

**Crocodile Specialist Group Steering Committee Meeting**  
**Sofitel Royal Bay Hotel, Agadir, Morocco**  
(12 May 2026)

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**West & Central Africa**

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The West & Central Africa region (WACA) continues to advance its primary missions of: 1) better understanding crocodiles and their conservation and management needs throughout WACA; and, 2) attracting local personnel/organizations and developing capacity for crocodile work within the region. Since the last CSG working meeting (Darwin, Australia, 2024) we have been productive to these ends. Here we recount some of the events over the last two years.

**Addition of Regional Vice Chair:** We welcomed Dr. N'dede Michel Ahizi to the regional team as representative for Cote d'Ivoire. Michel undertook research on the efficacy of Cote d'Ivoire's protected areas network for threatened aquatic species, specifically West African slender-snouted crocodiles and West African crocodiles. He has been working on crocodylians since 2014, during which time he has participated in a diverse portfolio of crocodylian research initiatives in Cote d'Ivoire and throughout the region, including in Guinea, Liberia, and Senegal. And, on behalf of CSG, he was also integral to the organization of the 3rd regional meeting (Abidjan, 2015), he participated in the 2016 CSG Working Meeting (Skukuza, South Africa), helped organize the 2024 Dwarf crocodile Red List and Conservation Planning workshop, and he is part of the Red List assessment teams for *Crocodylus suchus*, *Mecistops cataphractus* and *Osteolaemus afzelii*. We look forward to working closely with Michel as part of the regional leadership team.

**Red List Assessments:** West and Central Africa is one of the most diverse regions for crocodylian species, housing all seven of Africa's crocodylians. Since 2022, our regional leadership team has submitted assessment drafts for the West African Slender-snouted crocodile *M. cataphractus* (CR) and the Central African slender-snouted crocodile *M. leptorhynchus* (EN) - the first ever review for the latter - and are still working to finalize both. We are currently working on the assessment for the West African crocodile *C. suchus* (VU) and aim to have it submitted in 2026. In 2024, we held a Dwarf crocodile Red Listing and Action Planning workshop (November, Abidjan), which involved bringing nearly 20 participants from across Dwarf crocodile range states to evaluate each of the three species. This is the first time that Dwarf crocodiles have been evaluated for the Red List since 1996. We hope to have all three species assessments submitted in 2026. The delays have to do with the availability of the regional leadership team and assessors to move them forward - this is still a region that requires significant support, with few members having implication or visibility on crocodylians outside of their main project sites. We continue to use these assessments as opportunities to train CSG WACA members in Red List assessment methods - which can take considerably longer. We are hopeful that all will be submitted and published in 2026.

**Conservation Action Plans:** Conservation action plans have been in development for all six crocodylian species in the WACA region. For four of these species - *O. osborni*, *O. sp. nov. cf. tetraspis* - West Africa, *M. leptorhynchus*, and *C. suchus* - this is the first time that they will be represented by CSG-produced action plans. And, for five of the six species, this is the first time that the action planning process is being led by range state CSG members working on these species. The workshop mentioned above for Dwarf crocodiles included conservation action planning for all three species, as well as an *ex-situ* management chapter. We were hopeful that they would be available as of 2024, but the work is advancing slowly and anticipate 2026-2027 releases.

**Documentaries:** One documentary was filmed on African Dwarf crocodiles in Gabon, again focused on the unique population of cave-dwelling crocodiles in the Abanda cave system. This was filmed for the upcoming National Geographic series *Home* and will air in 2026. The release will be accompanied by a print article in the National Geographic magazine, the first time that Dwarf crocodiles have been featured in this prestigious environmental news outlet.

