

# Advisory Report on Bonaire Climate Table



# It is never too late

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Quartermaster Bonaire

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## A. Background

Bonaire's Executive Council informed the Minister for Climate and Energy Policy by letter on 24 May 2022 that it intended to set up a climate table on Bonaire. The Executive Council's aim is to contribute to achieving the Netherlands' climate targets, and it sees political, administrative and public support for greater sustainability on the island. There is a need for knowledge, expertise, leadership and coordination in the area of climate mitigation and adaptation. The Executive Council therefore asked the Dutch Government to provide a quartermaster to develop the climate table concept.

The Minister for Climate and Energy Policy, acting on behalf of the Dutch Government and the Executive Council of Bonaire, appointed me as quartermaster of the Bonaire Climate Table on 23 November 2022.<sup>1</sup> My brief was to examine how and in what form a climate table could be set up on Bonaire. This involved four tasks:

1. Facilitating the creation of a knowledge and policy evidence base by surveying existing research and policies and identifying any gaps.
2. Facilitating the development of the climate table and the setting-up and launch process.
3. Ensuring the embedding of the climate table on Bonaire.
4. Identifying ways of setting up a similar concept on Saba and St. Eustatius.

I was very happy to accept the assignment. It is highly commendable that the Caribbean parts of the Kingdom wish to contribute to combating climate change and its consequences. It is important to note that the consequences of climate change are already having an impact on Bonaire, and these are very likely to increase in future. Bonaire's Executive Council wishes to make coordinated efforts to anticipate this.

For the purpose of assignment I held many talks, on Bonaire, Saba and St. Eustatius and in the Netherlands. I talked with members of the public, companies and civil society organizations. I invited the most closely involved scientific, academic and government organizations operating on Bonaire to share their experience. I was supported in my work by Tibbe van den Nieuwenhuijzen of TwynstraGudde.

I drew up my report in the limited time of less than five months, during which time I visited Bonaire on two occasions. In my report I will discuss various scientific reports and findings, mentioning the gaps I found. It is not my aim to provide a full scientific overview.

**My main aim is to formulate a tight agenda and a proposal for the organization of the Bonaire Climate Table.**

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<sup>1</sup> See <https://www.rijksoverheid.nl/actueel/nieuws/2022/11/23/ed-nijpels-aangesteld-als-kwartiermaker-klimaattafel-bonaire>

## Structure of the report

The report is in nine parts, with six appendices.

1. Part B introduces the concepts of mitigation and adaptation and describes the ambition for the European Netherlands and the Caribbean Netherlands.
2. Part C outlines the context in which climate policy needs to be implemented on Bonaire.
3. Part D discusses the prerequisites for an effective climate policy. I have taken the liberty of going beyond my original brief here.
4. Part E provides an overview of the main scientific findings.
5. Part F identifies the knowledge and policy gaps.
6. Part G is a proposal for the organization of the climate table.
7. Part H discusses the detail of the climate table, with two agendas: one for mitigation and one for adaptation.
8. Part I discusses its applicability to Saba and St. Eustatius.
9. Part J concludes the report.

A list of the abbreviations used in the document can be found in Appendix 1, and a list of the organizations and persons consulted in Appendix 2. I additionally studied various documents, which are listed in Appendix 3. Given the time available to me, I confined myself to the most relevant documents. Appendix 4 provides an overview of the main climate policy legislation in the Caribbean Netherlands. Appendix 5 adds the routes to 100% sustainable power generation set out by TNO (Netherlands Organization for Applied Scientific Research). Appendix 6 lists the instruments available for climate policy on Bonaire identified by the Netherlands Enterprise Agency.

### *Note*

I use the term 'European Netherlands' in this report to refer to the territory of the Netherlands in Europe. I use the term 'Caribbean Netherlands' to refer to the three Public Entities of Bonaire, Saba and St. Eustatius. The independent countries within the Kingdom – Aruba, Curaçao and St. Maarten – do not fall within my brief.

## B. Targets and ambitions

The Bonaire Climate Table will flesh out the island's climate policy with targets and ambitions for both mitigation and adaptation. Concrete targets have already been formulated for the European Netherlands under the Paris Agreement, the Climate Act, recent decisions by the European Community, and the Spring Budget (B1-B3).

### B1 Climate mitigation and adaptation

**The Earth is warming and the climate is changing.** This is due to increased levels of greenhouse gases (CO<sub>2</sub>, methane, water vapor, N<sub>2</sub>O and fluorinated gases<sup>2</sup>) in the atmosphere, caused by human activities such as the burning of fossil fuels, deforestation and farming. Preventing further climate change by reducing greenhouse gas emissions is referred to as 'climate mitigation'.

**We are currently experiencing the consequences of climate change worldwide.** These will increase in the years ahead, in spite of mitigating measures. Climate change increases the likelihood of such things as flooding, storms, heat waves, droughts and sea level rise, which present risks to our safety and health, the economy, and biodiversity. 'Climate adaptation' refers to the measures we are taking to reduce the negative impact of these risks and adapt to them.<sup>3</sup>

### B2 Aim and ambitions

**Worldwide agreements on reducing greenhouse gas emissions were made in 2015 in Paris.** The aim is to limit global warming to substantially less than 2°C compared with the pre-industrial era, and to make efforts to reduce it to 1.5°C.<sup>4</sup> The European Climate Law lays down a statutory obligation upon the European Union member states to reduce net greenhouse gas emissions by at least 55% by 2030.<sup>5</sup> The European Union must moreover be climate-neutral by 2050.<sup>6</sup>

Policies in the European Netherlands on mitigation and adaptation are organized separately.

**As regards mitigation,** the fourth Rutte administration's coalition agreement, in line with the Paris Agreement, **increased the target for the European Netherlands from a 49% to a 55% greenhouse gas reduction by 2030**, and set a policy of aiming for an approximately 60% reduction in order to be certain to meet this target.<sup>7</sup> This resulted in a proposed amendment to the national Climate Act.<sup>8</sup>

**As regards climate adaptation, the aim is for the European Netherlands to be climate-proof and water-robust by 2050.** The efforts to achieve this are being organized through the National Delta Program and the National Climate Adaptation Strategy (NAS). In the European Netherlands, the Delta Program Commissioner has been appointed to lead collaboration between central government, the water authorities and the provincial authorities under the national Delta Program.<sup>9</sup>

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<sup>2</sup> See <https://www.milieucentraal.nl/klimaat-en-aarde/klimaatverandering/wat-is-het-broeikaseffect/>

<sup>3</sup> See <https://klimaatadaptatienederland.nl/kennisdossiers/klimaatverandering/gevolgen-beperken/>.

<sup>4</sup> See <https://www.rijksoverheid.nl/onderwerpen/klimaatverandering/klimaatbeleid#:~:text=In%202016%20heeft%20de%20Europese,op%201%2C5%20graden%20Celsius.>

<sup>5</sup> See <https://www.consilium.europa.eu/nl/policies/green-deal/fit-for-55-the-eu-plan-for-a-green-transition/>

<sup>6</sup> See <https://www.consilium.europa.eu/nl/policies/green-deal/>

<sup>7</sup> See <https://www.rijksoverheid.nl/onderwerpen/klimaatverandering/voortgang-klimaatdoelen>

<sup>8</sup> See [https://www.tweedekamer.nl/kamerstukken/plenaire\\_verslagen/kamer\\_in\\_het\\_kort/wijziging-van-de-klimaatwet](https://www.tweedekamer.nl/kamerstukken/plenaire_verslagen/kamer_in_het_kort/wijziging-van-de-klimaatwet)

<sup>9</sup> See <https://www.deltaprogramma.nl/deltaprogramma/wat-is-het-deltaprogramma>

### B3 Bonaire's ambition

**The Paris Agreement and the European-law obligations resulting from it only apply to the European part of the Netherlands.** The national Climate Act fits within the context of the international and European-law obligations upon the Netherlands and therefore only applies to reducing greenhouse gas emissions in the European Netherlands. There are consequently no statutory obligations upon the Caribbean Netherlands to reduce emissions.

**Bonaire's mitigation ambition is to contribute to combating climate change.** Unlike policy in the European Netherlands, the ambitions for the Caribbean Netherlands have not yet been formalized, but the Executive Council intends to contribute to mitigating harmful greenhouse gases by setting up a climate table.<sup>10</sup>

**Bonaire has an adaptation task:** in addition to its mitigation ambition, **climate adaptation is very important** for Bonaire, as it is for the European Netherlands. Being a small, low-lying island, Bonaire is extremely vulnerable to the negative impact of climate change, e.g. flooding, heavy rainfall and prolonged heat waves.<sup>11</sup> In the case of Saba and St. Eustatius, the challenges of flooding are less severe, but climate change presents a greater risk of tropical storms.<sup>12</sup> The Delta Program and the National Climate Adaptation Strategy<sup>13</sup> are paramount in the European Netherlands, but they do not apply to the Caribbean Netherlands. Bonaire is implementing the Nature and Environment Policy Plan Caribbean Netherlands (NMBP).<sup>14</sup>

The Dutch Government and the Caribbean Netherlands are developing the spatial planning part of the CN housing and spatial planning policy agenda in the spatial development program (a general framework). The Public Entity Bonaire (OLB) will then translate this into a spatial development plan specific to the island. The Policy Plan, the spatial development program and spatial development plan are existing programs that are instrumental in meeting Bonaire's climate adaptation challenge. Bonaire's Executive Council has also asked the Rhine and IJssel Water Authority to advise on water management.<sup>15</sup>

**More knowledge, expertise and action is needed in the area of climate adaptation and mitigation.**

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<sup>10</sup> See <https://www.rijksoverheid.nl/actueel/nieuws/2022/11/23/ed-nijpels-aangesteld-als-kwartiermaker-klimaattafel-bonaire>

<sup>11</sup> Van Beukering, P. et al (2022), The Impacts of Climate Change on Bonaire. *Institute for Environmental Studies*. Vrije Universiteit.

<sup>12</sup> See <https://www.knmi.nl/kennis-en-datacentrum/achtergrond/orkanen-in-caribisch-nederland>

<sup>13</sup> See <https://www.rijksoverheid.nl/onderwerpen/klimaatverandering/klimaatadaptatie>

<sup>14</sup> See <https://open.overheid.nl/documenten/ronl-cc70ea56-f90a-4a0a-be1a-09fbfb7db7b0/pdf>

<sup>15</sup> See <https://bonairegov.com/nieuwsoverzicht/artikel/gezaghebber-rijna-neemt-rapport-integraal-waterbeheer-in-ontvangst>

## C. The context

The development of climate policy on Bonaire needs to be seen in the right context. Bonaire, Saba and St. Eustatius are small islands with major tasks (see C1). The socioeconomic situation of many Bonairians presents a challenge (C2), and there are concerns about the consequences of climate change (C3). Political and administrative collaboration is problematic and has gotten off to a turbulent start (C4). In recent years, it has been a question of seeking the right balance in consultation (C5 and C6). This part outlines this context, considering the climate table agenda in a broader perspective.

### C1 A small island with major tasks

**The Caribbean Netherlands has substantial responsibilities for its size.** Bonaire, the largest island in the Caribbean Netherlands, has a population of 24,090,<sup>16</sup> comparable with the municipalities of Wijk bij Duurstede (Utrecht) and Heiloo (North Holland). The population of Bonaire has grown by 36% over the past ten years.<sup>17</sup> Despite its small scale, Bonaire is responsible for such things as an international port and airport, a hospital, a cruise industry, customs and electricity generation. This represents a substantial task for an island with a population of 24,000.

The island responsibilities on Bonaire are fulfilled by officials of the Bonaire Public Entity (OLB). The organization employs a total of about 400 staff, distributed among four departments: Operations and Support, Supervision and Enforcement, Spatial Planning and Development, and Community and Care.

The Public Entity additionally works together closely with the Bonaire National Parks Foundation (STINAPA), and STINAPA manages the Bonaire National Marine Park (BNMP) and the Washington Slagbaai Nationaal Park (WSNP) on its behalf.

As regards central government and island responsibilities, the island is supported by officials sent out by Dutch central government. The National Office for the Caribbean Netherlands (RCN) employs a total of 1,100 staff,<sup>18</sup> who live and work on the islands and are mainly engaged in implementation work there. Twenty-two organizations, such as the Tax and Customs Administration, the Public Prosecution Service, Bureau Halt (the first point of contact for young offenders) and the Dutch Authority for the Financial Markets, are involved.<sup>19</sup> These officials report to their respective ministries and work together in the National Office, which liaises between the ministries operating in the Caribbean Netherlands. The central government responsibilities are laid down and are fulfilled by each Ministry, based on the policy for the Caribbean Netherlands approved by the respective Minister.

