The Suriname
Country Overview

1. Country Context

Location and Administration

Suriname is located on the north eastern coast of South America and lies between latitude 2° and 6° N and between longitude 54° and 58° W. It is located between Guyana in the west, French Guyana in the east, Brazil in the south and has the Atlantic Ocean as the northern boundary.

The country has an area of 163,270 km^2, of which 90% is covered with tropical rain forest. With a population of approximately 600,000 people, Suriname is one of the most sparsely populated countries in the world. A larger part of the population lives in the north of the country, mainly in the coastal area, in the districts of Paramaribo, Wanica and Nickerie.

Rainfall and freshwater

The annual rainfall ranges from 1,950 mm in the west of the country to 3,000 mm in the higher region of Tafelberg. Rainfall in Paramaribo averages 2,250 mm.

Suriname is one of the top ten countries in the world with sufficient freshwater.

In 2013 Suriname had 237,000 m^3 of freshwater per inhabitant, compared to 6400 m^3 for the world average. [1]

Suriname has 7 large rivers which are connected to the sea. Most rivers are formed from a confluence of 2 rivers ea. Marowijne river is the confluence of the Lawa and Tapanahony rivers.

[1] https://www.dbsuriname.com/2013/03/22/surinaamse-waterpotentie-bewaken/#:~:text=Suriname%20behoort%20tot%20de%20top,6.400%20m%C2%B3%20voor%20het%20wereldgemiddelde.

Drinking water project

In 2008 Suriname made a Water Supply Master Plan that was identified by the government of the country as a necessary project to determine the infrastructure investment and institutional strengthening needed to meet growing water demands for the entire country to the year 2024. There is a reference in this document to Millennium Development Goal (MDG) Number 7, which points to ensuring environmental sustainability, and in particular Target 7.8 is to reduce by half the proportion of population using an improved drinking water source by 2015, or at least 85% of the population in Suriname. This goal is met in the urban areas, where over 95% of the population have access to an improved drinking water source. However, the goal was not met in rural areas in 2015, because less than 70% of the population had access to an improved drinking water source. [2] This number has since been improved as can be seen in the chart below from the General Bureau of Statistics.

Table WS.1.1: Use of improved and unimproved water sources (1 of 2)

Percent distribution of household population according to main source of drinking water and percentage of household population using improved drinking water sources, Suriname MICS, 2018

