



**ARUBA**

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**Uw kenmerk:**

**Uw brief:**

**Ons kenmerk:** mvm/alg 1360/09

**Onderwerp:** National Report Aruba: Status quote implementation LBS protocol

**Oranjestad, 8-6-2009**

Geachte Merv. Jacobs,

Hierbij bied ik u de stand van zake omtrent de implementatie van het LBS protocol, welke gerelateerd is met het Duurzame Economische Ontwikkeling Programma 2001-05 en 2006-09.

Het rapport: *National Report Aruba: Status quote implementation Protocol concerning Pollution from Land-Based Sources and Activities (LBS)*, dd June 5th 2009, omvat de projecten Rioolwaterzuiveringsinstallaties, Afvalverwerking, Lucht- en watermonitoring, Strandverbetering en kustbeheer en Voorlichting.

Hopende u voldoende te hebben geïnformeerd, verblijf ik,

Hoogachtend,

drs. C.A.S.D Wever  
Minister van Volksgezondheid, Milieu,  
Administratieve- en Vreemdelingenzaken

Bijlage: National Report Aruba: Status quote implementation Protocol concerning Pollution from Land-Based Sources and Activities (LBS), dd June 5th 2009.

Cc Directie Buitenlandse Betrekkingen

## National Report Aruba

### Status quote implementation Protocol concerning Pollution from Land-Based Sources and activities (LBS)

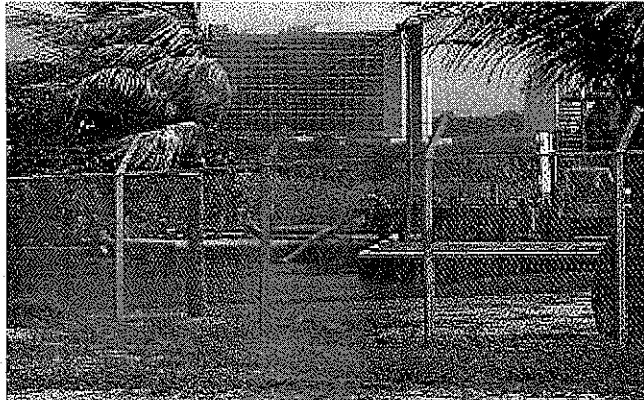
June 5<sup>th</sup> 2009

To address the environmental challenges and in particular the land base sources and activities of pollutions Aruba adopted a multi-year policy plan in 2001. In this multi-year policy plan the following projects were identified and were started: the waste water treatment plants, solid waste management facility, air and water quality monitoring program, beach improvement and coastal zone management institution and an awareness program to support the improvement projects.

#### Advancements, current status and activities.

##### Waste water treatment

Aruba has a long-term wastewater policy plan, this plan was translated in executable projects. Two new waste water treatment plants (WWTP) were projected, one in the middle of the island and another one at the Eastern side of the island. The existing sewage treatment plant at the Western side of the island has been upgraded and expanded, to cope with the growing volume of wastewater, especially from the hotels area.



The quality of the treated water is such that about 3500 m<sup>3</sup> is used daily to irrigate two golf courses at the western side of the island.

The WWTP in the middle of the island at Parkietenbos is in operation since May 2007. This plant processes the wastewater delivered by the septic tank trucks from the whole island. Until now only part of the treated water is reused at the plant itself as process water.



The WWTP at Zeewijk on the Eastern side is in operation since August 2008. With this new plant a very long period of discharging untreated wastewater from the urban area of San Nicolas into the sea has come to an end.



At a very few parts of the island, Aruba still discharges untreated domestic sewage water into the sea. The total volume of directly discharged untreated wastewater adds to less than 1 percent of the total produced wastewater on the island. One of the main goals within the master plan is to get to a zero direct discharge of untreated wastewater into the sea. Another aspect that also has to be studied is the impact of the indirect discharge through the groundwater.

At the refinery and the water and energy plant, they discharge processed industrial water into the sea.

### Solid waste management

Aruba has a solid waste management policy plan; this plan has been used to set the requirements for the waste management improvement project. The government financed the Emergency Action Project 2002-04, where the basic solid waste management facility was installed. This included a private transfer station for waste brought in by the citizen, a registration office with two weight bridges, a small incinerator for carrions, an asbestos cell and a sanitary landfill with four compartments.

