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MINISTERIE VAN  
**Gezondheid, Milieu & Natuur**  
Sector Landbouw, Milieu & Natuur

verzonden; 19 maart 2018

Datum	Contactpersoon	E-mail
<b>2 november 2017</b>		
Uw brief d.d.	Uw kenmerk	Ons nummer
--	--	2017/05795
Onderwerp <b>Voorstel Ramsarnominatie</b>		Zaaknummer
<b>Klein Curaçao</b>		
	Pagina	Aantal Bijlagen
	1	2

Geachte heer Wiebes,

Bij deze vraag ik uw medewerking om het eiland Klein Curaçao voor te dragen voor de status van Ramsar gebied in het kader van de internationale overeenkomst inzake watergebieden die van internationale betekenis zijn. Bijgaand treft u voor het desbetreffende gebied de Ramsar Information Sheet aan, inclusief een grafische weergave van het gebied.

Er heeft gedurende de maanden november 2011 tot en met maart 2012 voorbereidend onderzoek plaatsgevonden, waarbij nagegaan is welke waardevolle watergebieden er zijn die bescherming behoeven en of deze aan de gestelde criteria voor een Ramsar nominatie voldoen. Het genoemde onderzoek is uitgevoerd in opdracht van het Curaçaoese Ministerie van Gezondheid, Milieu & Natuur (GMN) door een team van deskundigen onder leiding van dr. M. Vermeij, wetenschappelijk directeur van het Carmabi en Geassocieerd professor aan de Universiteit van Amsterdam. De coördinatie vanuit het Ministerie GMN is gevoerd door de heer F. Dilrosun ([faisal.dilrosun@gobiernu.cw](mailto:faisal.dilrosun@gobiernu.cw)).

Door het team deskundigen is voorts een 9-tal gebieden geïdentificeerd die voldoen aan een groot aantal Ramsar criteria variërend van 3 tot 7 van totaal 9 Ramsar criteria.

In 2013 heeft de Raad van Ministers besloten 4 van de gebieden voor te dragen voor een Ramsar nominatie (Northwestern Curaçao, Muizenberg, St. Michiel/Malpais en St. Marie). Deze 4 gebieden herbergen een unieke flora en fauna en zijn "hot spots" voor de lokale en regionale biodiversiteit en zijn voorts van groot internationaal belang. De overige gebieden zijn aangehouden doordat wegens conflicterende belangen een Ramsar nominatie destijds niet opportuun bleek.

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Voor 2 van de niet voorgedragen gebieden (Eastern Curaçao en Spaanse water) wordt thans de laatste hand gelegd aan een wetsvoorstel voor afkondiging van een zogenaamd "SPAW marine protected area" in het kader van het SPAW protocol als onderdeel van de Cartagena Conventie.

Op 22 maart 2017 heeft de Raad van Ministers besloten Klein Curaçao voor te dragen voor een Ramsar nominatie.

Klein Curaçao herbergt een unieke flora en fauna en is een “hot spot” voor de lokale en regionale biodiversiteit en is voorts van groot internationaal belang. Indien een gebied aan ten minste één van de negen Ramsar criteria voldoet, kan het in aanmerking komen voor een Ramsar benoeming. Klein Curaçao voldoet aan maar liefst vijf van de 9 criteria.

Mede door deze ecologische rijkdom is het gebied ook een toeristische trekpleister en meer en meer touroperators doen ongereguleerd het eiland dagelijks aan waardoor de "carrying capacity" mogelijk wordt overschreden. Een actief beheer is thans vereist.

Hierom heeft de Raad van Ministers op 22 maart 2017 eveneens besloten een interministeriële werkgroep bestaande uit vertegenwoordigers van de Ministeries van Gezondheid, Milieu en Natuur, Verkeer, Vervoer en Ruimtelijke Planning, alsmede Economische Ontwikkeling in te stellen, met als taak het opstellen van een beheersplan voor Klein Curaçao ten einde een verantwoord en oordeelkundig beheer van dit belangrijke economische- en ecologische gebied te realiseren.

Het dient geen betoog dat de Ramsar status van gebieden implicaties heeft voor het Land Curaçao gezien het feit dat het verdrag voorschrijft dat zulke gebieden oordeelkundig beheerd dienen te worden.

Het is de intentie van het Land Curaçao om te waarborgen dat bij toekomstige ontwikkelingen op Klein Curaçao de essentiële functie van dit ecosysteem niet zal worden aangetast. Het vermelde gebied herbergt een unieke en waardevolle biodiversiteit die van grote lokale en internationale betekenis is.

Voor de Ramsar conventie geldt medegelding voor het Land Curaçao. Ik wil thans uw medewerking vragen om als Ramsar Focal Point voor het Koninkrijk der Nederlanden de voordracht van het gebied Klein Curaçao te doen toekomen aan het Ramsar Secretariaat te Zwitserland.