	Main source of drinking water																		
	Improved sources											Unimproved sources							
	Piped water																		
	Into dwelling	Into yard/plot	To neighbour	Public tap/ stand-pipe	Tube-well/ bore-hole	Protected well	Protected spring	Rain-water collection	Tanker truck	Bottled water[4]	Sachet water[4]	Unprotected well	Unprotected spring	Surface water	Other	Missing	Total	Percentage using improved sources of drinking water[1]	Number of household members
Total	58.9	10.5	1.0	0.5	0.3	0.7	0.7	16.8	0.2	8.2	0.4	0.2	0.1	0.9	0.6	0.0	100.0	98.2	30512
Area																			
Urban	70.2	8.5	0.9	0.5	0.2	0.6	0.5	8.7	0.2	8.5	0.4	0.0	0.1	0.0	0.7	0.0	100.0	99.2	22383
Rural Coastal	38.1	18.2	1.3	0.8	0.6	1.1	0.9	25.0	0.1	11.0	0.6	0.7	0.2	1.0	0.5	0.2	100.0	97.5	5408
Rural Interior	7.9	11.6	0.6	0.3	0.3	0.4	2.2	67.1	0.0	0.4	0.3	0.3	0.5	7.7	0.6	0.0	100.0	91.0	2722
Region																			
Paramaribo	78.1	9.9	0.8	0.3	0.0	0.4	0.1	2.4	0.1	7.4	0.0	0.0	0.0	0.0	0.4	0.0	100.0	99.6	11483
Wanica	63.9	8.2	1.2	0.9	0.3	1.0	0.7	12.9	0.1	8.5	1.0	0.0	0.1	0.0	1.1	0.0	100.0	98.7	8679
Nickerie	77.5	3.9	0.4	0.1	0.0	0.0	0.5	3.3	0.0	13.5	0.2	0.0	0.0	0.2	0.5	0.0	100.0	99.3	1785
Coronie	59.3	6.8	0.7	0.0	0.0	0.0	0.0	3.2	0.2	29.8	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	215
Saramacca	34.3	11.7	0.3	0.0	1.5	0.8	0.4	34.9	0.2	13.9	0.0	0.1	0.0	0.0	1.9	0.1	100.0	97.9	1143
Commewijne	23.1	4.1	0.2	0.4	1.2	0.9	1.6	48.2	1.1	16.9	0.4	0.9	0.3	0.1	0.3	0.4	100.0	97.9	2014
Marowijne	32.8	22.9	0.9	1.4	0.1	2.2	0.3	28.7	0.0	5.8	0.8	0.8	0.6	2.9	0.0	0.0	100.0	95.7	1017
Para	37.6	33.9	3.8	1.3	0.4	1.4	1.8	12.7	0.0	3.5	0.9	1.1	0.3	1.3	0.1	0.0	100.0	97.3	1454
Brokopondo	13.5	19.4	0.8	0.6	0.0	0.0	1.4	61.3	0.0	0.4	0.0	0.6	0.0	1.2	0.7	0.0	100.0	97.4	1364
Sipaliwini	2.2	3.8	0.4	0.0	0.6	0.8	2.9	72.9	0.0	0.3	0.5	0.0	0.9	14.1	0.5	0.0	100.0	84.5	1358
Education of HH head																			
ECE, Pre-primary or None	35.2	16.4	1.7	2.3	0.2	0.7	1.1	33.0	0.8	2.0	0.7	0.3	0.6	4.2	0.8	0.0	100.0	94.1	2717
Primary	48.0	14.4	1.4	0.5	0.3	1.0	0.5	25.6	0.0	5.3	0.3	0.2	0.1	1.4	1.1	0.0	100.0	97.3	7806
Lower Secondary	64.7	9.9	0.9	0.5	0.2	0.6	0.6	13.4	0.1	7.5	0.5	0.2	0.1	0.3	0.5	0.1	100.0	98.9	11091
Upper Secondary	71.1	5.4	0.3	0.0	0.1	0.3	0.5	7.1	0.1	14.4	0.2	0.2	0.0	0.0	0.4	0.0	100.0	99.4	4556
Higher	73.7	2.5	0.0	0.0	0.8	0.6	1.1	5.1	0.2	15.7	0.1	0.0	0.0	0.0	0.1	0.0	100.0	99.9	2428
Missing/DK	56.4	11.1	1.6	0.4	0.6	0.9	1.2	15.5	0.3	8.7	1.2	0.0	0.7	0.6	0.8	0.1	100.0	97.9	1915

2. SDG 6 focused WASH sector situation analysis

The SDG targets aimed at WASH are 6.1 - 6.3:

6.1: By 2030, achieve universal and equitable access to safe and affordable drinking water for all.

6.2: By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.

[2] Suriname Water Supply Master Plan

6.3: By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally.

Suriname is working on these targets by undertaking the following key WASH activities[3]:

- There was a consensus that an intersectoral water task force should be created to discuss priorities and operationalize them across the different ministries involved.
- Creating and leading a multi-disciplinary coordination platform on water resources management and water and sanitation services, or a Water Task Force working group. The platform, or taskforce/working group, would provide an overview of rules and responsibilities in water and sanitation service provision and water resources management and drive the action plans and recommendations arising from the workshop forward.
- **Policy and Strategy**: to define a 2030 Vision for water and sanitation for Suriname, which can provide a long-term strategic horizon for planning and priorities, for all future governments.
- **Capacity development**: to develop a Capacity Development Plan for the sector, and a Human Resources Management Plan in the public sector, based on the objectives of the 2030 Vision.
- **Decentralization**: accelerating decentralization efforts and test service delivery approaches that are suitable where currently no service providers exist

