

## Exemption report – crocodilian case Bonaire

Reporting format for exemptions under article 11(2)

14-02-2025

### SECTION RESERVED FOR THE ADMINISTRATION

#### I. CONTRACTING PARTY \*

Contracting Party: Ministry of Agriculture, Fisheries, Food Security and Nature

Contact Person: Melissa van Hoorn

Title: Crocodilian case Bonaire

Department: Directorate General Nature and Fisheries, Department of Nature

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#### II. DESCRIPTION AND JUSTIFICATION OF THE PROHIBITED ACTIVITY\*

*\* If the space provided is insufficient, please add continuation sheets throughout this report to provide the details necessary for a STAC review*

##### Supplementary note:

This report is set up from the knowledge we have to date. DNA analysis of the crocodilian has not yet been conducted. This is a long process that also requires compliance with CITES regulations for export and import. Consequently, the species' identification has not been scientifically confirmed based on DNA analysis at this time.

##### A. Description of the activity:

###### **General description of the activity**

On 8<sup>th</sup> October 2024 the presence of a large crocodilian was reported by a member of the public at Sorobon, Lac Bay, on Bonaire. Film footage showed a large, unidentified crocodilian swimming in shallow water around the fishermen's pier. Crocodilians are an alien species, not native to Bonaire. Whilst theoretically environmental conditions would provide a suitable habitat for their establishment, there are no known records indicating there has ever been an established population of crocodilians on Bonaire.

The crocodilian attracted island wide attention and Police immediately set up roadblocks to ensure the safety of the animal and the public at large. Access to the Bay was closed.

As the management body, STINAPA Bonaire immediately sought expert assistance. Due to high concern for endangered native species, public safety and the economic hardship to local businesses created by closing the Bay to visitors, the Governor instructed that the crocodilian be removed as a matter of urgency.

STINAPA captured the crocodilian on the night of the 26<sup>th</sup> October 2024 and removed it to a location outside of the Bay. Local veterinary services were notified and examined the crocodilian the next day. Unfortunately, one day later, on the 28<sup>th</sup> October the crocodilian was found dead. Cause of death was identified as: presumably capture myopathy, stress from the capture and removal from the Bay. The crocodilian was identified post mortem as a 2.9m male *Crocodylus acutus*.

**Place and full address of the activity**

Crocodilian was captured in remote mangrove channels adjacent to the Kaminda Sorobon and the west side of Lac Bay.

Please refer to the following document: Proces-verbaal submitted by STINAPA Bonaire to the Justice Department by Leonel Martijn, STINAPA Bonaire Assistant Manager, Bonaire National Marine Park which provides details on the site of capture.

**Commence date**

8<sup>th</sup> October 2024

**Termination date**

28<sup>th</sup> October 2024

**Name, affiliation and qualification of personnel responsible for the activity**

<b>Name</b>	<b>Experience</b>	<b>Affiliation</b>
John Soliano	Experienced HRM professional with a track record of adding value in the utilities industry and banking. Skilled in HR Consulting, Operations Management, Coaching, Executive Coaching, and Policy. <u>Academic:</u> Avans Hogeschool University of the West of England	Governor of Bonaire
Maurice Adriaens	Experienced in change management and getting things done. <u>Academic:</u> Wageningen University: Ir Troical Agriculture	Bonaire Government: Manager Agriculture and Fisheries; Policy Manager, Department of Spatial Planning
Sjon van Essen	HRM professional with over 40 years of experience in the Netherlands and Bonaire. Joined STINAPA in 2023 and took over as Interim Director August 2024. <u>Academic:</u> Stichting SOSA, Hogeschool Haarlem: HBO P+A	STINAPA Bonaire, Interim Director
Danielle de Kool [on site]	Marine ecologist providing science and monitoring support to Marine Park management. Joined STINAPA March 2024 <u>Academic:</u> Wageningen University: MSc Marine Resource Management Wageningen University: BSc Animal Science	STINAPA Bonaire, Ecology Advisor
Leonel Martijn [on site]	Assistant Marine Park Manager and experienced Marine Park practitioner with experience in protected area management and conservation	STINAPA Bonaire, Assistant Marine Park Manager
Edwin Domacassé	Experiences Marine Park practitioner with three decades experience in protected area management and conservation. Joined STINAPA 1994. Specialization disaster management, including sargassum influx	STINAPA Bonaire, Marine Park Chief Ranger
Christopher Ramirez [on site]	Ranger since 2024	STINAPA Bonaire, Marine Park Ranger

