improved maintenance and management of irrigation systems in rice production and sustainability certification in fisheries).

# 1. Introduction

1. IDB’s new country strategy for Suriname (launched in 2011) has selected agriculture as one of the key sectors to invest in. This paper is a first step towards the development a programmatic policy-based loan (PBL) that will help Suriname to improve its agricultural policies and strengthen its capacity to implement such policies. The paper provides an overview of the main agricultural policy issues in Suriname and the measures the government has been proposing to tackle them. It also identifies issues that will require more in-depth analysis and prioritizes the issues at stake.

# 2. The agricultural sector in Suriname

2. The total land area of Suriname is 15.6 million hectares, of which about 95% is covered by tropical forest. About 1.5 million hectares of land have agricultural potential. Of these 85% are located in the coastal plains and 15% on the river terraces in the interior (Defares 1996). Of the potential 1.5 million hectares of agricultural land, less than 6% is actually in use. Moreover, the area of land actually in use by agriculture has contracted from some 120,000 ha in 1981 to 81,400 in 2008 (LVV). To some extent this contraction in land use has been due to the expansion of urban areas, but mostly due to farms (and in particular large ones) going out of business. The soils are considered as highly fertile.

3. Suriname has a hot tropical climate and temperatures do not vary much throughout the year. Its average temperature ranges from 23 to 32 degrees Celsius. Annual rainfall ranges from 1250 to 2500 mm per annum in the main agricultural areas, generally increasing from the west to the east. There are two wet and two dry seasons: a long rainy season from April to August, a long dry season from August to December, a short rainy season from December to February and a short dry season from February to April. Heavy rainfall creates some problems for agricultural production on heavy clay soils as drainage is generally needed. These heavy clay soils require irrigation during the dry seasons.

4. In 2010, the total population of Suriname stood at an estimated 525,000 (FAOSTAT). Of these 195,000 were classified as economically active and 33,000 as economically active in agriculture (or 16.8% of the total economically active population in that year). In 1981, the economically active population in agriculture stood at 25,000 representing 23.1% of the economically active population. In absolute terms the economically active population in agriculture is still growing, but in relative terms it is steadily declining.

5. According to the latest census (2008), there are 10,234 farm holdings in Suriname of which 66.5% reported crop production as their main activity, 18.2% reported livestock production as their main activity (including a few beekeepers and aquaculture farms), and 15.3% classified as mixed. Of all farm holdings, 67.3% are located in the coastal area and 32.7% in the interior.

6. The large majority of farm holdings (88.6%) are smaller than five hectares (Table 1). About 37% of the farm holdings are smaller than half a hectare. The bigger farm holdings (50 ha and up) are all concentrated in the coastal zone.

**Table 1: Size distribution of farm holdings in Suriname (2008)**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 1< | 1-5 | 5-10 | 10-20 | 20-50 | 50-100 | 100-200 | 200-500 | >500 |
|  | *(hectares)* | | | | | | | | |
| Coastal zone | 2760 | 2999 | 566 | 284 | 149 | 60 | 23 | 25 | 16 |
| Interior | 2260 | 1046 | 33 | 9 | 1 | 0 | 0 | 0 | 0 |
| Total | 5020 | 4045 | 599 | 293 | 150 | 60 | 23 | 25 | 16 |

Source: LVV

7. In recent years, the contribution of the agricultural sector to the overall economy has been about 6 to 7% of GDP (Table 2). Broken down by subsector, crops made up for 53%, livestock for 23% and fisheries for 24% of agricultural GDP in 2009.[[1]](#footnote-1)

**Table 2: Contribution of the agricultural sector to the national economy 2005-2009 (in constant prices, million Suriname dollars)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | 2005 | 2006 | 2007 | 2008 | 2009 |
|  | *(million SRD, constant prices)* | | | | |
| GDP (formal sector) | 4431 | 4595 | 4822 | 5027 | 5201 |
| Agricultural GDP | 303 | 318 | 340 | 315 | 353 |
| Of which: |  |  |  |  |  |
| Crops | 143 | 150 | 160 | 162 | 186 |
| Livestock | 66 | 65 | 82 | 74 | 82 |
| Fisheries | 94 | 103 | 98 | 79 | 85 |
|  |  |  |  |  |  |
| Share agriculture in GDP (%) | 6.8 | 6.9 | 7.1 | 6.3 | 6.8 |

Source: LVV (2010)

## 2.1 Crops

8. By far the most important crop in Suriname is rice – estimated to represent about 80-85% of the harvested cropland area.[[2]](#footnote-2) Most of the rice production capacity is concentrated in the Nickerie district. In addition, there are two smaller rice production areas in the Coronie and Saramacca districts. Rice production in Suriname is for local consumption (it is the principal staple food) as well as export (about half of the rice production was exported in 2010). Traditionally, most of the rice export is going to Europe because of preferential access to the EU market. However, this preferential treatment (an import duty at a third of the normal level) has eroded significantly in recent years, because: (i) A major reduction of the EU import duty on rice in general; and (ii) The poorest countries in the world have been granted import-duty free access to the EU market under the Everything-but-Arms (EBA) agreement. Increasingly rice is also being exported to countries within the region.

9. In total, about 55,000 ha have been developed for rice production in Suriname (LVV 2011d). However, only about half of this acreage is currently in production (some 26,000/27,000 ha per season). On most rice cropland two harvests per year are possible.

10. Farm size in the rice sector varies greatly – at one end of the spectrum there are many small producers with only a few hectares, but the bulk of the rice production capacity (some two-thirds) is concentrated in a relatively small group of large farms of 75 ha and more (some 55 farms). The technology adopted in the rice production in Suriname is very much large scale and mechanized. Several of the real large, state-owned rice estates (750 ha and more) have collapsed over the past 15 years. The government has been trying to sell them off – either as an estate or to groups of farmers. We have been informed that underutilization of existing rice cropland is in particular a problem among the larger rice estates.

11. Major bottlenecks in the rice production in Suriname are:

1. The lack of proper maintenance of the irrigation and drainage systems. Under the EU program “Support to the Competitiveness of the Rice Sector in the Caribbean”, which was implemented between 2004 and 2010, water management boards have been established. However, proper functioning of these boards is still a major concern. Due to the lack of proper maintenance in the past, major rehabilitation investments are needed in order to improve production conditions.
2. Lack of coordination and cooperation within the rice sector. Under the EU programme the creation of a commodity board for rice has been discussed extensively. However, legislation to create such a commodity board has never materialized (in part because such legislation has to deal with the institution of commodity boards across the whole economy). Instead, the present government has created a rice coordination unit reporting directly to the President. Nevertheless, the White Paper on Rice (LVV 2011) lists the establishment of a commodity board as one of the top priorities for the rice sector.
3. Price setting within the rice sector lacks transparency. In principle, the price is set in the market. However, both the Minister of Agriculture and the Chairman of the Rice Coordination Unit have made public statements regarding the minimum price farmers should receive for their paddy. Neither of them has the instruments to enforce such a minimum price. At the same time the rice millers are being accused of oligopolistic behaviour.
4. Lack of affordable credit.
5. Very old machinery park. Machinery renting services underdeveloped.
6. A high dependency on imported inputs.
7. Low productivity growth. Unreliable seed quality. Inadequate extension services. Extreme mono-cropping. (LVV 2011d)

12. Despite being a far smaller crop in term of acreage, banana is the most important agricultural export product in terms of value. The banana sector is dominated by just one (state-owned) company, which produces at two estates – Jarikaba (1819 ha of which 1253 in production) and Nickerie (1234 ha of which 1012 ha in production). In 2002, however, Surland went bankrupt and the banana production and export of Suriname collapsed. A new state-owned company (SBBS) was created, which managed to revive production and improve the efficiency of the company. In recent years, SBBS has very much benefited from the EU banana sector support program, which has helped to make significant investments in the improvement of the production capacity and in the transport and marketing of the bananas. However, the objective of the government to privatize SBBS has not materialized yet. SBBS has some 2400 employees. (LVV 2011b)

13. Oil palm was another major crop, but collapsed in the late 1980s due to conflicts with rebels being fought out in the interior areas. At its peak, some 6100 ha were under oil palm production (FAOSTAT). Most of this production was on state-owned estates. As a consequence of the collapse of oil palm production (including a processing plant in Paramaribo), Suriname has to import large quantities of vegetable oil. The government has so far been unsuccessful in finding interested international partners to restart oil palm production in Suriname. (Other crops that have shown significant contraction in production over the past 50 years are cacao, coffee and coconut.)

14. The remaining 10-15% of harvested cropland is dedicated to a large range of crops, including many vegetables and fruits. The horticultural sector is dominated by small family farms (some 4000) and many farmers are part-timers. Value chains are usually weak, price information is absent, and the level of technological sophistication is low. About a quarter of the local vegetable production is exported to the EU and the CARICOM, but volumes are small and volatile (LVV 2011c and e).

15. As noted earlier, the total area under crop production has contracted significantly over the past three decades. Only after 2008 a reversal of the trend can be noted (mainly due to an expansion in rice production). There is still quite a bit of agricultural land that could be brought back into production and boost agricultural export. Moreover, Suriname still has a very large untapped potential of land that, at least in theory, is suitable for agricultural production. Top priority for the government is to revive rice production and export, followed by horticultural production (small-scale, but knowledge and capital intensive), and estate crops such as oil palm and sugarcane (large scale, capital intensive / foreign investors).

## 2.2 Livestock

16. Livestock production is made up by poultry meat and eggs, pork, meat and dairy products (see Table 3). Because of cultural and religious habits, poultry meat is by far the dominant animal product. Dairy and poultry consumption depend importantly on imports and local production of these products experiences major difficulties to compete with cheap imports. Moreover, backward linkages of the livestock sector tend to be rather weak -- a large part of the animal feed is being imported (in particular maize and soybean cake) rather than sourced locally. (LVV 2011f)

**Table 3: Key characteristics of the livestock sector**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Subsector | Farms | Animals | Production  (quantity) | Production  (value –SRD)) |
| Poultry (meat) | 2200 | 500,000 | 8,140,000 kg | 61,864,000 |
| Poultry (eggs) | 1500 | 240,000 | 45 million | 15,750,000 |
| Cattle (meat) | 1000 | 36,000 | 1,882,000 kg | 21,643,000 |
| Cattle (milk) | 1000 | 18,000 | 6.5 million litres | 12,350,000 |
| Pigs | 155 | 29,000 | 1,900,000 kg | 13,680,000 |
| Small ruminants | 450 | 13,000 | 16,500 kg | 577,500 |

Source: LVV (2010)

17. The trade balance of livestock products is negative across the board. In 2009, local production covered 59% of the local meat consumption, 73% of the pork consumption, 50% of the sheep and goat meat consumption, and 31% of chicken meat consumption (LVV 2010). Imported chicken meat is mainly in the form of cheap chicken parts, which is a rest product in rich countries. Supply of all types of meat in the consumer market is somewhat irregular, leading to occasional shortages and price fluctuations.

18. The number of farms active in livestock production has contracted dramatically between 1981 and 2008. The remaining farms have expanded their stock, but not enough to stop a significant drop in stock across the board (see Table 4). Increased efficiency, however, has very much dampened the effect of the drop in stock on output. Actually, meat output was 33% higher in 2008 than in 1981, pork output 40% higher, chicken meat output about equal, while egg production and milk production were respectively 32% and 17% lower (FAOSTAT).

**Table 4: Change in livestock production capacity 1981-2008**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Farms** | | | **Stock** | | | **Stock/farm** | | |
|  | **1981** | **2008** | **Change** | **1981** | **2008** | **Change** | **1981** | **2008** | **Change** |
| Cattle (meat and dairy) | 7183 | 2011 | -72.0 | 50449 | 28288 | -43.9 | 7.0 | 14.1 | +100.3 |
| Poultry (meat and eggs) | 11099 | 3629 | -67.3 | 1159999 | 484000 | -58.3 | 104.5 | 133.4 | +27.6 |
| Pigs | 628 | 155 | -75.3 | 18665 | 8975 | -51.9 | 29.7 | 57.9 | +94.8 |
| Small ruminants | 2577 | 1032 | -60.0 | 12055 | 8404 | -30.3 | 4.7 | 8.1 | +74.1 |

Source: LVV (2011x)

19. In order to stop a further contraction of the cattle herd, the government has recently banned the slaughtering of young female animals and has started to import cattle from Brazil in order to restock.

20. The government operates an active price policy for the dairy sector. The state-owned dairy factory (Melkcentrale) is obliged to buy milk from farmers at a fixed price (SRD 2.5/litre), which is substantially above the price for milk in the global market. This high price very much reflects the low productivity of dairy production in Suriname. At the same time, several private dairy industries only use cheap, imported powder milk in their production of dairy products. These private companies managed to escape the legal rule that they also have to buy local milk. As a result, the Melkcentrale ended up with a major disadvantage in the market and is making losses on milk products that are locally sourced. The Melkcentrale also uses substantial quantities of imported milk powder, which somewhat compensates for these losses. Nevertheless, the management of the Melkcentrale believes that the current situation is unsustainable.

21. Pork production is dominated by a few big producers (one of which is a vertically integrated company controlling primary production as well as slaughtering and processing) that use imported, state-of-the-art production techniques. In addition, there are many small pig farmers who are using out-of-date technologies.

22. Consumption of livestock products very much exceeds local production. Export is minimal, also due to poor veterinary supervision. Import-substitution seems to be the most logic strategy for the livestock sector for the moment, including substitution of imported animal feed. In order to compete with imported livestock products, lowering of production costs is key.

## 2.3 Fisheries

23. Fisheries production in Suriname can be divided into: (a) industrial fisheries; (b) artisanal fisheries; and (c) aquaculture. Industrial fisheries concentrate mainly in deep sea waters, while artisanal fisheries concentrate in inland waters and in shallow waters close to the coast. In addition to a wide variety of fish species (16,000 ton in 2009[[3]](#footnote-3)), also seabob shrimp (9,000 ton) and big sea shrimp (240 ton in 2009) are important species that are being caught. The catch of big sea shrimp has contracted sharply over the past decade due to overexploitation (LVV 2010 and LVV 2011g).