The Proportion of population using safely managed sanitation services, including a hand-washing facility with soap and water is currently being measured by the proportion of the population using a basic sanitation facility which is not shared with other households and where excreta is 'safely disposed in situ' or treated off-site. Excreta from improved pit latrines and septic tanks that is never emptied (or don't know if ever emptied) or is emptied and buried in a covered pit is classed as 'safely disposed in situ'. 'Improved' sanitation facilities include: flush or pour flush toilets to sewer systems, septic tanks or pit latrines, ventilated improved pit latrines, pit latrines with a slab, and composting toilets.[4]

Proportion of Population with Access to Improved Sanitation Facilities in Suriname, 2000, 2006, 2010 and 2018[5]

Population	2000	2006	2010	2018
Urban	99.1	97.9	97.8	98.7
Rural Coastal	98.3	91.6	94.1	93.7
Rural Interior	30.5	33	41.5	61.4
Total Suriname	**88**	**89.9**	**91**	**94.5**

[3] A coordination platform for the Water Sector in Suriname: Follow-up from the WASH BAT in Paramaribo in October 2019 February 11th, 2021
[4] Multiple Indicator Cluster Survey 2018 - Survey Findings Report
[5] SDG 6 sanitation data from the General Bureau of Statistics

Proportion of Population with Access to Improved Sanitation Facilities per District,2010 and 2018

District	2010	2018	*Change*
Paramaribo	97.9	98.5	0.6
Wanica	98.3	98.9	0.6
Nickerie	99.4	99.8	0.4
Coronie	98	99.6	1.6
Saramacca	83.4	97.3	16.7
Commewijne	94.2	97.9	3.9
Marowijne	88.4	85.5	-3.3
Para	91.6	91.1	-0.5
Brokopondo	55.5	71.7	29.2
Sipaliwini	37	51.1	38.1
Suriname	**91**	**94.5**	**3.8**

The tables above represent SDG 6 sanitation data from the General Bureau of Statistics.

3. National WASH sector SDG 6 vision, objectives, targets and future projects

Suriname is working hard on creating and optimizing policy to better the WASH (Water, Sanitation and Hygiene) sector. Proof of this can be seen in the establishment of the Water Directorate at the Ministry of Natural Resources. Part of the mission statement of this directorate is gaining insight into and keeping track of criteria and changes in international water policy and the operation of the provisions in the various sector-related agreements and the timely reporting and advice on this (including ACTO, IWRM and others). Another one of the responsibilities of this directorate is to establish and maintain a sound coordination structure for integrated water management. This is why a new department has been set up, the Integrated Water Resource Management department. The department is responsible for the coordination of administrative and policy matters regarding integrated water management and the coordination of policy in the field of integrated water management with relevant actors and fulfilling a bridging function[6] between other stakeholders.

[6] Taakstelling en Toelichting Ministerie van NH 260820 v.04

The goal is to work on capacity strengthening of water professionals in Suriname, in line with the Integrated Water Resource Management (IWRM) Action Plan in 2022 in collaboration with the UNDP, GCCA+ Phase 2. The GCCA+ Phase 2 project will also support actions and processes leading to the coordination of Integrated Water Resource Management (IWRM). Another activity of the project, relating to the water sector is to assess and monitor current uses of surface water (incl. area and water quality) with the objective to determine proposed water quality standards. This will be done in collaboration with the Ministry of Public Works. The project will also review and provide recommendations to improve existing regulatory framework on water management in light of Integrated Water Resource Management (IWRM) requirements and support actions and process leading to coordination of Integrated Water Resource Management (IWRM) [7]. The Ministry of Spatial Planning and Environment is also an important member of the GCCA+ Phase 2 project.