A new solid waste management is being constructed. This new facility should complete the exciting management facility and reduce initially the disposal of solid waste (residential and commerce) into the landfill with 50% and in the next phase (after a couple of years) it should reduce the disposal of solid waste into the landfill with 90% (compared with data from 2003).

The new facility will be a material recovery technology combined with a hazardous waste depot. The recyclable materials, like scrap metals, will be sold; the Fluff (soil improving additive) will be used to restore abandoned quarries and soil amendment.

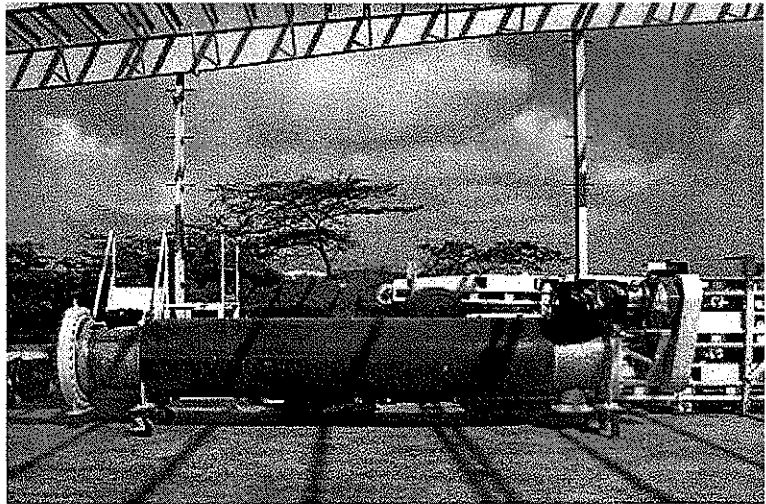
The first phase of this project is scheduled to be finished on July 17<sup>th</sup> 2009.

As described above the first phase consists of reducing the residential and commerce waste that is being disposed in the landfill to minimal 50%, a Hazardous Material Depot, a Car Crusher, a new office for the employees, training of the employees who will run the facility, a Shredder for yard waste and the acquiring of other equipments to complete the solid waste management facility.

The latest status of the new facility (based on Progress Report No. 11, Week May 11<sup>th</sup> 2009) is as follow:

- The process Building is being constructed not finished yet. Work is being done for the tipping floor of the building. The boiler room is still under construction. Roofing panels placed are about 80%. The erecting of the steel building is still on schedule;
- The new office is finished;
- Acquiring of Car crusher is in process;
- Shredder for yard waste not ordered yet;
- Equipments for the process building (WastAway System) has been ordered and most of the equipment has been delivered to the site;

- Auxiliary equipment has been ordered and will be delivered during month;
- Hazardous Material Depot, the Contractor of the project is working on the design;
- Personnel of waste management company have received training abroad and are being trained with the assembly of the equipment on site;
- Highest top of the facility building has been reached on May 20<sup>th</sup> 2009.



The Government of Aruba has been informed that the construction of the facility is on schedule and will be delivered by July 17<sup>th</sup> 2009.

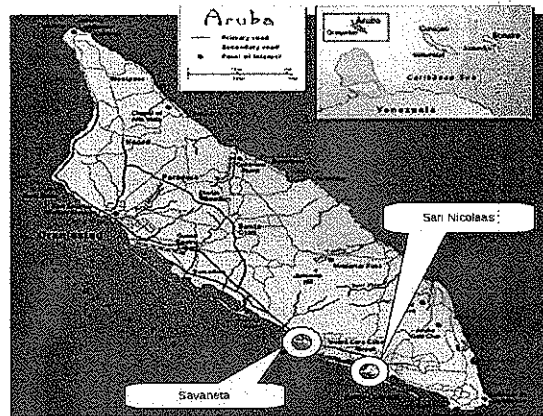
The pictures included show the progress till May 18<sup>th</sup> 2009 of the solid waste management facility at Parkietenbos.

#### Air and water quality monitoring program

Since April 2006 Aruba has a water quality monitoring in place, where we monitor the ten strategic locations along South-West coast line. The results until now are good compared with the Blue Flag standards.