We attach below the reports of some of the people working in these countries on crocodiles. In addition, we are aware of the following projects either burgeoning or underway in this region:

- **Congo:** WCS is implementing a Key Biodiversity Areas (KBA) initiative in Congo and included *Mecistops* and *Osteolaemus* as potentially critical species triggering recognition of KBAs. The results were supposed to be available in 2024 or 2025, but they have not been shared. WCS is also carrying forward work on dwarf crocodiles in Lac Tele Community Reserve, including surveys and support for community-led hunting and harvest reforms. They will present some of this during the working meeting.
- **Gambia:** The NGO Project Wild Gambia continues its work around the country and has documented dwarf crocodiles in several sites that they were previously not known from. There are long term plans for rehabilitation of some of the habitats that favor this species to improve its conservation outlook in the country, as well as to reintroduce to areas

from ex situ stock. In 2025, M. Shirley visited the country with Project Wild Gambia and CSG member Shaun Foggett to assist in surveys of the River Gambia National Park and implement training for project staff. This is the first time the area has been surveyed since 2008 and we are happy to report that *M. cataphractus* is still in the area – though still isolated to a very small stretch around the heavily protected chimpanzee islands. No *Osteolaemus* were detected during the surveys, but their presence was also reconfirmed shortly after. Of concern is that numbers of all three species seem to be declining in the country. Project Wild Gambia also participated in the 2024 Dwarf crocodile workshop in Cote d’Ivoire. Roy Armstrong, formerly of the University of Cumbria, and Caitlin Henderson are the lead points of contact.

- **Ghana:** This information appears in the Ghana country report below, but I want to highlight that Emmanuel Amoah (CSG Regional Vice Chair) and his NGO THRESCOAL have succeeded in gazetting the Tano River Crocodile Sanctuary, a community-based conservation area that falls in the Ghanaian CREMA system. This is, to the best of our knowledge, the first and only dedicated crocodylian protected area in the entirety of Africa, and is designed to conserve one of the largest remaining *M. cataphractus* populations which until now has been entirely outside the scope of a protected area or management system. Congratulations to Emmanuel and team!
- **Liberia:** The German Embassy requested assistance with a small group of *C. suchus* inhabiting their property. CSG members M. Ahizi and C. Kouman travelled to Liberia from Cote d’Ivoire to assist, but were ultimately unable to capture the animals for relocation. We have not had any news since. Additionally, Laurent Chirio reported finding a population of *M. cataphractus* on the St. Paul River, though no surveys were conducted and we do not know how large or threatened the population may be.

**Prepared by:** Matthew Shirley, West and Central Africa Regional Chair

**Date prepared:** 29 April 2026

## BENIN

### Des entreprises des travaux publics dans la conservation des crocodiles au Benin

La conservation des crocodiles concerne tous les secteurs d’activités dont les travaux publics. Les travaux de construction de la route des pêches et de ses bretelles ont suscité des interrogations quant à la présence de crocodiles dans l’une des localités concernées par les ouvrages. Interpelé par les communautés, l’entreprise en charge des travaux a diligenté une prospection par le biais de l’ONG Action Plus pour vérifier la présence effective de ce reptile.

#### 1. Phase de prospection

Les fouilles se sont avérées positives et conduit à la réalisation d’un dénombrement afin d’apprécier la population de cette faune. Pendant cette prospection, nous avons découvert deux nids (photo 1) dont un avec coquilles d’œufs et donc une éclosion très récente au regard de l’aspect que présente les restes d’œufs.

En dehors des nids, le crocodile de l’Afrique de l’Ouest (*Crocodylus suchus*) a bel et bien été observé. Ces derniers ont été présenté et discuté au cours d’une séance avec les responsables de l’entreprise, de la mission de contrôle, de l’inspection forestière, de l’ONG Action Plus et les autorités locales. La grande décision était la réalisation d’un dénombrement approuvé par la mission de contrôle et l’entreprise en charge des travaux.

