

SURINAME PLANATLAS

**Memorial of Guyana
Annex 47**

voorbereid door:

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REGIONAL LOCATION AND TRADE

1. THE SURINAMESE TERRITORY

1.1 Land and Sea Area

Suriname has a land area of approximately 164,000 sq. km. It is not possible to calculate the area precisely, all Suriname's boundaries have not been finally established and the coastline fluctuates constantly due to tidal action.

Legislation passed June 11, 1978 extended the territorial sea adjacent to Suriname to 12 nautical miles (1 nautical mile equals 1,853 km.), reckoned from the 0-meter isobath (baseline), while the exclusive economic zone was extended to 200 nautical miles (i.e., more than 370 km.) In these coastal waters, Suriname exercises certain exclusive economic rights, such as fishing and mineral rights. The territorial sea and the exclusive economic zone occupy approximately 129,500 sq. km., an area almost 79% of Suriname's land area.

1.2 The Boundaries

1.2.1 THE SEAWARD BOUNDARY

The northern boundary of Suriname is the Atlantic Ocean and, therefore, is subject to the International Law of the Sea. The seaward boundaries of the territorial sea and the exclusive economic zone are formed by lines composed of points equidistant from the nearest point on the 0-meter isobath (baseline). In other words, the outer boundary of the territorial sea is 12 miles distant from the baseline, while the seaward boundary of the exclusive economic zone is 200 miles distant.

The delineations between the Surinamese territorial sea and those of its neighbors must be established by bilateral agreements, which use the principle of equity to draw boundaries, where possible by means of an equidistance line. Such a line is determined by taking points equidistant from the nearest points on the baselines of both contiguous coastal states.

According to Suriname, the eastern seaward dividing line between Suriname and French Guiana is formed by an equidistance line with a direction of 30° east of true north, reckoned from the middle of the line (closing line) connecting Galibi on the Surinamese coast to Les Hattes on the French Guianese coast. France has never objected to this definition.

The seaward dividing line in the west, however, raises some problems. As the full width of the Corantijn River is in Surinamese territory—irrespective of the water-level fluctuation—the equidistance line method cannot be applied. Therefore, in 1938, a Dutch-British frontier commission established a point on the west bank of the Corantijn River (the so-called Kayzer-Phipps point, 5°59'53"8 north latitude - 57°08'51"5 west longitude) as the most northern point on Suriname's border with Guyana, as well as the point of departure for the seaward dividing line between both countries. This boundary is formed by running a line from the Kayzer-Phipps point in a direction 10° east of true north, substantially parallel with the channel of the Corantijn River.

1.2.2 THE EASTERN BOUNDARY

The boundary in the Marowijne River between the islands of Portal (French Guiana) and Stoelkanselland (Suriname) was established by the Treaty of September 30, 1915. The middle of the river at normal water level was designated as the dividing line. With the exception of the islands of Langa Tabiki and Blakarebo, which belong entirely to Suriname, and the island of Bastin Tabiki, which is part of the French territory, the islands in this part of the river were assigned to the Netherlands or to France, depending on which side of the dividing line the largest part of their area lay. The eastern border in the Marowijne River north of Portal has not yet been agreed upon. Through the arbitration of Czar Alexander III, the Lawa River was declared to be a continuation of the Marowijne River. However, the continuation of the boundary between Suriname and French Guiana is still to be determined.

1.2.3 THE SOUTHERN BOUNDARY

The international agreement of May 5, 1906 (signed in Rio de Janeiro, approved by the Law of July 11, 1908, and ratified on September 15, 1908, in The Hague), established the boundary between Suriname and the Federal Republic of Brazil. The watershed between the basin of the Amazon in the south and the basins of the watercourses that flow through Suriname "between the French and British borders" towards the Atlantic Ocean in the north determine the southern border. Between 1935 and 1938, 60 boundary marks were placed along this 597 km. watershed to delineate the border.