### C2 Socioeconomic challenges

**Developing climate policy on Bonaire cannot be seen in isolation from the socioeconomic challenges that are 'top of mind' for many inhabitants.** It was agreed in 2010 that the ministries would work together to achieve an acceptable level of provision. In 2020, 20% of Bonaire's inhabitants were living below the poverty threshold.<sup>20</sup>

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<sup>16</sup> See <https://www.cbs.nl/nl-nl/nieuws/2023/16/bevolking-caribisch-nederland-in-2022-met-bijna-1-7-duizend-toegenomen/>

<sup>17</sup> See <https://longreads.cbs.nl/the-caribbean-netherlands-in-numbers-2022/how-has-the-population-evolved-over-the-past-decade/>

<sup>18</sup> See <https://www.rijksdienstcn.com/over-de-rijksdienst-caribisch-nederland/alle-departementen-en-diensten>

<sup>19</sup> Ibid. for a complete overview

<sup>20</sup> See <https://www.cbs.nl/nl-nl/nieuws/2022/48/eerste-onderzoek-brede-welvaart-caribisch-nederland-toont-wisselend-beeld>

Poverty is unequally distributed, with an above average proportion (43%) of the Bonairian population – the population that has been living on Bonaire for several generations – living in poverty.<sup>21</sup> Bonaire still has greater wealth inequality than the European Netherlands: the wealthiest 20% on Bonaire earn 9.3 times more than the poorest 20%, whereas in the European Netherlands, the wealthiest 20% earn 4.4 times more than the poorest 20%.<sup>22</sup> The talks on Bonaire revealed that top priority for a large section of Bonairian Dutch nationals is making ends meet from day to day.

The Minister for Poverty Policy, Participation and Pensions has commissioned a study of the social minimum on the islands of Bonaire, Saba and St. Eustatius. The Caribbean Netherlands Social Minimum Committee started work on 1 March 2023.<sup>23</sup>

### C3 Concerns about climate change

**The inhabitants of Bonaire are worried about the consequences of climate change.** Concerns about the negative impact of climate change are secondary to concerns about livelihood, but they are certainly felt by the public, civil society organizations, and the politicians. These concerns were recently momentum lent momentum by a report produced for Greenpeace by the Institute for Environmental Studies (IVM), affiliated to the Vrije Universiteit Amsterdam (VU). Greenpeace subsequently launched a campaign to draw attention to climate change on Bonaire.<sup>24</sup> The question of how best to organize climate policy for the Caribbean Netherlands was already a hot topic and received more attention as a result.

In the European Netherlands, the government helps citizens, civil society organizations, and industry and commerce with mitigating measures, by setting up a citizens' forum and holding implementation discussions, and through the Regional Energy Strategies (RES). Adaptation is tackled primarily through central government, municipal and provincial authorities and water authorities, and is specially structured thanks to the appointment of a Delta Program Commissioner and the introduction of a Delta Program. It is only logical and necessary to involve the public, civil society organizations, and industry and commerce in the design and implementation of a climate policy in the Caribbean Netherlands.

### C4 The constitutional system since 2010

**The constitutional relationships in the Kingdom changed on 10 October 2010.** The Netherlands Antilles were dissolved, and Bonaire, St. Eustatius and Saba became special municipalities of the Netherlands. The term 'special' refers to the different statutory situation of the Caribbean Netherlands compared with that of municipalities in the European Netherlands. Constitutionally, the islands are Public Entities. Aruba, Curaçao and St. Maarten became independent countries within the Kingdom.

The legal status of the Caribbean Netherlands is laid down in the Bonaire, St. Eustatius, and Saba Public Entities Act (WolBES).<sup>25</sup> A major difference from municipalities in the European Netherlands is that Bonaire, Saba and St. Eustatius share responsibilities with Dutch central government, thus fulfilling many of the provincial responsibilities.

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<sup>21</sup> Panteia 2020 for the Ministry of Social Affairs and Employment. See <https://open.overheid.nl/repository/ronl-c1cc90e0-5676-4b7e-821d-5390dfcbcfb8/1/pdf/bijlage-1-eindrapport-beleidsdoorlichting-artikel-2-szw-panteia.pdf>.

<sup>22</sup> See <https://www.cbs.nl/nl-nl/nieuws/2022/48/eerste-onderzoek-brede-welvaart-caribisch-nederland-toont-wisselend-beeld>).

<sup>23</sup> See <https://www.rijksoverheid.nl/actueel/nieuws/2023/02/17/start-commissie-die-sociaal-minimum-in-caribisch-nederland-onderzoekt#:~:text=De%20commissie%20Sociaal%20Minimum%20Caribisch,te%20doen%20in%20de%20samenleving>

<sup>24</sup> See <https://www.greenpeace.org/nl/natuur/52468/milieu-organisatie-greenpeace-start-een-campagne-over-de-toekomst-van-bonaire/>

<sup>25</sup> See <https://wetten.overheid.nl/BWBR0028142/2023-01-01>

**There was some reluctance to introduce new legislation in the years following 2010**, the aim being to retain as much of the existing legislation as possible. The idea behind this was that there would be many changes after 2010 anyway, so it was necessary to mark time.<sup>26</sup> As a result, a lot of legislation – e.g. on the minimum wage, environmental policy and the national Delta Program – does not apply to the Caribbean Netherlands. The Spies Committee did research in 2015 into the effect of the new constitutional structure in the Caribbean Netherlands. For a detailed discussion of the development, successful outcomes and challenges of the transition to the current constitutional structure I would refer to that report. I do not intend to review its conclusions in the present report; I would merely observe that many of the findings are still valid, namely the perceived arbitrariness of regulations emanating from the European Netherlands, the feeling of living in two different worlds, and the still vulnerable nature of the administration in the Caribbean Netherlands eight years on.<sup>27</sup>

C5 'Working together' differently

**An Interministerial Policy Review (IBO)<sup>28</sup> was carried out in 2019 to examine a different policy approach.**

The brief was twofold:

1. To devise evidence-based options for a different policy approach with an appropriate financial package.
2. To identify areas for improvement and scenarios for enhancing the coordinating role of the Ministry of the Interior and Kingdom Relations (BZK) in the area of Kingdom Relations.

For the complete conclusions, please refer to the IBO report *Samen Werken*.<sup>29</sup> For the time being, I would stress that it argues that an integrated vision and enhancement of the Ministry's coordinating role are needed. The policy-related conclusions of the report are vital. It argues that:

- there is no integrated, government-wide vision of policy for the Caribbean Netherlands;
- the partnerships that exist are informal and non-binding;
- there is a direct relationship between the amount of attention paid by ministerial senior staff and the success of policy on the islands;
- the 2010 division of responsibilities between central government and the islands is ill-defined; and
- insufficient attention is being paid to the local Caribbean context on Bonaire, Saba and St. Eustatius at the policymaking and implementation stages. In order to address this, the Review introduced a partnership model.

**In July 2019, the State Secretary for the Interior and Kingdom Relations asked the Council of State (RvS) "to inform the Government of the existing setup between the Caribbean and European Netherlands and the coordinating role of the Ministry of the Interior and Kingdom Relations".** The Council of State argues that the islands are independent and should not therefore be considered jointly. Government bodies that are closer to the public are better able to gauge what the best policy is. The islands of the Caribbean Netherlands need to be placed in a position to formulate, coordinate and implement policy for the islands.<sup>30</sup>

<sup>26</sup> Spies, et al. (2015). *Vijf jaar verbonden, Bonaire, Sint-Eustatius, Saba en Europees Nederland* (Joined together for five years: Bonaire, St. Eustatius, Saba and the European Netherlands), p. 29. See <https://deugdelijkbestuuraruba.org/wp-content/uploads/2016/04/Evaluatiecommissie-Vijf-jaar-verbonden-Bonaire-Sint-Eustatius-Saba-en-Europees-Nederland.pdf>

<sup>27</sup> Ibid., p. 108

<sup>28</sup> IBO (2019). *Samen Werken* (Working together). See <https://zoek.officielebekendmakingen.nl/dossier/blg-902422.pdf>

<sup>29</sup> IBO (2019). *Samen Werken*. See <https://zoek.officielebekendmakingen.nl/dossier/blg-902422.pdf>

<sup>30</sup> Raad van State (2019). *Voorlichting over de bestaande vormgeving tussen de Caribische en Europees Nederland en de coördinerende rol van BZK* (Information on the existing setup between the Caribbean and European Netherlands and the coordinating role of the Ministry of the Interior and Kingdom Relations), p. 3. See <https://www.raadvanstate.nl/@113253/w04-18-0286-vo/>

Here the Council of State makes a distinction between the final perspective and the transitional phase. In the transitional phase, the islands and central government need to work together towards the final perspective. As regards both the final perspective and the transitional phase, the Council of State stresses the importance of differentiated legislation and regulations and the need to draw up clear-cut criteria for applying differentiation, both between the various islands and between the islands and policy in the European Netherlands.

C6 Current policy: to achieve an equal level of provision

**The Government responded to the reports of the Interministerial Policy Review and the Council of State on 8 October 2019, introducing the comply or explain principle.** This means that all regulations need to be scrutinized to see whether they can be declared applicable to the Caribbean Netherlands, and if so how. Bespoke solutions will sometimes be needed to ensure that legislation and regulations are appropriate and workable in the Caribbean context. The comply or explain principle is based on achieving an equal level of provision within the scope afforded by the Caribbean context.<sup>31</sup> The Government is thus abandoning its legislative restraint since 2010.

To achieve an equal level of provision, financial management needs to be in order. The Council of State concluded that the Caribbean Netherlands needs to bear some of the financial responsibility.<sup>32</sup> The Netherlands Court of Audit (AR) wrote a critical report in 2021, in which it concluded that the quality of financial management in the Caribbean Netherlands is substandard.<sup>33</sup> The Government recognizes this and sees a good deal of overlap between the reports of the Court of Audit and the Council of State. The Government states that it is implementing the Council's recommendations as a matter of priority and pledges to take responsibility for improving financial management and supervision on the islands.<sup>34</sup>

**Between 2019 and 2022, the Government took steps to improve collaboration with the Public Entities.** The State Secretary for the Interior and Kingdom Relations informed the House of Representatives on 8 April 2022 about the situation regarding the implementation of the Government's response to the reports of the Interministerial Policy Review and the Council of State.<sup>35</sup> The Government has implemented financial measures, introduced the comply or explain principle, and is working on amending the legislation and dealing with the backlogs. The Government is committed to improving the quality and responsiveness of local government.<sup>36</sup>

The executive agreement with Bonaire has come to an end. The Ministry of the Interior and Kingdom Relations and the Bonaire Public Entity are working towards a new executive agreement following the recent elections, and there are now administrative working agreements.<sup>37</sup> These provide the basis upon which central government and the Bonaire Public Entity work together and climate policy can be formulated.

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<sup>31</sup> See <https://zoek.officielebekemakingen.nl/kst-35300-IV-11.pdf>

<sup>32</sup> Raad van State (2019) Voorlichting over de bestaande vormgeving tussen de Caribische en Europees Nederland en de coördinerende rol van BZK. See <https://www.raadvanstate.nl/@113253/w04-18-0286->

<sup>33</sup> Algemene Rekenkamer (2021). *Bijzondere uitkeringen aan Caribisch Nederland* (Special allowances to the Caribbean Netherlands). See <https://www.rekenkamer.nl/publicaties/rapporten/2021/06/23/bijzondere-uitkeringen-aan-caribisch-nederland>

<sup>34</sup> See <https://www.rekenkamer.nl/publicaties/brieven/2021/06/23/reactie-staatssecretaris-van-bzk-namens-het-kabinet-op-het-rapport-bijzondere-uitkeringen-aan-nederland>

<sup>35</sup> See [https://open.overheid.nl/repository/ronl-4e711ae9cf418a33d703d4850fb9f5142fd6bf17/1/pdf/kamerbrief-stand-van-](https://open.overheid.nl/repository/ronl-4e711ae9cf418a33d703d4850fb9f5142fd6bf17/1/pdf/kamerbrief-stand-van-zaken-kabinetsreactie-raad-van-state-rvs-en-interdepartementaal-beleidsonderzoek-ibo.pdf)

<sup>36</sup> See <https://open.overheid.nl/repository/ronl-4e711ae9cf418a33d703d4850fb9f5142fd6bf17/1/pdf/kamerbrief-stand-van->

zaken-kabinetsreactie-raad-van-state-rvs-en-interdepartementaal-beleidsonderzoek-ibo.pdf

<sup>37</sup> See <https://www.tweedekamer.nl/downloads/document?id=2022D28563>

## D. General findings

I have taken the liberty in this report to mention some findings that do not strictly fall under the umbrella term 'climate policy' but that are essential prerequisites for an effective climate policy in my opinion. I make a number of observations based on the talks held and documents studied, while realizing that some of them will raise sensitivities on both sides of the ocean. We must face up to reality, however. I refer where appropriate to the previous reports of the Interministerial Policy Review, the Council of State or the Court of Audit as described at C. Where I make no such reference, these are personal findings and observations in my role as quartermaster.