24. The bulk of the employment in the fisheries sector (excluding aquaculture) can be found in artisanal fisheries, followed by fish processing (see Table 5). Employment in industrial fisheries has dropped off due to the cancellation of ‘snapper’ and ‘makreel’.

**Table 5: Employment in the fisheries sector**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | 2005 | 20006 | 2007 | 2008 | 2009 | 2010 |
| Industrial fisheries | 1310 | 1056 | 1179 | 478 | 576 | 547 |
| Artisanal fisheries | 4044 | 4154 | 3978 | 3172 | 4126 | 3403 |
| Processing | 1414 | 1388 | 1236 | 1218 | 940 | 1235 |
| Total | 6768 | 6598 | 6393 | 4868 | 5642 | 5185 |

Source: LVV 2011 x.

25. Artisanal fishermen sell their catch to traders or directly to processing companies. Prices fluctuate strongly depending on seasonal supply. There is no fish auction system and hence fishermen lack information about prices in the market. There are in total 12 fish/shrimp processing companies, of which two are fully or partially state-owned (SAIL and SIS). Most of the industrial fisheries fleet is owned by foreigners, but they have links with the local processing industry.

26. The Fisheries Department of the Ministry of Agriculture controls the fisheries sector through a licensing system. When fish stocks drop below a certain threshold level, the Fisheries Department should restrict fishing by issuing fewer licenses. This requires acquiring in-depth knowledge about fish stocks and their dynamics and the development/updating of a Fisheries Management Plan. In order to monitor fish stocks, more regular data collection and analysis is needed.

27. In order to continue to have access to export markets in rich countries, the fisheries sector has to maintain high hygiene standards and guarantee the sustainability of the fish catch. This requires compliance with international certification schemes such as Hazard Analysis and Critical Control Points (HACCP) and Marine Stewardship Council (MSC). Some parts of the Suriname fisheries sector comply with these standards, but not all.

28. One of the biggest problems in the fisheries sector is the lack of control on sea. For many years, Suriname did not have a coast guard. It is only very recently that such a guard has been established and is being equipped. The absence of a coast guard made that Suriname could not do much about illegal fishing (in particular by foreigners coming from Guyana and Venezuela). Moreover, sea pirates are making fishing on sea a rather dangerous undertaking. The Fishermen Collective singled the latter issue out as their most important problem.

29. Other problems in fisheries sector are: (a) Lack of affordable credit. Boats are not accepted as collateral; (b) High fuel prices due to the introduction of a fuel tax in 2011. The productive sector can get this fuel tax reimbursed through the tax system. However, many small fishermen do not file for taxes and hence are not compensated; (c) Difficulties to find qualified labour; (d) Lack of training and extension facilities; and (e) Extreme poverty among retired fishermen due to lack of pension facilities/savings.

30. In principle, aquaculture is a promising business given the growing demand for fish worldwide. Aquaculture experiments have been conducted in Suriname since the 1950s and various public and private investors have tried to setup aquaculture businesses over the years, but without much success. At present, the aquaculture sector in Suriname consists of only one company that operates commercially (Comfish N.V.), producing mainly shrimp (68 ton in 2010) and some tilapia (2.7 ton in 2010). Production is destined for both local consumption (mainly hotels and restaurants) as well as export. The company was established in 1987 by some leading Surinamese businessmen with interests in various industries. However, the company has never made a profit in all these years (ParBode, 1 March 2011). Nevertheless, the owners are still hopeful that the company will eventually turn into a profitable business. Aquaculture is potentially a promising business, but getting it off the ground in Suriname is rather difficult because: (a) The high price and low quality of inputs; (b) Lack of affordable credit; (c) Lack of expertise (few experts in aquaculture available); (d) Though competition in export markets and high transportation costs; and (e) Limited government support (no legislation in place yet). In addition, there are serious concerns regarding pollution of river water with mercury by the gold industry upstream. Nevertheless, the government continues to believe in the potential of the sector and aims to develop an aquaculture research and training centre (LVV 2011h).

## 2.4 Indigenous agriculture

31. Agricultural activities by the indigenous population in the interior of Suriname (some 10% of the population) are still very much based on shifting cultivation. Integration into the market economy is still very weak and production is mainly targeting own consumption. Transport costs are high, which very much constraints the use of external inputs.

32. Under the previous government, a department for indigenous agriculture was established within the Ministry of Regional Development. This department has been dismantled and the responsibility for indigenous agriculture returned back to the Ministry of Agriculture. The latter has initiated a special programme to stimulate agricultural production among the indigenous population in the interior. One of the aims of the program is to change shifting cultivation into more permanent production systems, which requires training of farmers in the use of more sound soil fertility management practices.

## 2.5 Agricultural and fisheries trade

33. Over the past decade the deficit on the agricultural trade balance (excluding fisheries) has almost tripled (see Table 6). Agricultural exports have continued to depend almost exclusively on only two commodities, namely bananas (43.6%) and rice (43.3%) in 2010. Agricultural imports are far more diversified and include a very substantial cluster of processed foods, alcoholic and non-alcoholic beverages, and cigarettes. Other important agricultural import items in 2010 included raw and refined sugar (US$ 14.6 million), soybean oil and soybean cake (US$ 18.0 million), chicken meat (US$ 17.3 million), dairy products (US$ 11.2 million) and maize (US$ 5.4 million). These big import items of unprocessed agricultural products suggest that there are important import substitution opportunities that should be explored.

**Table 6: Import and export of agricultural products (excluding forestry and fisheries)**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| Value agricultural export (million US$) | 52.7 | 35.1 | 30.6 | 19.1 | 28.1 | 28.5 | 34.7 | 50.6 | 47.1 | 87.4 |
| Value agricultural import (million US$) | 96.8 | 87.9 | 96.2 | 106.1 | 126.0 | 138.3 | 161.2 | 157.1 | 157.9 | 207.9 |
| Surplus/deficit (million US$) | -44.1 | -52.8 | -65.5 | -87.0 | -97.9 | -109.8 | -122.5 | -101.4 | -104.1 | -120.4 |
| Population ('000) | 473 | 480 | 487 | 493 | 499 | 505 | 510 | 515 | 520 | 525 |
| Deficit per capita (US$) | -93.3 | -110.1 | -134.6 | -176.5 | -196.2 | -217.5 | -240.1 | -196.9 | -200.2 | -229.4 |

Source: FAOSTAT

34. Soybean cake and maize are important animal feed components. There are probably several other items on the import list that are destined towards animal feed. Overall, the picture is that a large part of the animal feed in Suriname is being imported. There is research by CELOS looking into how this import can be substituted by locally produced items.

35. With the collapse of oil palm estates in the late 1980s, Suriname has become a big importer of soybean oil in order to cover the local demand for vegetable oil. Also several other vegetable oils are being imported (sunflower oil, olive oil, palm oil, maize oil, etc.).

36. The agricultural trade deficit stood at US$ 229 per capita in 2010 (see Table 6). Given the natural resources available in Suriname (ample land, water and sunshine), the deficit cannot be explained by physical constraints but are more due to lack of adequate human and social capital – i.e., low level of education of farmers and low level of organization and management within the sector. The aim of the government is to turn the agricultural trade balance into a surplus. Suriname should become the food basket for the Caribbean region.

37. In contrast to the agricultural sector, the fisheries sector has a major surplus on its trade balance (see Table 7). Nearly all the fishery products exported are caught. Aquaculture production in Suriname is still very small. Of the fish export, 36% of the value came from shrimp and 64% from fish.

**Table 7: Import and export of fisheries products**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
| Export fisheries (million US$) | 39.7 | 37.7 | 45.9 | 51.9 | 46.2 | 45.7 | 49.2 | 53.4 | 71.8 |
| Import fisheries (million US$) | 2.9 | 2.8 | 3.6 | 3.3 | 4.1 | 6.0 | 6.3 | 5.1 | 6.8 |
| Surplus/deficit (million US$) | 36.8 | 34.9 | 42.3 | 48.6 | 42.1 | 39.7 | 43.0 | 48.3 | 65.0 |

Source: FAOSTSAT

# 3. Macro-economic policies affecting agriculture

38. The overall macroeconomic outlook of Suriname is favourable (IMF Article IV Consultation Report 2012). A boom in the mining industry has increased the foreign currency inflow into the country. The trade balance and government budget are stable, government debt is relatively low (18.1% of GDP) and the Central Bank holds a healthy level of international reserves. The risk of the boom in the mining industry is for ‘Dutch disease’ effects: increased spending that could not be maintained in the event of falling international mining prices. In addition, high earnings in the mining sector cause an upward pressure on wages and a shortage of labour in agriculture. The IMF supports the Government’s strategy to establish a sovereign wealth fund in order to dampen the effects of fluctuating mining prices on the rest of the economy. Finally, an increased relative trade competiveness of the agricultural sector, given a fixed exchange rate, would ultimately depend on policies to raising agricultural productivity sufficiently.

## 3.1 Exchange rate policy

39. The exchange rate policy of Suriname is relatively straightforward. The Suriname dollar is de facto pegged to the U.S. dollar. In the context of a small open economy, the exchange rate is tightly managed by the Central Bank in order to keep inflation under control. Although inconceivable under current macro-economic policies, a lower exchange rate would be the quickest way to improve the relative competitiveness of Surinamese agriculture in the world market. Instead, the government aims to implement policies that help stimulate agricultural productivity, in combination with other measures, such as in the area of trade policy and fiscal policy.

## 3.2 Trade policy

40. Given the upward pressure on agricultural prices in recent years, the assumption of continued availability of cheap agricultural imports is to be questioned. Self-sufficiency in agricultural products is very much back on the political agenda. The Suriname government aims even higher, as it wants to become the food basket for the Caribbean region. However, in order to be competitive in export markets, the agricultural sector will have to raise its productivity significantly.

41. When it comes to using tariffs and quota as a way to provide protection against (unfairly) cheap agricultural imports (and in that way improve the agricultural trade balance), the government does not seem to have much room left for manoeuvring because of the trade liberalization treaties that have come into force over the past decade. [[4]](#footnote-4) Under the WTO entrance agreement, Suriname has agreed on a maximum import rate of 20% across all products. This is substantially lower than what most other CARICOM countries have negotiated (and in particular so for agricultural products). As a result, the external rate of CARIFORUM (CARICOM plus the Dominican Republic) is in a substantial number of instances higher than the maximum rate of Suriname. Suriname is currently renegotiating its import rates with the WTO in order to be able to bring its rates in line with the CARIFORUM external rates.

42. Within CARICOM tariffs and quota are zero, while with non-CARICOM parties (such as the EU and other trade blocks) the trend is towards lower import tariffs and quota. Unfortunately, we do not have an exact picture of the room for manoeuvring with these instruments, also because many tariffs are being phased out over time. The (simple) average external tariff for agricultural and food products dropped from 21-24% in 2003 (Jessen et al 2006) to 17% in 2008 (World Bank 2010). Over the same period, the average external tariff for all imported products declined from 13.4% to 10.0%, indicating a relatively higher external tariff for agricultural products than for non-agricultural products. A detailed update of this information would be useful in order to see where the use of external tariffs still can be an effective way to protect local agricultural production. Nevertheless, it is important to realize that such protection will be phased out in the long run and that only raising productivity will ultimately help to secure markets.

43. Suriname can ask CARIFORUM to temporarily lift an external import tariff. However, this requires providing evidence that the product cannot be sourced within the region. If it does not follow this procedure, it has to apply the CARIFORUM external rate.

44. Despite the overall trend towards lower import tariffs, CARIFORUM has a red list of products for which external rates will be maintained indefinitely (at least for the moment) – including rice (25%), vegetable oils (40%), groundnuts (40%), soybean meal (15%), sugar (40%), processed meat products (sausages, ham, etc.) (20%), chocolate (20%), pasta, bread, biscuits, etc. (20%), prepared or preserved fruits and vegetables (20%), fruit juices (10-40%), wine and other alcoholic drinks (50%), and tobacco products (50%).[[5]](#footnote-5)

45. Despite formal treaties, many countries (also within the CARICOM) try to block import by ignoring treaties or exploiting non-tariff barriers. To obtain their rightful access to markets, the Government of Suriname should assist Surinamese exporters in export markets with diplomatic interventions and, if needed, with legal assistance.

46. Despite a major simplification of the import and export procedures in 2003/2004 (no restrictions, unless listed on the negative list), there is still a lot of paperwork involved. Moreover, administrative processes are still largely paper based and extremely slow. Further streamlining of the process would help to reduce the red tape that comes with cross-border trade. For example, the government could consider abolishing charges for the various forms and the statistics tax and consent tax on import and export. We suspect that the costs involved in collecting these charges and taxes are high relative to their revenues.

3.3 Fiscal policy

47. A committee of the Ministries of Agriculture, Finance, and Trade & Industry was established in 2007 to make an inventory and analysis of all fiscal measures affecting agriculture. It submitted a report in May 2008, which recommended: (a) a waiver of import duties and sales tax on all imported agricultural inputs; and (b) an increase of the import tariff on milk powder, milk products, chicken, and chicken parts (LVV 2009). Only the waiver of import duties on agricultural inputs has been adopted. It is unclear what the status is of the other proposed measures. (Unfortunately, we have not been able to get hold of a copy of the report itself).

48. A fuel tax has been introduced in 2011. The productive sector (including farmers and fishermen) can get this tax reimbursed through their income tax. However, many farmers and fishermen do not file for income tax and hence miss out on this reimbursement. It is for this reason that the Rice Coordination Unit has asked the government to come up with a fuel tax subsidy for rice producers (SRD xxx per hectare rice sown). The government has agreed in principle to grant this subsidy, but is still in the process of finding the resources to finance it. This decision seems to be rather biased as it ignores the fact that also other farmers and fishermen are the same situation.

49. The government intends to substitute the sales tax with a value added tax in 2013. No details are available yet regarding how this new tax instrument will affect the agricultural sector and to what extent farmers will have to report for value added tax. A big problem is that most farmers do not keep proper accounts. In many countries farmers are exempted from paying value added tax, but this also means that they cannot recuperate value added tax on purchased inputs and services. The Ministry of Agriculture should discuss this issue with the committee that is working on the value added tax legislation.

