

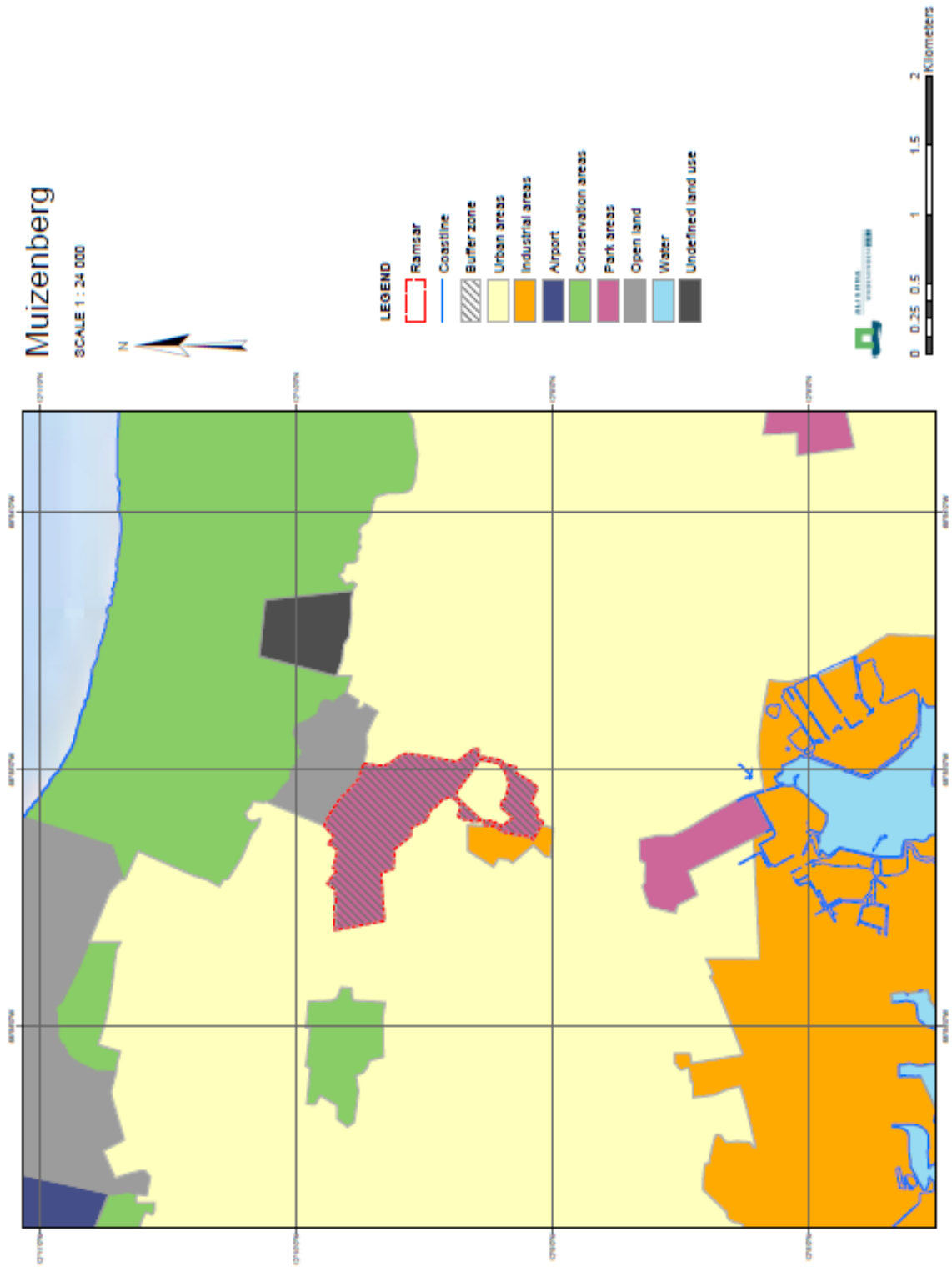
Curaçao

Proposed Ramsar area “Muizenberg”

Photographic impressions and map of the proposed Ramsar Area

1. Overview of the lake formed by the dam at Muizenberg, the proposed Ramsar area.
2. The population of the Caribbean coot (Kùt, *Fulica caribaea*) supported by Muizenberg (800 birds) is important as it represents more than 1 % of the global population
3. During the rainy season, the manmade dam is filled with freshwater and supports a great range of biodiversity.
4. Other migratory and nomadic birds use the area for overwintering or as a breeding habitat. The Common moorhen (*Gallinula chloropus*, Gaitu pik kòrá), the Pied-billed grebe (*Podilymbus podiceps*, Sambuyadó pik diki) and the White-cheeked pintail (*Anas bahamensis*, Patu di aña; shown here) have also been confirmed as breeding residents.
5. The Caribbean flamingo (*Phoenicopterus ruber*, Chochogo), which is listed as Conserved Through Agreements under appendix II of the Convention for Migratory Species (CMS), occasionally feeds at Muizenberg in groups up to 170 birds.
6. When the rains stop, the lake gradually disappears through evaporation.
7. Overview of the surrounding area towards the north.
8. Aerial picture of the proposed Ramsar area “Muizenberg” where one can see that the area borders the outskirts of Willemstad, the capital of Curaçao.





