



**ST. EUSTATIUS
CARIBISCH NEDERLAND**

Terms of Reference

For the procurement of the position of

Waste Water Research Project



Openbaar Lichaam St. Eustatius, Caribisch Nederland

Versie 1

November 2022

Terms of Reference

Project informatie

Project naam:

Project Waste Water research

Opdrachtgever:

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Versie: FINAL

Datum:

8 November 2022

1. BACKGROUND INFORMATION:

St. Eustatius is a Dutch island in the Caribbean (located in the Caribbean part of the Netherlands) that has been a special municipality since 2010 administratively as a Caribbean public body. It is located in the eastern part of the Caribbean Sea, belongs to the SSS islands that geographically includes Guadeloupe, Saba and St. Maarten to the Windward Islands. The capital is called Oranjestad. On the oldest map on which the island appears, it is called Estatia. Later it was named St. Anastatia and St. Eustatius, which became the permanent name. In the Caribbean, the island is known as Statia. The official language is English, but Dutch is also spoken. St. Eustatius is covered by the "St. Eustatius Provisions Restoration Act". This law aims to extend the administrative intervention on St. Eustatius and gradually phase out the current provisions established based on the "Temporary Act on Neglect of Duties St. Eustatius".

2. General information and objectives:

The civil service consists of more than 170 employees, with the Island Secretary as the General Director of the organization. Furthermore, the Public Entity consists of three offices, namely:

- Administrative Support Office;
- Cabinet governor;
- Bureau Deputies.

In addition, there are the following four directorates:

- Customer Service and Strategy;
- Economy Nature & Infrastructure
- Social
- Transport

The function that is put out to tender here falls within the PPMO project management

3. Terms

You are asked to issue a quotation (including schedule and planned reporting schedule: form and frequency) for drawing up implementation advice on how to shape the flexible waste water research project, which cooperation agreements must be made concretely, and what is needed for OLE in this regard. The implementation of the advice should remove the identified bottlenecks in the various phases. The Public Entity is the person of the support coordinator who must be involved in the implementation advice.

Waste-water management on St Eustatius is limited by the lack of a sewerage system or other appropriate (de-centralized) sanitation. The waste water from both households and businesses is discharged into cesspools. Some houses and businesses discharge into septic tanks, but there is no further waste-water treatment in a WWTP or a WWTP. The final processing of sludge is also missing. In addition, in the event of intense rainfall, the untreated waste water is discharged into the sea by overflowing waste-water collection tanks in the coastal area. The untreated waste water discharge into the sea threatens the vulnerable coral reef. Research has shown that the water quality is negatively affected by erosion, the lack of a sewerage system, and the landfill. As a result, the amount of coral has significantly been reduced, from 30% in 2005 to 5% in 2016 to 2% in 2017-2018. ¹

In 2020, the Nature Environment Policy Plan (NMBP) for the Caribbean Netherlands was adopted. The NMBP includes the following for the subject of waste water treatment:

Strategic goal 1: Investing in a resilient coral reef for greater well-being in the Caribbean Netherlands

1.2. Effective waste and waste-water management to improve water quality

1.2.1 Adequate waste water treatment on all three islands

a) Effective waste water treatment on St Eustatius (2030)

Improving water quality requires, among other things, efficient collection, transport, and waste-water treatment. Based on the objectives of the NMBP, effective research-based strategies for waste water management must be drawn up for St Eustatius by 2024 and, where possible, implemented. The aim is to significantly reduce the nutrient level in groundwater and coastal areas by 2030, thanks to adequate and effective waste water treatment.

This assignment description sets out the objectives, preconditions, and expected results for this research.

Objective and results of the research

Objective: an overview of possible systems and associated infrastructure for the efficient collection, transport, and treatment of household and industrial waste water on St Eustatius.

In addition to the research, the institutional and legal embedding and financial consequences will also have to be examined in parallel: implementation of the ole duty of care for the collection, transport, and waste-water treatment (Article 4.25 of the Vrom BES Act, see Annex I) and the necessary legal adjustments.

Preconditions:

The following shall apply as guide values for the discharge of the effluent from a treatment plant with a pollution value of more than 2000 population equivalents (in the residential areas): ²

- BZV : 20 mg/l;
- CZV : 125 mg/l
- Dissolved substances : 30 mg/l

- Total nitrogen (TN) :15 mg/l;
- Total phosphorus (TP) :2 mg/l;

For (several) individual households, the requirements of an IBA system with a waste water treatment efficiency class IIIb **apply for the discharge of effluent** as guide values (purification nitrogen and phosphate) (requirements as included CIW report Individual treatment of waste-water IAB systems)

For a treatment facility per household (e.g., outside the residential areas), the following minimum requirements may apply: a waste water treatment plant consists of a septic tank with a nominal capacity of at least 6 cubic meters, which complies with NEN-EN 12566-1, and with a hydraulic output of not more than 10 grams. The treatment plant is easily accessible and well maintained (requirements included in the Regulation on the discharge of domestic waste water) (requirements included in the Regulation on the discharge of domestic waste water).