50. Further study of fiscal policies is required in order to understand how they affect the different sub-sectors as well as different categories of farmers (i.e., small family farms versus commercial plantations). For example, we were told that many small farmers do not file for income tax. Hence any fiscal policy trying to help them through income tax will be ineffective.

3.4 Economic diversification

50. The economy of Suriname strongly depends on the mining industry. The range of export products is very narrow, which makes Suriname rather vulnerable for price fluctuations in specific commodity markets. There is an urgent need to diversify economic activities and to avoid crowding out existing economic activities.

3.5 Poverty reduction

51. There is a trade-off between protecting local agricultural production (income generation) and keeping local food prices low by allowing cheap imports to enter the market (e.g. milk powder and chicken meat). Protection of local agricultural production is sometimes warranted, but should be tied to an effort to raise productivity. Unlimited protection will only induce production inefficiencies at the expense of local consumers.

52. Poverty is in particular high among the rural population in the interior territories. Specific measures are needed to assist these groups.

53. Social security in the agricultural sector is rather weak. There are very few formal jobs in agriculture that come with health insurance and a pension scheme. Poverty tends to be relatively high among retired farmers and fishermen.

# 4. Modernization of the public agricultural services program

## 4.1 Structure, policy, budget and staffing of the Ministry of Agriculture

54. The Ministry of Agriculture has a fairly simple structure at the top, consisting of five departments: (i) crops; (ii) livestock; (iii) fisheries; (iv) research, marketing and processing; and (v) administrative services.[[6]](#footnote-6)[[7]](#footnote-7) The directors of these five departments report to the ‘Permanent Secretary’ of the Ministry. Together they form the management team of the Ministry. Each department operates somewhat independently (e.g., they each have their own financial administration and personnel division) and each comprises a large number of divisions. Most of these divisions are very small (just a few staff members) – basically for each function of the Ministry there is a separate division. The marketing and processing component of the Research, Marketing and Processing department only exists in name. The research component covers: (a) laboratory analysis for crops, livestock and fisheries (an integrated laboratory has been established recently); and (b) some research on plant production and plant protection.

55. In addition to the headquarters of the Ministry in Paramaribo (fisheries has offices at the harbour, separate from the main complex), the Ministry has four regional offices as well as some 14 resort offices. In addition, the Ministry owns a state farm and an agricultural experiment station (?) and has access to a series of experimental gardens across the country through STIPRIS (Foundation Experimental Gardens in Suriname). Agricultural activities undertaken at these different facilities generate some income for the ministry, but are most likely not profitable.

56. Until 2010, Suriname’s agricultural policy has been presented in the form of an agricultural sector plan, the latest one running from 2005-2010. With a new government coming on board in 2010, an updated agricultural policy has been presented in the form of a Policy Memorandum 2010-2015 (LVV 2010). Details of this policy framework have been worked out in series of white papers (some nine in total) published during the second half of 2011. The content of these policy documents has been summarized in Annex A.

57. The updated agricultural policy expanded the number of overall objectives from three (i.e., food security and food safety, income and employment, and foreign currency) to the following seven:

1. To guarantee the food security of the population of Suriname;
2. To secure agricultural health and food safety;
3. To develop a sustainable agricultural sector;
4. Transform the agricultural sector into the food basket of the Caribbean region;
5. To increase the contribution of the agricultural sector to the national economy;
6. To create the spatial conditions for sustainable development of the agricultural sector; and
7. To manage the prerequisites and risks regarding the implementation of the agricultural policy (LVV 2010).

These seven objectives largely overlap with the old objectives, although a few new accents have been made -- most importantly the explicit aim to make Surinam the food basket of the Caribbean.

58. Table 8 provides an overview of the budget of the Ministry of Agriculture over the past six years. The sharp reduction of the development component of the budget in 2011 was due to the fact that the Dutch development cooperation was cancelled in 2010. In the past, the development budget of the Ministry depended strongly on Dutch development assistance (because agriculture was one of the focus areas of Dutch development assistance). In 2012, the development budget of the Ministry of Agriculture was brought back to previous levels by cutting the development budgets of other ministries. The development budget of the Ministry also includes the subsidies for various semi-public organizations, such as the rice research institute ANDRON.

**Table 8: Recurrent and Development Budget of the Ministry of Agriculture (2007-2012)[[8]](#footnote-8)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|  | *(million SRD)* | | | | | |
| *Budget* |  |  |  |  |  |  |
| Recurrent | 26.1 | 25.1 |  |  | 40.1 | 42.5 |
| Development | 41.7 | 33.3 |  |  | 26.1 | 46.7 |
| Total | 67.8 | 58.3 |  |  | 66.3 | 89.2 |
| *Actual* |  |  |  |  |  |  |
| Recurrent | 25.7 | 25.8 |  |  |  |  |
| Development | 24.1 | 16.8 |  |  |  |  |
| Total | 49.8 | 42.5 |  |  |  |  |

Sources: Annual reports LVV and ????

59. Underutilization of the development budget is a rather common phenomenon at the Ministry of Agriculture as well as at other ministries. In 2008, for example, only half of the development budget of the Ministry of Agriculture was actually spent (Table 8). It seems to be a rather permanent phenomenon that ministries budget substantially more than what they can implement. The Ministry of Finance insists on a better score regarding the on-time realisation of development budgets and contemplates the introduction of a reward for those ministries that score better. This is a rather crude way of measuring performance. What is still missing is a budgeting system that is truly performance oriented using clear performance indicators.

60. In 2008, the breakdown of the recurrent expenditures was 68.5% personnel costs, 16.1% operational costs and 15.4% capital costs. The relatively low share of operational costs indicates a situation of rather scarce resources to work with.

61. Only 1.7% of the total government budget was directed towards the Ministry of Agriculture in 2012. This is a rather low percentage when compared with other countries in the region (on average 2.5% for LAC in 2002 and down from 8% in 1980 – Fan and Saurkar 2006). Moreover, the point made by the 2008 World Development Report (World Bank 2008) is that across the world governments as well as donors have relatively neglected agriculture over the past 20-30 years and that a reversal of this trend is much needed in order to achieve poverty reduction targets (poverty is in particular high in rural areas) and maintain a high level of food security (and hence political stability). With the recent increases on food prices in global markets, governments (and in particular of net importing countries) have become more concerned regarding food security.

62. The total number of staff at the Ministry of Agriculture has fluctuated between 1100 and 1200 over the past few years. In 2007, the large majority of the staff (77.2%) had only very basic educational qualifications (i.e. primary school plus a few years of secondary school) and only a very small group (6.4%) had academic qualifications (BSc and higher). The remaining 16.4% had completed advanced secondary education or middle-level vocational education. Overall, lack of qualified staff is a major bottleneck. Moreover, they are spread very thinly over a very wide portfolio of issues. There is lack of critical mass in many policy areas.

## 4.2 Reorientation of the role of government

63. For long, the Government of Suriname (assisted with development assistance) has functioned as the motor of agricultural development. As a result, the government has become deeply involved in agricultural production and processing activities. However, many of the agricultural state enterprises and non-profit foundations (‘stichtingen’) have suffered from mismanagement and political interference and are in financial difficulties or have been dissolved.

64. There seems to be a broad consensus that government should retract from direct involvement in agriculture. Instead, the private sector should play a far more active role in the development of the agricultural sector, while the public sector should assume more of a facilitating and regulating role. This is a very important paradigm/culture shift, which requires a critical review of the activities undertaken by the Ministry of Agriculture.

65. A first step in the modernization of the Ministry of Agriculture is to get rid of the policies of the past. This means getting rid as much as possible of the state enterprises and non-profit foundations that are no longer functional or that are no longer considered core to the mandate of the ministry. Some steps in the right direction have already been taken (e.g. the privatization of SLM), but this process needs to be accelerated and streamlined.

66. In order to speed up the privatization process, the Investment and Development Corporation Suriname (IDCS) was created in November 2010. Its mandate is to sell off the assets of abandoned state enterprises and non-profit foundations to interested (foreign) investors. The large majority of the assets to be sold are agricultural.[[9]](#footnote-9) IDCS may also assist foreign investors to secure access to new agricultural land. A conflict between the two directors of IDCS has very much overshadowed IDCS over the past year and has affected its effectiveness in striking deals with foreign investors (no major sale has been concluded yet, only a few rental deals).[[10]](#footnote-10)

67. Still a substantial number of state enterprises and non-profit foundations are coming under the direct responsibility of the Ministry of Agriculture (see Table 9). The Ministry of Agriculture should develop for each foundation and state enterprise in which it has a stake a strategy for the future (including possible closure or privatization). For those that remain under the supervision of the Ministry of Agriculture and require government support, a performance contract should be introduced with clear objectives and measurable outputs.

**Table 9: Overview of Public Sector Foundations and Enterprises under the Ministry of Agriculture**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **Activity** | **Legal status** | **Budgetary transfers in 2004** | **No longer operational** |
| *Non-profit Foundations* | | | | |
| Stichting Nationale Parken (STINAPA) | National parks | Foundation | Yes |  |
| Stichting voor Visserijbevordering (STIVI) | Fishing development and promotion | Foundation | No |  |
| Stichting Experimentele Landbouwbedrijven (SEL) | Developing rice production | Foundation | No | X 🡪 IDCS |
| Stichting Proeftuinen in Suriname (STIPRIS) | Agricultural research / demonstration farms | Foundation | Yes |  |
| Stichting Nationaal Rijstonderzoek Instituut (SNRI) | Rice research | Foundation | Yes |  |
| Stichting Landbouwontwikkeling Commewijne (SLOC) | Resgional agricultural society – vegetables | Foundation | Yes |  |
| Stichting Agrarische Kernbedrijven Nickerie (SAKN) | Agricultural enterpise, Nickerie | Foundation | No | X |
| Stichting Agrarische Ontwikkeling Coronie (SAOC) | Agricultural development Coronie | Foundation | No | X |
| Stichting ter bevordering van de cocospalmcultuur | Coconutpalm culture development and promotion | Foundation | No | X |
| Stichting Surinaamse Citrus Centrale | Packaging and cooling facilities | Foundation | No | X |
|  |  |  |  |  |
| *Commercial enterprises* | | | | |
| Multipuprose Corantijn Project (MCP) | Infrastructure for rice production | Sui generis | Yes |  |
| Centrale voor Vissershaven in Suriname | Central fishing port | Joint stock | No |  |
| Landsbedrijf Alliance | Fruit plantations (citrus) | Special law | Yes |  |
| Melkcentrale Paramaribo | Milk procesing and import | Joint stock | No |  |
| Suriname American Industry Ltd (SAIL) | Shrimp fishing and processing | Joint stock | No |  |
| Stichting Behoud Bananen Sector (SBBS) | Banana plantation | Foundation | No |  |
| Suriname Rice Operations NV | Rice operation | Foundation | Yes | X (as of 2005?) |
| Stichting Machinale Landbouw (SLM) | Rice plantation | Joint Stock | No | X 🡪 IDCS |
| Landbouwmaatschappij Patamacca NV | Regional agricultural society (oil palm) | Joint stock | No | X 🡪 IDCS |
| Landbouwmaatschappij Brokopondo NV | Regional agricultural society (oil palm) | Joint stock | No | X 🡪 IDCS |
| Surinaamse Garnalenvangst Maatschappij (SUGAM) | Shrimp fishing and processing | Joint stock | No | X |
| Surinaamse Landbouwbedrijven (SURLAND) | Banana plantation | Joint stock | No | X 🡪 SBBS |
| Tropica Food Industries NV (Tropics) | Fruit plantations and fruit processing | Joint stock | No | X |
| Landbouwmaatschappij Victoria NV | Oil palm estate | Joint stock | No | X 🡪 IDCS |
| Gemeenschappelijke Plantaardige Olieen en Vettenbedrijven (GPOV) | Production of consumption oil | Joint Stock | No | X 🡪 IDCS |
| Landbouwbank | Commercial bank | Joint stock | No |  |
| Suriname Zwaarmaterieel (SURZWAM) | Heavy equipment | Joint stock | No |  |

Source: IMF (2006); Note: Not included in this table but mentioned by others are: Stichting Plantage Geyersvlijt Noord, Stichting Agrarische Ontwikkeling Suriname, Surinam Japan Fisheries Company (SUJAFI), Surinam Rice Export Company (SUREXPO), and Fisheries Center Commewijne.

68. While solving these problems of the past, the government should be very prudent not to create new state enterprises. We noted several projects under the Ministry that are based on direct involvement of the government in production or processing (e.g., the building of a cassava processing plant and six greenhouses of one hectare each). Although the aim of these projects is to privatize these investments as soon as they are up and running, we are rather sceptical that this will happen.

69. Reorienting the Ministry of Agriculture from its traditional steering role to a more facilitating and regulating role is a major paradigm/culture shift that requires a lot of attention and persistence. A complicating factor is that the President of the Republic has a keen interest in agricultural development and interferes rather directly. The Cabinet of the President has launched various initiatives in recent years that by-pass the regular decision making process within the Ministry of Agriculture, but rely on its implementation capacity. Pushing for quick results does not sit well with the idea of a more hands-off, facilitating role of the Ministry and letting the private sector take the initiative. Apparently, the Agricultural Advisor to the President has more influence than the Minister of Agriculture. The recent conflict between the Chairman of the Rice Coordination Unit (reporting directly to the President) and the Minister of Agriculture is also the result of conflicting lines of authority.