Voor het geval dat er van uwer zijde of vanuit het Ramsar Secretariaat inhoudelijke vragen zijn of enkele punten nadere informatie behoeven, wil ik u verzoeken deze te richten aan de heer F. Dilrosun, projectleider binnen de Uitvoeringsorganisatie Milieu- en Natuurbeheer, die zorg draagt voor de algehele coördinatie van dit initiatief.

Ik zie uw welwillende reactie gaarne tegemoet,

~~Hoogachtend,~~

Mw. mr. S.F.C. Camelia-Römer

Minister van Gezondheid, Milieu en Natuur

Schottegatweg Oost 18 | Willemstad, Curaçao | T: + (599 9) 432-5800

Period	Period
Q1 (Jan-Mar)	Q1 (Jan-Mar)
Q2 (Apr-Jun)	Q2 (Apr-Jun)
Q3 (Jul-Sep)	Q3 (Jul-Sep)
Q4 (Oct-Dec)	Q4 (Oct-Dec)

c.c. Dienst Buitenlandse Betrekkingen

## Bijlagen:

## Ramsar Information Sheet Klein Curaçao uit het dossier voor aanwijzing van 9 Ramsar gebieden ter bescherming van de natte natuur op Curaçao.

Besluit Raad van Ministers Curaçao, d.d. 22 maart 2017

## Information Sheet on Ramsar Wetlands

# Curaçao Proposed Ramsar area “Klein Curaçao”

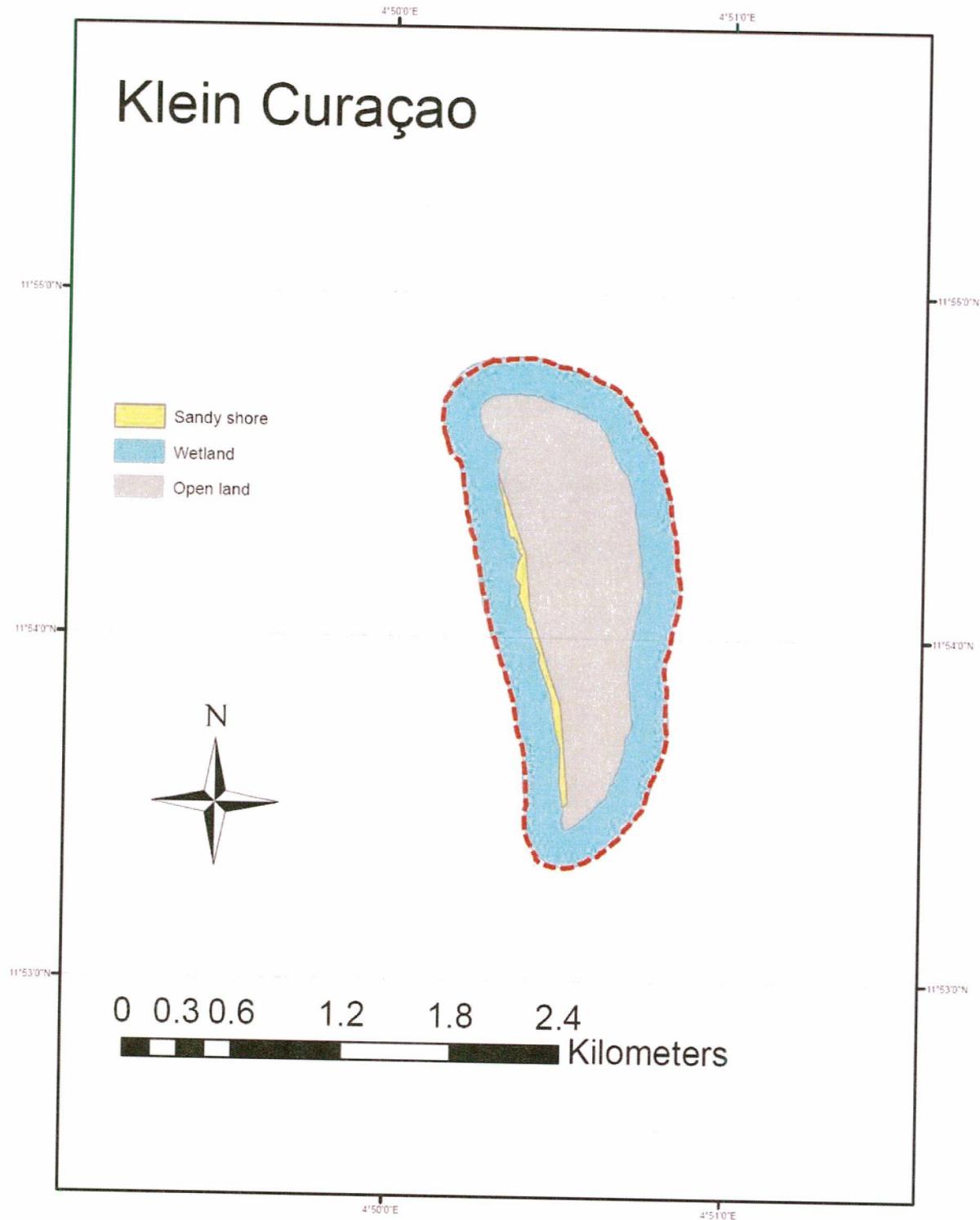
### Photographic impressions and map of the proposed Ramsar Area