### **1. A different approach is needed.**

I was asked in my role as quartermaster to prepare the organization of and substantive agenda for a Bonaire Climate Table. It is tempting to examine the way in which we in the European Netherlands have set about implementing the Energy and Climate Agreement, but it is important to realize that, apart from the general framework, the situation in Bonaire is fundamentally different from that in the European Netherlands, in terms of both the nature and scale of the problems. A one-on-one copy of policy in the European Netherlands would therefore not be appropriate. The Government needs to formulate a bespoke policy suitable for the Caribbean context.

**2. A tight, coherent climate policy is closely linked to an energetic nature conservation and environment policy and appropriate spatial planning.** Climate policy can thus only bear fruit if these policy areas have been dealt with, implementation has been organized, and there is proper enforcement. There are two initiatives currently in progress, one focusing on the physical environment and the other focusing more broadly on improving collaboration between the Caribbean Netherlands and the European Netherlands.

The initiative relating to the physical environment is the Caribbean Netherlands housing and spatial planning policy agenda of January 2023, with the respective action lines and spatial development programs, alongside the Nature and Environment Policy Plan Caribbean Netherlands. More broadly, the Government is implementing its response to the report of the Council of State and Interministerial Policy Review of 8 April 2022. I would stress that the success of these efforts is vital to the implementation of an effective climate policy, as this cannot be achieved without putting energy into both implementation and policy, proper agreements about roles, duties and responsibilities, and strict enforcement.

**3. The relationship between the European Netherlands and the overseas municipalities is complicated and above all highly sensitive.** There is ongoing anxiety on the part of the European Netherlands about being seen as a colonial power. The same feeling in reverse exists on the Bonairian side. Given the scope of my report, there is no point in going into the question of guilt in detail. I would merely note that virtually all the organizations and people I consulted come to the same conclusion, with variations.

**4. There has been a massive succession of unimplemented and partly implemented policies on both sides.** The administrative agreements between the Caribbean and European Netherlands are based on "the promotion of policy freedom". As explained in C6, the Government is committed to achieving a comply or explain approach, in which it seeks an equal level of provision, while working to improve the quality and responsiveness of local government. However well intended, agreements of this kind result in an administrative mirage in practice and fail to bring the results desired by both parties any closer. Ultimately it is a question of equality, not exact copies.

**5. Implementing the Council of State recommendations will contribute towards an effective climate policy.** The Council made four recommendations in a July 2019 report<sup>38</sup> that are also relevant to a climate policy for Bonaire:

- a. The Public Entities must not be considered jointly but each separately.
- b. They must have adequate financial resources at their disposal.
- c. They must have sufficient power.
- d. They must have an expert civil service apparatus.

The Council of State added that it is vital to deal with the physical and social backlogs. As mentioned at 2. and 4. above, I fully endorse the importance of this.

**6. The staffing and financial resources for policymaking, implementation and enforcement are inadequate in terms of both quality and quantity.** The staffing for climate policy in the European Netherlands is fragmented among various departments and at least four ministries,<sup>39</sup> whereas on the islands climate policy is often dealt with by only one or two policymakers. As the Council of State concluded (see 5.), adequate resources need to be available for the Caribbean Netherlands. Following on from the points at 1. and 4., a breakthrough and a more controlling policy are needed to deal with these shortcomings. There is insufficient awareness of that administrative reality in the Netherlands. The coordinating role of the Ministry of the Interior and Kingdom Relations also needs to be enhanced.

**7. Special allowances are the rule rather than the exception.** The Court of Audit concluded that Bonaire received 146 special allowances from the various ministries in the 2011-2019 period, in addition to the general allowance.<sup>40</sup> These need to be dealt with by a small number of officials on Bonaire. For an island with a population of 24,090 this is highly undesirable – to say the least – from the administrative point of view, and it cries out for drastic changes. Consultation, coordination and clear-cut responsibilities for policy and its funding are absent or inadequate. A study is in progress into the free allowance in relation to the special allowances and the duties of the Public Entities.

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<sup>38</sup> Raad van State (2019) Voorlichting over de bestaande vormgeving tussen de Caribische en Europees Nederland en de coördinerende rol van BZK. See <https://www.raadvanstate.nl/@113253/w04-18-0286-vo/>

<sup>39</sup> Economic Affairs and Climate Policy, Infrastructure and Water Management, Interior and Kingdom Relations, Agriculture, Nature and Fisheries

<sup>40</sup> Algemene Rekenkamer (2021). Bijzondere uitkeringen aan Caribisch Nederland. See <https://www.rekenkamer.nl/publicaties/rapporten/2021/06/23/bijzondere-uitkeringen-aan-caribisch-nederland>

**8. The current policy instruments are inadequate to handle the transition facing the Caribbean Netherlands.** The administrative development of Bonaire (and Saba and St. Eustatius) can be characterized as a transition in the opinion of the Council of State. The European Netherlands is also engaged in transition in a host of areas. The standard administrative instruments in the European Netherlands are not always suitable to handle transition, and this applies even more to the Caribbean Netherlands. Those concerned need to recognize this. The same is true of the implementation agendas, an investment fund, and the position of the Ministry of the Interior and Kingdom Relations as manager, as proposed by the Council.<sup>41</sup>

**9. From my point of view, it is even debatable whether the administrative (constitutional) configuration adopted in 2010 is still the most suitable solution for the Caribbean Netherlands and is not displaying too much wear and tear.** Now that 13 years have elapsed, I would recommend a fundamental reconsideration of the construction. It is not a healthy situation in which a multiplicity of ministries have direct relationships with the Public Entities, with populations of 24,090, 3,293 and 2,035 respectively,<sup>42</sup> as this creates a good deal of administrative congestion. For the purposes of this report, I discussed the history of the chosen construction and the options considered at the time with some of the people involved. I will not now discuss the various options that were considered in the past. From some of the discussions I was able to conclude that many people regard the absence of the intermediate layer that exists in the Netherlands between central and municipal government (i.e. the provincial authorities) as a flaw in the configuration adopted in 2010. Some of those involved said that a provincial authority would be a far more natural partner for the three special municipalities (Public Entities) and would provide a good way of reducing the current administrative congestion.

I found from contacts with administrators that the joint provinces are willing to discuss a possible provincial role in relation to the BES islands with the respective ministers. A partnership between the Caribbean Lands/Islands is being set up under the flag of the Interprovincial Consultative Committee (IPO), chaired by the Provincial Governor in Gelderland. The aim of this partnership – in addition to the existing municipal and ministerial expertise – is to provide provincial knowledge and expertise to the Caribbean area. I would recommend that the Government consult with the partnership in the near future to determine what the possibilities are. This initiative needs to result in effective staffing and financial support, not in an increase in administrative congestion and frequent trips by officials. In order not to get bogged down in excessive consultation, I would specifically propose organizing a task force of twelve provincial/municipal/water authority officials to be seconded or loaned to Bonaire for two years.

The scope of this report does not permit me to go into the structural relationships within the Kingdom in detail, but I would urge the Government to place this obviously sensitive issue firmly on the political and administrative agenda.

**10. The implementation and enforcement of nature conservation, environment and climate policy agreements is a problem.** Independent scientific monitoring of the results of policy is required but often difficult to achieve. It goes without saying that monitoring and enforcing agreements is of fundamental importance. Supervision and enforcement policy has often been difficult to implement in the Netherlands too, where the scale of the agencies (before 2014) proved inadequate to supervise the implementation and enforcement of policy effectively.

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<sup>41</sup> Raad van State (2019) Voorlichting over de bestaande vormgeving tussen de Caribische en Europees Nederland en de coördinerende rol van BZK. Proposals for the transitional phase at B. See <https://www.raadvanstate.nl/@113253/w04-18-0286-vo/>

<sup>42</sup> See <https://www.cbs.nl/nl-nl/nieuws/2023/16/bevolking-caribisch-nederland-in-2022-met-bijna-1-7-duizend-toegenomen/>

This ultimately led to a dramatic scaling-up, resulting in 29 regional environment agencies.<sup>43</sup> The smallest environment agency, for the northern part of the Veluwe region, serves a population of 206,000, and the largest, for the Rijnmond (greater Rotterdam) area, one of 1.3 million.<sup>44</sup> These environment agencies fulfill responsibilities for municipal and provincial authorities combined, thus serving a far larger population than that of a single municipality. This scaling-up in the Netherlands has resulted in far more effective enforcement. It would be advisable to organize the implementation and enforcement of nature and environment policy – and future climate policy for the BES islands – through a regional environmental protection agency. Increasing the scale of enforcement is unavoidable, hence a ‘regional’ environment agency for the Caribbean Netherlands makes sense.

Bonaire’s Executive Council intends to ask the Human Environment and Transport Inspectorate (ILT) to do research into enforcement on Bonaire.

**11. Central government has failed to draw up a spatial development program and is now working on one.** As already noted, proper spatial planning is a sine qua non for the implementation of environment, nature and climate policy. The Spatial Development Planning Principles (BES) Act<sup>45</sup> requires central government to draw up a spatial development program, setting out the spatial planning frameworks for the development plans to be drawn up by the islands (comparable to land use plans). Central government has failed to draw up a program; this is now being done as part of the CN housing and spatial planning policy agenda (VRO CN).<sup>46</sup> The program is expected to be passed at the end of this year.

Bonaire passed the Bonaire Spatial Development Plan (ROB) in 2011. This lays down, among other things, on what grounds house-building is permitted. No land policy has been adopted as yet. Updating of the plan began in 2021. After the Minister of Housing and Spatial Planning announced in 2022<sup>47</sup> that a development program would be drawn up, updating came to a standstill. It will be continued once the program has been passed. Action line 4 of the CN housing and spatial planning policy agenda relates to spatial planning, which takes place through the spatial development program.

The CN housing and spatial planning policy agenda on Bonaire is closely related to areas of climate policy, as the spatial decisions made have a major impact on climate policy.

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<sup>43</sup> See <https://www.omgevingsdienst.nl/>

<sup>44</sup> See <https://open.overheid.nl/documenten/ronl-eb02d67a-a3e6-4b86-9c07-81f218efc596/pdf>

<sup>45</sup> See <https://wetten.overheid.nl/BWBR0028218/2021-07-01>

<sup>46</sup> See <https://www.rijksoverheid.nl/documenten/rapporten/2023/01/26/beleidsagenda-volkshuisvesting-en-ruimtelijke-ordering-voor-caribisch-nederland>

**12. Local power generation would appear to be attractive at first sight, but it is not an efficient solution.** Although the strong sunlight provides opportunities for local solar panels on roofs of residential properties – and this is often talked about –, the island administration and island energy company wants to invest money and energy particularly in central sustainability, as that benefits poorer households as well, unlike solar panels on the roofs of households who can afford to invest in them. Also, the power grid on Bonaire provides limited opportunities for feed-in. A 6 MW publicly owned solar farm is to be constructed in 2023.

The stability of the grid in some parts of Bonaire presents a major challenge to more local feed-in. The island's grid operator is working hard on strengthening the grid where necessary and expanding it to cater for all the new customers. Customers are permitted to install solar panels for their own use and to feed back any surpluses for a small charge.

**13. Not all the international treaties apply to the Caribbean Netherlands:** the Paris Climate Agreement,<sup>48</sup> for example, only applies to the European part of the Kingdom. The Dutch Climate Act fits within the context of these international and European-law obligations upon the Netherlands, hence it only applies to the European part of the Kingdom. The Caribbean Netherlands is a full-fledged part of the Netherlands where the consequences of climate change are being felt and require urgent action. In future it needs to be ensured that the international treaties also apply to the Caribbean Netherlands.

**14.** Proper procurement is a challenge in the Caribbean Netherlands, and this stands in the way of the large-scale infrastructure projects needed for mitigation and adaptation policy. Public contracts awarded and fulfilled beyond the borders of the European Union are not covered by European procurement law.<sup>49</sup> Procurement in the Caribbean Netherlands is therefore not the same as in the European Netherlands: only a small number of people have experience of implementing large-scale procurement projects, and these involve only a small number of companies. Local knowledge is needed, and it is precisely local knowledge and capacity that are limited. This presents a challenge to the efficient, effective and fair procurement of large-scale infrastructure projects.

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<sup>48</sup> The Paris Agreement is part of the broader United Nations climate framework convention.