In cooperation with the UNICEF, Suriname is currently also working on exploring the possibility of forming a coordination platform for Water. There have been several workshops with stakeholders to find out how this platform should be created, where roles and responsibilities were discussed. A limited number of priority actions also had to be set and the stakeholders had to specify which organization would take the lead on each. And finally, the scope of the coordination platform was discussed. [8] After the workshops the consultants made a draft Terms of Reference (ToR) document to solidify the information, which after approval will be used to set up the coordination platform.

The government's policy is always aimed at safeguarding the availability of good, healthy and affordable drinking water in the interest of healthy development of the community. In the context of the United Nations Sustainable Development Goal 6, Clean Water and Sanitation for all to be achieved by 2030, there will be a need to increase awareness among policy makers, society as a whole, with a special emphasis on young people, women and disadvantaged areas. Around 2030 the implementation of integral management of water resources should be a fact, as well as the accessibility of water for all Surinamese. As a result, the establishment of a directorate specifically focused on water policy, which goes beyond mere water supply, is of paramount importance.

The guiding principle for the drinking water policy is the further realization of the recommendations as contained in the Suriname Water Supply Master Plan 2011 – 2024 and its updating. To this end, new sources will again be tapped in 2022 and the water supply network will be further expanded with, among other things, the extraction of surface water, in order to guarantee the drinking water supply for Suriname. The replacement and expansion of the water supply network in the relevant districts will also be continued. In the coming years, the emphasis will be placed on optimizing the installed infrastructure (pipelines, sources and purification) as well as expanding the number of connections realized throughout Suriname.

In guaranteeing good and safe drinking water for society, the government is supported by the Surinamese Water Supply Company (SWM) and the Water Supply Service (DWV). Due to the takeover of the water stations in the coastal plain of Suriname from 2017, the SWM now bears

[7] GCCA+ 2022 Workplan
[8] Suriname WASH & WRM coordination platform - FEB2021 - v7_11 febr 2021

responsibility for the water supply in almost the entire coastal plain, while the DWV mainly operates in sparsely populated areas (districts) and inland.

In 2022, the Water Directorate will make the necessary preparations for the implementation of an integrated water management system and management plan. The draft laws that have already been prepared will be reviewed and presented to the National Assembly (DNA) for consideration:

1. “Supervision of Drinking Water Quality” (with Explanatory Memorandum);
2. “Groundwater Act” (with Explanatory Memorandum);
3. “Groundwater Protection Areas” (with Explanatory Memorandum).

These draft laws will serve as first instruments for the Water Directorate for a better management structure of the water resources in Suriname. Furthermore, the development of a 'National Water Marketing and Export Strategy' for Suriname will be started. This strategy will mainly have to help guide the export potential of our water to the region and elsewhere and create a source of income for Suriname from exporting water.

The national report on the status of IWRM implementation 2020 9in Suriname generated the following results based on SDG indicator 6.5.1, partially because there is no formal policy regarding IWRM in Suriname yet:

Section	**Average Scores** (all values rounded to nearest whole number)
Section 1 Enabling environment	21
Section 2 Institutions and	22
Section 3 Management	33
Section 4 Financing	17
Indicator 6.5.1 score **= Degree of IWRM implementation (0-100)***	**23**

4. Eliminating Inequalities

As per MICS 2018[i] Suriname still sees disparities in the WASH sector, mostly in the field of sanitation. At national level 89% of households make use of improved sanitation facilities which are not shared with other households. There is a high inequality by area: 94% for urban households versus 47% for the interior. Furthermore, 22% of the interior households has no sanitation and 16% of the existing sanitation is classified as unimproved. There is still high level of open defecation in the interior district Sipaliwini; at least one third of the households.