#### 2. Phase de dénombrement

Au total 33 individus du crocodile de l’Afrique de l’Ouest ont été dénombrés pour 29 observations dans la zone prospectée (tableau 1). Plus de la moitié de la population étaient des juvéniles et donc très vulnérables. Les jeunes représentent 20% de cette population tandis que les adultes et les sub-adultes représentent 25%. Ces résultats sont en adéquation avec ceux de la première prospection de confirmation de la présence de crocodile dans la zone au cours de laquelle des nids de crocodiles avaient été observés dans la zone.

Tableau 1. Répartition de la population en fonction des classes d’âges.

Catégories ou Classes d’âges	Juvénile (Jv)	Jeunes (J)	Subadulte (SA)	Adulte (A)	Total
Classe de taille	<50 cm	<1 m	≥1 - ≤1.8	>1.8 m	-
Nombre	19	6	3	5	33
% par de catégorie	57.58	18.18	9.09	15.15	
IKA (Zone de présence)	1.65	0.52	0.26	0.43	2.87
IKA (Général)	0.54	0.17	0.09	0.14	0.94



Photo 1. Observation de nid (à gauche) ©Fidèle, 2023 Déplacement en barque dans les mangroves lors de la prospection (au milieu) ©Fidèle, 2023 Crocodile observé au cours de la prospection (à droite) ©Georges, 2023

Il faut remarquer que la zone de concentration des crocodile (figure 3) est plus dense et relativement calme et offrirait une certaine tranquillité aux animaux.

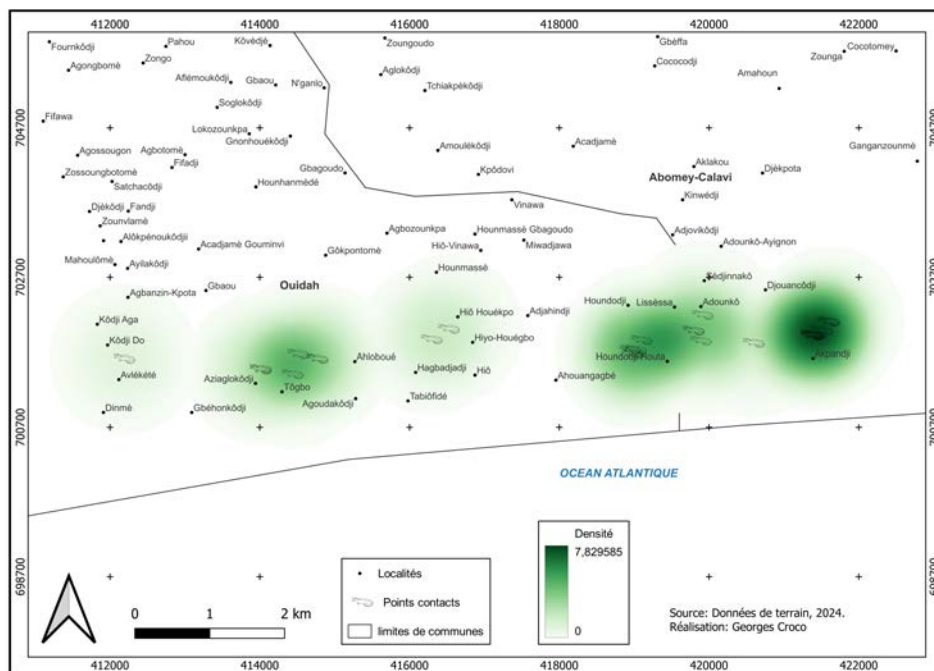


Figure 3. Distribution cartographique des crocodiles dans la zone de dénombrement

Pour l'ensemble des crocodiles, l'indice kilométrique d'abondance (tableau 1) montre que nous avons près de trois (3) individus par kilomètre sur la zone de concentration (les 12 km cités plus haut). Remarquons aussi, cet indice calculé pour les juvéniles, nous renseigne qu'il y a près de deux (2) juvéniles crocodiles observés à chaque kilomètre. Aussi, la présence de ce fort taux de juvénile corrobore avec les nids observés dans la zone.