1.2.4 THE WESTERN BOUNDARY

By virtue of an agreement reached in 1799/1800 between the two acting Governors, Imbyze Batenburg of Berbice and Juraan Frederici of Suriname, the west bank of the Corantijn River, from the source to the mouth, has been established as Suriname's western boundary.

2. INTERNATIONAL TRADE

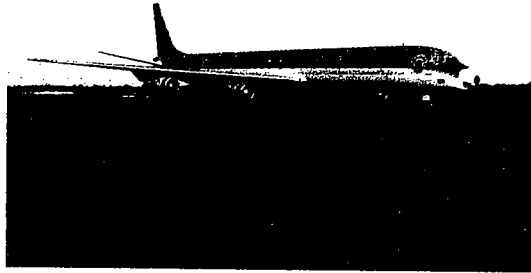
Even though Suriname is part of the South American continent, it maintains strong trade relations with the United States of America (USA) and the countries of the European Common Market (EEC), particularly the Netherlands.

Trade with the Caribbean Islands and Latin America is not diverse. Imports from the Caribbean consisted primarily of some \$1.150 million of petroleum products from Trinidad and Tobago, about 24% of total imports for 1979.

Imports from the Netherlands dropped from 24% in 1977 to 16% in 1979. Imports from the United States of America, on the other hand, increased to 33% in 1979, after a decrease in the period 1975 to 1977. Japan is the most important trade partner among the other countries from which Suriname imports.

Suriname's total imports in 1979 amounted to \$1.738 million—fuels, lubricants, and other petroleum products (30%), natural and semilinished materials (23%), consumer goods (22%), and capital goods (19%). About 6% (\$1.9.5 million) of the imported natural and semilinished materials went to agriculture and fishery, about 40% (\$1.65 million) to construction and building, and 54% to other industrial sectors. In comparison with 1975, imports increased by 63% in 1979. The imports from the EEC, as well as from the USA and Canada, were chiefly consumer goods and semilinished materials.

The EEC countries and the USA/Canada are also the principal markets for exports. They received 23% and 36%, respectively, of Suriname's total exports in 1979, whereas the Caribbean—including Trinidad and Tobago—bought only 4%. Suriname sends 5%, 6%, and 7% of its exports to Venezuela, Brazil, and Japan, respectively.



DC-8-63 Surinaamse Luchtvaart Maatschappij (SLM)
DC-8-63 Surinam Airways

Table 1 BALANCE OF TRADE BY REGION/COUNTRY
1972, 1975 AND 1979 (\$f. millions)

Region/Countries	1972		1975		1979	
	Import	Export	Import	Export	Import	Export
EEC	100.1	87.9	144.5	132.7	206.0	166.5
(The Netherlands)	(61.6)	(36.7)	(80.7)	(85.4)	(121.4)	(90.0)
USA and Canada	84.7	146.3	155.6	213.2	245.2	259.3
Caribbean	30.5	8.3	92.2	18.9	174.2	25.6
(Trinidad and Tobago)	(25.9)	(1.1)	(77.4)	(1.4)	(146.8)	(1.3)
South America	7.8	15.3	10.8	5.5	19.1	84.5
Japan	19.4	2.6	22.6	17.0	39.1	49.6
Rest of the World	15.7	45.3	28.4	94.0	55.1	141.2
Total	258.2	305.7	454.1	481.3	738.7	726.7

SOURCE: MFP

Table 1 shows that there was a surplus trade balance in 1972 and 1975, but by 1979 the trade balance was running a deficit. The trade deficit occurred because prices for the industrial products and the fuels that Suriname imports increased, while world market prices for its principal export products decreased.

Table 2 IMPORTANT EXPORTS TO SOME COUNTRIES 1981*
(\$f. millions)

Products	The Netherlands		West Germany		Trinidad and Tobago	
	USA	USA	Japan	Japan	and Tobago	and Tobago
Alcohol	570.0	276.0	169.0	—	—	—
Alumina	91,696.0	155,519.9	—	—	—	—
Aluminum	—	31,957.2	7,721.7	1,944.3	—	—
Bauxite	—	95,747.1	1,747.2	3,477.8	—	—
Rice	3,171.7	—	2,182.9	—	—	—
Shrimps	8.0	4,228.8	1,622.0	17,092.2	—	—
Wood Products	2,217.0	2,642.0	1,485.0	—	—	1,522.1

SOURCE: MFP, Ministry of Agriculture

* Export trends have not changed between 1979 and 1981 (Table 1).