## 4.3 Modernization of how public services are being managed and organized

70. The wave of new public management reforms, which has altered government operations all over the world over the past 20-30 years, seems to have largely by-passed Suriname. New public management, which aims to foster a more performance-oriented culture in the public sector by using private-sector management principles, has the following six core characteristics:

1. *Productivity*: finding ways of generating more services from the same or smaller revenue base;
2. *Marketization*: contracting out the implementation of policies to the private sector or semi-public agencies and replacing traditional bureaucratic command-control mechanisms with market strategies;
3. *Service orientation*: making government programs more responsive by changing the focus of the service delivery system. Instead of designing programs from the point of view of service providers and managing them through existing bureaucratic structures, reformers are trying to put citizens (as service recipients) first;
4. *Decentralization*: transferring more service-delivery responsibilities to local governments and front-line managers;
5. *Policy*: separating government’s role as a purchaser of services from its role in providing them. This gives a ministry the opportunity to concentrate on policy formulation and evaluation and contract implementation out to the private sector or semi-public agencies operating at some distance from the ministry;
6. *Accountability for results*: focusing more on outputs and outcomes instead of processes and structures. Replacing top-down, rule-based accountability systems with bottom-up, results-driven systems (Kettle 2000).

71. A study commissioned by the Ministry of Agriculture on the modernization of the institutional structure of the agricultural sector in Suriname (CARID/CESWO 2004) very much reflects a new public management approach. It proposes:

1. Privatization or closure of all agricultural state enterprises.
2. A substantial smaller Ministry of Agriculture that focuses mainly on policy formulation and evaluation. Implementation responsibilities should be handed over to: (a) commodity boards that have a public-private character (these have to be newly established); (b) public foundations dealing with research, extension, phyto-sanitary services, veterinary services, land improvement, etc. (some of these already exist, others will have to be newly created); and (c) district authorities (taking over some of the regional infrastructure of the ministry).
3. The number of staff positions at the Ministry is to be reduced from 1210 to 520, but these positions will require recruitment of substantially better qualified staff.[[11]](#footnote-11) Most redundant staff will be redeployed by the various implementing agencies (commodity board, public foundations, and district authorities), but they also require major upgrading of their qualifications.
4. Active participation of the private sector in commodity boards and water management boards as well as the promotion of private-sector collaboration in various forms.

72. The recommendations of this report have never been implemented, although certain ideas proposed by the report, such as the creation of commodity boards, have been floating around for the past decade in various policy documents, including the recent white papers. The other idea of placing most of the implementation capacity of the Ministry in public foundations at arm’s length of the Ministry has not received much support. This idea has not reappeared in any recent policy document. (The only exception is the proposal to create an independent Agricultural Health and Food Safety Institute.) Nevertheless, I believe that this should be an essential component of the reform of the Ministry. The radical reform that the CARID/CESWO report proposed is probably too much for the Ministry to swallow, but one could implement this reform in small steps.

73. Unfortunately, there is not much support for major institutional reform coming from the government. In the National Development Plan 2012-2016, major institutional reforms are being contemplated but rejected. Instead, the choice is to improve the existing institutions and structures and improve their performance. The introduction of a performance management system within the ministries is being proposed, which will require the upgrading of the management skills of senior staff.

74. Whether or not a major reform is being adopted, one of the key problems of the Ministry of Agriculture is the low educational qualifications of the majority of the staff. In order to become a more effective Ministry, the balance has to shift towards substantially better educated staff. However, the Ministry is experiencing difficulties to attract and retain higher qualified staff because of relatively low pay, which does not outweigh job security. A restructuring of the salary scales is needed in order to solve this problem. Another option is to introduce special allowances for scarce specialized technical staff (e.g. laboratory staff).

75. A disadvantage of being a small country is that Suriname lacks the advantage of economies of scale. The range of issues in agriculture and the diversity in agricultural products are for small and large countries more-or-less the same, but the (fiscal) capacity to tackle them is not. As a consequence it will be difficult for the Government of Suriname to offer its farmers the whole range of agricultural support services that larger countries can afford. Lack of economies of scale forces the government to be more selective and where possible seek collaboration with other countries in order to minimize implementation costs (e.g., the collaboration on agricultural health issues through CARICOM). In that regard, standardization of legislation and policy coordination within CARICOM will be increasingly required.

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# 5. Agricultural policies and their implementation capacity

76. In this chapter we will analyse agricultural policies as how they:

1. Improve the supply and quality of agricultural production factors, including: land, water, infrastructure, labour, agricultural inputs (seeds, fertilizer, agrochemicals, agricultural machinery, etc.), agricultural services (credit, plant health services, veterinary services, artificial insemination)
2. Stimulate agricultural innovation by investing in agricultural research, extension, training, education and information services;
3. Regulate the agricultural production process in order to avoid negative externalities (health hazards, production losses due to diseases, pollution, degradation of the natural resource base, work accidents, noncompliance to product standards, etc.);
4. Stimulate post-harvest marketing, transport and processing (market information, transport infrastructure, market infrastructure, pricing policy, export promotion) and promote stronger integration within value chains and the development of new ones;

## 5.1 Supply and quality of agricultural production factors and inputs

*Land, water and infrastructure*

77. Land tenure in Suriname is relatively complex as there have been some major changes in land tenure legislation through time. The following categories of land titles do exist (Anon 2003):

1. *Allodial ownership and inheritable property*: This title was issued by the Dutch during the early colonial period under the condition that the land would be developed and kept in cultivation. The owner also had the responsibility to contribute to other services that would promote the welfare of the nation, including security. Land not cultivated could be returned to the domain of the State. Allodial title is treated today as absolute ownership even though this may not be legally accurate.
2. *Absolute ownership (BW-Eigendom, freehold under civil law)*: This is the most complete title to land available in Suriname. There are no limitations imposed by the State, the owner has full and unlimited enjoyment of the land within the context of the law. Only a limited amount of land was issued under this title, again due to the fear that the land would be used for speculation or would be left uncultivated.
3. *Leasehold (Erfpacht)*: This was the most common title issued between 1937 and 1982. The term was for a period of 75 years and the owner had to pay an annual fee. When a leasehold expires, it is transferred to land lease (see below) and so this type of land title will eventually disappear. Separate leasehold titles were issued for agricultural land. In 1938 several Javanese communities in the coastal area, but also four Indigenous villages in District Para were issued communal leasehold titles. These titles could not be alienated or mortgaged and thus differed from the standard leasehold title. In 1981 the Village Communities Act was repealed and these titles were automatically terminated.
4. *Land lease (Grondhuur)*: This is the only title that can be issued after the introduction of the new Land Law in 1982 and it is issued for land to be used for habitation, agriculture and animal husbandry, industrial purposes and for special purposes. The nature of the use is specified in the title and permission must be obtained from the government to alter the intended use of the land. The duration of the land title is for 40 years.
5. *Simple rent*: A transitional title issued by the government to individuals for land in areas of which the zoning destination has not been determined yet. Also issued in anticipation of completion of the administrative procedure to obtain a land lease title so that the person in question can begin to conduct agricultural or other commercial activities. This title is personal and not transferable.

78. Of the approximately 170,000 ha under title in 2003 (which is only a little bit more than 1% of the total land area of Suriname), approximately 37,000 ha were ‘freehold’, 46,500 ha were ‘leasehold’, 26,200 ha were ‘land lease’, 3,600 ha were ‘private lease’ and some 56,700 ha were classified as government land or communal land (Anon 2003). Leasehold and land lease titles are accepted as collateral by banks.

79. Despite the fact that there is a lot of abandoned agricultural land (and an enormous potential to develop new agricultural land), there are many problems regarding the availability and access to good agricultural land, including: (a) Fragmentation of agricultural land due to inheritance; (b) Many absent landowners who are reluctant to sell their land title or keep land titles solely for speculation purposes[[12]](#footnote-12); (c) Uncontrolled diversion of good agricultural land to other uses due to lack of adequate land use planning and enforcement; (d) Deterioration of the quality of agricultural due to salinization and over exploitation; and (e) Distribution of agricultural land by the government is highly politicized and at times extremely slow. Moreover, getting changes in land titles approved can take ages.

80. The policy of the Ministry of Agriculture addresses in particular the issues c and d. However, most land and land use issues are outside the mandate of the Ministry of Agriculture. This is primarily the responsibility of the Ministry of Spatial Planning, Land Management and Forestry. The Ministry of Agriculture only has an advisory role when government land is being issued for land lease. Only the issue of sustainable use of agricultural land falls within the mandate of the Ministry of Agriculture. The Ministry wants to promote the sustainable use of agricultural land by: (a) promoting sustainable land use technologies; (b) introducing legislation and legal sanctions against improper use of land; and (c) introducing/promoting certification of sustainable land use.

81. Suriname is blessed with an ample supply of fresh water. However, the use of mercury in gold mining is posing a threat to the quality of water downstream (and in particular in aquaculture). Measures need to be taken to stop this threat. While water may be available in abundance, the critical factor in the case of Suriname is to optimize the use of it through irrigation and drainage.

82. The Ministry of Regional Development is responsible for: (a) all forms of local governance (including water management boards); and (b) all secondary and tertiary infrastructural works (roads, waterways, drainage, irrigation infrastructure) across the country, except the Paramaribo district. Nevertheless, the Ministry of Agriculture has often been involved in irrigation projects in the past and has still a keen interest in the improvement and maintenance of the irrigation systems.

83. Most of the existing irrigation and drainage infrastructure has been financed by the government and often backed by development assistance. However, due to poor maintenance and repair, large parts of this infrastructure are in a bad condition and require rehabilitation. Water boards that functioned during the 1970s and 1980s have disintegrated in more recent years. One problem, for example, is that the fine farmers have to pay by law for not maintaining irrigation canals has eroded dramatically over time due to inflation. It has become a negligible amount and hence is ineffective as an instrument to enforce the maintenance of irrigation canals. Moreover, the government has tended to step in where water boards failed to do their job. In part, the government is to be blamed for letting water boards slip into dysfunction in the past. In addition, there is a lack of funding for maintenance of the primary irrigation infrastructure. Any new investment in the rehabilitation of existing irrigation systems or new irrigation infrastructure should be made depended on the presence of an adequate mechanism to organize and fund the maintenance of this infrastructure.

84. Under the Agricultural Sector Plan 2005-2010, the management and maintenance of irrigation systems (and in particular in the rice growing areas) has received a considerable amount of attention. New legislation was introduced in 2007 that provided the legal framework for the introduction of self-governing, water management boards (waterschappen). Some 12 boards have been established under this scheme in Nickerie and one in Wanica, but most of them are not functioning as required. There are a lot of concerns about the poor functioning of these boards. In the case of Nickerie, there is also an overarching water management board in the form of the Multi-Purpose Corantijn Project.

85. A big unresolved issue is whether the costs of these water management boards should be covered by the government (the present situation) or that they should be covered by farmer contributions in the form of a fee or levy for irrigation services. While the latter is quite common in many countries, Surinamese farmers have always resisted such a fee or levy. Particularly in the rice sector, farmers argue that their business is already unprofitable and that such a fee would only worsen the situation. However, not pricing water is leading to an enormous spillage of water. At present, rice farmers are using twice the volume of water than what is actually needed. In other words, with the same volume of water two times as many fields could be irrigated. A draft Water Law that proposes to introduce such a levy was developed by the previous government, but it is unclear whether and when the present government will submit this law to Parliament.

86. In particular the white paper on rice has a major section on irrigation. It estimates that in the coming 5 years some 50 million euros (or SRD 200 million) are needed in order to rehabilitate and improve the irrigation infrastructure in the rice sector. Clearly, external donors are needed. According to the Rice Coordination Unit, there are discussions with the Government of India for a US$ 30 million loan to invest in the rehabilitation and expansion of the irrigation infrastructure in Nickerie. The population in this rice-growing region is predominantly of Indian descent.[[13]](#footnote-13)

87. In addition to a decaying irrigation infrastructure (see above), also poor rural roads are a major bottleneck. In particular during the wet seasons a lot of rural roads are problematic. The maintenance of these roads is the responsibility of the Ministry of Regional Development. [We do not have specific information on this topic, but greater participation of local communities in road maintenance could be a cost-effective way to resolve this problem.]

*Labour*

88. FAOSTAT estimates that about 33,000 people are economically active in agriculture (i.e. active in primary crop, livestock, forestry and fisheries production, but not agricultural trade and processing, input industries, etc.). About a third of those are employees (at estates and large farms), while the other two-thirds are self-employed. Many farmers work only part-time in agriculture, have a low level of education and are relatively aged.

89. The agricultural sector is experiencing quite a severe shortage of labourers. High salaries in the mining sector are having an upward pressure on salaries across the whole economy. There is little interest among young people to work in agriculture.

90. Lack of vocational training in agriculture at the lower end.

91. Social security is rather underdeveloped in the agricultural sector.

*Credit*

92. The Landbouwbank (Agricultural Bank) is state-owned, but operates as a regular commercial bank. It was established in 1972. Interest rates on commercial loans are currently in the 11-13% range. Few farmers want to borrow money at this rate.

93. In order to assist farmers with credit, the government has created an Agricultural Credit Fund (AKF) in 2007. The capital for AKF has been provided by Dutch development assistance (about 3.5 million euros), while the implementation of AKF has been contracted out to the Landbouwbank. The interest charged on these agricultural credits is 6.75%, which more or less covers the administrative costs of the Landbouwbank.

94. AKF loans require: (a) sufficient collateral in the form of land or property (this is a major bottleneck for farmers who do not own land)[[14]](#footnote-14); and (b) a realistic business plan (quality of submitted business plans tends to be rather poor). Access to this subsidized credit line is contained by: (a) maximum size of farm (smaller than 75 ha); (b) a maximum amount that can be borrowed (SRD 200,000); and (c) once the SRD 200,000 maximum is reached, no further loans will be allowed. The Landbouwbank has to turn down quite a number of loan requests that meet the minimum selection criteria, but for which there is not sufficient capital.

95. Limitations of AKF credit: (a) grace period too short and does not match the production in question (e.g. fruit trees); (b) maximum size of farm (75 ha) is rather restrictive for livestock farmers; and (c) the maximum amount that can be borrowed is too small, while its one-time nature does not help farmers with their seasonal, operational capital needs. The latter pushes farmers into the arms of agricultural input suppliers or millers who pre-finance agricultural inputs (i.e., buy now, pay after harvest arrangements).

96. The repayment of AKF credit is pretty good. Some improvement of the AKF facility is warranted, but above all it needs more capital in order to meet the demand for agricultural credit. The stock of agricultural machinery in the rice sector, for example, is old and needs replacement in the coming years.