<sup>49</sup> See <https://www.sdu.nl/content/commentaar-op-aanbestedingswet-2012-art-223-aanbestedingsrecht>

## E. The science

The climate table agenda is based on the latest science, but there are gaps in this. The scope of this report does not permit a detailed overview of scientific knowledge relating to the Caribbean Netherlands. In order to formulate the agenda, I confine myself to listing the most important scientific findings:

1. **Climate change presents a risk to Bonaire**, involving a negative impact in both the semi-short term (0-50 years) and the long term (50+ years).<sup>50</sup>
2. **Research by the Intergovernmental Panel on Climate Change (IPCC)<sup>51</sup> shows that small islands such as Bonaire run a relatively high risk of negative consequences of sea level rise, drought, and damage to and loss of coral reefs.** The risks are smaller for Saba and St. Eustatius, where the main challenge is a greater likelihood of severe storms and tropical hurricanes.<sup>52</sup>
3. **An increase in sea level rise will result in the possibility of the low-lying mainly uninhabited parts of Bonaire, the ‘Salinas’,<sup>53</sup> being flooded by 2050.** Buildings and symbols of important cultural value, e.g. slave huts, are situated in this early high-risk area. The built-up areas – such as the capital, Kralendijk, and Belnem – will also be at risk by 2150.<sup>54</sup>
4. **Bonaire is vulnerable to flooding, as a good deal of the critical infrastructure is situated in low-lying coastal areas.**<sup>55</sup> The Royal Dutch Meteorological Institute (KNMI) argues that the impact on Bonaire will be greater than on Saba and St. Eustatius, as Bonaire is a coral island with a lot of real estate on the coast, whereas Saba and St. Eustatius are higher, volcanic islands. The KNMI does not yet have any data on the specific risk and the consequences of flooding for Bonaire. Nor are there any figures on the risk and the consequences of hurricanes and tropical storms for Saba and St. Eustatius. The KNMI has been commissioned to translate the IPCC scenarios into scenarios for the Caribbean Netherlands.
5. **In some periods, climate change will result in less precipitation, but precipitation extremes will increase at other times.**<sup>56</sup> The infrastructure and water management on Bonaire are not equipped to handle these weather conditions.
6. **The health and quantity of coral reefs and mangrove forests are declining due to sea level rise, salinization and land erosion.** Coral reefs and mangrove forests contribute to biodiversity and provide natural coastal protection for the island, acting as breakwaters. The disappearance of coral and mangrove forests thus directly harms the island’s natural coastal protection.<sup>57</sup>

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<sup>50</sup> Van Beukering, P. et al. (2022). The Impacts of Climate Change on Bonaire. Institute for Environmental Studies. Vrije Universiteit.

<sup>51</sup> IPCC report, Climate Change 2022: Impact, Adaptations and Vulnerability. See:

[https://report.ipcc.ch/ar6/wg2/IPCC\\_AR6\\_WGII\\_FullReport.pdf](https://report.ipcc.ch/ar6/wg2/IPCC_AR6_WGII_FullReport.pdf)

<sup>52</sup> See <https://www.ipcc.ch/report/ar6/wg2/>

<sup>53</sup> A ‘Salina’ is a salt lake or inlet cut off from the sea by a dam of dead coral.

<sup>54</sup> Van Beukering, P. et al. (2022). The Impacts of Climate Change on Bonaire. Institute for Environmental Studies. Vrije Universiteit.

<sup>55</sup> Koninklijk Nederlands Meteorologisch Instituut (2022), *Signaal van het klimaat* (Signal from the Climate). See

[https://cdn.knmi.nl/knmi/asc/klimaatsignaal21/KNMI\\_Klimaatsignaal21.pdf](https://cdn.knmi.nl/knmi/asc/klimaatsignaal21/KNMI_Klimaatsignaal21.pdf).

<sup>56</sup> See <https://www.knmi.nl/over-het-knmi/nieuws/klimaatverandering-op-de-caribische-eilanden>

<sup>57</sup> See [https://www.sprep.org/att/IRC/eCOPIES/Pacific\\_Region/315.pdf](https://www.sprep.org/att/IRC/eCOPIES/Pacific_Region/315.pdf)

This makes the island more vulnerable to tidal waves due to storms or earthquakes on the sea bed. The likelihood of these is small, but they have a major impact.<sup>58</sup>

7. **Groundwater quality and fresh water availability are declining due to sea level rise and salinization**, and this is intensified by increasing heat and drought. This could result in less fresh water being available, i.e. a risk to the availability of fresh water and the scope for nature and farming.<sup>59</sup>
8. **Stray goats and donkeys are one of the main threats to nature and the environmental quality of the land and the coral reef.**<sup>60</sup> Goats and goat rearing are part and parcel of the culture and landscape of Bonaire, but the scale and method of goat rearing are reducing the island's resilience. Wageningen University & Research (WUR) estimated the total number of stray goats in 2015 at 32,000, and the number in the forest (12,000) may be an underestimate. About 40% of the total number of goats are regarded as semi-feral. Goats seriously harm plantations and vegetation,<sup>61</sup> resulting in soil erosion and sediment run-off into the sea. This causes waterlogging of the land and damages the coral in the ocean. In addition to the goat problem, Bonaire has about 500 stray donkeys (2019 estimate), which exacerbate the goat problem as a result of overgrazing.<sup>62</sup>
9. **The negative impact of climate change affects Bonaire's revenue-earning possibilities.** This can be seen in various areas:
  - a. The disappearance of coral due to ocean acidification and land erosion affects the island's revenue-earning possibilities. Bonaire focuses on – and is to a large extent dependent on – snorkeling and diving tourism.<sup>63</sup> Tourism is Bonaire's main source of income.<sup>64</sup> In 2022, 157,800 tourists flew to Bonaire.<sup>65</sup> This does not include cruise tourism, which according to the latest figures (three years earlier) brought 457,700 tourists to the island in 2019.<sup>66</sup>
  - b. The increase in sargassum seaweed makes Bonaire less attractive as a tourist destination because of its smell and visibility. According to the Ministry of Agriculture, Nature and Fisheries, the gases released from rotting sargassum on Bonaire have even reached levels that could be harmful to human health.<sup>67</sup>

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<sup>58</sup> See [https://cdn.knmi.nl/knmi/asc/klimaatsignaal21/KNMI\\_Klimaatsignaal21.pdf](https://cdn.knmi.nl/knmi/asc/klimaatsignaal21/KNMI_Klimaatsignaal21.pdf).

<sup>59</sup> Verweij et al. (2020). A nature inclusive vision for Bonaire in 2050. Wageningen University and Research.

<sup>60</sup> See <https://www.wur.nl/nl/Onderzoek-Resultaten/Onderzoeksinstituten/livestock-research/show-wlr/Plan-van-aanpak-duurzamere-geitenhouderij-op-Bonaire.htm>

<sup>61</sup> Lagevelt et al. (2015). *Populatie inschatting Geiten op Bonaire* (Estimate of the Goat Population on Bonaire). Universiteit Wageningen

<sup>62</sup> See <https://www.dcbd.nl/sites/default/files/documents/Ezels%20op%20Bonaire%20def.pdf>

<sup>63</sup> See <https://bonairegov.com/ondernemers/tourism-recovery-plan>, p. 24

<sup>64</sup> See <https://www.wolfcompany.com/wp-content/uploads/2016/02/Whats-Bonaire-Cruise-Tourism-Worth-Wolfs-Company-Revised-report-Aug-2015.pdf>.

<sup>65</sup> See <https://www.rijksdienstcn.com/actueel/nieuws/2022/maart/21/toerisme-caribisch-nederland-deels-hersteld-in-2021>

<sup>66</sup> See <https://opendata.cbs.nl/statline/#/CBS/nl/dataset/85007NED/table?ts=1679584954112>.

<sup>67</sup> See <https://www.openkamer.org/kamervraag/2019Z10635/>

10. **Climate change has a negative impact on the health of the island's inhabitants and visitors.** The Institute for Environmental Studies (IVM) has identified six health risks:
1. Temperature rises cause a risk of an increase in vector-borne<sup>68</sup> diseases such as the Zika virus and malaria.<sup>69</sup>
  2. Heat, extreme weather conditions and air pollution have a negative impact on the symptoms people experience from non-communicable diseases such as diabetes, heart and lung diseases, and kidney disease.
  3. Heat-related stress.
  4. Malnutrition and food insecurity.
  5. Water-borne diseases due to drinking water contamination as a result of heavy rainfall and stagnant water.
  6. Mental health problems caused by concerns about climate change or as a direct result of experiencing extreme weather conditions.
11. **Given all these concerns, it is important to stress that there are a host of small and large-scale initiatives in civil society to tackle the climate problems on Bonaire.** Without wishing to do a disservice to the others, I would point to the joint efforts of nature conservation organizations to preserve and restore coral and mangrove forests. The airport authority, for example, has plans to create a large solar farm so as to develop small-scale electric aviation and provide a public electric bus service from the airport in order to make some parts of the island accessible to the section of the population that has no transportation or for whom it is too expensive.

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<sup>68</sup> Diseases that can be transmitted by humans or animals. See WHO <https://www.who.int/news-room/fact-sheets/detail/vector-borne-diseases>.

<sup>69</sup> Van Beukering, P. et al. (2022). The Impacts of Climate Change on Bonaire, pp. 59-64. Institute for Environmental Studies. Vrije Universiteit.

## F. Knowledge and policy gaps

There are some major knowledge and policy gaps that stand in the way of an effective climate policy on Bonaire. I will list them briefly, distinguishing between gaps in knowledge and policy. I refer to them in the formulation of the agendas for the two tables and suggest how they could be bridged.

### Knowledge

#### 1. **Identifying island-specific risks**

The impact of climate change on small islands is attracting political and public attention. It is important to identify island-specific risks, as each island has its own characteristics in terms of such things as geology, economics, and population distribution and density. These factors affect the risk profile. There is as yet only limited policy-related and scientific knowledge about and experience of the impact of climate change and opportunities for climate adaptation in the specific Bonairian context.<sup>70</sup>

#### 2. **No data on greenhouse gas emissions for the Caribbean Netherlands**

Figures for the amount of CO<sub>2</sub> emissions and how it is changing are useful when monitoring reduction efforts. In the European Netherlands, the Netherlands Environmental Assessment Agency (PBL) provides an up-to-date annual picture of greenhouse gas emissions and the proportion of renewable energy and energy saving in its Climate and Energy Outlook (KEV).<sup>71</sup> There are no figures on CO<sub>2</sub> and other greenhouse gas emissions for the Caribbean Netherlands. Data on greenhouse gas emissions are useful when monitoring reduction efforts. Collecting data on reduction is expensive and labor-intensive; while it is useful, it is not needed for climate policy. Given the scale of the sectors that cause emissions in the Caribbean Netherlands, progress can be monitored by monitoring the bespoke agreements reached, without precise emission figures being available.

#### 3. **No height data for the Caribbean Netherlands**

There is a lack of elementary physical data such as a contour map.<sup>72</sup> The European part of the Netherlands has an up-to-date height model for the Netherlands (the AHN),<sup>73</sup> which provides precise height data, with an average of eight height measurements per square meter. There is no such thing for the Caribbean Netherlands, hence it is not possible to determine what effect sea level rise is having on the danger of flooding. Height data is also needed for good rainwater management. In both cases, the absence of a contour map stands in the way of scientific research into the future impact of climate change.

#### 4. **The Caribbean Netherlands does not have a climate impact atlas.**

In the European Netherlands we have a climate impact atlas that provides an initial impression of how vulnerable areas of the Netherlands are to waterlogging, drought, heat and flooding,<sup>74</sup> which is used by municipal and provincial authorities. If there were data of this kind for the Caribbean Netherlands, it would be very useful for stress tests to identify the vulnerabilities.

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<sup>70</sup> The first major study, carried out for Greenpeace by the VU's Institute for Environmental Studies, identified the negative impact on Bonaire of climate change using scenarios. See op. cit., Van Beukering et al., 2022.

<sup>71</sup> See <https://www.pbl.nl/publicaties/klimaat-en-energieverkenning-2022>

<sup>72</sup> We refer to a Digital Elevation Model in the literature.

<sup>73</sup> See <https://www.ahn.nl/>

<sup>74</sup> See <https://www.klimaat-effectatlas.nl/nl/>

This data is needed to enable us to have a proper dialogue about the risks. The KNMI will be producing new climate scenarios in the fall of 2023, paying special attention to the Caribbean Netherlands.

5. **Applied research is limited.**

The scientific publications of e.g. the VU and WUR focus mainly on basic research, e.g. identifying the challenges to humans, nature and the environment due to climate change, and the human impact on nature and the environment. What is lacking is applied research into specific adaptation policy options in the Caribbean Netherlands.