Suriname's principal exports are bauxite, alumina, aluminum, timber and wood products, rice, bananas, and shrimps. In 1981, Suriname exported the largest share of its bauxite, alumina, and aluminum to the USA, shrimps to Japan and cargo rice (i.e., hulled but unpolished) and bananas to the EEC. Revenues from the export of bananas amounted to \$1.13.3 million in 1981, 70% from England and 30% from Italy. The Caribbean imported rice and wood products. Many other products are exported to the Netherlands. These goods (e.g., vegetables) are exported in small shipments.

FISHERY

1. FISHING GROUNDS

Suriname's fishing grounds can be divided into the inland waters and shallow coastal waters on the one hand, and the sea, on the other. From the fishery standpoint, there are 4 important estuaries in Suriname:

- the Marowijne River
- the Commewijne and Suriname rivers
- the Saramacca and Copenaema rivers
- the Nickerie and Corantijn rivers

In addition to the estuaries, the lagoons and mudflats along the coast are also plied by fishers. The following areas are particularly important: Wag Wia, up to the mouth of the Suriname River (this area includes Krotjapasi Creek, the Marapica Canal, the Warapa Canal, and Kat Creek) and Corone, up to the mouth of the Nickerie River (this area includes Platolo Pan, the Fraser Pan, and the Big Pan). The shallow sea, mudflats, river mouths, and lagoons constitute a very productive estuarine area. Fishing grounds for sea fish lie at a depth of 10 to 30 m, and extend over an area of 13,560 sq. km. Shrimp fishing is done at a depth of 20 to 70 m. There are also 2 snapper grounds, the outer of which is located on the edge of the continental shelf.

2. TYPES OF FISHING

Two types of fishing are practised in Suriname, small-scale commercial fishing and industrial fishing. Small-scale commercial fishing is semiprimitive in technique and semicommercial in organization. Catches are small, there is little mechanization, and fishers use small boats powered by outboard motors and primitive fishing equipment, such as static nets. This type of fishing is confined to the shallow coastal and inland waters, and therefore is sometimes called inland fishing. It has traditionally supplied all the local requirement for fish.

Industrial fishing began more recently and is done in open sea at depths of 30 m or more. Therefore, it is called deep-sea fishing. Industrial fishing is modern, export oriented, and partly dominated by foreign companies.

2.1 Small-scale Commercial Fishing

Small-scale commercial fishing may be divided into 5 groups: coastal fishing, estuarine fishing, river fishing, lagoon fishing, and swamp and creek fishing.

2.1.1 COASTAL FISHING

Coastal fishing consists of banknet fishing and driftnet fishing. In banknet fishing, the fishers use nets 1,000 to 2,000 m in length and 1.20 m wide. These are attached to poles that are stuck into the mud. At high tide, the fishers enclose a section of the mudflat in this way and point the ends of the net toward shore. When the water ebbs from the flat, they collect the fish stranded behind the net with a "mud sledge."

In driftnet fishing, fishers use nets made with spaces 15 to 20 cm wide when fully extended, and 30 rows high (1.20 to 1.40 m), or nets with spaces 5.0 to 7.5 cm wide and 50 rows high (1.10 to 7.0 m). They use them at depths of 1 to 7 m, and pull the nets in every 6 to 10 hours. This method is less laborious than banknet fishing.

The main species of fish caught by coastal fishers are sekubi (*Microgobias furnieri*) and banban (*Cynoscion acoupa*). In this type of fishing, piakas (canoes) and the "open" and "closed" Guyanese-type boats are used. The "open" Guyanese boat has an outboard motor, while the "closed" type has an inboard motor allowing more room for the fishers.