97. There are stories about misuse of subsidized agricultural credit – farmers using the agricultural credit for other activities than agriculture. It is difficult to assess how widespread this phenomenon is. Stricter screening of business plans could help to curtail this phenomenon.

98. AKF only lends money to farmers. Other actors in the agricultural commodity chain (traders, input suppliers, processors, etc.) can obtain, under certain conditions, subsidized credit from the state-owned National Development Bank (Nationale Ontwikkelingsbank). For this purpose a special Investment Fund has been created with a working capital of 5.5 million euros (provided by Dutch development assistance (?)). The National Development Bank also has a special facility to offer technical assistance to small and medium-sized businesses (SMEs). There are talks to merge the Agricultural Bank and the National Development Bank.

99. The share of agriculture in the total portfolio of loans dropped from 20% in 1996 to 4.2% in 2008 (CCMF 2009). Over the same period, the share of housing loans and consumer credit in the total loan portfolio expanded rapidly from xx% to xx%.

100. There are some 29 credit unions active in Suriname, representing together some 2% of the total financial assets. Most of the credit unions are close bond, which means they are only open to employees of a company or members of a certain organization. [We have no information how many of these are active in agriculture. There are no indications that the government aims to promote rural credit unions as a way to resolve capital shortage in the agricultural sector.]

*Agricultural inputs: Seeds, fertilizers, agricultural chemicals, agricultural machinery, animal feed*

101. Only for rice there is a breeding and seed multiplication program at ADRON. The seed multiplication program needs to be expanded in order to facilitate the projected expansion of rice production. For all other crops, farmers depend either on own or imported seed material. There is no screening of imported seed.

102. The Ministry of Agriculture has a Seed Unit which multiplies and distributes (vegetable) seeds. The Ministry also produces and sells planting material of fruits and vegetables [?].

103. Particularly in the vegetable sector there is a lack of good quality seeds and planting material. In part this is due to a lack of knowledge among farmers how to produce good quality seeds. One problem is the re-use of imported hybrid seeds, which results in substantially lower yields.

104. Plant breeder rights legislation is still pending. Bill has been drafted, but it is unclear where it stands at the moment. Given the limited size of the seed market in Suriname, it is unlikely that plant breeder rights will trigger local private investment in plant breeding.

105. There is no formal livestock breeding program for any of the livestock species. The same also applies to forestry and fisheries.

106. The seed markets in Suriname are too small to expect much investment by the public sector, let alone the private sector. Except for rice, there is no other crop that warrants a permanent breeding program from an economic point of view. For other crops the government role is limited to: (a) screening imported varieties for their suitability under Surinamese conditions; and (b) providing training of how best to produce good-quality seeds from local varieties.

107. Distribution of fertilizers and agricultural chemicals is mainly in the hands of commercial input suppliers. Market share of agricultural (input) cooperatives is rather limited. Most of these inputs have to be imported. The supply of these inputs is no longer constrained by foreign exchange shortages as was the case in the past. There is little or no quality control of these inputs.

108. The distribution of agricultural machinery is controlled by the private sector. Import is no longer constrained by foreign exchange shortages. There is a great diversity in brands that are being sold. This affects the efficiency of maintenance and repair negatively.

109. Particularly in the rice sector, there has been a tendency to overinvest in agricultural machinery. Each farmer wants to have his own machines. Agricultural machinery renting services are underdeveloped.

110. A large part of the ingredients of animal feed (in particular maize and soybean cake) are being imported at a considerable cost. Substitution of such import would have a significant impact on the agricultural trade balance. There are experiments with using locally produced cassava as an ingredient in animal feed. We suggest that the Ministry of Agriculture designs a policy to stimulate the use of locally sourced animal feed.

111. Low quality of grassland constitutes a major bottleneck in the dairy and cattle sub-sectors. The Livestock Department has been promoting better technologies. However, because of low margins, farmers have been reluctant to adopt such technologies.

*Agricultural services*

112. The provision of agricultural services in Suriname is relatively underdeveloped. The plant and animal health services of the Ministry focus mainly on the enforcement of government rules and regulations and less so on providing advice on disease control methods and products. An NGO has recently been organizing plant health clinics, where farmers and gardeners can obtain advice from experts. Government extension services are rated as rather poor, largely because of the low educational qualifications of staff and the absence of a clear strategy. The Livestock Department runs an artificial insemination program for cows. Machinery renting services are underdeveloped. Price information services are lacking in almost all agricultural markets. The large majority of farmers does not keep proper accounts and hence lacks insight in how their business is doing. Agricultural accounting services are underdeveloped. The difficulty is to determine to what extent the government should get involved in providing all these different services.

## 5.2 Agricultural innovation

113. Improvements in technology, knowledge and skills (at farm level as well as elsewhere throughout the production chain) are essential in order to achieve higher agricultural productivity and better sustainability and food safety. Some of this improvement will come in the form of technology embodied in agricultural inputs (see above), but a large part has also to come from improved management at farm level – better knowledge and skills. Lack of knowledge and skills is seen as a major bottleneck across the agricultural sector. Farmers have a low education and, because of their age, are often less inclined to upgrade their knowledge and skills. The government aims to help farmers to acquire better knowledge and skills by providing agricultural research, extension, training, and education services.

114. Agricultural research in Suriname is rather fragmented over four different entities, namely:

1. The Department of Agricultural Research of the Ministry of Agriculture (previously known as the Agricultural Experiment Station). Research capacity (about 15 staff with higher education, of which only 2 at MSc level) is spread very thinly over many different topics. This includes research staff that supports the regulatory functions of the Ministry regarding food safety, plant protection, and animal health. The latter have recently been merged into an Agricultural Health and Food Safety Unit. The joint laboratory of this unit is currently being rebuilt. Actual *research* activities are limited to crop production only (livestock and fisheries have research within their respective departments), focusing on soil fertility, plant protection and vegetables. DAR also has five experimental gardens across the country. A considerable amount of time goes into technology transfer activities. [Total staff 263, of which 15 higher, 25 secondary, and 223 lower education, budget in 2005 about SDR 3 million (Awie 2005)];
2. The Anne van Dijk Rice Research Centre Nickerie (ADRON). Established in 1994 as the executive branch of the Foundation for Rice Research in Suriname (SNRI). It took over rice breeding work previously conducted by SML and SNRI. It is funded out of a levy on the rice export, but also receives a subsidy from the Ministry of Agriculture. Research focuses mainly on rice breeding and little bit on agronomic practices and post-harvest issues. ADRON is also responsible for rice seed production and has its own extension service. [Total staff 52, of which 4 higher, 4 secondary and 44 lower education, budget in 2005 about SDR 1.1 million (Awie 2005)];
3. The Centre for Agricultural Research in Suriname (CELOS), established in 1967, is attached to the National University of Suriname ‘André de Kom’. Funded by the Ministry of Education as part of the university budget. Highly depended on external funding for its research activities. Many externally funded projects are essentially development projects with a small research component. CELOS has a total staff 110, of which 13 researchers. CELOS comprises the following departments: (a) Agronomy, (b) Forestry, (c) Agroforestry, (d) Biodiversity, and (e) GIS and Remote Sensing Department. In addition it has a chemical lab for soil, water and product analysis, a tissue culture lab, a plant health lab, a wood technology lab, a microbiological/veterinary lab, and an agro-processing lab. Most of these labs are also used for training purposes. CELOS represents Suriname in regional and international agricultural research networks; and
4. The Agricultural Production Division of the Faculty of Technical Sciences of the National University of Suriname. This division offers a BSc in the following specializations: crops, livestock, forestry, aquaculture & fisheries, and agro-processing. About 20 new students per year. Agro-processing is currently the most popular specialization. Total staff about 15 – some of them also conduct research, usually in collaboration with CELOS.

115. It has been suggested in the past to merge all agricultural research capacity into a single organization. This has been rejected for various reasons (one of them because funding for the current setup is coming from different ministries). Instead a National Agricultural Research Council was launched in 2008, but this has never really taken off.

116. The following reform is being suggested: Dismantle the current Department of Agricultural Research, Marketing and Processing. Transform the Agricultural Health and Food Safety Unit into an independent institute outside the Ministry (this is already being proposed by the white book on agricultural health and food safety [LVV 2011a]) and merge the crop research activities with the Crops Department. The latter allows for a tighter collaboration between research and extension within the crops department. The Livestock and Fisheries departments are advised to invest more in research, but should contract out this research (e.g. to CELOS) rather than trying to build their own research capacity. This latter principle should also apply to the Crops department – create a budget with which specific research services can be bought.

117. Merge the research and extension functions within each of the three sub-sector departments into innovation units that deal with technology acquisition, validation and promotion as well as with market and business development. Drop the idea that these units will be doing advanced research. At best, they can do very simple applied or adaptive research. There is just not the staff with the right scientific qualifications to do proper research. If more advanced research is needed, this should be contracted out.

118. Agricultural extension is provided mainly by the Ministry of Agriculture, through its crop, livestock and fisheries departments.[[15]](#footnote-15) Each of them has its own extension arm. The Extension Service of the Crops Department is by far the biggest of the three and has some 160 staff in the field, spread out over 4 regional offices (extension coordinators) and 14 resort offices. The level of training of extension staff is low and with little or no training in extension methodologies. There is no measurement of the effectiveness of extension activities, but it is generally believed to be very low. Moreover, extension staff has to perform all kinds of other duties such as collecting data, issuing licenses, etc.

119. The white book on horticulture (LVV 2011e) suggests a complete overhaul of the extension service – far fewer staff (about 3 per resort) but substantially better qualified. Moreover, new extension methodologies will have to be developed, including the use of modern media such as internet, radio and television.

120. Training of farmers is one of the key themes of the Agricultural Policy Memorandum 2010-15 (LVV 2010). To this end, the Ministry seems to be inclined to transform much of the old research and production infrastructure under the Ministry into training facilities and demonstration farms. For example, the Staatsboerderij (i.e., state farm) is to be transformed into a training and demonstration facility for the livestock sector. Similar plans are underway for the experimental gardens. Specific training needs mentioned in the policy documents:

1. Training for farmers in the interior in production techniques regarding vegetables, fruit, cassava and highland rice; soil conservation techniques; and organization and management.
2. Training for members of farmer organizatons in organization and management.
3. Training in good agricultural practices in order to obtain HACCP certification.
4. Training in entrepreneurship.

121. The following educational agencies in Suriname offer agricultural specializations:

1. Agricultural Production Division of the Faculty of Technological Sciences, National University of Suriname. Offers BSc level training.
2. Polytechnical College (PTC), established in 1997, offers a bachelor’s degree in international agribusiness.
3. Institute for Natural Resources and Engineering Studies (NATIN), established in 1973, offers mid-level vocational education. Minimum entrance: 4 years of secondary school education. Course length is four years. NATIN offers various specializations, of which the following are relevant to agriculture: crops, livestock, forestry (production), and forestry (tourism). It also offers specializations in laboratory analysis. NATIN has recently opened a subsidiary in Nickerie.

122. What is missing is agricultural education at secondary school level – i.e., lower agricultural education. The problem is that many young people (in particular boys) drop out of the education system before they have completed secondary school level. They never reach NATIN, PTC or the university. Moreover, these educational streams target more government positions and jobs in private companies than becoming a farmer. The white papers of the Ministry of Agriculture recognize the need for such educational establishments, which, in addition to full-time education, could also offer short-term training courses to up-date farmers on the latest technological and commercial developments. It is not clear what steps have been undertaken towards this objective, but it would require the involvement of the Ministry of Education.

123. In addition to innovation at farm level, it is also important to stimulate innovation along the whole value chain and develop new markets. This is where the Suriname Business Foundation (SBF) may have to play a more leading role in providing funding for feasibility studies, market development, export promotion, rick capital for new agri-businesses, etc..

## 5.3 Regulation of the production process

124. Agricultural production is not only the sum of agricultural inputs brought together, but also a set of rules and regulations (including traditional customs) that define how these inputs are being used properly. These rules and regulations do not only have an impact on the quality of the end product, but also on the potential (negative) externalities that may be caused by the production process.

125. *Agricultural health and food safety* have been high on the (international) policy agenda for the past few decades because they have assumed a critical precondition for cross-border trade. Also in the case of Suriname, the necessary policy reforms and capacity building activities have been undertaken (including an IDB project). Nevertheless, this process is far from completed as is reflected by the white book on agricultural health and food safety. There is still quite a bit of legislation that needs to be updated or that is just lacking. At the same time, the implementation capacity is very limited and needs to be upgraded. The white book proposes the establishment of an Agricultural Health and Food Safety Institute with a mandate that is considerably wider than the current AHFS unit. In addition, Veterinary Services and Plant Health Services need to be upgraded (in particular staffing at the Veterinary Services seems to be problematic) and new border control units and quarantine facilities will have to be built. The only entity that seems to be functioning properly is the Fisheries Inspection Institute, which operates independently from the Ministry [may be interesting to look how this agency is functioning, seems to be self-financing].

126. *Environmental sustainability* of agricultural production has been explicitly included as one of the core objectives of the updated agricultural policy. It will require: (a) the necessary updating of agricultural legislation; (b) training of farmers about how to avoid practices that are environmentally unfriendly; and (c) certification of farmers who adopt good agricultural practices (and in that way could be rewarded with a price premium for their efforts). For example, unnecessary and improper use of agricultural chemicals is widespread. Training of farmers in integrated pest management (IPM) and other good practices is warranted. Increasingly, there is also an interest among farmers to adopt organic production methods. At the moment this is not regulated by law whatsoever. Legislation is needed to set organic production standards and protocols. This should form the basis for proper certification of organic products.

127. Essential in making the fisheries sector sustainable is to have in place: (a) a fisheries management plan (FMP); (b) updated legislation to facilitate the implementation of the FMP; (c) an effective monitoring system of fish stocks; and (d) a capacity to enforce regulation (LVV 2011x). The lack of a coast guard has been a major weakness regarding the enforcement of any regulation of fish catch on sea. It is only recently that Suriname has started to establish a coast guard.