6. **No experience of other Caribbean islands yet**

The Caribbean Netherlands is surrounded by many countries facing similar challenges, but there is little exchange of knowledge on the subject. A good example of knowledge that is not being exchanged is on 'nature-based solutions'. The scientific literature points to these as the preferred approach to strengthening biodiversity and making nature more resistant and resilient to the impact of climate change.<sup>75</sup> There is little research into whether other islands in the Caribbean are using nature-based solutions, and if so, how.

From a broader point of view, it is very important to learn from similar geological and geographical locations in order to make the right decisions on suitable measures and worthwhile investments. Knowledge exchange initiatives in this area are now being organized. For example, an International Panel for Deltas and Coastal Areas (IPDC) has been launched at the instigation of the Netherlands: this is a partnership between countries, knowledge institutions and financial authorities focusing on water and climate change.<sup>76</sup>

The Netherlands and Aruba are organizing a climate conference on Aruba in May to promote climate action collaboration between small islands worldwide.<sup>77</sup> The Netherlands also joined two existing island-related partnerships at the COP 27 climate conference: the Local2030 Islands Network<sup>78</sup> and the IRENA/SIDS Lighthouses initiative.<sup>79</sup>

## Policy

1. **No coordination of scientific research**

Scientific research focusing on the Caribbean Netherlands is developed in various ways. The three standard ways are: (1) independent academic initiatives using the Caribbean islands as a case study; (2) scientific projects as part of a European initiative;<sup>80</sup> and (3) scientific research for a government organization. What is lacking is policy focusing on coordination, establishing what research is needed, and how the various scientific initiatives relate to each other. The fragmentation of knowledge is a major challenge, standing in the way of an efficient, robust, effective adaptation policy.

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<sup>75</sup> Verweij et al. (2020). A nature inclusive vision for Bonaire in 2050. Wageningen University and Research.

<sup>76</sup> See <https://www.rijksoverheid.nl/actueel/nieuws/2023/03/23/nederland-richt-nieuw-samenwerkingsverband-op-over-water>

<sup>77</sup> See <https://www.rijksoverheid.nl/actueel/nieuws/2023/03/20/nederland-en-aruba-organiseren-klimaatconferentie-op-aruba>

<sup>78</sup> See <https://www.islands2030.org/about>

<sup>79</sup> See <https://islands.irena.org/About>

<sup>80</sup> See <https://www.rvo.nl/subsidies-financiering/horizon-europe>

2. **No policy yet to move to 100% sustainable generation**

The good climate provides substantial potential for generating sustainable energy (wind and solar power in particular).<sup>81</sup> Stakeholders on the islands say that the potential is not being utilized to the full. Given the current oil price and consumption on the island, the business case for 100% sustainable energy is costly. TNO has surveyed alternative ways of generating power sustainably in addition to wind and solar power<sup>82</sup> (Appendix 5). No policy has yet been developed to move to 100% sustainable generation.

3. **Limited plans to make sectors sustainable**

Climate policy encompasses many things, going beyond generating sustainable energy. Under the Climate Agreement in the European Netherlands, for example, plans have been drawn up to make industry, the built environment, farming and land use, and the mobility sector sustainable. Plans for the Caribbean Netherlands to make mobility on land, shipping and aviation, and tourism sustainable are limited. The Bonaire Climate Table can provide these.

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<sup>81</sup> See <https://www.rijksdienstcn.com/economie-klimaat/energie>

<sup>82</sup> TNO, 2021, *Opties voor klimaatneutrale energievoorziening in Caribisch Nederland* (Options for climate-neutral energy supply in the Caribbean Netherlands), p. 3. See <https://publications.tno.nl/publication/34639355/JHyjby/TNO-2021-R11513.pdf>

## G. The organization and governance of the climate table

The Bonaire Climate Table requires a bespoke approach with a clear aim and outcome (see G1). It has various functions (G2). All the relevant sectors of society and government bodies need to participate and commit themselves (G3). The table operates under the auspices of the Bonaire Public Entity, with the consent of the Minister for Climate and Energy Policy and has an independent chair (G4). As regards developing the climate adaptation plan, the Delta Program Commissioner's expertise is available and it makes sense to utilize it (G5). As not all data is available for both the Caribbean and European Netherlands, the table will need to agree on measures and monitor their progress (G6).

### G1 Aim and outcome

The Executive Council has said that there is a need for knowledge and expertise, and leadership and coordination in the area of mitigation and adaptation. **I would recommend adopting an approach whereby the Bonaire Climate Table ultimately produces a Bonaire Climate Agreement.** The new climate table will need to have drafted it before 1 January 2024. Time is running short, and agreements can be reached within a foreseeable period.

A prerequisite for participating in the table is commitment to the aim, i.e. an agreement.

As quartermaster, I would recommend **setting up a single climate table and giving it a twofold brief**. As already mentioned, the issues of mitigation and adaptation differ fundamentally in terms of the nature of the problems, the available knowledge, and the progress that has already been made. Because of these differences, mitigation and adaptation each require a different approach.

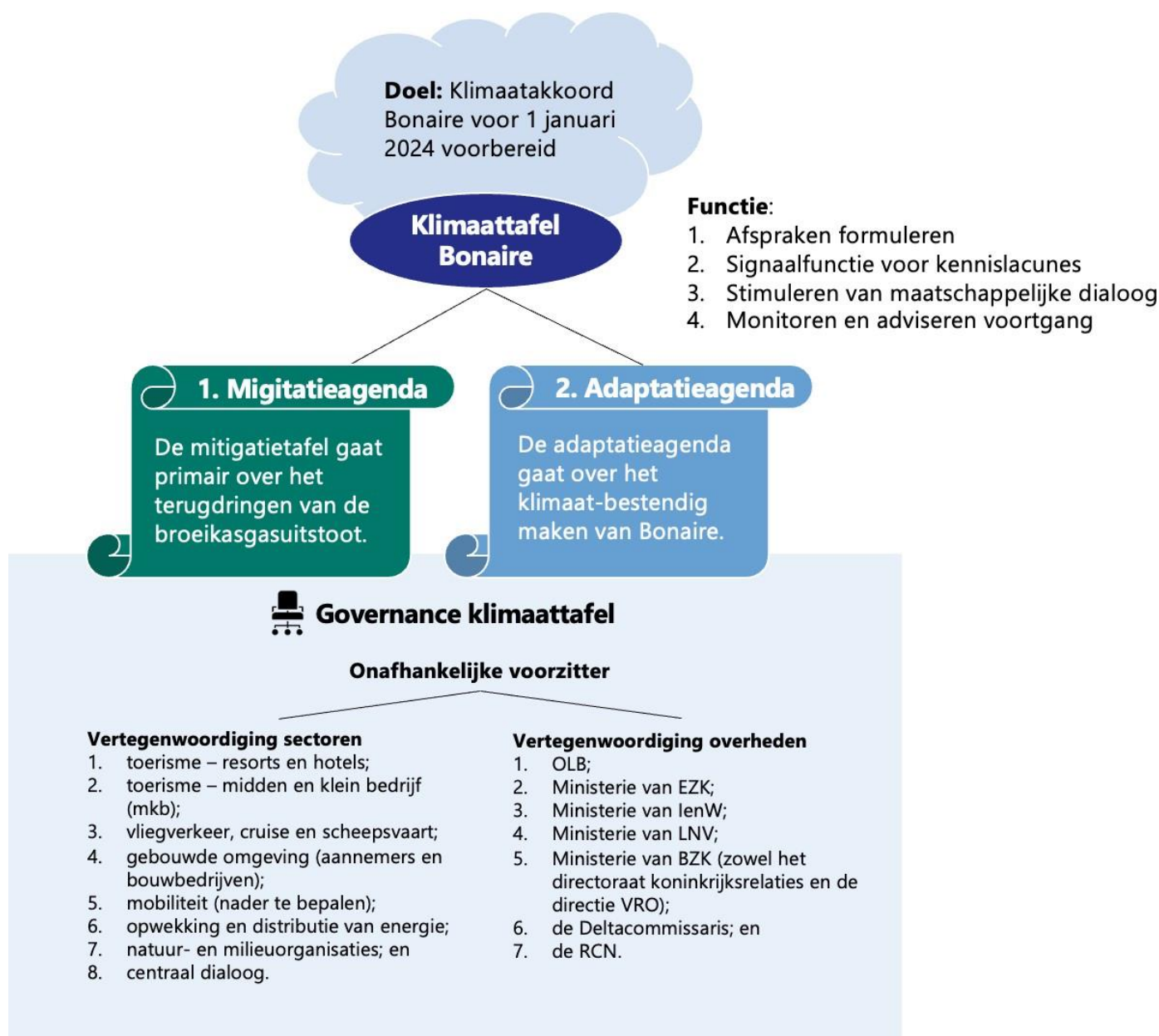
As regards **mitigation**, the aim of the table is to **reach agreements** on making the island of Bonaire sustainable, and specific agreements on **reducing the island's own contribution to climate change**.

As regards **adaptation**, the aim of the table is **to make the island more resilient and resistant to the current and future consequences of climate change**. I would recommend adopting the approach used in the Delta Plan for Spatial Adaptation (DPRA).<sup>83</sup> The Delta Program Commissioner's expertise should be used to implement the agreements in the adaptation agenda.

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<sup>83</sup> See <https://klimaatadaptatienederland.nl/overheden/deltaplan-ra/>

The proposed design of the Bonaire Climate Table is shown below.



## G2 Functions

In order to achieve the aims of the mitigation and adaptation table, I propose drawing up **two different agendas to be discussed there**. The interlocutors may change from one agenda to the other, as proposed by the chair.

Specifically, the Bonaire Climate Table has **four functions**:

- a) To formulate **agreements** to reach a Climate Agreement containing the following elements:
  - The Bonaire Climate Table should provide a platform for the sectors wishing to contribute to climate policy on Bonaire. This **platform function** will involve the members participating in the table each contributing to reducing Bonaire's greenhouse gas emissions.
  - The participating sectors should reach **measurable, time-limited agreements on the contribution that each sector will make**. Civil society partners not pledging any specific performance or contribution should sign a covenant to collaborate on implementing the agreements in the Climate Agreement.
  - This **commitment** should be a prerequisite for participating in the table.
  - As regards mitigation and adaptation, the table should provide a platform to bring together the **required knowledge, expertise** and civil society involvement to reach agreements to make Bonaire climate-proof.
- b) Knowledge gap warning function  
A **function** of the Bonaire Climate Table is to **identify knowledge gaps and make proposals on how they can be bridged and by whom**. The partners at the table should commit to stay away from any well-intentioned initiatives on the part of authorities and government bodies. The table should discuss what research is and is not needed, looking beyond Bonaire where appropriate, and examine where the policy required is suitable for the rest of the Caribbean Netherlands. New scientific research proposed by the table should be commissioned by the Bonaire Public Entity and the respective ministry. The Public Entity and the ministries should only approve research that is consistent with a research agenda. The Dutch Research Council (NWO) has told me that it intends to take on a coordinating role under the Dutch Climate Research Initiative (KIN).
- c) Promoting a public dialogue  
One of the tasks of the Bonaire Climate Table is to **promote a public dialogue on the island about the impact of climate change**. Conducting an effective climate policy is not just a technical exercise; it requires a system transition in society. Given the problems on the island – both the climate challenges and the socioeconomic situation –, a broad-based public dialogue is needed on how we intend to live together with our nature and environment in a changing world.

This is not about obtaining approval for the considerations and choices made at the table but involving people in them. The table thus has an explicit brief to consider how to embed the table in society, both during implementation and once an agreement has been reached.

d) Monitoring and advising on progress

Once the Climate Agreement has been signed, the table should embark upon a series of **progress meetings with a solely monitoring and advisory function**, as in the European Netherlands. The chair should take the first step in selecting the members of the progress committee, and the Agreement should contain proposals on the details of the committee. The chair of the climate table should advise on the profile of the committee's independent chair.

### G3 Composition

The Bonaire Climate Table should comprise representatives of the **various government bodies** and the **main sectors** on the island.

I would recommend inviting at least the following **sectors**:

1. Tourism: resorts and hotels
2. Tourism: Small and Medium-sized Enterprises (SMEs)
3. Aviation, cruising and shipping
4. The built environment (contractors and construction companies)
5. Mobility (to be specified)
6. Energy generation and distribution
7. Nature conservation and environmental protection organizations
8. A central dialogue.