The air quality-monitoring program has not yet been finalized. The equipment is expected to be fully operational in the middle of 2009. Due to technical issues, the expected start-up date (October 2008) could not be met. Extra hardware had to be ordered and some issues relating to the specifics of the locations had to be addressed.

The project set-up consist of two stationary units and one mobile unit (trailer). The stationary units are respectively located at San Nicolas and Savaneta (see map) and will perform measurements on a continuous basis (24/7).



These locations are downwind from the oil refinery, which is our main source of interest. The mobile unit will be used amongst others to perform measurements in relation to the traffic on the island.

The main purpose of the project is to safeguard the public against harmful effects of air-pollution in relation to the burning of fossil fuels. Other sources of air pollution may be integrated in future policy plans.

The measured components are for both the stationary units: sulfur dioxide (SO<sub>2</sub>), nitrous oxides (NO<sub>x</sub>) and PM<sub>2.5</sub> (can be switched to PM<sub>10</sub>, but not measured simultaneously). At

the moment we are only measuring the PM<sub>2.5</sub> at the Savaneta station. The mobile station also has a carbon monoxide (CO) analyser installed.

The technical oversight (proper functioning of instruments/quality control) of the project is performed by the DTI (Department for Technical Inspections) whereas the regulatory aspects are taken care of by the dept. for environmental inspections.

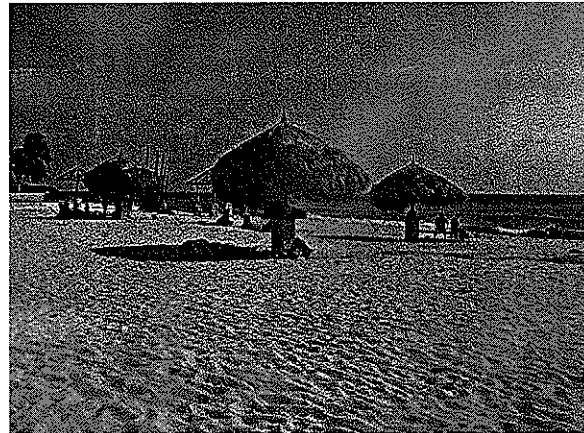
### Beach improvement and coastal zone management institution

The beaches and the sea around Aruba possess important cultural and recreational value for local residents. The beaches and sea around Aruba are also main contributors to Aruba's tourism industry and economy.



Under an integrated Coastal Zone Management approach, Aruba is working on establishing integrated policies between various government entities, and to look at all the problems in relation to each other and involving private sector and stakeholders. One of the initiatives to manage these natural resources is to establish guidelines for beaches. Arashi, Mangle Halto and Baby beach are the first to undergo work as prototype beaches to showcase the positive aspects of integrated coastal zone

management. The design and its improvements are aimed to comply with the international accreditation such as Blue Flag and also the Cartagena conventions, LBS protocol water quality standards and subsequently the SPAW protocol after the enactment of the Aruba Marine Park legislation. The vision is to have an island wide standard that match or exceed most international requirements.



The popular beaches of Arashi, Mangel Halto and Baby Beach were improved through integrated design to achieve better management and conservation of natural resources. This was achieved by landscaping, better-organized parking, demarcation of specific zoning with specific conservation areas

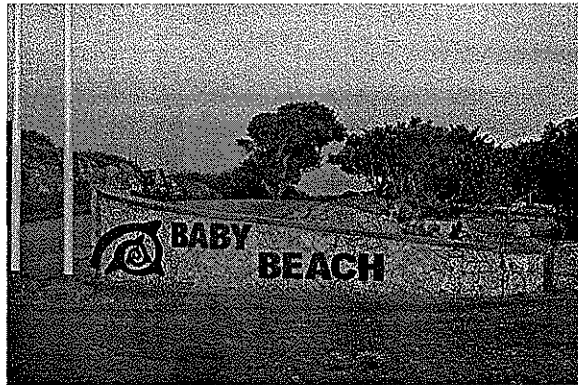


and user areas, and the placement of facilities and awareness materials. The designation as prototype beaches is to convey to the public that these principles will be applied at other beaches and coastlines of the island in due time. The new look of these areas is the result of careful planning, design and construction carried out according to an overall plan which involved widespread public participation including local NGO's.