1. Aerial view from the south on the island of Klein Curaçao.
2. The coral reefs on the exposed east side of the island are extremely well developed and rank among the best reefs left in the Caribbean.
3. Klein Curaçao is home to a significant part of the global population of nesting Least terns (*Sterna antillarum antillarum*, Meuchi chikitu) representing 1.2% of the global population.
4. Due to its oceanic location the reefs of Klein Curaçao are continuously visited by enormous schools of large piscivorous fish.
5. Temporary brackish water pools form on the island after heavy rainfall.
6. Large numbers of critically endangered Elkhorn coral (*Acropora palmata*, Koral kachu grandi) are abundant on the island's east side and attract large numbers of fish that hide among its branches.
7. The wrecked tanker, the Maria Bianca Guidesman which washed onshore on the east side of the island.
8. Another example of the extremely well developed coral reefs that can be found around the island. Coral cover in many locations approaches 100%, which exceeds even historic baselines for the Caribbean region.
9. The sandy beach on the west side of the island.
10. Klein Curaçao is the single most important sea turtle nesting area within Curaçao's jurisdiction, especially for the Critically Endangered Hawksbill turtle and the Endangered Green turtle (shown here).
11. The steep reef walls around the island contain many caves.
12. Large predatory fish are still common in the area and are often observed cruising along the reefs.
13. While the island was at some point devoid of vegetation, reforestation activities have brought back some of the vegetation that used to grow on the island.
14. The lighthouse that sits approximately in the middle of Klein Curaçao.
15. Small huts have been erected to provide visiting tourists with basic facilities while visiting the island.
16. Marine mammals, such as these are frequently encountered around Klein.Curaçao.





# Klein Curaçao



# Information Sheet on Ramsar Wetlands (RIS)

## — 2009-2012 version

Available for download from [http://www.ramsar.org/ris/key\\_ris\\_index.htm](http://www.ramsar.org/ris/key_ris_index.htm).

*Categories approved by Recommendation 4.7 (1990), as amended by Resolution VII.13 of the 8<sup>th</sup> Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX.22 of the 9<sup>th</sup> Conference of the Contracting Parties (2005).*

### 1. Name and address of the compiler of this form:

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DD	MM	YY

Designation date

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Site Reference Number

### 2. Date this sheet was completed/updated:

April X 2012

### 3. Country: Curaçao

### 4. Name of the Ramsar site: Klein Curaçao (Klein Kòrsou)

### 5. Designation of new Ramsar site or update of existing site:

This RIS is for (tick one box only):

- a) Designation of a new Ramsar site ; or
- b) Updated information on an existing Ramsar site

### 7. Map of site:

#### a) A map of the site, with clearly delineated boundaries, is included as:

- i) a hard copy (required for inclusion of site in the Ramsar List):
- ii) an electronic format (e.g. a JPEG or ArcView image)
- iii) a GIS file providing geo-referenced site boundary vectors and attribute tables

b) Describe briefly the type of boundary delineation applied: Klein Curaçao, a small uninhabited island located 11 kilometres from the eastern tip of Curaçao, was designated as an Important Bird Area (IBA, AN019) in 2007 (Debrot & Wells 2008). The Ramsar site follows the same delineations as the IBA and includes the entire island and surrounding waters down to 60 m depth to include the island's coral reefs.

8. Geographical coordinates: Approximate centre: Latitude: 11°59'31"N Longitude: 68°39'02"W

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**9. General location:** Curaçao is an oceanic island in the Southern Caribbean Ecoregion. It lies approximately 70 km north of Venezuela and is part of the Leeward Antilles. The proposed Ramsar area “Klein Curaçao” is an offshore island situated about 11 km south-east of Curaçao and approximately 65 km north from the Venezuelan coast. Klein Curacao is included in Curacao’s Territorial Sea

**10. Elevation:** Minimum 0 m; Maximum 4.5 m (ASL)

**11. Area:** (in hectares)

**12. General overview of the site:** Klein Curaçao is a small, uninhabited, offshore island of global importance for its breeding population of the Least tern (*Sterna antillarum*, Meuchi chikitú). The island's 600 m stretch of sandy beach represents the most important nesting area within Curaçao's jurisdiction for the Critically Endangered Hawksbill turtle (Turtuga karét, *Eretmochelys imbricata*) and Endangered Green turtle (Turtuga blanku, *Chelonia mydas*). In addition, the eastern side of Klein Curaçao is surrounded by a near pristine Caribbean coral reef system supporting an enormous diversity of marine organisms.

### **13. Ramsar Criteria:**

1 • 2 • 3 • 4 • 5 • 6 • 7 8 • 9  
□     □  □  □  □

14. Justification for the application of each Criterion listed in 13 above

**Criterion 2:** A wetland should be considered internationally important if it supports vulnerable, endangered, or critically endangered species or threatened ecological communities.