The following **government bodies** should sit at the climate table:

1. Bonaire Public Entity
2. Ministry of Economic Affairs and Climate Policy (EZK), Climate and/or Region Department
3. Ministry of Infrastructure and Water Management (IenW), Soil, Space and Climate Adaptation Department, Environment and International Directorate
4. Ministry of the Interior and Kingdom Relations (BZK), Directorate General Kingdom Relations and Housing and Spatial Development Department
5. Ministry of Agriculture, Nature and Fisheries, Nature Conservation Department
6. The Delta Program Commissioner in his knowledge role
7. National Office for the Caribbean Netherlands (RCN).

#### G4 The role of the chair

The climate table will operate under the auspices of the Bonaire Public Entity (OLB) and the Government. **The OLB will be the client, with the approval of the Minister for Climate and Energy Policy on behalf of the ministries concerned.** The OLB cannot possibly perform its client role properly without being provided with additional financial and staffing resources.

The climate table should be chaired by an **independent chair** who is **not a civil servant**, with experience, knowledge and expertise and at arm's length from the politicians.

The chair's **responsibilities** are as follows:

- To set up the climate table and ensure its coherence.
- To ensure that members commit to the agreements that they reach with each other.
- To have the right to bar members from the table.
- To pay attention to the table's broader embedding in society.
- To be a standard bearer for the climate table in the outside world, to communicate transparently and publicly about decisions, and to be the spokesman.

The chair should report regularly to the Bonaire Public Entity and the Minister for Climate and Energy Policy.

#### G5 Taking advantage of the Delta Program Commissioner's expertise

In the European Netherlands, organizing the fight against the consequences of climate change resulted in the passing of the Delta Act, the appointment of a Delta Program Commissioner and the subsequent introduction of the Delta Plan for Spatial Adaptation (DPRA). The result is a clear-cut, consistent approach that commands government support. Given the status and independent position of the Delta Program Commissioner within the four tiers of government in the Dutch system, this structure could also be adopted for the Caribbean Netherlands.

As a full-fledged part of the Netherlands, we should **take advantage of the Delta Program Commissioner's expertise** for implementation. I realize, however, that given the islands' limited scale and capacity, exacerbated by the absence of a provincial authority, the Commissioner will perform a different role at the adaptation table than is currently customary in the Netherlands. There is no need to amend the Delta Act. Central government can make this decision in the form of an official instruction and provide the required resources. The Commissioner has told me that he is willing to take on this responsibility in a form to be discussed. The Commissioner could also play a role in the implementation of the climate agendas of St. Eustatius and Saba.

This is not the first time the Commissioner will have played an advisory role outside the European Netherlands. The Netherlands works together with authorities in fifteen Delta countries under the Partners for Water program, part of the Netherlands International Water Ambition (NIWA). In recent years, the Commissioner has helped to develop and implement delta plans on the Philippines (the Manila Bay Sustainable Development Master Plan), Bangladesh (the Bangladesh Delta Plan), and Vietnam (the Mekong Delta Plan).

#### G6 Agreements on concrete, practicable measures needed

During the negotiations on the Climate Agreement in the European Netherlands, the various climate tables for each sector were set concrete reduction targets for greenhouse gas emissions. These were based on an analysis by the Netherlands Environmental Assessment Agency (PBL) and passed by the Government. It was the responsible of the tables themselves to produce proposals and reach agreements on how to meet them. The agreements are monitored through the Climate Policy Dashboard and the Climate and Energy Outlook.

The situation on Bonaire is different. **We do not have an overview of greenhouse gas emissions in the Caribbean Netherlands**, and it is therefore not possible to produce an overview of the emissions per sector. The Government could commission Statistics Netherlands (CBS) and the RIVM (National Institute for Public Health and the Environment) to quantify them, but the question is whether this is desirable and necessary. Measuring these emissions is a complicated process that takes time and money. The emissions on Bonaire are small, hence a cost-benefit analysis would probably prove negative. The organizations and individuals responsible for them are easy to identify and limited compared with those in the European Netherlands. It is also fairly clear what measures would yield the maximum climate benefit.

My conclusion is that time is running short and the clear nature of the sectors involved and the scale of the problems means that mitigation action is desirable, feasible and necessary, even without having a complete overview of emissions. I would therefore **recommend that the tables agree concrete, verifiable measures rather than reduction targets**. These agreements will provide the basis for monitoring success and impact.

## H. Two agendas: 1. Mitigation and 2. Adaptation

The Bonaire Climate Table will have two substantive agendas, a mitigation agenda (H1) and an adaptation agenda (H2).

### H1 The mitigation agenda

The **mitigation table will be primarily concerned with reducing greenhouse gas emissions**. In the European Netherlands, this is enshrined in the Climate Act as a greenhouse gas emissions reduction target.<sup>84</sup> In the case of Bonaire, I would recommend adopting this system and agreeing measures to reduce greenhouse gases in a Climate Agreement.

Specifically, I propose placing the following item on the agenda for the table:

1. The sectors should each reach measurable, time-limited agreements on the contribution that each sector will make to reducing greenhouse gas emissions, in terms of measures. Civil society partners not pledging any specific performance or contribution should sign a covenant to collaborate on implementing the agreements in the Climate Agreement.

Sustainable energy is vital to reduce use of fossil fuels and hence greenhouse gas emissions, and steps in this direction are already being taken on Bonaire. The table should examine what else can be done.

Specifically, I propose placing the following items on the agenda for the table:

2. The Ministry of Economic Affairs and Climate Policy is investing on Bonaire through its participation in the Bonaire Fuel Terminal (BBT), the aim of which is to achieve 80% sustainable generation in the form of a solar farm and a wind farm. There will also be a battery to store electricity. The expectation is that 80% of electricity on Bonaire will be generated from sustainable sources by 2024-2025.<sup>85</sup>

Do you expect this target to be met? If not, what needs to be done to achieve 80% by 2025 at the latest?

3. What stands in the way of sustainably generating the remaining 20%, and what are the solutions? Fact-finding research into the various routes towards 100% sustainable generation has already been carried out. I would recommend using the routes identified by TNO and set out in Appendix 5 as the starting point for the discussion.

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<sup>84</sup> Climate Agreement (2019). See <https://www.klimaataakkoord.nl/binaries/klimaataakkoord/documenten/publicaties/2019/06/28/klimaataakkoord/klimaataakkoord.p df>

<sup>85</sup> See <https://www.rijksoverheid.nl/actueel/nieuws/2022/09/28/ruim-33-miljoen-euro-voor-duurzame-elektriciteit-caribisch-nederland>

A broad view of mitigation goes beyond merely reducing greenhouse gas emissions: it involves combating harmful activities that cause and exacerbate climate change. On Bonaire, this requires implementing and enforcing the existing Nature and Environment Policy Plan (NMBP). The table needs to discuss the points where nature, the environment and the climate meet.

Specifically, I propose placing the following item on the agenda for the table:

4. Make it clear how the agreements to be reached in a Climate Agreement are related to the Nature and Environment Policy Plan Caribbean Netherlands for Bonaire.

Finally, I see a link between circular policy and the climate table on Bonaire. A circular economy is very important, particularly on a small island with expensive, limited exports. Circular policy on Bonaire should help to combat environmental pollution, damage to biodiversity and climate change. In the Netherlands, the relationship between circular policy and the energy transition has recently been set out in the National Circular Economy Program (NPCE) and the second Integrated Circular Economy Report (ICER).<sup>86</sup>

Specifically, I propose placing the following item on the agenda for the table:

5. Indicate what opportunities there are for circular policy on Bonaire and what civil society agreements and government interventions are needed.

## H2 The adaptation agenda

The **adaptation agenda is about making Bonaire climate-proof**, so that the island is more resistant to the consequences of climate change, now and in the future. The Delta Program comprises three plans:

1. to protect the European Netherlands against flooding in future;
2. to continue to provide the European Netherlands with enough fresh water;
3. make the European Netherlands climate-proof.

This latter task is set out in the Delta Plan for Spatial Adaptation 2017.<sup>87</sup> Central government and the provincial and municipal authorities and water authorities have laid down their joint ambition in the Delta Decision for Spatial Adaptation: *The Netherlands must be climate-proof and water-robust by 2050*. This Delta Decision is part of the Delta Program. No partnership between central government and the municipal authorities has been developed for the Caribbean Netherlands.

The DPRA is a joint plan of central government, the provincial and municipal authorities and water authorities that sets out a plan of attack for making the European Netherlands climate-proof. The detailed plan involves seven ambitions to be implemented nationally, regionally and locally in a cyclical process of knowing, wanting and working. The seven ambitions are as follows:

1. to identify vulnerabilities;
2. to conduct risk dialogues and draw up a strategy;
3. to draw up an implementation agenda;
4. to take advantage of linkage opportunities;
5. to encourage and facilitate;
6. to regulate and assure; and
7. to take action in the event of emergencies.

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<sup>86</sup> Netherlands Environmental Assessment Agency (2023). Circulaire economie rapportage (Circular Economy Report). See <https://www.pbl.nl/publicaties/integrale-circulaire-economie-rapportage-2023>

<sup>87</sup> See <https://klimaatadaptatienederland.nl/deltabeslissing/deltabeslissing/>

This systematic approach is proving effective in the Netherlands. It provides sufficient starting points for the process and scope for appropriate local implementation. As already mentioned, I would recommend adopting a similar systematic approach to the climate agenda for adaptation. The deadline for this plan should be no later than 1 January 2024. I propose that the Delta Program Commissioner monitor the agreements reached at the table.

Specifically, I propose placing the following items on the agenda for the table:

1. Identify Bonaire's vulnerabilities due to climate change, paying special attention to the impact of climate change on the population, the coral and the mangrove forests.
2. Develop a shared vision through a risk dialogue.
3. Translate that vision into an implementation agenda with concrete adaptation actions, with clearly defined roles, duties and responsibilities for the private sectors, civil society organizations, Bonaire Public Entity and central government.
4. Examine what other initiatives are in place on Bonaire or in the Caribbean Netherlands that could be incorporated in the climate adaptation plan.

Climate adaptation in the Caribbean Netherlands requires different knowledge and expertise than in the European Netherlands. The inhabitants of the Netherlands – both the European and Caribbean part – have been formed by a history of living with water. A good deal of expertise has been developed in the European Netherlands, but this is limited as yet in the case of the Caribbean Netherlands. The challenges for the Caribbean Netherlands due to climate change mean that more knowledge is needed. I define the gaps in scientific knowledge in this report. Adaptation is potentially difficult because of the lack of scientific knowledge and the fragmentation of experience-based knowledge of the changes in land and sea available among the inhabitants. The Bonaire Climate Table should establish what knowledge is still lacking and identify the most important questions that need to be answered in the coming years.

Specifically, I propose placing the following item on the agenda for the table:

5. Draw up a research agenda based on the knowledge that is still lacking and the questions that need to be answered in the coming years.

The climate adaptation plan is closely linked to the spatial vision for Bonaire, Saba and St. Eustatius. The spatial planning choices made affect the direct risks to the inhabitants of the islands. Spatial planning choices determine the scope allocated for natural protection against the effects of climate change, e.g. the growth of mangrove forests and protecting them against erosion. The Minister of Housing and Spatial Planning sent a housing and spatial planning policy agenda to the House of Representatives in January 2023. That agenda is the basis for the spatial development program that the Bonaire Public Entity and the Ministry of the Interior and Kingdom Relations are currently working on. The Public Entity Bonaire needs to translate this into an island-specific spatial development plan. These processes affect the climate table's brief.

Specifically, I propose placing the following item on the agenda for the table:

6. Make it clear how the agreements to be reached in a Climate Agreement are related to the Caribbean Netherlands housing and spatial development policy agenda for Bonaire. Ensure that the risks and potential risks due to climate change guide the spatial planning choices and licensing.

The Bonaire Public Entity asked the Rhine and IJssel Water Authority in November 2022 to assist in developing an integrated approach to water management. The Authority published a final report in February 2023 setting out the problems, measures and short-term and long-term actions.

7. Discuss the measures and actions in the Rhine and IJssel Water Authority's Integrated Water Management final report, and decide on that basis what the Climate Agreement should include, the timetable, and who should be responsible for implementation, including waste water treatment. Examine whether staff of the Bonaire Public Entity, the Ministry of Infrastructure and Water Management, water authorities, municipal sewerage departments, drinking water companies and Rijkswaterstaat (the Ministry's executive agency) could be twinned for a period to be decided in an unchanging configuration so as to ensure continuity.

## I. Applicability to Saba and St. Eustatius

Just as the development of the Climate Agreement in the Netherlands cannot be compared with the possible approach for Bonaire, the climate policy approach for Saba and St. Eustatius will not be the same as for Bonaire.

What is the same is the express wish of both islands to provide a clear framework for existing climate policy (enshrined e.g. in the Nature and Environment Policy Plan, the policy on sustainable energy and water supply, and the policy on spatial planning and development), with clear targets in a tight timetable. A comprehensive long-term climate vision is necessary and desirable.