[9] Country Survey Instrument for SDG Indicator 6.5.1 - The Foundation Waterforum Suriname

Table WS.3.2: Use of basic and limited sanitation services (1 of 2)

Percent distribution of household population by use of private and public sanitation facilities and use of shared facilities, by users of improved and unimproved sanitation facilities, Suriname MICS, 2018

	Users of improved sanitation facilities					Users of unimproved sanitation facilities							
		Shared by					Shared by						
	Not shared[1]	5 households or less	More than 5 households	Public facility	Missing/DK	Not shared	5 households or less	More than 5 households	Public facility	Missing/DK	Open defecation (nofacility, bush,field)	Total	Number of household members
Total	88.6	4.2	0.8	0.6	0.2	2.7	0.5	0.1	0.1	0.0	2.1	**100.0**	30512
Area													
Urban	93.7	3.8	0.6	0.4	0.3	0.9	0.2	0.0	0.0	0.0	0.1	100.0	22383
Rural Coastal	88.4	4.6	0.4	0.3	0.0	4.7	1.0	0.3	0.0	0.0	0.2	100.0	5408
Rural Interior	47.1	6.9	4.1	3.2	0.2	13.2	1.6	0.6	0.7	0.1	22.2	100.0	2722

When it comes to basic drinking water, at national level 98% of the population has access to basic drinking water. The rural interior area has the lowest level of access (91%). Only 57% of the households are using drinking water free from contamination. Looking at basic hygiene, we see that the availability of a handwashing facility on premises with soap and water at national level and by area is about 65%. About 8% of the households did not have a place to wash hands using soap.

Table WS.3.6: Drinking water, sanitation and handwashing ladders (1 of 2)

Percentage of household population by drinking water, sanitation and handwashing ladders, Suriname MICS, 2018

	Percentage of household population using:																
	Drinking water					Sanitation					Handwashing[4]						
	Basic service[1]	Limited service	Unimproved	Surface water	Total	Basic service[2]	Limited service	Unimproved	Open defecation	Total	Basic facility[3]	Limited facility	No facility	No permission to see /other	Total	Basic drinking water, sanitation and hygiene service	Number of household members
Total	97.5	0.7	1.0	0.9	**100.0**	88.6	5.9	3.4	2.1	**100.0**	63.8	7.5	8.1	20.7	**100.0**	56.0	30512
Area																	
Urban	98.5	0.7	0.8	0.0	100.0	93.7	5.1	1.2	0.1	100.0	62.4	6.2	8.8	22.6	100.0	58.2	22383
Rural Coastal	96.7	0.8	1.6	1.0	100.0	88.4	5.3	6.1	0.2	100.0	68.8	8.7	5.0	17.5	100.0	59.8	5408
Rural Interior	90.6	0.3	1.4	7.7	100.0	47.1	14.3	16.3	22.2	100.0	65.2	16.0	7.9	11.0	100.0	30.7	2722

Comparing various population subgroups show that the poorest households and households where the heads have the lowest educational level, have the lowest access to basic drinking water, while households belonging to the richest quintile or household where the heads have the highest educational level, have relatively higher access to water.

Nationally 96% of women in households indicate they have a private place at home to change and wash during their menstruation. Whereas nationally, 93% of women indicate that they use appropriate material during menstruation and 89% indicate they have a private place and appropriate material. This percentage is just 76% for the rural interior. Around 19% of women across all ages indicate to have been excluded from activities during their menstruation. These percentages dot not vary a lot based on the region, educational level and wealth quintile.

Table WS.4.1: Menstrual hygiene management (1 of 2)

Percent distribution of women age 15-49 years by use of materials during last menstruation, percentage using appropriate materials, percentage with a private place to wash and change while at home and percentage of women using appropriate menstrual hygiene materials with a private place to wash and change while at home, Suriname MICS, 2018

	Percent distribution of women by use of materials during last menstruation									
	Appropriate materials[A]									
	Reusable	Not reusable	DK whether reusable /Missing	Other/No materials	DK/ Missing	Total	Percentage of women using appropriate materials for menstrual management during last menstruation	Percentage of women with a private place to wash and change while at home	Percentage of women using appropriate menstrual hygiene materials with a private place to wash and change while at home[1]	Number of women who reported menstruating in the last 12 months
Total	3.5	89.2	0.1	6.9	0.2	100.0	92.9	96.0	89.4	6441
Area	2.8	91.9	0.1	4.9	0.3	100.0	94.8	96.0	91.3	4866
Urban	3.1	86.2	0.1	10.5	0.1	100.0	89.4	97.4	87.3	1099
Rural Coastal	12.0	68.9	0.7	18.4	0.0	100.0	81.6	92.8	75.5	475
Rural Interior										