Deangelo Martijn [on site]	Ranger since 2022	STINAPA Bonaire, Marine Park Ranger
Karel Rosario [on site]	Former STINAPA Marine Park ranger and STINAPA Field Assistant (on call)	STINAPA Bonaire, Field Nature Unit
Eva Scheltens	Specialist in conservation medicine and small animal medicine. <u>Academic:</u> University of Edinburgh: MSc Conservation Medicine University of Utrecht: MSc Veterinary Medicine and Biomedical Science	Flamingo Island Veterinary Centre
Marloes van Elderen	Extensive experience in veterinary medicine including internship for African Conservation Experience and senior veterinarian for companion animals. University of Utrecht: MSc Veterinary medicine Malilangwe Zimbabwe: certificate of accreditation	Dierenpark Apenheul

**Identification of the Government department responsible for oversight of the activity – reference the domestic legal authority under which the exemption is granted:**

Bonaire Government (OLB) Department of Spatial Planning and Development (Ruimte en Ontwikkeling)

**Request for exemption to the protection of species of fauna listed in Annex II for:**

Capturing the individual crocodylian and its removal to a safe location in order to protect the general public, safeguard SPAW and CITES protected species in Lac Bay and where DNA analysis could be conducted.

**B. Justification for the exemption**

**Explain why the prohibited activity is necessary**

There are no known records indicating that there has ever been an established population of crocodylians on Bonaire. On Bonaire, crocodylians are alien species. The origin of this animal remains unclear and troubling. With insufficient expertise available locally, identification of the crocodylian as *Crocodylus acutus*, was only possible *post mortem*.

Lac Bay is a highly protected area within the Bonaire National Marine Park and a 1,550 hectare Ramsar site (#199). It is one of the largest natural inland bays in the Caribbean. Lac is surrounded by mangrove forest with extensive sea grass beds and fringing coral reefs and is home to a number of native species which are highly protected. It is a nursery ground and foraging area for Queen conch (*Strombus gigas*) and an important foraging area for globally endangered juvenile Green turtles (*Chelonia mydas*), and Rainbow parrotfish (*Scarus guacamaia*). Lac is the most important fish nursery habitat on Bonaire (Debrot et al, 2012) and more than 340 species of reef fish have been recorded in the bay. It supports significant numbers of breeding, wintering and wetland birds including Reddish egret (*Egretta rufescens*), Tricoloured heron (*Egretta tricolor*), Green heron (*Butorides virescens*), Great Egret (*Ardea alba*) Snowy egret (*Egretta thula*) and Blue heron (*Ardea Herodias*) as well as Magnificent frigate (*Fregata magnificens*), Brown pelican (*Pelecanus occidentalis*), and several species of Night heron. Information from the veterinarian conducting the autopsy (personal communication) indicated a substantial portion of the stomach content consisted of avian fauna.

It is unclear how long the crocodylian was resident in Lac before its capture and there is significant concern about the detrimental impact the crocodylian may have had on the native flora and fauna

of the Bay, particularly Queen conch, other invertebrates, turtles, fish and particularly wading wetland birds.

The accidental death of this individual crocodile was presumably due to the stress of capture and removal (Capture myopathy). Bonaire has no local expertise on the management of crocodilians. However, advice was given about the situation by reptile expert and staff member of Diergaarde Blijdorp in the Netherlands, who was present on Bonaire at that time. The parks management body, STINAPA Bonaire, was obliged to act with the resources they had to hand.

Removal of the crocodilian from Lac, an area with very high visitation by locals and tourists, who engage in a range of water sports activities from swimming, snorkeling and kayaking to windsurfing and diving, was deemed necessary due to high concern for public safety and economic hardship to local businesses caused by the closure of the Bay.

***List the equipment and explain the methodology used for your activity (including substantive information as attachments or as hyperlinks). Consider that any methodology should conform the international best practices, which should be specified.***

Equipment: drone, remote baited cameras, nets (traditional 'reda')

Methodology:

**Intervention team:** established with the Governor on the 9<sup>th</sup> October consisting of 18 persons [14 STINAPA staff, two local fishers, one staff member from Diergaarde Blijdorp and a local resident with experience handling reptiles]

**Monitoring patrols:** by Marine Park staff twice daily from 9<sup>th</sup> October to 26<sup>th</sup> October by boat and kayak (including the use of a drone)

**Remote baited cameras:** were set out at strategic points around the Bay, including where the crocodilian was first sighted

**Closure of Lac Bay:** the Bay was closed to visitors from the 9<sup>th</sup> – 14<sup>th</sup> October 2024 to prevent crocodilian – human interaction.