2.1.2 ESTUARINE FISHING

In this type of fishing, traps and lines are used. Traps are used to harvest shrimp using the ebb and flow of the currents. A series of traps are placed side by side. The trap nets are 7 m long and are attached to two poles. They are placed in such a way that the mouth of the trap faces the current, while the bag hangs loosely and is distended by the current. At fixed times, the bag is raised and its contents (shrimps and small fish) are emptied into the boat.

In line fishing, a long line with short sidelines bearing 200 to 300 fishhooks is deployed. The ends of the long line are attached to buoys, the most upstream buoy is anchored to the bed of the estuary. The fishers move up and down the line to remove the fish and rebait the hooks. The principal bait is shrimp. The catch is mainly scaleless fish. During the low season for line fishing (December-April), many fish are caught with banknets in the river mouths. Why this is so is not precisely known.

2.1.3 RIVER FISHING

In river fishing, seines or dragnets are used. Seine fishing is practised only in the lower rivers, where there are no obstacles in the riverbed. The net is 150 to 200 m long, about 8 m deep and, when extended, has spaces 7.5 cm wide. It has a mesh bag in the middle. As the boat sails the net is set out in a circle, and is finally drawn in by hand. The catch is made up mainly of scaleless fish such as jarabaka (*Arius parkeri*).

In dragnet fishing the nets used are 40 m long and 2 m deep, with 1.5 m poles attached to each extremity. The net is plied by two fishers, one of whom sits in the boat while the other wades through the water. They travel a distance of about 100 m in the water and then bring the poles together, enclosing the fish. The net is then emptied into the boat.

2.1.4 LAGOON FISHING

Lagoons are shallow reservoirs of brackish water near the coast. They serve as spawning grounds for a large number of fish and shrimp species. The most important species caught in the lagoons are snook (*Centropomus spp.*), quetman (*Mugil spp.*), and tilapia (*Oreochromis mossambica*). Fish traps are used in the canals that empty into the lagoons, while gillnets are used in open stretches of water.

2.1.5 SWAMP AND CREEK FISHING

Commercially, this type of fishing is viable when high-priced fish such as kwikwi (*Hoplosternum spp.* and *Callichthys callichthys*) or anjumara (*Hoplias macrophthalmus*) can be caught. Traps, hooks, nets, basket traps, springhooks and lines are used.

2.2 Industrial Fishing (Deep-sea Fishing)

In contrast to inland fishing, sea fishing demands high investment, the highest item of which is the purchase of a seaworthy vessel. Therefore, this type of fishing is not undertaken by small entrepreneurs.

Since 1974, more than 100 trawlers have made Paramaribo their home port each year. In 1984, most of this fleet sailed under the Korean (84), Japanese (27) and Surinamese (22) flags. In addition, 21 ships flying the Panamanian flag, 7 flying Venezuelan colors and 4 under the US flag fished in Suriname's waters. The target catch was shrimp. A drastic reduction in the number of red snapper (*Lutjanus purpuratus*) off the Venezuelan coast, the result of overfishing, led Venezuela to look

Table 1 AMOUNT OF SEAFOOD HARVESTED BY SMALL-SCALE FISHING, WHOLESALE AND RETAIL VALUES

Type of Catch	Measures	Units	1975	1977	1979	1981	1983
Shrimp	Amount	tons	226	189	321	144	123
	Supply value	SI '000	184	250	383	200	214
	Market value	SI '000	289	367	545	293	323
Crabs	Amount	tons	56	25	30	37	33
	Supply value	SI '000	44	38	50	56	54
	Market value	SI '000	72	53	81	90	85
Sea fish (salmon)	Amount	tons	9	0	-	-	-
	Supply value	SI '000	3	0	-	0	-
	Market value	SI '000	4	0	-	-	-
Coastal fish (banban, jarabaka, snook, wetwet, kandratiki)	Amount	tons	2 049	1 844	2 234	1 942	2 084
	Supply value	SI '000	1 458	1 690	2 289	2 348	2 514
	Market value	SI '000	2 333	2 534	3 471	3 637	3 879
River and brackish water fish (aarder, kubi, trapun)	Amount	tons	132	112	320	249	155
	Supply value	SI '000	177	205	554	560	405
	Market value	SI '000	263	314	818	911	635
Swamp fish (kwikwi, walapa, krobia)	Amount	tons	140	64	64	72	72
	Supply value	SI '000	350	176	266	219	322
	Market value	SI '000	533	263	378	378	537
Miscellaneous	Amount	tons	23	49	1	24	84
	Supply value	SI '000	14	40	1	35	136
	Market value	SI '000	23	27	2	52	204
Total	Amount	tons	2 635	2 283	2 970	2 468	2 551
	Supply value	SI '000	2 240	2 399	3 543	3 418	3 645
	Market value	SI '000	3 517	3 558	5 295	5 361	5 663