Table 1 (Annex 1) provides an overview of all Migratory, Threatened, Vulnerable, Endangered, and Critically Endangered marine species that have been in the proposed Ramsar site “Klein Curaçao” (International Union for Conservation of Nature (IUCN), Convention on International Trade in Endangered Species (CITES), Convention on Migratory Species (CMS)).

**Sea turtles (*Chelonioidea* & *Dermochelyidae*)-** Klein Curaçao is the single most important sea turtle nesting area within Curaçao's jurisdiction (Debrot & Pors 1995), especially for the Critically Endangered Hawksbill turtle (*Eretmochelys imbricata*, Turtuga karèt) and the Endangered Green turtle (*Chelonia mydas*, Turtuga blanku) (Debrot et al. 2005). Nesting occurs foremost during the months October and November (Debrot et al. 2005). Anecdotal evidence suggests that nesting by Endangered Loggerhead (*Caretta caretta*, Turtuga kawama,) also occurs on Klein Curaçao (Sybesma 1992). Critically Endangered Leatherback (*Dermochelys coriacea*, Turtuga drikil) and Vulnerable Olive Ridley (*Lepidochelys olivacea*, Warana) are frequently encountered on Klein Curaçao's coral reefs but have never been reported nesting on the island (Debrot et al. 2005). The five species all have a protective status under international conventions (IUCN Red List, CITES Appendix I, CMS Appendix I/II) and are protected nationally by the "Eilandbesluit bescherming zeeschildpadden" (PB 1996, 8). Hawksbill and Leatherback turtles are categorized as Critically Endangered (IUCN Red List), Green and Loggerhead turtles as Endangered (IUCN Red List) and Olive Ridley turtles as Vulnerable (IUCN Red List). Although no exact information exists regarding the population size of sea

Hydrocarbons  
Oil  
Gas  
Petroleum  
Chemicals  
Toxic  
Hazardous  
Waste  
Pollutants

turtles species in the waters of Klein Curaçao, they are frequently reported in the area by boaters, snorkelers and divers.

**Marine mammals (*Cetacea*)-** Marine mammal sightings occur regularly around Klein Curaçao and include the following, most frequently encountered species: the Short-finned pilot whale (*Globicephala macrorhynchus*, bayena), the Humpback whale (*Megaptera novaeangliae*, bayena) and especially Spinner dolphins (*Stenella longirostris*, dòlfein) (Debrot 1998). All these species are listed as Conserved Under Agreement under CMS Appendix I/II.

**Table 1. Curaçaoan species listed under the IUCN Red List, CITES and CMS**

**Critically endangered (IUCN Red List)**

Elkhorn coral (*Acropora palmata*) (CITES II)  
Staghorn coral (*Acropora cervicornis*) (CITES II)  
Leatherback sea turtle (*Dermochelys coriacea*) (CITES I)  
Hawksbill sea turtle (*Eretmochelys imbricata*) (CITES I)  
Goliath grouper (*Epinephelus itajara*)

**Endangered (IUCN Red List)**

Boulder Star coral (*Montastraea annularis*)  
Mountainous Star coral (*Montastraea faveolata*)  
Green sea turtle (*Chelonia mydas*) (CITES I)  
Loggerhead sea turtle (*Caretta caretta*) (CITES I)  
Nassau grouper (*Epinephelus striatus*)  
Queen conch (*Strombus gigas*)

**Vulnerable (IUCN Red List)**

Pillar coral (*Dendrogyra cylindrus*) (CITES II)  
Lamarck's Sheet coral (*Agaricia lamarckii*) (CITES II)  
Elliptical Star coral (*Dichocoenia stokesii*) (CITES II)  
Olive Ridley sea turtle (*Lepidochelys olivacea*) (CITES I)  
Mutton snapper (*Lutjanus analis*)  
Cubera snapper (*Lutjanus cyanopterus*)  
Yellowmouth grouper (*Mycteroperca interstitialis*)  
Yellowfinned grouper (*Mycteroperca venenosa*)  
Snowy grouper (*Epinephelus niveatus*)  
Queen triggerfish (*Balistes vetula*)  
Rainbow parrotfish (*Scarus guacamaia*)  
Hogfish (*Lachnolaimus maximus*)

**Migratory species (CMS)**

Leatherback sea turtle (*Dermochelys coriacea*) (App. I/II)  
Hawksbill sea turtle (*Eretmochelys imbricata*) (App. I/II)  
Olive Ridley sea turtle (*Lepidochelys olivacea*) (App. I/II)  
Green sea turtle (*Chelonia mydas*) (App. I/II)  
Loggerhead sea turtle (*Caretta caretta*) (App. I/II)  
Spinner dolphin (*Stenella longirostris*) (App. II)  
Humpack whale (*Megaptera novaeangliae*) (App. I)