Sightings:

- 8<sup>th</sup> October 2024: sighting at the Fishermen's pier, Sorobon in shallow water under the pier
- 14<sup>th</sup> October 2024: sighting near the Mangrove Centre
- 20<sup>th</sup> October 2024: sighting near the Mangrove Centre with unsuccessful attempted capture (from kayaks using a lasso)
- 21<sup>st</sup> October 2024: sighting near the Mangrove Centre
- 25<sup>th</sup> October 2024: sighting in the mangrove channels near Kaminda Sorobon

A capture strategy was developed with the Intervention Team. Nets were cut to size and strung across the mouth of mangrove channels where the crocodilian had been sighted in an attempt to enclose it. Nets were monitored on a regular basis.

On the night of the 26<sup>th</sup> October 2024, the crocodilian was found entangled in a net and STINAPA Marine Park Ecology Advisor notified Marine Park Assistant Manager, Chief Ranger and a local fisher familiar with the area. Marine Park staff removed the crocodilian from the mangrove channel. Veterinarians were not available. The crocodilian was subdued with tape to its snout and legs were bound during transportation to a remote site and containment (see Proces-verbaal for details). On containment the constraints (tape and tiewraps) were removed.

All possible care was taken not to injure the crocodilian during capture and transportation, as confirmed by the autopsy report, the animal did not sustain any injuries or wounds.

Please refer to the following documents:

- Proces-verbaal submitted by STINAPA Bonaire to the Justice Department by Leonel Martijn, STINAPA Bonaire Assistant Manager, Bonaire National Marine Park which provides a detailed overview of all steps taken to secure the crocodilian
- Autopsy *Crocodylus acutus* Bonaire 28<sup>th</sup> October 2024 report submitted by Flamingo Island Veterinary Centre and Vets World Wild

### III. DESCRIPTION OF THE SPECIES IMPACTED BY THE EXEMPTION

(Please provide separate answers to the questions in this section for each listed species; use additional sheets if necessary):

#### **SPAW listed species impacted by the exemption**

<b>Species</b>	<b>Quantity harvested</b>	<b>Description of species, specimen, individuals</b>
American crocodile ( <i>Crocodylus acutus</i> )	One (accidental death)	Male, 2.9m, sub-adult, 55-65kg (estimation). No wounds, no abnormalities

**Please give a detailed description of the current conservation status of the species subject to the prohibited activity (such information could include international and national status, management programme, domestic legislation relating to the conservation of the species, nature of legal protection for the affected species, recovery plans for species, technical publications relevant to the species)**

The American crocodile (*Crocodylus acutus*) is listed as Vulnerable by the International Union for the Conservation of Nature (IUCN – Red List; assessment 25<sup>th</sup> Feb 2020); Appendix I of the Convention on Trade in Endangered Species of Flora and Fauna (CITES); Specially Protected Areas and Wildlife under the Cartagena Convention (SPAW) Annex II.

The American crocodile is not native to Bonaire. As such, whilst it is protected by local legislation which refers to species listed under the SPAW Protocol, it is an alien species and there are no conservation measures, recovery measures or similar in place.

#### **IV. DESCRIPTION OF THE IMPACTS AND MITIGATION MEASURES**

**Tick the box that applies to your situation concerning the principal threats to the subject species due to the prohibited activity**

Not applicable. On Bonaire *Crocodylus acutus* is an alien species.

**Explain why the prohibited activity will not jeopardize the species, or if relevant, other listed species**

There is no known documented history of native crocodylian populations on Bonaire. It is unclear where the crocodylian originated and whether it was part of a regional meta population. Given Bonaire's relative marine isolation, it is unlikely to have originated from a wild population and is more likely to be an escaped or released pet.

There are no known records of Crocodylians migrating around the ABC islands.

Assuming that the crocodylian was washed into Lac Bay, the accidental death of one individual is unlikely to cause harm to the meta population of *Crocodylus acutus* in the region.

**Does the activity require a separate exemption by another Party, and if so which one?**

No.

**Has an Environmental Impact Assessment or equivalent process been completed? If so, please attach the EIA or other impact studies**

Not applicable.

**Describe the mitigation measures designed to limit or counteract any deleterious effects (providing a list and supporting documentation, such as guidelines, policies, reports, videos/photographs etc. as attachments or by hyperlinks)**

This event involved a single individual of an alien species, therefore mitigation measures are not appropriate.

**Please give a detailed explanation of the monitoring or evaluation protocols that will be used to assess the effect of the activity on species populations including changes in range, numbers or reproductive success (include as attachments or hyperlinks)**

Not applicable. See above.

***Additional remarks***

There is considerable concern about the potential for the introduction of other similar non-native species such as crocodiles, alligators, caiman, boa constrictors, pythons and similar for which Lac Bay would be prime habitat and where they might reasonably be expected to quickly become invasive.