To eliminate the inequalities in the sector, Suriname has started with a number of projects, especially in the interior, to purify surface water for consumption must be expanded. As early as 2021, a start will be made to supply drinking water to the villages of Pamboko, Kajapati and Guyaba by means of a pipeline network. In the period 2022-2026, a large part (of the more than 50 villages with more than 50,000 inhabitants) along the upper reaches of the Suriname River must have access to clean drinking water. Suriname is also in the process to adopt three water laws (Drinking Water Quality Supervision, Groundwater Act and the Groundwater Protection Areas), to implement Integrated Water Resources Management and protect groundwater. The implementation of programs for protection against hazardous substances, for example, mercury, pesticides, herbicides and other harmful substances, application of environmentally friendly methods that do not contaminate drinking water supplies and participation in international cooperation on relevant environmental and climate treaties are also part of the strategic action points for 2022-2026.[10]

5. Water, sanitation and hygiene financing

The Special Fund for Dutch Aid (SFDA) provided €16 Million for Suriname to finance some of the projects outlined in the 2002 Coastal Master Plan, however the assistance was insufficient to undertake all the investments identified. In addition, the recommendations have since become outdated, and are now targeted for update by the government of Suriname.

In 2021, the GCCA+ Phase 2 project from the UNDP made $1,012,000 available to Suriname for improved regulatory framework, awareness and capacity for sustainable management and use of mangroves and coastal ecosystems and $478,000 for improved knowledge on the Surinamese mangroves and on the effects of climate change on the coastal ecosystem and wider coastal area and increased capacity of Nickerie and Coronie districts for effective and immediate gender responsive climate actions. This project also includes research in hydrology and water quality. In 2022 Suriname will keep working with the GCCA+ Phase 2 project. The budget that has been agreed upon is $2,128,500. In this year the focus will still be on the aforementioned activities, but also on executing robust awareness programs on Integrated Water Resource Management (IWRM) and Integrated Coastal Zone Management (ICZM) for policy makers and media.

[10] Meerjaren Ontwikkelingsplan 2022-2026 van de Republiek Suriname

Government projects

1. Loan concluded with the Agence Française de Développement (AFD) - Project "Water Supply Infrastructure Improvement project for greater Paramaribo, Wanica, Para and Moengo etc. The loan was signed on 15 May 2015. The loan amount is Euro 12.5 million.
   General Objective: To improve the infrastructure for the water supply in Paramaribo, Wanica, Para and Moengo, by providing support for the implementation of the "Masten Plan" on the water supply in Suriname.
   The project provides support to the Water Sector.
2. Caribbean Investment Facility (CIF) of the European Union - Grant for "towards sustainable water Suriname" project (Financing Agreement CSR 1014 03 D). This is a grant of Euro 3 million for the project "Reinforcement of the Water sector in Suriname".
   General objective: This project aims to support access to safe and sustainable water supplies in the coastal area of Suriname.
3. Caribbean Development Bank (CDB) and state budget project: Feasibility Study to Upgrade Water Supply Facilities. This loan was signed on November 22, 2017. The loan amount is USD 498,850. The government must provide USD 85,000.
   General Objective: This project aims to carry out a feasibility study to improve the water supply in Paramaribo, Wanica, Para and Nickerie districts.
4. CDB - Grant Agreement "Feasibility Study to upgrade Water Supply Facilities".
   The grant was signed on November 22, 2017. The amount is USD 249,700. (projects 3 and 4 are technically the same project but the project consists of a loan part and a donation part.
5. IDB - for an amount of USD 25 million for the project "Water Supply Modernization Program". The loan was signed on February 22, 2022.
   Program objective: The general objective of the proposed operation is to improve efficiency, quality, and financial and environmental sustainability of the potable water services provided by SWM.
6. Saramacca Canal System Rehabilitation Project.
   Loan amount: USD 35 million. The loan was signed with the World Bank Group on April 11, 2019.
   Overall Objective: To reduce flood risk for the people and assets in the greater Paramaribo area and to improve the operation of the Saramacca Canal System (SCS).[11]
7. Set up a sanitary landfill
   Based on a baseline and feasibility study delivered under the GEF 5558 project in 2018, it was recommended to close the Ornamibo Dumpsite and instead establish a sanitary landfill in its proximity for Greater Paramaribo. Since then, mechanisms for financing are being explored to realize this, however, without any success so far.