**Corals (*Scleractinia*)-** The reef flat and crest of the fringing reef off the eastern coast of Klein Curaçao harbors dense populations of Elkhorn coral (*Acropora palmata*, Koral kachu grandi) and various patches of the Staghorn coral (*Acropora cervicornis*, Koral kachu di biná). These Acroporid species are both listed as Critically Endangered on the IUCN Red List and as Threatened under CITES Appendix II. Two Endangered species, listed on the IUCN Red List, the Boulder Star coral (*Montastraea annularis*, Koral strea pilá) and the Mountainous Star coral (Koral strea seru, *Montastraea faveolata*), dominate the reef community on the deeper fore reef and cover 100% of the bottom in certain areas (MJA Vermeij, pers. Obs.). Other coral species listed as Vulnerable under the IUCN Red List are also commonly found between Fuik and Punt Kanon, examples include Pillar coral (*Dendrogyra cylindrus*), Lamarck's sheet coral (*Agaricia lamarckii*, Koral plachi fini Lamarck) and the Elliptical Star coral (*Dichocoenia stokesii*, Koral strea webu). Colonies of the Pillar coral on Klein Curaçao are particularly large and abundant compared to the reefs of the main island of Curaçao (MJA Vermeij, unpubl. data).

**Criterion 3: A wetland should be considered internationally important if it supports populations of plant and/or animal species important for maintaining the biological diversity of a particular biogeographic region.**

The total number of coral species on Curaçao is 68 (Bak 1975), representing 70% of all known Caribbean species. In terms of reef-building corals Curaçao is one of the most species-diverse areas in the Caribbean together with the Cayman Islands and nearby Aruba and Bonaire, (Miloslavich et al. 2010). Curaçao is therefore often considered a hotspot of biodiversity in what is already one of the five richest hotspots for biodiversity and endemism on Earth (i.e. the Caribbean) (Stehli & Wells 1971; Bak 1977). Coral reefs in the proposed Ramsar area remain in a near-pristine state, are well developed and currently growing. Reef systems capable of maintaining themselves are becoming increasingly rare and as such the proposed Ramsar area shelters one of the few remaining healthy Caribbean reef communities and thus serves as a unique representation of Caribbean reef communities in general.

**Criterion 4: A wetland should be considered internationally important if it supports plant and/or animal species at a critical stage in their life cycles, or provides refuge during adverse conditions.**

Klein Curaçao possesses the longest stretch (600m) of natural sandy beach within Curaçao's jurisdiction, where beaches rarely exceed a 100m in length (Debrot & Pors 1995). As a result, Klein Curaçao's beaches are since long renowned for their importance as nesting grounds for local sea turtles (Debrot & Pors 1995). Nesting female turtles, eggs and hatchlings are particularly exposed and vulnerable to biotic and abiotic threats. In the Wider Caribbean Region, several factors can lead to death of nesting female, eggs and hatchlings: egg collection and killing of nesting females by humans or predators, harassment due to humans, artificial lighting, pollution, beach erosion/accretion, beach armouring/stabilization, beach nourishment, beach obstacles, mechanized beach cleaning, sand mining, loss of native vegetation and livestock on the beach (Dow et al. 2007). On Klein Curaçao, with the exception of occasional harassment by humans, most of these threats are absent and/or very rare and therefore crucially important to ensure the reproductive success of the Endangered Green turtle (*Chelonia mydas*, Turtuga blanku) and Critically Endangered Hawksbill (*Eretmochelys imbricata*, Turtuga karèt).

Klein Curaçao is also home to a significant part of the global population of nesting Least terns (*Sterna antillarum antillarum*, Meuchi chikitu) (Debrot & Wells 2008).

**Criterion 6: A wetland should be considered internationally important if it regularly supports 1% of the individuals in a population of one species or subspecies of waterbird.**

As mentioned above, Klein Curaçao is home to a significant part of the global population of nesting Least terns (*Sterna antillarum antillarum*, Meuchi chikitu) (286 nested in 2002, Debrot & Wells 2008). On the island 286 nesting terns are found (of a total population of 858 birds in 2002 (Debrot & Wells 2008)), representing 1.2% of the global population (Delaney & Scott 2006).

**Criterion 8: A wetland should be considered internationally important if it is an important source of food for fishes, spawning ground, nursery and/or migration path on which fish stocks, either within the wetland or elsewhere, depend.**

The shallow reefs (0 to 4 m depth) of the proposed Ramsar site harbor dense populations of the Elkhorn coral (*Acropora palmata*, Koral kachu grandi) and large stands of Fire coral (*Millepora complanata*, Brantkoral),

15. Biogeography

a) **biogeographic region:** Realm: Tropical Atlantic, Province: Tropical North-western Atlantic, Ecoregion: Southern Caribbean.

b) **biogeographic regionalisation scheme:** Marine Ecoregions of the World (MEOW) (Spalding et al. 2007).

which both provide complex structural habitats for specific reef fish species that are crucial for these species as hiding places and nursery habitats (Nagelkerken 1974). Especially juveniles of the Smallmouth grunt (*Haemulon chrysargyrum*, Traki traki), Mahogany snapper (*Lutjanus mahogany*, Kalala), Blue tang (*Acanthurus coeruleus*, Kleinfeshi blou), Ocean surgeonfish (*Acanthurus bahianus*, Kleinfeshi blanku) and Sergeant Major (*Abudefduf saxatilis*, Kataboli) depend on the habitat provided by these (hydro)corals as critical nursery habitat (Nagelkerken et al. 2000a).