Recent improvements at the model beaches can be appreciated in entryways of natural stone that drive traffic to specific parking zones

and away from more delicate natural areas. The actual beach area is now also wider, with fresh sand placed in areas that had originally been overtaken by cars driven on the beach. New shade structures have been constructed in a new style, with durable materials. Careful consideration in the placement of these structures was also considered in order to allow for a more spacious feel and relaxed experience at these beaches.

Work will soon commence at these sites for the Phase 2 implementation of public facilities, to include changing rooms, ranger post and sanitary facilities. These facilities will help bring these model beaches up to the "Blue Flag" standard.



Increased signage is also a part of Phase 2 plans. Signs outlining beach use, rules and regulations, pointing out the location of facilities and informing the public of natural and cultural facts and areas at the specific beach are intended to enhance the guest experience as well as protect the environment and heighten awareness among the general public of Aruba's beaches as a valuable natural resource.



Phase 2 is scheduled to begin at these three beach sites by August, with work expected to be completed in 5 to 6 months. While work continues at the prototype beaches, legislation is being drafted for Marine Park protection status for the island's entire coastline. The marine park would provide further instruments for the department of environment and nature parks to protect fragile and unique ecosystems around the island.

The coastal zone management unit that will be instituted in July and is foreseen to integrate in the future Department of Environment and Nature. This policy department will be linked to a coordinating entity in the private public partnership foundation. This PPP foundation will be the executing authority to meet with the stakeholders to improve the different use of this zone and coordinate the management of Marine Protected Areas. With this in place Aruba will also be a step closer to complying with the SPAW protocol of the Cartagena convention, which Aruba is eager to achieve.

Various stakeholder conferences have been held and is creating a platform to launch more project for the management of the coastal areas.

Amongst these, in connection with LBS protocol requirements, the office of Yellow Fever Outbreak Prevention and the Coastal



Zone Management coordinating office has started to look for more bio-marine sound pesticides or combat methods in coastal areas, particularly with mangroves, seagrass beds and coral reefs.

Other examples include, the greater participation of protection agencies, in planning issues and decision making, such as oil spill prevention, infrastructure zoning plans, etc.

#### Awareness program to support the improvement projects

To support the above mentioned improvement projects an awareness program will be executed. Each project will be having an awareness campaign to introduce the new service and the expected support, i.e. change in mentality and attitude (new behaviour) of the users.

The multi-year policy plan of 2001- 2005 states that “the lack of sufficient environment awareness among the majority of the general public and its respective consequences form a serious problem”.

In relation to this fact, the overall objective has been formulated as follows:

“Increased environment awareness among Aruban citizens and organizations in order to strengthen the chance of achieving an environment friendly behaviour, in particular in regards to the most urgent environment problems and their adjunct improvement projects”.

In order to realize the above-mentioned objective, the project must and will focus on the following two aspects of environment awareness as well:

- An increased knowledge of the behaviour alternatives to stimulate the public to proactively take actions on the environment issues themselves.
- A more positive attitude toward the environment friendly behaviour alternatives.

Of the Terms of References (ToRs) described in the Awareness Program, the second ToR is approved by the FDA (Aruban Development Funding) for execution during 2009. This ToR targets at the general public, households in particular, and includes the production of newspaper advertisements, folders and posters. It concerns the improvement projects air quality monitoring, solid waste management, wastewater treatment and general awareness.

ToR 1 and ToR 3 are in the process of approval. ToR 1 includes the production and airing of TV spots. This ToR targets at the same public and concerns the same improvements projects as ToR 1. Additionally, it includes the production of a short film aimed at hotel guests. The latter is in relation to the improvement project coastal zone management.

ToR 3 targets at the general public, beach visitors specifically, and concerns the improvement project coastal zone management. In addition, it will include Aruban habitat billboards as well.

After the bidding of the above-mentioned ToRs, ToR 4 will be analyzed and if necessary be adjusted. This includes workshops on environment care aimed at hotels.

Since the preliminary research for the awareness program has been conducted in 2006, some adaptations have been and will be necessary before the approval/ execution of the ToRs.