[11] The Ministry of Finance and Planning

Estimated cost based on study: US$ 15.000.000,-

There are also other programs, like the sanitary landfill project mentioned above, being developed. Some of these are: the national medical waste assessment, contaminated sites and POP (Persistent Organic Pollutant) projects and the national integrated waste management plan.[12]

6. Country priorities and commitments based on the NAP RWSSH 2019-2023

The National Adaptation Plan positions Suriname's priorities for action in the discourse with the multilateral and donor communities. It provides a basis for exploring various climate finance modalities suitable for the priority actions that need to be taken. Such modalities include blended finance, climate bonds, debt-for-swap, risk insurance and private sector funding.

At the same time, the NAP calls for intensive ramping up of efforts in cross-cutting sectors of environment, disaster risk reduction and spatial planning in the immediate term, but having built that foundation early, will require less emphasis in the longer run. The third stream or foundation supports sectors of education and health, which will have sustained climate adaptation efforts throughout.

This NAP also emphasizes attention to the reality that implementation of these strategic and sectorial objectives are dependent on precursors of (1) a new focal point for leadership of NAP implementation; (2) strengthening the capacity in ministries with existing mandates relevant to climate adaptation; and (3) effective systems of collaboration among (1) and (2) with resources to produce results. The NAP also therefore discusses the new and evolving inter and intra ministerial structures relevant to achieving national objectives within resource boundaries and a practical timeframe. The objectives and actions laid out in the NAP will be implemented according to an estimated timeframe and roadmap.

7. Mechanisms for review and follow-up on the priorities and commitments

The NAP covers adaptation needs at two levels. First are the adaptation priorities at the strategic national level that will strengthen efforts across the board, now and in the future. The strategic level priorities covered under the NAP are: 13

(1) Institutional arrangements, policies and capacities able to lead and coordinate national and sub-national climate change adaptation;
(2) Data and information collection systems to fully support national and sub-national climate change impacts, vulnerability and adaptation decision-making;
(3) The integration and institutionalization of climate change adaptation in broader Surinamese economic development policies, plans and programs;

[12] The Ministry of Spatial Planning and Environment

(4) National technical capacity that is fully trained and skilled at leading and implementing Suriname's climate change adaptation actions;
(5) Climate change adaptation that respects Surinamese society and culture and reduces gender and social inequities;
(6) Identifying and accessing financing and investment especially for innovation driven climate change adaptation technologies.

8. Possible barriers towards the achievement of the commitments and approaches to overcoming them

The SWOT analysis of the drinking water supply and Suriname's nature and environment [13] has shown that the effects of climate change, the social and environmental effects of economic activities (including agriculture and mining) can make the availability and quality of surface and groundwater resources unusable. Other threats are sea level rise and extreme weather events due to climate change, increased effects of mercury in the environment, salinization due to ingress of salt water and effects of environmental damage from mining, forestry and agriculture. This is why the action points mentioned under chapter 4 are so important. These actions must prevent surface and groundwater from becoming unusable.

Another important barrier for Suriname is the available funds. Programs to achieve anything cost money and Suriname doesn't always have the necessary funds. That's why Suriname aims to collaborate with various organizations. Some international organizations that Suriname is currently working with are UNDP, UNICEF and IDB.

[13] Suriname Water Supply Master Plan