Planning

Q4 2022: assignment for the execution of the research

Q1 2023: start of research on St Eustatius

The second half of 2023: completion of research

Background to the situation

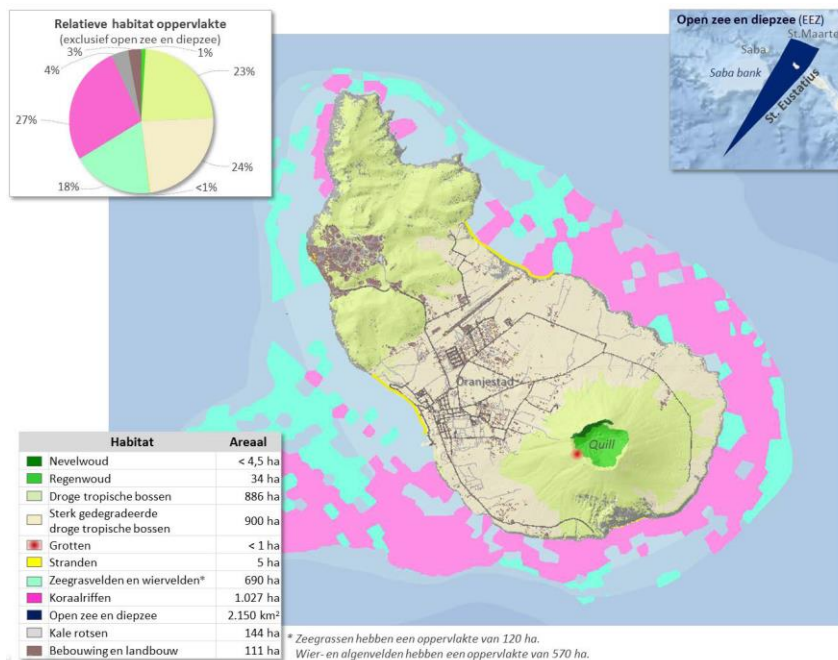
As a result of the new constitutional position of the islands of Bonaire, St. Eustatius and Saba (since 10 October 2010 these islands have become part of the Dutch polity), the Vrom BES Act has been adopted. The Vrom BES Act is further fleshed out with general administrative measures and local regulations. The Act partially entered into force on 1 July 2012. The Vrom BES Act provides the regulatory framework for waste water management and discharges from households and establishments (companies) on the islands. Article 4.25 contains the legal basis for developing waste-water policy and regulating discharges. The Executive Council is responsible for collecting domestic waste water in areas where the supply of domestic waste water is efficient (Article 4.25, first paragraph).

Article 4.26 contains several principles the island ordinance must provide for waste water. These are measures:

- to prevent or limit the generation of waste water;
- which prevents or reduces the pollution of waste water;
- To keep the waste-water flows as separate as possible, and the setting of rules:
- for the discharge of waste water into the soil or on surface water;
- the discharge of waste water into the sewerage system or other facility intended for that purpose, and
- for the protection of the sewerage system or other facilities intended to discharge waste water.

The Memorandum of Understanding of the Act states that the waste-water situation must be mapped out concretely.

Based on the establishments and activities decree BES (Inrichtingen-en activiteitenbesluit BES), requirements regarding discharges from establishments (companies) will be included. These regulations are expected to enter into force on 1 January 2023.





Parish	ISO 3166-2	Capital	Area (km ²) ▼	Population	Density (pers/km ²)
Wilton Farm/Union	n.d.	n.d.	n.d.	422	n.d.
Princess Garden	n.d.	n.d.	n.d.	153	n.d.
Oranjestad	n.d.	Oranjestad	n.d.	525	n.d.
Mountain	n.d.	n.d.	n.d.	47	n.d.
Mansion	n.d.	n.d.	n.d.	71	n.d.
Jeems	n.d.	n.d.	n.d.	118	n.d.
Golden Rock/Concordia	n.d.	n.d.	n.d.	525	n.d.
Cherry Tree	n.d.	n.d.	n.d.	152	n.d.
Chapel Piece	n.d.	n.d.	n.d.	56	n.d.
Bay Brown	n.d.	n.d.	n.d.	110	n.d.
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Total			21	2 292	109,14

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