Substantial percentages of sustainably generated electricity are available on both those islands, and plans to move towards 90% sustainable energy are at an advanced stage. Saba currently generates enough sustainable electricity to be self-sufficient for a large part of the day. Battery storage is needed on both islands to make the supply more sustainable. Given the extent and nature of the climate problems on both islands, the small size of the population (St. Eustatius 3,293, Saba 2,035) and the nature of the mitigation and adaptation approach, a Climate Agreement with negotiations between a host of partners is not needed.

**I would therefore recommend that a climate agenda for the two islands be drawn up under the leadership of an independent expert with specific knowledge of mitigation and adaptation, in consultation with the executive councils and civil society organizations. The respective departments of the Ministries of Economic Affairs and Climate Policy, the Interior and Kingdom Relations, and Infrastructure and Water Management should provide support.**

This climate agenda should briefly set out the mitigation and adaptation problems, the strategic choices that need to be made, and possible solutions. Those responsible for solving the problems should then be identified and should jointly draw up an action plan and timetable. If knowledge needed to make these choices is lacking, that should be placed on the agenda. Every six months, a progress report should be made to the executive councils, the Minister for Climate and Energy Policy, the Minister of Infrastructure and Water Management, and the State Secretary for the Interior. It is also important in my view to involve the population and Saba and St. Eustatius actively in the climate agenda through clear climate communication.

It would be worth considering giving the independent chair of the Bonaire Climate Table a chairing role in the drawing up of the climate agendas for Saba and St. Eustatius. In line with this, the Delta Program Commissioner – if he plays a role in the implementation of the Climate Agreement on Bonaire – could also play an independent role in the implementation of the climate agendas.

In the foregoing, I have made an urgent plea for technical, staffing and financial support for Bonaire, and it goes without saying that this also applies – as appropriate – to Saba and St. Eustatius. That support is essential in order to put climate policy into practice on the islands. Proper embedding of this knowledge in local government is advisable, and a good deal can be gained from exchanging best practices between the three BES islands.

During my visit to Saba and St. Eustatius, I noticed that some specific problems on the islands were repeatedly mentioned in the talks I held there. I share these observations below, in the hope that they can provide a starting point for fruitful discussions on the climate agenda for these islands.

## **St. Eustatius**

1. The main concerns on St. Eustatius are focused on energy, water and large-scale erosion.
2. The administrative problems have caused policy and implementation to lag behind seriously.
3. Clean drinking water and water supply are a problem. Restoring the wells (only four of the fourteen are in use) could contribute to the solution, and research needs to be done into this. The water bottling company on Saba is regarded as a very attractive example.
4. The estimated 14,000 stray animals (goats and cows) cause severe erosion, which in turn affects the health of the coral (there is in fact a link between severe erosion and damage to the coral on all the BES islands) and makes the island more vulnerable to the effects of severe storms and tropical hurricanes.
5. The socioeconomic challenges faced by the inhabitants of both St. Eustatius and Saba need to be taken into account. Energy bills currently consume as much as 20-30% of household income in some cases. This is an obstacle to making electricity generation more sustainable, as investments are passed on in the price of electricity.
6. Economic activity is growing on both St. Eustatius and Saba, e.g. due to the growth of tourism and the construction of a new port. All this calls for a tight, controlling, sustainable spatial planning policy that anticipates long-term developments and sets boundaries.

## **Saba**

1. In the case of Saba, the focus is mainly on nature restoration and conservation on land and sea, increasing self-sufficiency, and developing sustainable food production.
2. Developing a third solar farm would bring Saba to 90% renewable energy. Of a total investment of some 20 million euros, 2.5 million is still lacking.
3. The program to remove wild goats is proving very successful: the stray population has been reduced from just under 5,000 to around 1,500. The results are clearly apparent in an increase in vegetation and hence a reduction in erosion. The policy needs to be continued, and it would be advisable to share knowledge and resources with islands in the region (including St. Eustatius).
4. Good progress has been made in the area of providing clean drinking water at affordable prices. Saba Splash, the water bottling company, has taken substantial steps in that direction with assistance from the Ministry of Infrastructure and Water Management and the Dutch water management authority VEI, and this development also needs to be continued.
5. The need for a tight, controlling, sustainable spatial planning policy is just as important on Saba as on St. Eustatius.

## J. Conclusion

I discovered from my talks with everyone concerned, both on the islands and in the Netherlands, that there is great willingness to embark upon climate policy in the special municipalities. Unfortunately, I have also found that the staffing and financial resources and knowledge required are largely lacking.

The Dutch Government recently took a further step towards making the Netherlands more sustainable, with an impressive package of proposals and a sum of 28 billion euros. What is needed to enable Bonaire, St. Eustatius and Saba to take similar steps, in the area of both mitigation and adaptation, is negligible in financial terms. Central government would thus be fulfilling its responsibility in a special way.

It is never too late.

## Appendix 1 List of abbreviations

AHN - Actuele hoogtebestand Nederland  
(up-to-date height model for the Netherlands) AR - Algemene Rekenkamer  
(Netherlands Court of Audit) BBT - Bonaire Brandstof Terminal  
(Bonaire Fuel Terminal) BES - Bonaire, St. Eustatius, Saba  
BNMP - Bonaire National Marine Park  
BZK - Ministerie van Binnenlandse Zaken en Koninkrijksrelaties  
(Ministry of the Interior and Kingdom Relations) CBS - Centraal Bureau voor de Statistiek (Statistics Netherlands)  
CN - Caribbean Netherlands  
DPRA - Deltaplan voor Ruimtelijke Adaptatie (Delta Plan for Spatial Adaptation)  
EZK - Ministerie van Economische Zaken en Klimaat  
(Ministry of Economic Affairs and Climate Policy)  
IenW - Ministerie van Infrastructuur en Waterstaat  
(Ministry of Infrastructure and Water Management)  
IBO - Interdepartementaal beleidsonderzoek  
(Interministerial Policy Review)  
ICER - Integrale Circulaire Economie Rapportage  
(Integrated Circular Economy Report) ILT - Inspectie leefomgeving en transport (Human Environment and Transport Inspectorate)  
IPCC – Intergovernmental Panel on Climate Change  
IPDC - International Panel for Deltas and Coastal Areas  
IVM - Instituut voor milieuvraagstukken (Institute for Environmental Studies)  
KEV - Klimaat en Energieverkenning (Climate and Energy Outlook)  
KIN - Klimaatonderzoek Initiatief Nederland (Dutch Climate Research Initiative) KNMI - Koninklijk Nederlands Meteorologisch Instituut (Royal Dutch Meteorological Institute)  
LNV - Ministerie van Landbouw, Natuur en Visserij  
(Ministry of Agriculture, Nature and Fisheries) NAS - Nationale Strategie Klimaatadaptatie (National Climate Adaptation Strategy)  
NIWA - Nederlandse Internationale Waterambitie  
(Netherlands International Water Ambition) NMBP - Natuur en Milieubeleidsplan (Nature and Environment Policy Plan)  
NPCE - Nationaal Programma Circulaire Economie (National Circular Economy Program)  
NWO - Nederlandse Organisatie voor Wetenschappelijk onderzoek  
(Dutch Research Council) OLB - Openbaar Lichaam Bonaire (Bonaire Public Entity)  
PBL - Planbureau voor de leefomgeving  
(Netherlands Environmental Assessment Agency) RCN - Rijksdienst Caribisch Nederland (National Office for the Caribbean Netherlands) RES - Regionale Energiestrategie (Regional

Energy Strategy)

RVO - Rijksdienst voor ondernemend Nederland

(Netherlands Enterprise Agency) RvS - Raad van  
State (Council of State)

STINAPA - Stichting Nationale Parken Bonaire (Bonaire National Parks Foundation)

VRO - Volkshuisvesting en Ruimtelijke Ordening (Housing and  
Spatial Planning (Minister)) VU - Vrije Universiteit Amsterdam

WOLBES - Wet Openbare Lichamen Bonaire, Sint Eustatius en Saba  
(Bonaire, St. Eustatius, and Saba Public Entities Act) WSNP -

Washington Slagbaai Nationaal Park

WUR - Wageningen University & Research

## Appendix 2 List of organizations and persons consulted

Organization	Location	Type
Architect Okhuijsen	Bonaire	Private sector
Beach & Dive Resort Grand Windsock/Plaza Resort Bonaire	Bonaire	Private sector
Bonaire Executive Council	Bonaire	Government
Saba Executive Council	Saba	Government
St. Eustatius Executive Council	St. Eustatius	Government
Bonaire Fuel Terminal	Bonaire	Government
Bonaire Exclusief Suites	Bonaire	Private sector
Bonhata	Bonaire	Tourism
Bonned Contractors	Bonaire	Private sector
Bonaire Fire Service	Bonaire	Government
Buddy's Dive Resort	Bonaire	Private sector
Captain Don's Habitat	Bonaire	Private sector
Bonaire's Central Dialogue	Bonaire	Public-private sector
Contour Global	Bonaire	Private sector
The Delta Program Commissioner	European Netherlands	Government
Delfins Beach Resort Bonaire	Bonaire	Private sector
Divi Flamingo Bonaire	Bonaire	Private sector
Dutch Caribbean Nature Alliance	Bonaire	Nature conservation organization
Echo Foundation	Bonaire	Nature conservation organization
Bonaire Island Council	Bonaire	Government
Saba Island Council	Saba	Government
Flamingo International Airport	Bonaire	Public-private sector
Fundashon Cas Boneriano	Bonaire	Social rented homes cooperative
Greenpeace	European Netherlands and Bonaire	Civil society
Institute for Environmental Studies	European Netherlands	Science/academia
Inhabitants of Bonaire (x2)	Bonaire	Civil society
Jong Bonaire	Bonaire	Civil society
Chamber of Commerce and Industry	Bonaire	Government
Royal Dutch Meteorological Institute	European Netherlands	Government
Magazina di Rei	Bonaire	Civil society
Mangroves Maniacs	Bonaire	Nature conservation organization
Ministry of the Interior and Kingdom Relations	European Netherlands	Government
Ministry of Economic Affairs and Climate Policy	European Netherlands	Government

Ministry of Infrastructure and Water Management	European Netherlands	Government
Ministry of Agriculture, Nature and Fisheries	European Netherlands	Government
Netherlands Organization for Applied Scientific Research (TNO)	European Netherlands	Science/academia
NTCS Green Bee	European Netherlands	Consultancy
Dutch Research Council	European Netherlands	Science/academia
Bonaire Public Entity	Bonaire	Government
Saba Public Entity	Saba	Government
St. Eustatius Public Entity	St. Eustatius	Government
Netherlands Environmental Assessment Agency	European Netherlands	Government
Plaza Beach Resort Bonaire	Bonaire	Private sector
Province of Gelderland	European Netherlands	Government
Council of State	European Netherlands	Government
Reef Renewal	Bonaire	Nature conservation organization
National Office for the Caribbean Netherlands	Bonaire	Government
Netherlands Enterprise Agency	European Netherlands	Government
Rijkswaterstaat	European Netherlands	Government
Saba Conservation Foundation	Saba	Nature conservation organization
Saba Electric Company (SEC)	Saba	Government
Schiphol Airport	European Netherlands	Public-private sector
Sea & Learn Foundation	Saba	Nature conservation organization/NGO
Sea Turtle Conservation	Bonaire	Nature conservation organization
Statia Utility Company (STUCO)	St. Eustatius	Government
STENAPA	St. Eustatius	National Park Manager
STINAPA	Bonaire	National Park Manager
Telbo Bonaire	Bonaire	Private sector
D66 parliamentary party, House of Representatives	European Netherlands	Government
Wageningen University & Research	European Netherlands	Science/academia
Bonaire Water and Energy Company (WEB)	Bonaire	Government
Wolfs Company	European Netherlands	Consultancy
WWF Dutch Caribbean	Bonaire	Nature conservation organization

## Appendix 3 Documents studied

- Algemene Rekenkamer (2012). *Bijzondere uitkeringen aan Caribisch Nederland* (Special allowances to the Caribbean Netherlands).
- Commissie Spies (2015). *Vijf jaar verbonden, Bonaire, Sint-Eustatius, Saba en Europees Nederland* (Joined together for five years, Bonaire, St. Eustatius, Saba and the European Netherlands).
- IBO (2019). *'Samen Werken' Samenwerken waar het moet, zelfstandig waar het kan* (Working together where necessary, independently where possible).
- Gert Oostindie and Wouter Veenendaal (2022). *Ongemak, Zes Caribische eilanden en Nederland* (An uncomfortable situation: Six Caribbean islands and the Netherlands). Prometheus.
- IPCC (2022). Climate Change 2022: impacts, adaptations, and vulnerability. IPCC - United Nations Intergovernmental Panel on Climate Change. Summary for policymakers. Sixth Assessment Report.
- KNMI (2021). *Klimaatsignaal '21, Hoe het klimaat in Nederland snel verandert* (Climate signal '21: How the climate in the Netherlands is rapidly changing). Koninklijk Nederlands Meteorologisch Instituut, Ministerie van Infrastructuur en Waterstaat. October 2021.
- Peter Verweij et al. (2020). A nature inclusive vision for Bonaire in 2050. Wageningen University and Research.  
Pieter van Beukering et al. (2022). The Impacts of Climate Change on Bonaire. Instituut voor Milieuvraagstukken.
- Raad van State (2019). *Voorlichting over de bestaande vormgeving tussen de Caribische en Europees Nederland en de coördinerende rol van BZK* (Information on the existing setup between the Caribbean and European Netherlands and the coordinating role of the Ministry of the Interior and Kingdom Relations).
- TNO (2021). *Opties voor klimaatneutrale energievoorziening in Caribisch Nederland* (Options for climate-neutral energy supply in the Caribbean Netherlands).
- Quickscan Waterveiligheid Caribisch Nederland (2016). *Overstromingsrisico's als gevolg van Orkanen, tsunami's en neerslag op Saba, St Eustatius en Bonaire* (Caribbean Netherlands Water Safety Quick Scan: Flood risks due to hurricanes, tsunamis and precipitation on Saba, St. Eustatius and Bonaire). HKV Lijn in Water.