128. The *Suriname Standards Bureau* (SSB) has only been established in 2006. It is still a relatively young institute and is still in the middle of developing standards across the whole economy, including agriculture. Standards and grades do not only cover the physical characteristics of the end product, but also the production process (e.g. a hygiene code). It therefore closely interacts with the agricultural health, food safety and environmental standards. Good collaboration between SSB and the Ministry of Agriculture in this area is important.

129. Proper land-use planning and enforcement is another key objective of the updated agricultural policy. Important synergetic benefits can be created by clustering agricultural production activities efficiently together. The ministry responsible for this topic is the Ministry of Spatial Planning, Land Management and Forestry. The principal bottleneck seems to be the enforcement of such planning.

## 5.4 Post-harvest marketing, transport and processing

130. Lack of adequate post-harvest marketing, transport and processing is a major bottleneck for most agricultural products, except for rice, bananas and fish (i.e., the principal agricultural export products). For all other products, small and irregular production volumes make it difficult for value chains to achieve sufficient efficiency and hence competitiveness. Exceptions are a few vertically integrated pig, poultry and fish companies (companies that combine primary production and processing). The processing part of the agricultural value chain is relatively limited. Most processed food products are being imported (in particular the big international brands). With a few exceptions, local processed foods are limited mainly to cottage industry products.

131. Critical post-harvest bottlenecks regarding the export of fresh vegetables and fruit are poor packaging and lack of adequate cold storage facilities. This leads to a relatively high rejection rate (one study mentions 25%) by overseas buyers. The white book on vegetables and fruits suggests the establishment by the government of a central packaging facility. Guyana seems to have such a facility. The question is whether the government should assume responsibility for such a facility. It is better when the private sector sets this up. Cold storage along the value chain still has major gaps. There is hardly any cold storage capacity at farm level and during transport from farm to the door of the export agent. Only the latter has some cold storage capacity. Investment in cold storage facilities at farm level only makes sense when there is sufficient volume of production. Small producers should try to organize such a facility collectively.

132. Studies that looked into the relative competitiveness of the Surinamese fruit and vegetable export (LVV 2009a and 2009b) revealed that air transport and handling costs from Suriname to Europe are substantially higher than for most other competitors (e.g. the Dominican Republic). Export to CARICOM countries, a key objective, is constrained by the fact that there are very few direct flights from Suriname to other CARICOM countries. This also results in high transport and handling costs. Transport by boat is only an option for some products, but has the same problem.

133. Another major limiting factor on the export of Surinamese agricultural products is the lack of credible proof that products meet the high agricultural health and food safety standards that are applied by the importing country. The necessary measures are underway to repair this weakness, but they will require substantial investments

134. The fisheries sector, which is strongly export oriented, seems to have relatively well-developed value chains, in which the different partners cooperate. A new fisheries inspection act was issued in 2002, which required the establishment of a fisheries inspection institute.

135. Many studies point to the relatively poor integration of agricultural value chains in Suriname. Actors at the different value chain stages are often poorly organized among themselves (and in particular so farmers), which results in weak connections between the different value chain stages. The need for more integrative institutional mechanisms, such as commodity boards, is very clear and they have been proposed in various policy documents over the past decade. Despite of all the talk, however, no commodity boards have been established to date. Getting these institutions established is a major policy challenge that will require new legislation as well as a substantial investment in institution building.

136. Suriname Fruits and Vegetable Cluster (SFVC) was launched earlier this year by the Suriname Business Forum (SBF)[[16]](#footnote-16) and constitutes an informal platform, integrating all the different stakeholders in the fruits and vegetable sector from farmers to exporters and from input suppliers to government agencies. Bringing all these stakeholders together on one platform is considered important in order to catalyse bottom-up innovation. After joint analysis of the bottlenecks and problems within the cluster, the participants have proposed a concrete action plan of how best to tackle these bottlenecks and problems. Government and donors are being asked to fund the action plan. The question is whether this informal approach is more effective than the more formal commodity board approach.

137. Also other horizontal and vertical integrative mechanisms in the agricultural value chains should be promoted, such farmer organizations, farmer cooperatives, trader associations, contract farming arrangements, etc.

# 6. A tentative agenda for policy improvements and strengthening of policy implementation capacity

138. Except for EU assistance to the banana sector, there is very little donor support left since the Netherlands cancelled its development assistance to the Government of Suriname at the end of 2010. This very much affected the development budget of the Ministry of Agriculture in 2011. However, in 2012 the development budget for the Ministry of Agriculture substantially improved as resources from elsewhere from the budget were reallocated to the Ministry of Agriculture.

139. A few multilateral donors, such as FAO and IICA, provide in-kind policy advice to the Ministry of Agriculture. IICA has currently four ongoing projects/activities in Suriname, namely: (i) technology strengthening; (ii) agricultural health and food safety services; (iii) support to agribusinesses; and (iv) enhancing livelihoods in the rural areas (food security). FAO is assisting the Ministry of Agriculture with bringing agricultural legislation up to date.

140. At the macro level it is important to acknowledge the fact that, because of the boom in the mining industry, the competitiveness of the agricultural sector is being negatively affected. This is so because of so-called ‘Dutch disease’ effects – strong currency and high wages. In order to counterbalance these effects, the government should focus foremost on raising agricultural productivity and on using its fiscal and trade regulation instruments in such a way that they support agriculture. To some extent the latter is already being done (e.g., no import tax on agricultural inputs), but it could probably be further intensified. In this context, we suggest a study to be undertaken to review how (changes in) fiscal and trade regulation instruments are affecting the competiveness of the agricultural sector.

141. Two over-arching themes regarding the modernization of public agricultural services are:

1. Redefinition of the role of government in the overall economy (from direct actor to facilitator and regulator); and
2. Introduction of new public management ideas and principles.

The first theme requires a major culture shift within the Ministry of Agriculture and a retraction of government from direct involvement in agricultural production. The latter process requires a substantial amount of attention and possibly also resources to accomplish. IDB could provide assistance to speed up this process. The second theme (the adoption of NPM ideas and principles) has been adopted only very partially by the government. A classic NPM reform is the proposed adoption of performance-based budgeting by the government. This requires a significant overhaul of the budgeting process as well as closer monitoring and evaluation of activities and policies. Another classic NPM reform that has not been adopted widely by the Surinamese government is the outsourcing of policy implementation to semi-public agencies or the private sector. Nevertheless, there are two examples within the Ministry of Agriculture where such an arrangement has been implemented, namely the rice research institute ADRON and the fisheries inspection institute. The proposed transformation of the Agricultural Health and Food Safety unit into an institute would add another example. We suggest that the Ministry of Agriculture also looks at other activities that could be outsourced (e.g., research and extension). In this context it is also important to consider the potential role of commodity boards. Are there any functions that they will they take over from the ministry?

142. The NPM ideal is a ministry that focuses on policy formulation and evaluation and contracts out policy implementation. The idea is that by separating policy formulation from implementation a far stronger performance culture can be achieved. Whether such benefits can be actually achieved very much depends on the details of how such arrangements are designed and managed. IDB support could play an important role in stimulating this modernization process.

143. The analysis in this paper covers a rather exhaustive list of policy issues and policy implementation capacity limitations. In an attempt prioritizing the most important ones for possible investment by IDB, the following have been selected:

* Substantial investments are needed to rehabilitate and upgrade the irrigation systems in the rice producing areas (some SDR 200 million). A critical precondition for such an investment (whoever will finance it) is the presence of effective water management boards that can take care of the maintenance and management of the irrigation infrastructure. The capacity of these boards needs to be strengthened. The costs of these water management boards should preferably be paid by the users of the irrigation systems. This is a very sensitive policy issue that needs to be addressed.
* The development of a proper functioning Agricultural Health and Food Safety program is still far from complete. A major setback has been the burn down of the new laboratory facilities in 2010. The Ministry has only just started to rebuild them. Still a lot of legislation in this area requires updating. Moreover, production protocols have to be developed and farmers trained and certified. Complying with agricultural health and food safety standards is in particular critical in export markets. Given the ambition to boost agricultural export, this is a high priority area. Given IDB’s past investment in this area, it would make sense to make sure that accomplished improvements are consolidated and further expanded.
* Reform of agricultural research and extension activities within the three sub-sectors into crops/livestock/fisheries *innovation* units that deal with technology acquisition, validation and promotion as well as with market and business development. These units should only get involved in demand-driven research at the applied/adaptive end of the research spectrum. More advanced research should be contracted out (e.g., to CELOS). The idea of using existing infrastructure to develop training and demonstration facilities for each of the three sub-sectors could easily be integrated into this reform. The biggest challenge will be to get these units properly staffed with qualified staff and redeploy redundant staff. In the medium-to-long run these units should be transformed into semi-public agencies operating under the umbrella of the Ministry of Agriculture.
* Despite the frequent mentioning in policy documents of the need to establish commodity boards, there seems to be very little concrete activity at the moment towards the creation of such boards. Through a policy loan IDB could help the Ministry to: (i) pursue the creation of commodity boards (or informal clusters if they turn out to be effective); (ii) define their tasks, funding, etc.; and (iii) get the necessary legislation in place. These commodity boards can constitute an important vehicle to promote the much needed integration of value chains.
* In order to reverse the growing deficit on the agricultural trade balance, the government is very keen on promoting agricultural exports. This requires providing assistance in developing such markets and eliminating those factors that constrain export. However, there are also some import-substitution options that should be pursued.
* The future of the fisheries sector strongly depends on whether the government can guarantee its sustainability. This requires a set of critical government actions, including the development of a Fisheries Management Plan, fish stock monitoring capacity, legislation & regulation, and enforcement.

144. Table 10 summarizes the prioritized policy interventions and gives an indication of the potential benefits and beneficiaries of each intervention. Most of these interventions do not stand alone, but have to be seen as a package that work together. For example, for export promotion to be successful it has to go hand-in-hand with enhanced productivity through innovation and AHFS certification.

145. At the macro level the proposed interventions aim at a stronger contribution of the agricultural sector to the overall economy. This is probably best captured by aiming at a higher agricultural growth rate (in the 3-6% range), a reduction of the agro-food trade deficit (and possibly turning it into a surplus in the long run), and a steady increase in labour productivity in order to raise the income of farmers and farm workers.

146. At the government level the proposed interventions aim at reorienting government activities towards truly public goods, generating better results with the same resources, and realizing greater participation by the private sector in collective action within the agricultural sector.

147. Of the proposed specific government interventions, four aim at creating benefits across all agricultural sub-sectors (innovation, AHFS, export promotion, commodity boards) and two target specific subsectors (rice and fisheries). Given limited resources, within each specific intervention some priority setting will have to take place in order to select those interventions that give the highest return.

**Table 10: Summary table prioritized policy interventions in support of the agricultural sector**

|  |  |  |  |
| --- | --- | --- | --- |
| Topic | Issue | Intervention(s) | Potential benefits (and beneficiaries) |
| *General topics* | | |  |
| Macro-economic policies | Boom in the mining industry is having a negative effect on agriculture due to ‘Dutch disease’ effects. | # Use fiscal and trade instruments to compensate agriculture; Conduct a study regarding possibilities. | # Further fine tuning of macro-economic policies in order to dampen the crowding out of agricultural activities by the boom in the mining sector (Population at large) |
| Redefinition of the role of government | Ministry of Agriculture should get rid of its involvement in production activities. | # Privatize state-owned companies (this may require accompanying measures);  # Avoid creating new state-owned companies; and  # Change in culture from direct intervention to facilitator and regulator. | # Freeing capacity (both in terms of time and resources) at the Ministry of Agriculture that can be used for truly public-good activities (All farmers and other agricultural stake holders). |
| Adoption of new public management ideas and concepts | Suriname has made relatively little progress when it comes to modernizing government and increasing its productivity. | # Adoption of performance-based budgeting, which should translate into a more performance oriented culture within the Ministry;  # Look for opportunities to outsource the implementation of policies; and  # Support the creation of commodity boards (or similar public-private partnerships). | # Achieving more results with the same budget  # Greater participation by the private sector in organizing collective action within the sector and more results through public-private partnerships (All farmers and other agricultural stakeholders) |
| *Specific topics* | | |  |
| Agricultural innovation | Low productivity growth; Lack of new emerging markets (while losing market share in existing markets) | # Reform of agricultural research and extension activities into three agricultural innovation units (crops, livestock and fisheries);  # Upgrading of staff working at these units;  # Contract out the more upstream research needs to CELOS or research agencies outside Suriname; and  # Launch a program to develop new markets in collaboration with SBF. | # Increased agricultural productivity  # Development of new (export) markets  # Better income for farmers, farm workers and fishermen  (All farmers and other agricultural stakeholders) |
| Agricultural health and food safety (AHFS) | AHFS program is still far from complete. | # Further investment in capacity building;  # Update of legislation;  # Development of AHFS protocols and certification; and  # Transformation of the AHFS unit into an independent institute. | # Reduced agricultural losses due to pest and diseases (farmers) and reduced food safety incidences (consumers)  # Access to export markets not constrained by lack of adequate AHFS standards and certification (In principle this applies to all products, but some priority setting may be required depending on export potential. For example, AHFS for fisheries is already better organized than for livestock because of fisheries export.) |
| Export promotion and import substitution | Suriname has the potential to become a big agricultural exporter within the region, but is at this moment a net importer. In addition to export promotion, look at opportunities for import substitution. | # In order to promote export, increase productivity; have a credible AHFS system in place; reduce direct and indirect trading and transport costs; and assist exporters with identifying new export markets.  # Adopt an explicit import substitution policy and explore for measures to reduce the high import dependency regarding vegetable oil, animal feed ingredients, dairy products, and chicken meat. | # Increase in production of typical export commodities such as rice, vegetables, fruits, and bananas (existing as well as new farmers).  # Increase in production of typical import-substitution commodities such as sugarcane, oil palm, cassava, soybean, milk and chicken. (existing as well as new farmers and agricultural plantations)  # Greater contribution of agriculture to the national economy (population at large)  # Reduction of the agro-food trade deficit (population at large) |
| Maintenance and management of irrigation systems | Poor maintenance and management have been undermining the (cost) effectiveness of the irrigation systems in rice. | # Institutional strengthening of the water management boards; and  # Introduction of a mechanism to finance the operational and maintenance costs of the irrigation systems. | # Better functioning irrigation systems at lower overall costs (rice farmers)  # Better distribution of irrigation costs according to benefits (taxpayers)  # Improved water use efficiency (rice farmers and population at large) |
| Creation of commodity boards | Vertical integration and collaboration within value chains poorly developed; Unrealistic expectation that the government will resolve all problems; More public-private partnership needed. | # Pursue actively the creation of commodity boards;  # Define their tasks, responsibilities, funding, etc.  # Get the necessary legislation in place | # Better integrated and therefore more effective agricultural value chains (all agricultural stakeholders, including input suppliers, farmers and post-harvest traders and processors) |
| Sustainability of the fisheries sector | Sustainability of the fisheries sector is at risk. Importing countries increasingly demand sustainability certification. | # Develop a Fisheries Management Plan;  # Get a fish stock monitoring system in place;  # Update fisheries legislation; and  # Enforce legislation. | # Securing the long-term sustainability of the fisheries sector (the whole fisheries sector as well as the population at large) |