## 15. Biogeography

a) **biogeographic region:** Realm: Tropical Atlantic, Province: Tropical North-western Atlantic, Ecoregion: Southern Caribbean.

b) **biogeographic regionalisation scheme:** Marine Ecoregions of the World (MEOW) (Spalding et al. 2007).

## 16. Physical features of the site:

**Geology & Geomorphology-** Klein Curaçao is a 2 km long by 800 m wide, flat, offshore reef island surrounded by a fringing coral reef. The island consists entirely of limestone deposits and its central part consists of Lower Terrace limestone (De Buissoné 1974). It is rimmed by a zone of recent or sub-recent coral shingle. On the southwest shore of the island lies a 600 m long stretch of recent calcareous sand (De Buissoné 1974), facing calm and shallow waters whereas the rest of the island's shore is rocky and wave exposed. Most of the island lies less than 2 m above sea level, with a maximum altitude of 4.7 m in the east where there is a ridge of coral rubble (van Buurt 2006). In the past, the island had a low limestone ridge with a maximum height of about 7 m, but the island was mined for phosphates (guano) from 1871 to 1913 and the ridge was levelled (Stienstra 1991). The fringing coral reef surrounding Klein Curaçao is characterized by a narrow submarine terrace (<150 m wide) which gradually slopes from the shore to a drop-off between 7 to 12 m depth at the western side of the island, after which it slopes off steeply, sometimes interrupted by a small second terrace at 50 to 60 m, and ends in a sandy plain at 80 to 90 m (Bak 1975). At the east side the reef flat turns into a steep vertical wall at a depth of approximately 10 m that continues to depths of 80-100 m where a rubble plane starts that further extends to deeper water. The vertical wall contains many caves, some of which are more than 10 m wide and 40 m deep.

**Hydrology-** The main oceanic current travels from east to west and reaches Klein Curaçao at its eastern side, where clear, oceanic water hits the island. Currents around the island are notoriously variable and can be extremely strong, exceeding  $1\text{m s}^{-1}$ . Curaçao's daily tidal range is small (30 cm), only during strong winds the tidal range can be bigger with a maximum of about 70 cm (de Haan & Zaneveld 1959). Mean annual water temperature and salinity are  $28^\circ\text{C}$  and 35 ppt, respectively. After heavy rainfall, temporary brackish pools form within depressions on the island.

**Climate-** Based on the mean annual rainfall (573 mm), the climate on the island qualifies as semi-arid. Annual variations in temperature are small and average around  $28^\circ\text{C}$ . Precipitation levels differ throughout the year and in the period between October and January rainfall is higher than all other months and generally referred to as the wet season (Meteorological Services of the Netherland Antilles and Aruba 2008).

## 17. Physical features of the catchment area: see 16

**18. Hydrological values:** As the island is undeveloped and uninhabited, the coastal waters of the area are not affected by terrestrial runoff pollution so that coral reef system benefits of clear and high quality water.

**19. Wetland Types**

a) presence:

Marine/coastal: A • B • C • D • E • F • G • H • I • J • K • Zk(a)

Inland: L • M • N • O • P • Q • R • Sp • Ss • Tp • Ts • U • Va •  
Vt • W • Xf • Xp • Y • Zg • Zk(b)

b) Dominance: C-D-E-Ss

**20. General ecological features:**

**Marine habitats-** The coral reef communities of Klein Curaçao harbor an exceptionally large abundance of hard and soft corals, gorgonians, sponges and a range of encrusting organisms. They provide habitat for numerous fish species, crustaceans and echinoderms. The reef flat off the east/ southeast coast of Klein Curaçao harbors 2 valuable marine community types: dense populations of the Elkhorn coral and dense fields of gorgonians. Both communities sustain major ecological processes as gross community calcification and nitrogen fixation. Dense populations of these branching species dissipate wave energy and thus protect the coast (Mumby et al. 2008). Elkhorn coral also ensures healthy and productive reefs by providing shelter to an enormous amount of other reef organisms (Gladfelter & Gladfelter 1978), including both adult fish and their juveniles (Nagelkerken 1974). Both Elkhorn coral and equally abundant fire corals provide shelter to juvenile fish, thus supporting productive fish communities (Nagelkerken 1974). On the coral reefs included in this proposal, grunts (Haemulidae), snappers (Lutjanidae) and Squirrelfish (Holocentridae) primarily use the habitat provided by Elkhorn coral and fire corals (Vermeij MJA, unpubl. data). Similar functions are assumed for gorgonian communities that further shelter significant numbers of herbivorous fish, especially Acanthurids, but also predatory fish as groupers. The forereef of Klein Curaçao is characterized by extremely high coral cover. Fields of the Vulnerable Pillar coral (*Dendrogyra cylindrus*) are commonly found between depths of 5 to 8 m. Two Endangered species, listed under the IUCN Red List, the Boulder Star coral (*Montastraea annularis*, Koral strea pilá) and the Mountainous Star coral (*Montastraea faveolata*, Koral strea seru) cover large areas of the forereef in this proposed Ramsar Area (Vermeij MJA, unpubl. data). Coral cover on these reefs currently exceeds that of the earliest historic baselines for Caribbean reef systems (Vermeij MJA, unpubl. data).