## Appendix 4 The legal basis: legislation applicable to the Caribbean Netherlands

### *Climate mitigation*

- There are no specific local climate targets for the Caribbean Netherlands in terms of mitigation. The Government supports the 1.5 degree ambition in the Paris Agreement and is committed to reducing global emissions in the service of all citizens of the European and Caribbean Netherlands.

### *Climate adaptation*

- The same allocation of responsibilities applies in principle to the Caribbean Netherlands as to the European Netherlands. The Public Entities themselves are primarily responsible for climate adaptation. In the case of the CN, the duties that are incumbent upon water authorities in the case of municipalities in the European Netherlands (e.g. water management) are incumbent upon the Public Entities in the Caribbean Netherlands. As is the case with other responsibilities of the Public Entities, a Public Entity that is not in a position to fulfill that responsibility can ask central government for assistance.

### *Montreal Protocol*

- Bonaire and other islands have not ratified the amendments to the Montreal Protocol (Beijing and Kigali: the phasing-out of very strong greenhouse gases and substances that damage the ozone layer). Based on the agreements in the Montreal Protocol, parties are in principle not permitted to export any substances covered by the Montreal Protocol to Bonaire and the other islands, and those islands are also not permitted to export to parties that are members of the Montreal Protocol. From 2032 onwards, parties that have not ratified the Kigali amendment will in principle also not be permitted to export substances covered by the Kigali amendment (HFCs) or import them from parties that have ratified it.
- Legislation and regulations on import and export licenses for these substances in bulk and devices (in air conditioners, cooling systems and heat pumps) and regulations on proper installation and maintenance to prevent leaks (and to improve and maintain energy efficiency) do not yet exist.

### National legislation

#### *The Climate Act*

- The Climate Act does not apply to the Caribbean Netherlands.
- There are no specific climate legislation and targets for the Caribbean Netherlands. A consistent climate mitigation policy can be carried out even without statutory regulation, as is being done e.g. as regards making electricity production more sustainable.<sup>88</sup>
- The national Climate Act, the 2021-2030 Climate Plan, the NDCs under the Paris Agreement, the Climate and Energy Outlook (KEV) and the Regional Energy Strategy do not apply to the Caribbean Netherlands.

#### *The Water Act*

- The Water Act does not in principle apply to the Caribbean Netherlands, with the exception of Section 5.32, which lays down a specific responsibility in the event of a flood disaster or potential flood disaster.
- This Act was designed for the situation in the European Netherlands and cannot thus be applied one-on-one to the Caribbean Netherlands. This does not mean that there is no legislation in the Caribbean Netherlands referring to water (see "Legislation specifically focused on the Caribbean Netherlands").

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<sup>88</sup> See <https://open.overheid.nl/documenten/ronl-7405ad9024e6ea7c004bedbbb2f7d07f3ade74a6/pdf>

### *Legislation specifically focused on the Caribbean Netherlands*

Legislation in force in the Caribbean Netherlands in the physical domain includes the following:

- Wet VROM BES (Housing, Spatial Planning and Environment (BES) Act)
- Wet elektriciteit en drinkwater BES (Electricity and Drinking Water (BES) Act)
- Wet maritiem beheer BES (Maritime Management (BES) Act)
- Wet grondslagen ruimtelijke ontwikkelingsplanning BES (Spatial Development Planning Principles (BES) Act)
- Wet grondslagen natuurbeheer- en bescherming BES (Nature Conservation and Protection (BES) Act)
- Wet voorkoming verontreiniging door schepen BES (Prevention of Pollution from Ships (BES) Act)
- Luchtvaartwet BES (Aviation (BES) Act).

### *Instruments and funding*

The Executive Councils in the Caribbean Netherlands each receive a free allowance from the BES Fund by analogy with the general allowance from the Municipalities Fund. There are some other ways of funding climate policy:

- Some generic schemes are open to applications from anywhere in the Netherlands, e.g. the Growth Fund and the Energy Innovation Demonstration Scheme (DEI).
- The Climate Fund is a transfer fund that feeds into existing or new subsidy schemes, to which ministries make annual applications. Whether the subsidy schemes also apply to the Caribbean Netherlands will become apparent from the respective Act. As noted in the Explanatory Memorandum, the Temporary Climate Fund Act does not rule this out.
- The Growth Fund: A minimum amount of 30 million euros applies in the case of the Growth Fund. It is also possible to take advantage of initiatives in the European Netherlands.
- The Nature and Environment Policy Plan includes funding of 35 million euros for the Caribbean Netherlands.

A challenge with generic central government measures is that they focus on activities that generally go beyond the scale of the Caribbean Netherlands, just as measures of this kind generally go beyond the scale of a European Netherlands municipality with a population of 2,035 (Saba), 3,293 (St. Eustatius), or 24,090 (Bonaire). The coalition agreement sets out the Government's desire to open up European Netherlands schemes to applications from anywhere in the Kingdom. The Government is working towards a worthwhile bespoke approach to these schemes in the Caribbean Netherlands and the independent Caribbean countries of the Kingdom (e.g. the Sustainable Energy Incentive Scheme and the Growth Fund).

- Examples of bespoke measures for the Caribbean Netherlands are as follows:
  - The support for making the electricity supply on Saba and St. Eustatius more sustainable in the 2014-2019 period.
  - The Nature and Environment Policy Plan: the Government has made 35 million euros available to implement this. The Plan includes a broad assessment of the consequences of climate change on the islands.
  - The KNMI's Sea Level Rise Knowledge Program, which is looking at climate change in the Caribbean Netherlands (including sea level rise and the storm and drought trends in the southern part of the Caribbean Sea).

### *Governance*

The responsibilities in the Caribbean Netherlands are incumbent upon the Spatial Planning Departments of the Executive Councils of Bonaire, Saba and St. Eustatius.

In the European Netherlands, the following departments are involved in climate mitigation, adaptation and case files involved in the case of the Caribbean Netherlands:

### *Mitigation*

- General mitigation policy, Economic Affairs and Climate Policy/Climate
- Montreal Protocol, Economic Affairs and Climate Policy/Climate
- Sustainable electricity production, Economic Affairs and Climate Policy/Energy

- Energy saving, Interior and Kingdom Relations/Building and Energy
- Sustainable mobility, Infrastructure and Water Management/Mobility
- Electric aviation, Infrastructure and Water Management/Aviation
- Shore power, Infrastructure and Water Management
- Sustainable fuels, Infrastructure and Water Management/Environmental Safety & Environmental Risks

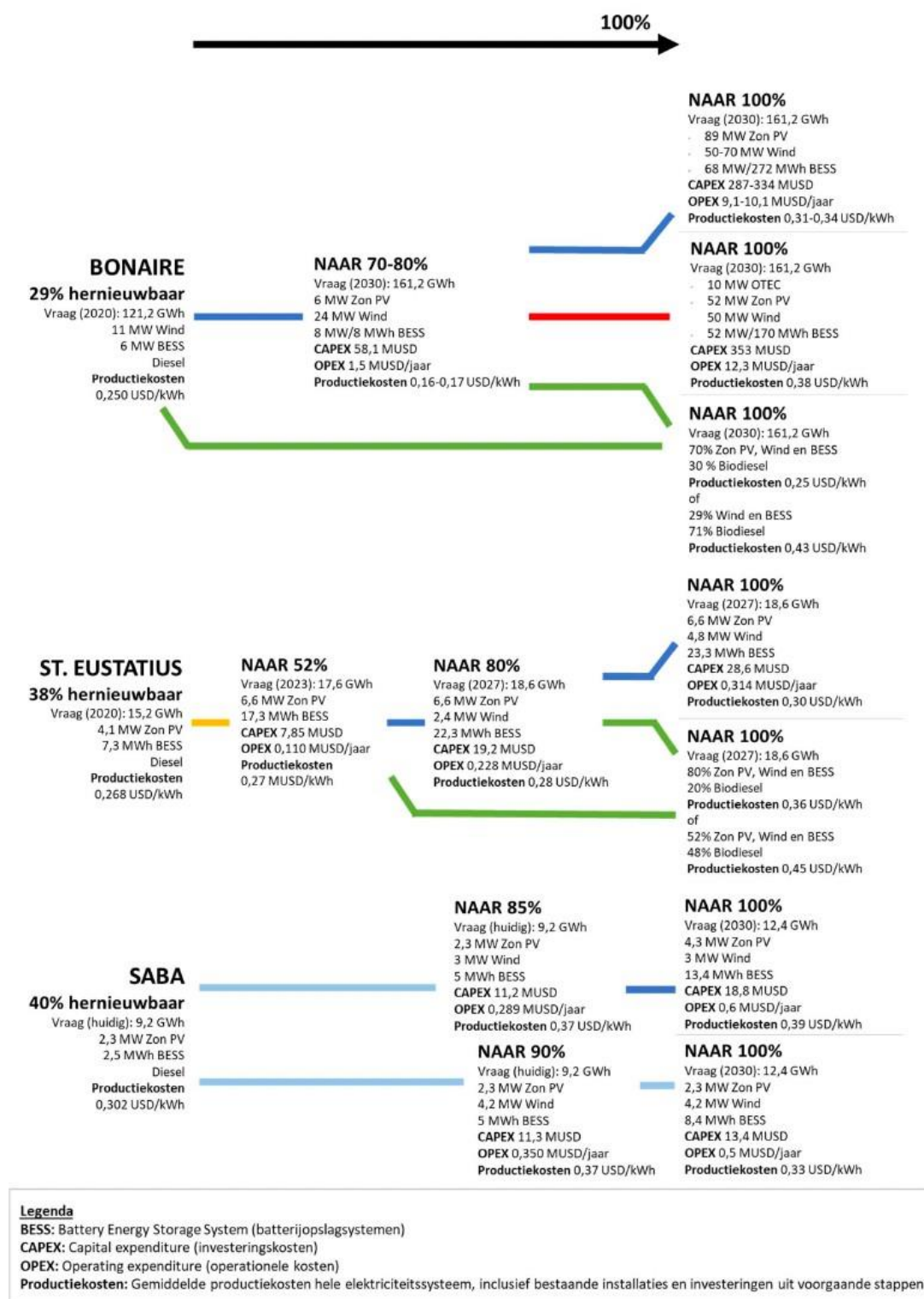
#### *Adaptation*

- General adaptation policy and water, Infrastructure and Water Management/Water Safety, Climate Adaptation and Management
- Spatial development program, Interior and Kingdom Relations/Spatial Planning
- Nature conservation (e.g. the Nature and Environment Policy Plan), Agriculture, Nature and Fisheries/Nature and Fisheries)
- Sustainable tourism, Economic Affairs and Climate Policy/Netherlands Enterprise Agency
- Heat & health, Health, Welfare and Sport

#### *Multi-sector*

- Housing and spatial planning policy agenda, Interior and Kingdom Relations/Housing Market
- Waste, Infrastructure and Water Management/Environmental Safety & Environmental Risks.

## Overzicht routes naar 100% hernieuwbare elektriciteitssystemen Bonaire, St. Eustatius en Saba



## Appendix 6 Bonaire's climate policy instruments (Netherlands Enterprise Agency)

