MASTERPLAN FOR THE COASTAL ZONE OF SURINAME
SURINAME
BASIC (GEOGRAPHICAL) DATA

(1)

• Location: Northern coast of South America, bordering French Guyana in the east, Brasil in the south, Guyana in the west and the Atlantic ocean in the north

• Area: 163,270 sq km
BASIC (GEOGRAPHICAL) DATA

(2)

- Population: appr. 420,000 (of which about 70% lives in the district Paramaribo & the neighbouring district Wanica)
- Capital: Paramaribo
- Population with access to drinking water (source PAHO/WHO, 1996):
  - Urban: 99%
  - Rural: 56.1%
COASTAL ZONE OF SURINAME
DRINKING WATER SUPPLY IN SURINAME

- NV Surinaamsche Waterleiding Maatschappij (SWM):
  - founded in 1930
  - responsible for the drinking water supply in the (semi-) urban areas in Suriname (see map)

- Water Supply Service of the Ministry of Natural Resources:
  - responsible for the drinking water supply in the remainder of the coastal zone and the hinterland
GOVERNMENT POLICY ON DRINKING WATER SUPPLY (2001-2005)

1. Sustainable and efficient drinking water supply
2. Protection and rational management and use of the drinking water sources
3. Promotion of an efficient production and consumption of drinking water
GOVERNMENT POLICY ON DRINKING WATER SUPPLY (2001-2005)

4. Safe drinking water at economically sound, yet reasonable tariffs (access to safe drinking water for 95% of the urban population and 70% of the rural population)

5. Control and management of the organisation of the drinking water supply (merging the service areas of the SWM and the Water Supply Service)
OVERVIEW

• Drafted in January 1998 by the SWM (updated in September 1999)
• Framework for the strategic policy of the SWM regarding the drinking water supply:
• Results:
  – rehabilitation of drinking water systems in the coastal zone
  – one drinking water company in the coastal zone (merging of SWM and Water Supply Service, to be completed by 2010)
• Investment costs: 97 million Dutch guilders (= 44 million EURO). Investment costs of rehabilitation of drinking water systems outside SWM service areas based on information from Water Supply Service (proven to be unreliable)
COSTS AND FINANCING

(2)

• Financing:
  – SWM 50%
  – Grant 25%
  – Revolving fund 25%
MASTER PLAN FOR THE COASTAL ZONE
PURPOSE

Structure (planning cycle) for the planning of the necessary investment projects and activities (will serve as input for the SWM’s annual plans)
BASIC ASSUMPTIONS (1)

- Population growth:
  Present:
  - in 2000, 2 % in Greater Paramaribo and 1 % in the remaining districts (source: Demographic Data Suriname 2000).
  Future (prognosis):
  - annually: 4.5% in Greater Paramaribo and 2% in the remaining districts
BASIC ASSUMPTIONS (2)

- **Coverage:**
  - 95 % in present SWM areas and 75% in future SWM areas (at present Water Supply Service)

- **Water consumption:**
  - increase from 120 l/c/d (2002) to 150 l/c/d (2010)

- **Water quality:**
  - based on standards of World Health Organization (WHO)
BASIC ASSUMPTIONS

(3)

• Water leakages:
  – Maximum of 20%
• Cost price:
  – Maximum of 5% of the minimum income
BASIC ASSUMPTIONS
(4)

- Production figures 2002:
  Greater Paramaribo (including Wanica):
  - 3,000 m³/hour (SWM)
  - 650 m³/hour (Water Supply Service)
PROGNOSIS

Average water demand 2010:
• Greater Paramaribo (including Wanica): 4,500 to 5,000 m$^3$/hour
NECESSARY PRODUCTION CAPACITY IN 2010

• Greater Paramaribo (including Wanica):
  – 7,500 m³/hour (increase in water consumption to 150 l/c/d), with warm and dry days taken into account (peak factor = 1.5)
INVESTMENT SCENARIOS
GREATER PARAMARIBO
(1)

- Variant A: Optimization of the existing production facilities, without solving the existing salinity problems (5,171 m³/hour production capacity by 2010)
- Variant B: Partial solving of salinity problems by closing part of the existing production facilities, which don’t meet the WHO-standards (5,383 m³/hour production capacity by 2010)
Variant C: Complete solving of salinity problems by closing all existing production facilities, which don’t meet the WHO-standards (5,123 m³/hour production capacity by 2010)

Variant D: Optimization of the existing production facilities + partial expansion of production facilities (6,673 m³/hour production capacity by 2010)
INVESTMENT COSTS (GREATER PARAMARIBO)

- Variant A: 38.1 million EURO
- Variant B: 41.9 million EURO
- Variant C: 46.3 million EURO
- Variant D: 51.9 million EURO
INVESTMENT COSTS (REMAINDER COASTAL ZONE)

• Variant A: 25.25 million EURO (new production facility in Nickerie)
• Variant B: 22.89 million EURO (maintain existing production facilities in Nickerie)
CONCLUSIONS

- Greater Paramaribo (including Wanica): at least 41.9 million EURO (cost price 0.50 EURO per m$^3$), with partial solving of salinity problems
- Remainder coastal zone: at least 22.89 million EURO (cost price 0.68 EURO per m$^3$)
BOTTLE NECKS

• Financing:
  – SWM (appr. 26 million EURO)
  – Rest:
    • Commercial loans (risky, due to high inflation rate)
    • Donors (Dutch Treaty Funds, IsDB, etc)
    • “Soft” loans