**Terrestrial habitats-** The island was originally vegetated but was extensively mined for phosphate in the late nineteenth and early twentieth century's and overgrazed by livestock, probably since the 1800s. As a consequence the island has been devoid of all trees and bushes for more than 100 years. The Department of Agriculture and Fisheries (LVV) reached an agreement with the owner of the goats and his grazing rights and goats were bought and removed from the island in January 1998. Since then, the vegetation, although sparse, has recovered considerably. Since 2000, Carmabi Foundation has been successfully reforesting the island with native plant species. Drought and salt resistant trees, shrubs, herbs and grasses have been introduced and are now dispersing naturally across the island. Some of the most successful species are the Button mangrove (*Conocarpus erectus*) and Portia tree (*Thespesia populnea*), the bushes Bay cedar (*Suriana maritima*) and Sea lavender

(*Mallotonia gaphalodes*) and the herbs Saltwort (*Batis maritima*) and Flatleaf flatsedge (*Cyperus planifolius*) (Debrot & Wells 2008). The island harbors a large population of the Whiptail blue lizard (*Cnemidophorus murinus*, lagadishi). As mentioned previously, the terrestrial habitats of Klein Curaçao are important for sea turtles and terns nesting.

**21. Noteworthy flora:** n/a

**22. Noteworthy fauna:**

**Terrestrial fauna-** The population of the Whiptail blue lizard (endemic to Curaçao at the species level) found on Klein Curaçao which differs from the population of the main island. The population is large and stable, however, any population of lizards found only in such a small area (1.2 km<sup>2</sup>) must be considered as vulnerable (van Buurt 2006).

**23. Social and cultural values:**

Klein Curaçao holds great historical value as many relicts relating the past of the island can still be found; (1) The abandoned lighthouse of Klein Curaçao which was first built in 1850 by the government was destroyed by a hurricane on 22/23 September 1877 and a new lighthouse was built in 1879 and again rebuilt in 1913, is still watching over the island; (2) A wrecked tanker, the Maria Bianca Guidesman which washed to shore is still standing on the eastern coast of the island together with a small sail boat. And (3) Over two hundred canons from the 17<sup>th</sup> and 18<sup>th</sup> century lie across the bottom on Klein Curaçao's eastern coast.

Klein Curaçao has become a privileged destination for tourists and locals for recreational purposes. More than 600 people visit the island every week and represent a significant source of income for specialized tour operators (Debrot & Wells 2008). Klein Curacao is also a regular stop for local fishermen which have built a few fishing shacks where they sometimes stay for several days. The island is considered of high scenic value by the local community of Curaçao.

**24. Land tenure/ownership:**

- a) within the Ramsar site: The designated area is entirely state owned.
- b) in the surrounding area: The waters surrounding Klein Curaçao lie within the Territorial Sea of Curaçao.

**25. Current land (including water) use:**

- a) within the Ramsar site: The island itself was given an «Open land» status by means of the land-use zoning ordinance locally known as the EOP (“Island Development Plan”). The EOP (AB 1995 no. 36) became effective on May 23, 1997. Open lands have no special designation at present, but could be assigned one in the future. The main uses of Klein Curaçao and surrounding sea are tourism- and fisheries related, although the island is also occasionally visited by scientists for research purposes
- b) in the surroundings/catchment: The waters adjacent to Klein Curaçao are visited by fishermen, especially at the end of the year starting at the end of September and usually lasting through October and November, when there is an increase of pelagic fish around the Island (e.g. Yellowfin tuna (*Thunnus albacores*), Bigeye tuna (*Thunnus obesus*)) (G van Buurt, personal communication).

**26. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land (including water) use and development projects:**

a) within the Ramsar site: Klein Curaçao was covered by vegetation before extensive mining of phosphate began in the late nineteenth century. Additionally, livestock kept on the island greatly contributed to the eradication of plant life on the island. As a consequence, the island has been devoid of all trees and bushes for more than 100 years, until restoration activities were successfully started by the Carmabi Foundation in 1998 (Debrot & Wells 2008). The waters of Klein Curaçao were home to the now extinct Caribbean Monk seal (*Monachus tropicalis*), that was hunted by the Arowak Indians of Curaçao (Debrot 2000). Presently, the main threat facing the island's natural resources is disturbance from uncontrolled recreational access by over 600 visitors per week (Debrot & Wells 2008). This disturbance may (amongst others) negatively affect nesting activity of sea turtles and terns.

b) in the surrounding area: n/a

#### **27. Conservation measures taken:**

a) Klein Curaçao does not benefit of any protected status at present. However, several management actions were undertaken on the island. Feral goats were eradicated in 1996 by the Curaçao Agriculture and Animal Husbandry and Fishery Service. Feral cats were eliminated by the Carmabi Foundation in 2004. These two successful eradications have paved the way for ecological recovery which has been assisted since 2000 by Carmabi through the planting of drought and salt resistant native trees, shrubs, herbs and grasses. These plants are now spreading naturally over the island. The first native land bird (Bananaquit, *Coereba flaveola*) was reintroduced from Curaçao in 2005 and has since been breeding (Debrot & Wells 2008). The island of Klein Curaçao was designated as an Important Bird Area (IBA, AN019) in 2007 (Debrot & Wells 2008).