Information Sheet on Ramsar Wetlands (RIS) – 2009-2012 version

Available for download from http://www.ramsar.org/ris/key_ris_index.htm.

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

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Designation date

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Site Reference Number

2. Date this sheet was completed/updated: November 11 2012

3. Country: Curaçao, Kingdom of the Netherlands

4. Name of the Ramsar site: Muizenberg

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:

The area was designated as an Important Bird Area (IBA AN0017) in 2007 (Debrot & Wells 2008) and as a Park area in 1995 by means of the island zoning plan locally known as the EOP (“Island Development Plan”) (A. B. 1995, no.36). The Ramsar area follows the same boundaries. The wetland itself comprises the waters of the dam to the highest water mark and the surrounding lands act as a buffer.

8. Geographical coordinates: Approximate centre of the area: 12°09’29”N 68°55’07”W

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 “Muizenberg” is located in the northern suburbs of Willemstad; central Curaçao. The population of Muizenberg is 2301 inhabitants and presently decreasing. Willemstad is the capital city of Curaçao and the island has 149.679 inhabitants (Central Bureau of Statistics Curaçao, 2011).

10. Elevation: Minimum: 5 m, Maximum: 20 m (ASL)

11. Area: (in hectares) 65 ha

12. General overview of the site: Muizenberg comprises an intermittent shallow lake created by the damming of a stream that drains the surrounding low hills. The wetland typically retains some water for more than six months each year. Periodically inundated grassland and shrubland surround the wetland. A separate small pond, Kaya Fortuna, is situated 200 m west of Muizenberg. This area is internationally significant for its population of the Caribbean coot (*Fulica caribaea*, Kùt, Near Threatened under the IUCN Red List) and the Caribbean flamingo (*Phoenicopterus ruber*, Chochogo, conserved under CMS) but also supports many other waterbirds, both residents and migrants.

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 1: A wetland should be considered internationally important if it contains a representative, rare, or unique example of a natural or near-natural wetland type found within the appropriate biogeographic region.

Natural freshwater lake habitats are scarce in the Southern Caribbean Ecoregion and artificial lakes are generally only present during and immediately after the rainy season. Local circumstances sometimes allow freshwater lakes to persist for periods up to several months and Muizenberg is one of the two most important freshwater habitat sites on the island of Curaçao (Debrot & de Freitas 1991). It is the largest freshwater reservoir on the island with a capacity of 650,000 m³ (G van Buurt, pers. comm.).

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 freshwater lake of Muizenberg support significant populations of the Caribbean coot (*Fulica caribaea*, Kùt) which is listed as Near Threatened under the IUCN Red List (Nijman 2010). The species is a resident breeder, with congregations of up to 800 birds during the wet season. The Caribbean coot is endemic to the Caribbean region and is considered uncommon to rare on most of the Greater Antilles and is an irregular

breeder or vagrant on the Lesser Antilles south to Trinidad (Prins et al. 2005; Rafaele et al. 1998). It presently only occurs on 13 islands (Nijman et al. 2008). Throughout the Caribbean this species showed a marked decline as a result of hunting, egg collection, habitat loss and introduced predators (BirdLife International 2011). Since current populations of this species are extremely fragmented (covering a combined area of approximately 1000 km²), this waterbird is particularly vulnerable to extinction (Nijman et al. 2008).

The Caribbean flamingo (*Phoenicopterus ruber*, Chochogo), which is listed as Conserved Through Agreements under appendix II of the Convention for Migratory Species (CMS), occasionally feeds in the wetlands in groups up to 170 birds (Debrot & Wells 2008). The endemic freshwater fish (*Poecilia vandepollii*) is present in the wetland (Debrot 2003).

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.

The Caribbean coot (*Fulica caribaea*, Kùt) is dependent on the seasonal availability of freshwater ponds for breeding (Nijman et al. 2008). On Curaçao, successful breeding of the Caribbean coot was confirmed at the Muizenberg dam and Malpais. At Muizenberg, hundreds of coots are regularly observed and breeding occurs predominantly in the three month-period between January and March after the heavy rains when reservoirs and ponds fill up (Nijman 2010). Other migratory and nomadic birds use the area for overwintering or as a breeding habitat. The Common moorhen (*Gallinula chloropus*, Gaitu pik kôrâ), the Pied-billed grebe (*Podilymbus podiceps*, Sambuyadó pik diki) and the White-cheeked pintail (*Anas bahamensis*, Patu di aña) have also been confirmed as breeding residents (Voous 1983; BirdLife International 2011).

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.

The population of the Caribbean coot (Kùt, *Fulica caribaea*) supported by Muizenberg (800 birds in 1997 and 600 birds in 2005) is important as it represents regularly more than 1 % of the global population (Debrot & Wells 2008; Delaney & Scott 2006).