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# Annex A: Summaries of Key Policy Documents

**1. “Kruispunt” – “Samen naar Betere Tijden”: Regeringsverklaring 2010-2015 (Government Declaration 2010-2015)**

Principal policy document setting out the overall policy intentions of the new government. Presented by the President of Suriname to the National Assembly on 10 October 2010. Emphasis on the need to create sustainable employment and to invest in production capacity, human capital development and innovation. Specific policy intentions regarding the agricultural sector include: (i) Suriname should become the food basket of the Caribbean region; (ii) Where necessary, foreign policy will have to assist securing access to Caribbean markets; (iii) Closer collaboration with Brazil will be sought to develop the agricultural sector and with Japan and Korea to develop the fisheries sector; (iv) The agricultural sector should produce at least 85% of all food locally consumed and export some 40% of all agricultural production (in other words, the aim is to create a 25% surplus on the agricultural/food trade balance); (v) The latter will be achieved by a mix of lead companies in collaboration with smallholders through cooperatives and out-grower schemes; and (vi) Rice production should be substantially expanded (150,000 ha sown by 2020 – this is quite an ambitious target as currently only some 52,000 ha are sown annually).

**2. Ontwikkelingsplan 2012-2016: Suriname in Transformatie (Development Plan 2012-2016: Suriname in Transformation)**

National Development Plan covering the whole economy. Chapter on agriculture summarizes what already has been said in other, more specific policy documents (see below). Relevant source of information on non-agricultural policies.

**3. Beleidsnota LVV 2010-2015 (Policy Framework Ministry of Agriculture, Animal Husbandry and Fisheries 2010-2015)**

This document is the principal policy document for the Ministry of Agriculture (LVV) for the current government period (2010-2015). It replaces the old Agricultural Sector Plan 2005-2010, which was developed and implemented by the previous government and which depended strongly on Dutch development assistance (some € 20 million for the duration of the sector plan). Under the current government, Dutch development assistance came to a halt, forcing LVV to adopt a substantially less ambitious development budget. This policy document was drafted rather quickly (within three months after the new government started) and only provides an overall policy framework. Further details have been worked out in a series of white papers (see below) that have been developed in collaboration with FAO and published during the second half of 2011. The Agricultural Policy Framework 2010-2015 formulates the following *strategic goals*:

1. To guarantee the food security of the population of Suriname;
2. To secure agricultural health and food safety;
3. To develop a sustainable agricultural sector;
4. Transform the agricultural sector into the food basket of the Caribbean region;
5. To increase the contribution of the agricultural sector to the national economy;
6. To create the spatial conditions for sustainable development of the agricultural sector; and
7. To manage the prerequisites and risks regarding the implementation of the agricultural policy.

The document identifies a long list of *critical success factors* in order to achieve the strategic goals, including:

1. The development of a sustainable agricultural policy and strategic plans through strategic thinking, acting and learning;
2. Mobilization of external capital investment into the agricultural sector to support large-scale agricultural production activities and to increase agricultural production;
3. The promotion of income growth in the agricultural sector of both entrepreneurs and workers;
4. Creation of sustainable employment;
5. Expansion of the inspection of agricultural products, the adoption of the highest international agricultural health and food safety standards, and decentralization of inspection facilities;
6. The creation of an institutional and juridical framework for a controlled and sustainable development of the agricultural sector;
7. Effective internal and external communication;
8. Raising public awareness regarding agricultural health and food safety;
9. Training and certification of stakeholders in food safety;
10. Promotion of sustainable exploitation of agricultural land and fish stocks;
11. Updating of regulatory instruments regarding the agricultural sector and enforcement of such regulations by pursuing offenders;
12. The protection of fish grounds;
13. Obtaining a competitive position and a substantial market share in the import of agricultural products in the Caribbean region;
14. Promote the export of agricultural products and expand the production of those products;
15. Develop regional (i.e. intra Caribbean) transport facilities in support of agricultural exports;
16. Trade and foreign policy should aim at creating opportunities to export Surinamese products to Caribbean and other potential markets;
17. Use economic diplomacy to promote Surinamese products in Caribbean markets and explore potentially new markets;
18. Increase the export and trade quota for Surinamese products in the Caribbean markets and other potential markets;
19. Promote the production of agricultural products with a high value added;
20. Diversification of agricultural production into non-traditional crops and products;
21. Intensification of research in support of the development of the agricultural sector and the realisation of policy goals;
22. Spatial planning of agricultural activities (including aquaculture);
23. The development and maintenance of an effective inspection and enforcement capacity regarding agricultural regulations and laws;
24. Strengthening of the horizontal coordination of external stakeholders;
25. Promotion of cooperation between stakeholders in the agricultural value chains;
26. Management of competencies of LVV staff;
27. Development of the knowledge and competencies of LVV staff regarding program and project management;
28. Management of risks regarding the implementation of agricultural policy.

Subsequently, the document presents a long list of *preconditions and operational goals*, including:

1. Development of a Human Resource Management policy that is in support of achieving the strategic goals;
2. Attract the necessary staff on the basis of the HRM plan;
3. Introduce a change in the culture of the organization that reflects the core values of the ministry;
4. Develop an agricultural policy and knowledge centre;
5. Strengthen research and planning;
6. Improve the service orientation of LVV towards its stakeholders;
7. Improve the investment climate in the agricultural sector;
8. Develop a more effective budgeting system that focuses on the realisation of the strategic and operational goals of LVV;
9. Train and certify stakeholders in food safety;
10. Prepare and submit the necessary legislation regarding the agricultural sector;
11. Develop a communication plan;
12. Provide entrepreneurs advice regarding working conditions, food safety standards, and social security;
13. Provide entrepreneurs with up-to-date information and data about developments in the agricultural sector in support of their business plans, market research and new technological developments;
14. Produce a capacity development plan for the agricultural sector, including LVV;
15. Support the Ministry of Transport with the development of a regional transport policy;
16. Research regarding the spatial planning and environmental impact of agricultural activities in order to decide on possible areas for agricultural expansion;
17. Conduct feasibility studies for the development of agricultural products for the Caribbean market;
18. Produce white papers regarding local agricultural production;
19. Conduct risk analyses.

The policy framework is subsequently worked out per sub-sector, i.e. agriculture, animal husbandry, and fisheries. For each sub-sector a situational analysis is presented, including a structural analysis of the sub-sector, a stakeholder analysis and a SWOT analysis. Per sub-sector a set of interventions is being proposed for each strategic goal (see table below).

|  |  |  |  |
| --- | --- | --- | --- |
| Strategic goals | Crops | Animal husbandry | Fisheries |
| To guarantee the food security of the population of Suriname; | # Sustainable policy and strategic planning  # (External) capital investment  # Income growth  # Sustainable employment  # Infrastructure | Ditto – specific measures: more generous access to land; provide price stability; | Ditto – feasibility study aquaculture Commewijne; fisheries school; |
| To secure agricultural health and food safety; | # Capacity to measure chemical residues in agricultural products  # Legislation  # Communication and extension  # Certification | # Animal disease control system  # Emergency plans for disease outbreaks  # Certification of disease free status of animals  # Certification of staff  # Legislation  # Communication and extension | # Fish inspection  # Legislation  # Communication and public awareness  # Certification |
| To develop a sustainable agricultural sector; | # Promote sustainable agricultural production  # Legislation  # Sanctions  # Protection of agricultural land  # Certification | # Animal disease control system  # Spatial planning  # Genetic diversity  # Legislation  # Certification | # Sustainable exploitation of fishing grounds  # Legislation  # Enforcement and sanctions  # Protection fishing grounds  # Certification |
| Transform the agricultural sector into the food basket of the Caribbean region; | # Competitive position and market share  # Production for the export market requires expansion production capacity  # Sustainable agricultural policy  # Supportive trade and foreign policy  # Cost-effective regional transport facilities | Ditto | Ditto (Expansion of export depending on exploitable fishing grounds and aquaculture development and investment in additional production capacity.) |
| To increase the contribution of the agricultural sector to the national economy; | # Structuring and stimulation of agricultural production  # Value addition  # Capital investment  # Diversification | # Substitution of imported animal feed  # Value addition  # Capital investment | # Regulation of the fisheries sector  # Value addition  # Capital investment |
| To create the spatial conditions for sustainable development of the agricultural sector; and | # Research in support of proper planning of agricultural activities  # Spatial planning  # Control / enforcement | Ditto | Ditto |
| To manage the prerequisites and risks regarding the implementation of the agricultural policy. | # Coordination with external stakeholders  # Management on competences  # Program and project management  # Risk management | Ditto | Ditto |

**4. Beleidswitboek Agrarische Gezondheid en Voedselveiligheid (White Paper Agricultural Health and Food Safety)**

Proposes to bring agricultural health and food safety standards in Suriname up to international standards in order to: (a) minimize production losses and health hazards; and (b) secure access to international export markets. Projected investments in institutional strengthening in this area will include: (i) the creation of an independent Agricultural Health and Food Safety Institute (and which will take over from the Agricultural Health and Food Safety Unit that is currently in operation under the Ministry) that will be in charge of maintaining agricultural health and food safety standards through inspection and control; (ii) the creation of border control units; (iii) strengthening of the Fish Inspection Institute; (iv) Strengthening of the Veterinary Service; etc.

**5. Beleidswitboek Bananensector (White Paper Banana Sector)**

The banana sector in Suriname (consisting of one state-owned company (SBBS) producing at two different locations) has undergone a major restructuring over the past decade with assistance coming from the EU banana programme. The latter was set up by the EU in order to assist ACP countries that traditionally had preferential access to the EU market to adjust to the new banana trade regime (lower import tariffs/quota restrictions for non-ACP countries, which will have a downward pressure on the banana price in the EU). Between 2003 and 2011 some US$ 30 million has been invested in the banana industry, of which some 70% has been provided by the EU. As a result the productivity of the banana industry has improved significantly from 12 ton/ha in 2001 to 40 ton/ha at present. For the final phase of the EU banana programme, Suriname has developed a national adaptation strategy (NAS) for the period 2011-2015, costing some € 17.6 million. The EU has proposed a substantially lower budget (about € 9 million) and negotiations are currently in a deadlock. The NAS aims at substantially reducing production costs in order to remain competitive. Privatization of SBBS is still pending, but should be achieved soon. Government could help by creating a more favourable tax and customs regime and address some of the infrastructural issues (i.e. port facilities).

**6. Beleidswitboek Agribusiness in de Tuinbouw Sector (White Paper Agribusiness in the Horticulture Sector)**

The agribusiness chain in horticulture (including fruit production) includes the following links:

1. Farming: This link includes all operations in the primary horticultural production, from land preparation to harvest and post-harvest;
2. The supplying industries / trade: This link includes both local producers of inputs (e.g. planting material) and the import trade (including chemicals, equipment, and machinery);
3. Support services: This link includes both the financial institutions (banks, credit cooperatives) and the horticultural research and extension services;
4. Processing industries: This link includes the traditional and industrial processing and packaging of fresh horticultural products; and
5. Marketing: This link includes all actions aimed at the most efficient way to achieve the most attractive consumer. It includes storage, transportation, distribution and sales.

Over the past decade the production of fruits and vegetables has declined in terms of area under production as well as volume of output. This contrasts sharply with the aim to achieve a growth of 6% per year between now and 2016.

Strengthening of the entire horticulture production chain, serves the following objectives:

1. Guarantee food security and food safety;
2. Supply of products for the local and export market;
3. Production of raw materials for industry;
4. Reinforcement and support to demand-driven private sector development mechanisms, through an "agribusiness value chain";
5. Increased contribution of the horticultural sector to GDP.

Concretely, the export of fruit and vegetables compared to 2011 are to be increased by 6% per year and exports to the Caribbean market should be doubled by 2016. Therefore an Action Program for strengthening the entire horticulture production chain for the period 2012-2016 has been identified. The Action Program consists of 4 sub-programs, including:

1. Improved research and extension;
2. Improved national plant health and food safety system;
3. Strengthening the horticulture chain (adequate supply of planting material and certification of planting material, increased production and productivity);
4. Improved entrepreneurship (finance, market information and marketing support, organization).

Each component of the program consists of a number of actions where the estimated duration, the responsible organization and the tentative budget are shown. The total required budget for the planned period is US$ 9.330.000 or SRD 31.7 million.

**7. Beleidswitboek Rijst (White Paper Rice)**

Rice is by far the biggest staple crop in Suriname and is important in terms of local food security, employment and export earnings. However, since the late 1980s the rice sector has been in crisis due to low world market prices at that time. The area sown with rice has contracted from 74,900 ha in 1985 to 40,300 ha in 2007. In more recent years production has recovered somewhat to 54,800 ha sown in 2010. Better world market prices as well as the EU Project “Support to the Competitiveness of the Caribbean Rice Sector” have helped to create this turnaround. The latter project invested some € xx million in the rice sector between 2004 and 2010.