Source: UNCTAD

Salmon	=	<i>Caranx spp.</i>
Banban	=	<i>Cynoscion acoupa</i>
Jarabaka	=	<i>Arius parkeri</i>
Wetwet	=	<i>Cynoscion steindachneri</i>
Kandratiki	=	<i>Cynoscion vitescens</i>
Aarder	=	<i>Mugil spp.</i>
Kubi	=	<i>Plagoscion surinamensis</i>
Trapun	=	<i>Megalops atlanticus</i>
Kwikwi	=	<i>Hoplosternum spp.</i> and <i>Callichthys callichthys</i>
Walapa	=	<i>Erythrinus erythrinus</i>
Krobia	=	Mainly <i>Aequidens spp.</i>

Table 2 SHRIMP FISHING, PRODUCTION AND VALUE

Definition	Units	1975	1977	1979	1981	1983
Numbers of trawlers	each	150	190	153	165	167
Shrimp production	tons	3 544	4 105	3 164	3 777	3 290
Production per trawler	tons	23.6	21.6	20.7	22.9	19.7
Value of shrimp produced	SI '000	18 593	43 308	55 569	73 915	-
Value per kg	SI / kg	5.25	10.55	17.56	19.57	-
Shrimp exports	tons	3 448	3 824	3 116	3 731	3 368
Value of shrimp exported	SI '000	23 671	51 586	54 725	91 298	3 630
Value per kg	SI / kg	6.87	13.49	17.56	24.47	-

Source: Fisheries Service

3. FISH PROCESSING

The main methods of processing fish are freezing, salting, drying, and smoking. Before processing, the fish is often filleted (sliced parallel to the backbone). Freezing preserves the taste of the fish most effectively. In smoking, the preservation adds to the color and flavor of the fish.

4. ECONOMIC SIGNIFICANCE

Suriname underutilizes fish as a natural resource. Only 30% of all fish caught are brought to port. This percentage, which amounts to some 4,000 tons, is only about 10% of the potential catch, which is estimated at 38,000 tons per year. This lack of development is attributed to inadequate shore facilities and credit, as well as the absence of a good marketing and distribution system. Only in the commercial sea shrimp sector are activities planned on a large scale. International markets for shrimp include the United States and Japan. (For an explanation of new fishery projects, see Map F1 and related text.)

5. PROBLEMS IN THE FISHERY SECTOR

Shrimp fishing uses closely knit nets, with spaces of 5 cm. However, these nets also bring up many fish. Owing to the scarce freezing space, however, only the more valuable shrimp are kept. At most, about 1,500 tons of by-catch are saved and brought to shore annually. The rest is thrown overboard.

There is little monitoring of fishing activity in the exclusive economic zone, either for compliance with the licenses granted or illegal fishing (poaching) by foreign fishing boats. Because of the low level of surveillance, less shrimp are brought to port than are caught, because the fishers sell the shrimp to passing ships to obtain extra private income.

Since sea fishing, especially trawler fishing, is becoming increasingly expensive as a result of the high price of fuel and lubricants, overfishing, seasonal fluctuations, and the migratory patterns of fish and shrimp, more thought is being given to finding solutions through aquaculture. Already, N.V. Surland (a parastatal company) has completed an experiment on the breeding of freshwater shrimp.