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- The Muizenberg dam and its surroundings straddle volcanic soils of the Curaçao Upper Cretaceous Lava formation (De Buissonjé 1974). The wetland has been created by the damming of a stream that drains the surrounding low hills. The dam was built by Shell and is still being maintained (Henriquez 1962; Debrot 2002). It is bounded on all sides by busy roads. On the north-east side the area is flanked by agricultural lands with small farms. The wetland typically retains water for more than six

months each year and in wetter years, water can be present year-round. The lake at Muizenberg measures 1.4 ha while Kaya Fortuna, a small pond laying 200 m west from the dam, covers a mere 200 m² during the wet season (Nijman 2010). The maximum depth of the Muizenberg dam is less than 2 m (Debrot 2002).

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 °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 previous section.

18. Hydrological values: The Muizenberg dam was built by Shell Curaçao in 1915 to collect freshwater for industrial cooling purposes. This dam represents the largest freshwater reservoir on the island with a capacity of 650.000 m³. It collects freshwater during and after the rainy season, and recharges ground water reservoirs and allows woodlands to grow in the area year round that support many animal species during long periods of drought.

19. Wetland Types

a) presence:

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

Human-made: 1 • 2 • 3 • 4 • 5 • **6** • 7 • 8 • 9 • Zk(c)

b) dominance: 6-W-Ip

20. General ecological features: The area of Muizenberg represents a high conservation value as it is one of two important freshwater areas on the island (Debrot & de Freitas 1991). It supports numbers of overwintering and breeding populations of waterbirds. Periodically inundated grassland and shrubland surround the wetland (Debrot & Wells 2008). When the water level inside the wetlands drops, vegetation starts growing which attracts insects, which are an important food source for several bird species. The organic matter left behind by these plants, insects and birds when the dam is dry fuels aquatic life when freshwater comes back during the wet season (F Mercelina, Uniek Curaçao, pers. comm.).

21. Noteworthy flora: n/a

22. Noteworthy fauna:

23. Social and cultural values: The Muizenberg dam was built by Shell and has been maintained since then (Henriquez 1962; Debrot 2002). The area was designated as a park area that in an otherwise developed urban area. The Park improves the urban living conditions according to the nearby community and is mainly used by hikers for recreational purposes.

24. Land tenure/ownership¹:

- a) **within the Ramsar site:** The area is entirely state-owned.
- b) **in the surrounding area:** the surroundings of the area are private properties.

25. Current land (including water) use:

- a) **within the Ramsar site:** Muizenberg is considered a “Park” under the EOP (“Island Development Plan”). The EOP (AB 1995 no. 36) became effective on May 23, 1997. The area is mainly used by hikers for recreational purposes.
- b) **in the surroundings/catchment:** The surrounding area is a suburb of Willemstad, the island’s capital, which is well developed and represents the most densely populated area on Curaçao. The area around Muizenberg counts approximately 2301 inhabitants.

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:** The area is threatened by illegal dumping of garbage, pollution, drainage of surrounding wetlands and recreational disturbance (Debrot & Wells 2008).
- b) **in the surrounding area:** Muizenberg is bounded on all sides by busy roads. On the north-east side the area is flanked by agricultural lands with small farms (Debrot & Wells 2008).

27. Conservation measures taken:

- a) The area has been recognized as a key bird area for many years (Debrot & de Freitas 1991). It was attributed a park status in 1995 in the Island Development Plan of Curaçao, which was ratified by the Island Government in 1997 and was also designated as an Important Bird Area (IBA AN0017) in 2007 (Debrot & Wells 2008). The Ramsar area follows the same delineations as the IBA.
- 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:
Although it is designated as protected parkland, the area is not being actively managed.

28. Conservation measures proposed but not yet implemented: In 1998, the central government of the Netherlands Antilles ordered each island to develop policies and a legal framework to sustainably manage and protect its natural marine and terrestrial resources (P.B. 1998, no. 49, amended in 2001, P.B. 2001, no. 41). This decision came into effect on February 1st 1999 (“Landsverordening grondslagen natuurbeheer en – bescherming”, P.B. 1999, no. 24). Specifically, this meant that islands were expected to establish nature parks and take measures to protect certain species listed in the appendices of international treaties undersigned by the former government of the Netherlands Antilles. The national legal framework for nature management and conservation, enacted in 1998 exists (Landsverordening Grondslagen Natuurbeheer), but requires implementation at present.

¹ needs formal confirmation from Curaçaoan planning department (DROV)

29. Current scientific research and facilities: Carmabi Foundation along with the Zoological Museum of the University of Amsterdam and several associated scientists, have carried out inventories of waterbirds and freshwater fish in the area.

30. Current communications, education and public awareness (CEPA) activities related to or benefiting the site: Muizenberg was designated as an Important Bird Area (IBA, AN017) in 2007 (Debrot & Wells 2008) which rises 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: Hiking is the most common form of recreation in the area.

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: 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.

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