Two rice harvests per year are possible in Suriname, so the actual area in production is about half the area sown. The installed capacity of rice land is estimated at 55,000 ha. So even in the peak year 1985, not all capacity was actually in use (in part this is also due to other bottlenecks – e.g. insufficient irrigation water in some areas). A lot of rice land has been abandoned or turned toward other uses (other crops, housing). Bringing abandoned land back into use will require rehabilitation of irrigation and drainage and other infrastructure. In 2001, there were about 4500 rice farms of which 4300 had less than 12 ha, while at the other end of the spectrum there were 8 rice farms with 750 ha or more. Just two-thirds of the installed rice production capacity (36,480 ha) is controlled by 55 farms each holding more than 75 ha. It seems that in particular some of the bigger farms (750 ha and more) controlled by the government have gone out of production. Yields at smaller farms have tended to be better than at estate farms.

The aim of the government is to substantially increase rice production (up to 90,000 ha sown in 2016) and raise rice exports, which will require:

1. Expansion of the supply of irrigation water (i.e. rehabilitation of infrastructure as well as new investments);
2. Improved maintenance of water infrastructure;
3. An improvement in the functioning of the water boards;
4. An improvement in research, agricultural extension, training and communication;
5. An improvement in the decision making processes within the rice value chain by installing a commodity board (produktschap);
6. Better availability of inputs (including seeds), machinery and spare parts;
7. Better access to credit;
8. An improvement in the quality of rice in order to maintain access to export markets;
9. The association of rice exporters (VRE) assuming a greater role in providing market intelligence; and
10. Generating more value added by exploring alternative uses of rice ‘waste’ products.

The bulk of the required investments will go into the rehabilitation/expansion of the (irrigation) infrastructure. An estimated € 47 million is needed for the period 2012-2016. In addition, about € 3 million is needed to get the water boards up and running. In order to expand the rice seed supply by ADRON, an investment of about € 1 million is needed. Agricultural machines in the rice sector are rather old and need to be replaced. In addition, more machines are needed as the production expands. Required annual (private) investment in machines is estimated at US$ 20 million in 2012 increasing to US$ 27 million in 2016. Credit facilities are needed to make these private investments possible, while the government could help by making it easier to import agricultural machinery without paying import tax and compensate the rice farmers for the fuel tax. Under the EU rice project the idea of a creating a commodity board for rice (and in that way improving the overall coordination of the rice sector) has been discussed extensively (including the funding of the commodity board through a levy on urea). However, it was never implemented and the present government opted to create a Rice Coordination Unit reporting directly to the President. Nevertheless, the white paper still calls for the establishment of a commodity board. Projected additional investment in rice research is projected at about € 200,000 annually for the coming five years. In particular research into the exploitation of rice waste products will be required. In the case of agricultural extension an additional investment of about € 100,000/annum is projected in order to improve the facilities and incentives for extension agents, employ more specialists within the extension service and upgrade the education level of extension agents. For capacity building of staff within LVV, water boards, rice farmer organizations, etc. a budget of € 300,000/annum has been projected.

**8. Beleidswitboek Tuinbouw (White Paper Horticulture)**

This white paper very much overlaps with the white paper agribusiness in the horticulture sector (see above). The problem analysis is largely the same, but it proposes a different set of interventions, namely:

1. Reorganisation agricultural extension (SRD 5,136,000 for the period 2012-2015)
2. Establishment of a packaging house facility for export of fruits and vegetables. Ownership should be with farmers/traders. Government will assist with: (a) feasibility study and organizational structure; (b) promote collaboration between producers; and (c) train people in GAP and other standards. (SRD 990,000 for the period 2012-2015)
3. Promotion of horticulture under greenhouse conditions. Government will setup greenhouses in several locations as a demonstration facility. The idea is that farmers will be trained and eventually take over the facility. The proposed project budget (SRD 2,180,000 for the period 2012-2015) covers the start-up costs (feasibility studies, market study, training, research and extension, etc.) but not the costs of the greenhouses.
4. Introduction Global GAP certification among vegetable and fruit producers. Lead role for the agricultural extension service. (Budget: SRD 1,560,00 for the period 2012-2015)
5. Other interventions needed (but not specifically budgeted): (a) reformulation of functions of LVV; (b) rehabilitation of institutional and physical infrastructure; (c) promote private sector involvement; (d) transfer of responsibilities to direct beneficiaries (e.g. maintenance of irrigation infrastructure and user pays principle); (e) promote farmer organizations and stimulate collective action; (f) support market development initiatives and removal of logistic bottlenecks; (g) invest in infrastructure and credit facilities; (h) support research and extension.

**9. Beleidswitboek Veeteelt (White Paper Animal Husbandry)**

The livestock sector is characterized by mainly small scale holdings in poultry, beef cattle and dairy. Though small scale holdings in pigs prevail a few companies dominate this market. Most farm managers work part-time, are males and 45-54 years old. Both cattle and dairy farms have problems feeding their cows, most pastures are natural and have a low production. Genetically the quality of their herd is low resulting in low milk yields and poor beef quality. The cattle herd of Suriname is declining for years – more than 54% of the cattle brought to the slaughterhouse is female. In general the country is self -sufficient in fresh meat, besides the import of poultry meat from USA and Brazil. Till 1990 Suriname was self-sufficient in poultry meat, political decisions made the local market being flooded with cheap leg quarters from the USA. Local industry still has only 30% of the market left. Processing of meat is not widespread, most processed products are imported. The demand for dairy products is growing, one milk processing plant functions, three other dairy plants use imported milk powder. Import of meat, processed meat, milk powder and dairy products amounts to USD 30-40 million a year. Import of animal feed and animal feed components is estimated at USD 12-15 million a year.

Strong points of the livestock sector are:

1. Government policy is focused on livestock development
2. Availability of processing units (dairy and slaughterhouses)
3. Plenty of agricultural land and water
4. In all sub sectors progressive farms exist as an example

Weak points are:

1. Farm structure: small scale holdings, mostly part-time farmers
2. Poor quality of milk (result of handling) and of carcases / beef
3. Management skills and commitment mostly low, organisation level low
4. Production inefficiencies make the cost price relative high
5. Ageing of the farmers and also of the ministry staff, especially the AHA’s
6. Dependence on import high (feed and other input)
7. Legislation on Livestock Production needs reviewing

The challenges of the livestock sector are more demand for meat and dairy products and a trend of better prices on the world market. An animal disease monitoring system according OIE standards should be in place to benefit from these opportunities. Better management practices (GAP , GMP) should enable a profitable production with lower cost prices. Threats are foremost the increasing number of imported products entering the country with low import rates, the division of agricultural land in residential areas, the image of farming doesn’t attract young people in the sector.

The proposed actions are targeting elements of the production process to make the sector adapt to the changing conditions. Important are preconditions like reviewing the Legislation on Livestock Production, better tax provisions and financing facilities for livestock production activities, local mechanised production of feed crops, better production infrastructure in rural areas, expansion and training of personnel and enhancing the process in the Veterinary department to comply with the standards of OIE.

The ministry should continue its efforts for new breeds to improve productivity, GAP and GMP training sessions, developing alternative local feed mixtures and other actions to improve the efficiency of livestock production. Other actions to stop the current decline of the cattle herd and to give more support for the poultry industry are discussed. All these actions will make the livestock sector grow and at least stay an important part of rural production and rural development.

Proposed actions include:

1. Stop the decline of the cattle herd (import of cattle and prohibition of slaughtering female cattle);
2. Improve the quality of grassland through research, extension, and training;
3. Stimulate improvement in cattle races through breeding;
4. Rebuilding and operationalization of the veterinary laboratory as part of the integrated laboratory facilities;
5. Adjust and update the legal and regulatory framework for the animal sector;
6. Recruitment and training of at least 26 animal health assistants to conduct field and inspection activities;
7. Completion of farm and animal registration system;
8. Completion of animal disease survey in order develop an animal disease monitoring system;
9. Development of containment plans regarding animal disease outbreaks;
10. Improvement of milk quality through GAP training and certification of dairy farms;
11. Training in GAP management and certification of primary producers;
12. Building of a new slaughterhouse in Nickerie;
13. Implementation of recommendations made by the study ‘fiscal incentives for the agricultural sector’;
14. Stimulate the level of organisation within the various value chains (i.e. creation of commodity boards);
15. Regulation animal feed
16. Update milk collection study;
17. Transformation of the State Farm into a training and knowledge centre for the livestock sector;
18. Feasibility studies regarding large scale dairy and cattle production;
19. Feasibility study of using old mining areas for cattle production;
20. Develop animal feed using more local components;

**10. Beleidswitboek Subsector Visserij – Deel 1 (White Paper Fisheries)**

Based on the analytical review of the subsector fisheries it was concluded that the subsector is faced with a number of urgent problems and challenges such as outdated legislation, absence of a Fisheries Management Plan (FMP), the absence of an adequate control and monitoring system of the marine resources, a low organizational level within the sub-sector and limited value added of the exported products. In addition, the persistent dominance of foreigners in the sector and the shortage of highly skilled and technical expertise are also major concerns. Moreover, for decades there is a downward trend in production, in particular in shrimp trawling. In conclusion, the fishing industry and the Ministry of Agriculture, Animal Husbandry and Fisheries are faced with serious challenges in terms of sustainable management, monitoring, control and surveillance of the fishery resource.

Within the context of nowadays approach to fisheries management, maintaining ecosystems and biodiversity at an acceptable level of productivity, is crucial towards sustaining optimum utilization. Therefore, practicing sustainable management is increasingly a condition for entering major export markets. In this regard, having a Fisheries Management Plan (FMP) is essential. The basic conditions for implementing the FMP are: (i) monitoring and control, (ii) institutional capacity, (iii) a legal framework and (iv) research and development. In anticipation of the implementation of the FMP, other issues also need to be addressed. Among others, close cooperation with stakeholders and other actors is a necessity.

In this regard, the Ministry already established working relations with various agencies, including the competent authorities and NGOs, in particular, the Suriname Seafood Association (SSA) and the Fishermen's Collective (VC).

In the framework of sustainable management and food security, the following actions are top priorities:

1. Updating and implementing the Fisheries Management Plan (FMP);
2. Finalizing, endorsement and put into law the new fisheries legislation;
3. Concluding a partnership agreement with the Ministry of Defence and the Ministry of Justice and Police regarding the Coast Guard and on the development of Monitoring, Control and Surveillance (MCS) plan;
4. Reorganization of the fishing industry and institutional strengthening of the fisheries sector targeting the public and private sector organizations such as NGO’s;
5. Upgrading the data collection system and training of staff to manage the system;
6. Continuation of by-catch reduction from trawl fishing activities.

Other challenges confronting the subsector relate to the approach to achieving growth and development. Among the main strategies are: (i) the development of aquaculture which is considered of having the largest potential for further growth of the fishery sector. The aquaculture development policy is presented in a separate document, Volume 2: White paper Aquaculture development 2012 -2016; (ii) the development are high seas fisheries; (iii) value-adding; (iv) the establishment of a national strategy and a structure for marketing and market research policy; (v) formulation and implementing domestic support measures for local entrepreneurs; (vi) formulation of an education and training policy for ensuring availability of adequate local expertise in most relevant disciplines necessary in the fishing industry.

**11. Beleidswitboek Visserij – Subsector Aquaculture, Deel 2 (White Paper Aquaculture)**

1. Forestry has been left out in these calculations. It would add another SRD 15-20 million to the AgGDP. [↑](#footnote-ref-1)
2. If the same area is harvested multiple times per year, it is counted multiple times. In the case of rice two harvests per year are possible. For vegetables, harvests could be even more frequent. [↑](#footnote-ref-2)
3. Of which, about 12,000 ton artisanal and 4,000 ton industrial. [↑](#footnote-ref-3)
4. The difference between the ‘bound’ rate and the ‘applied’ rate was estimated at 5.2% for Suriname in 2008 (World Bank 2010). [↑](#footnote-ref-4)
5. Based on data provided by the Ministry of Trade and Industry. [↑](#footnote-ref-5)
6. The directorate planning has been dissolved and its functions redistributed over the other directorates. [↑](#footnote-ref-6)
7. An organogram of the ministry and a staff breakdown has been requested by the aide memoire of the October 2012 mission. [↑](#footnote-ref-7)
8. The aide memoire of October 2012 has requested more complete budget data which should help to further complete this table. [↑](#footnote-ref-8)
9. Including, the Surinaamse Cultuur Maatschappij (7000 ha Groot Mariënburg), Patamacca (5000 ha abandoned oil palm estate), Victoria (1700 ha abandoned oil palm estate), Phedra (850 ha abandoned oil palm estate), Gemeenschappelijk Plantaardige Oliën en Vettenbedrijven (2000 m² parcel in Paramaribo), Stichting Machinale Landbouw (700 ha abandoned rice land), Stichting Experimentele Landbouw (4560 ha abandoned, 500 ha rice cultivation), and Bruynzeel Suriname Houtmaatschappij (87000 ha timber concessions). [↑](#footnote-ref-9)
10. Because of this, a US$ 200 million deal with an Indian company fell through last year. [↑](#footnote-ref-10)
11. This seems to be still a rather large number of staff. I believe that the policy and administration functions of the Ministry can be tackled with a staff of 100-150. [↑](#footnote-ref-11)
12. Land lease (grondhuur) titles stipulate that the holder must use the land. If not, the government can retract the title. It is only very recently that the government has started to act upon this stipulation and has started procedures to retract land lease titles. [↑](#footnote-ref-12)
13. We need further details on the status of this loan. If it comes through, it means that there is less need for IDB to invest in the rehabilitation of the irrigation infrastructure. [↑](#footnote-ref-13)
14. The Bank’s experience with loans without collateral is pretty bad. It prefers not to go there. [↑](#footnote-ref-14)
15. There are also various NGOs that provide agricultural extension services and in particular so in the interior regions. [↑](#footnote-ref-15)
16. In collaboration with the Ministry of Trade and Industry and the Inter-American Development Bank (IDB), and implemented by the consultancy firm Economic Transformations Group, Inc. (ETG). [↑](#footnote-ref-16)