**b)** If appropriate, list the IUCN (1994) protected areas category/ies which apply to the site (tick the box or boxes as appropriate): none

Ia ; Ib ; II ; III ; IV ; V ; VI

c) Does an officially approved management plan exist; and is it being implemented? no

d) Describe any other current management practices:

See Appendix "An overview of specific rules and regulations to protect Consumers" page 162.

**28. Conservation measures proposed but not yet implemented:** The government has recently established a commission to develop a management plan and policy framework for Khirki Ghar.

**29. Current scientific research and facilities:** Carmabi Foundation has been leading several research projects on Klein Curaçao and scientists from the institution still visit the island occasionally for research and monitoring purposes.

**30. Current communications, education and public awareness (CEPA) activities related to or benefiting the site:** Tour operators offering trips to Klein Curaçao are generally aware and respectful of the island's natural values and raise awareness of their customers to the ecological importance of Klein Curaçao. In the past, one of the charters regularly visiting the island (i.e. The Mermaid), would inform the Carmabi Foundation of the occurrence and localisation of sea turtle nesting on Klein Curaçao. The island was designated as an Important Bird Area (IBA, AN019) in 2007 (Debrot & Wells 2008) which also raises

local/regional/international public awareness of the importance of preserving this area. Several scientists from Carmabi and associated universities regularly participate in conventions, radio/television shows, public presentations and local events to inform the general public of the importance of preserving our marine ecosystems. A general education program was also implemented by the Natuur en Milieu Educatie (NME), a separate branch within Carmabi which implements various educational programs for schools and local groups since the 1980s. The organization's goal and mission is to increase awareness of the values of nature through school visits, information booklets and activities in the field. However, this initiative concerns mostly the terrestrial field. Therefore, an education and visitor's centre is currently being implemented at Carmabi that will focus on the island's marine life.

**31. Current recreation and tourism:** Klein Curaçao represents a valued touristic assett as more than 600 tourists visit the island every week (Debrot & Wells 2008). Recreation consists mostly of boating, fishing, SCUBA diving, snorkelling, swimming and beach use. Tourism is concentrated on the southwest coast of the island on the sandy stretch of the island, where tour operators have built rudimentary installations for tourists to get shade and use sanitary facilities.

**32. Jurisdiction:** The Ramsar area is under the territorial jurisdiction of the Curaçao Government; the functional jurisdiction falls under the Minister of Public Health, Environment and Nature of Curaçao.

**33. Management authority:**

Provide the name and address of the local office(s) of the agency(ies) or organisation(s) directly responsible for managing the wetland. Wherever possible provide also the title and/or name of the person or persons in this office with responsibility for the wetland.

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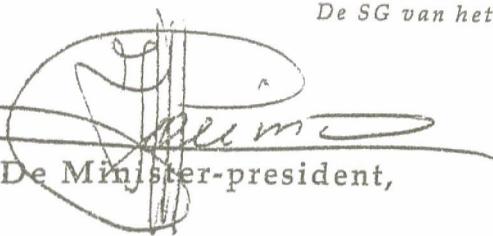
## Besluit Raad van Ministers

Datum: 22 maart 2017

Akkoord met het voorstel d.d. 25 januari 2017 van de Minister van Gezondheid, Milieu en Natuur (zaaknummer 2017/05795) om het gebied Klein Curaçao voor te dragen om tot Ramsargebied te worden benoemd via het Ramsar Focal Point van het Nederlandse Ministerie van Economische Zaken. Tevens akkoord met de oprichting van een interministeriële werkgroep (onder voorzitterschap van het Ministerie van Gezondheid, Milieu en Natuur) bestaande uit vertegenwoordigers van de ministeries van Gezondheid, Milieu en Natuur, Verkeer, Vervoer en Ruimtelijke Planning en Economische Ontwikkeling met als taak het opstellen van een beheersplan voor Klein Curaçao voor een verantwoord en oordeelkundig beheer van dit gebied. Aan de Minister van Gezondheid, Milieu en Natuur ter coördinatie van het vervolgtraject.

Cc. De Min EO;  
De Min. VVRP;  
De SG a.i. van het Ministerie van GMN;  
De SG van het Ministerie van EO;  
De SG van het Ministerie van VVRP.

Zaaknummer: 2017/05795

  
De Minister-president,



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Brief 2017/05795

EZH-mm

aan: Minister van Economische Zaken en Klimaat

dr. ir. E.D. Wiebes

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