### 3. Recommandations

Au nombre des recommandations formulées, nous avons :

- ❖ Organiser un suivi annuel pour mieux apprécier la dynamique de cette population de crocodiles;
- ❖ Elaborer un programme de suivi par balise GPS afin d'améliorer les connaissances sur la mobilité crocodiles dans la zone et contribuer ainsi à la mise en œuvre de la stratégie de leur conservation globale.

**Prepared by:** HEDEGBETAN Georges C., ADJAHO Fidèle, MADOGOTCHA Josias, LISSAGBE Hermann, et FALADE Valentin

**Date prepared:** 5 February 2026

A publication was also accepted from Benin:

Bio Ouré R., Kpéra G.N., Djagoun C.A.M.S., Kassa B., Shirley M.H., Djego G., Natta A., Mensah G.A., Sinsin B. (*In preparation*) Population status and habitats suitability for the West African crocodile (*Crocodylus suchus*) in the Northern Biosphere Reserves of Benin. *African Journal of Ecology*

The Pendjari Biosphere Reserve (PBR) - W Transboundary Biosphere Reserve (WTBR) complex (CPWBR) is the most protected area of Benin and a critical refuge for the newly recognized West African crocodile (*Crocodylus suchus*). We determined crocodile population status and habitats suitability using diurnal and nocturnal counts along rivers and ponds. During diurnal counts, we detected population structure to be 44.05% juveniles, 18.45% subadults and 37.50% adults (n= 147 individuals detected). During nocturnal counts in the CPWBR, we encountered crocodiles at a rate of 10.95 crocodiles/km of bank, while we encountered 3.25 crocodiles/ha of pond. A Getis-Ord Gi\* hotspot Analysis showed two most populated ponds in PBR (Getis Ord Gi\* Z score= 8.08; Confidence= 99%) and WTBR (Getis Ord Gi\* Z score= 2.41; Confidence= 95%). Finally, the modelling reveals that highly favorable areas for crocodile during dry season in the CPWBR accounted for about 3%. With a crocodile population size above the minimum viable population size and a growing population structure, the CPWBR exhibits the characteristics of a favorable habitat selected by crocodiles. Maintaining this level of protection for the CPWBR will ensure continuing growth of this crocodile population.

**Prepared by:** Gnanki Nathalie Kpera and Ridwane Bio Oure

**Date prepared:** 7 April 2026

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## BURKINA FASO

### **Crocodiles and Floating Cage Aquaculture: Ecological Management and Human-Crocodile Conflict Prevention in Three Reservoirs in Burkina Faso**

**Abstract:** The expansion of floating cage aquaculture in Burkina Faso has intensified interactions between crocodiles and fish farming, raising concerns about human-wildlife conflicts and biodiversity conservation. This study aims to assess crocodile abundance and spatial distribution in relation to aquaculture sites in the Bagré, Loumbila, and reservoirs no3 of Ouagadougou. Using direct observation methods, georeferencing, and socio-ecological surveys, the research evaluates ecological interactions, characterizes damage associated with crocodile presence, and analyzes local perceptions. The study will inform evidence-based management strategies for sustainable coexistence between crocodiles and aquaculture activities.

#### **1. Introduction**

Human-crocodile conflicts are increasingly reported in freshwater ecosystems where aquaculture development overlaps with crocodile habitats. In Burkina Faso, the rapid growth of floating cage aquaculture in reservoir lakes has created ecological, economic, and social challenges. While aquaculture contributes significantly to food security and local livelihoods, it may also alter habitat use patterns of crocodiles and increase the risk of negative interactions.

Understanding crocodile distribution around aquaculture facilities, assessing associated risks, and integrating local perceptions into management planning are essential for developing sustainable conservation strategies. This study investigates the ecological and social dimensions of crocodile-aquaculture interactions in three major reservoirs (Bagré, Loumbila, and No. 3), with the objective of providing actionable recommendations for mitigating human-crocodile conflicts.

#### **2. Materials and Methods**

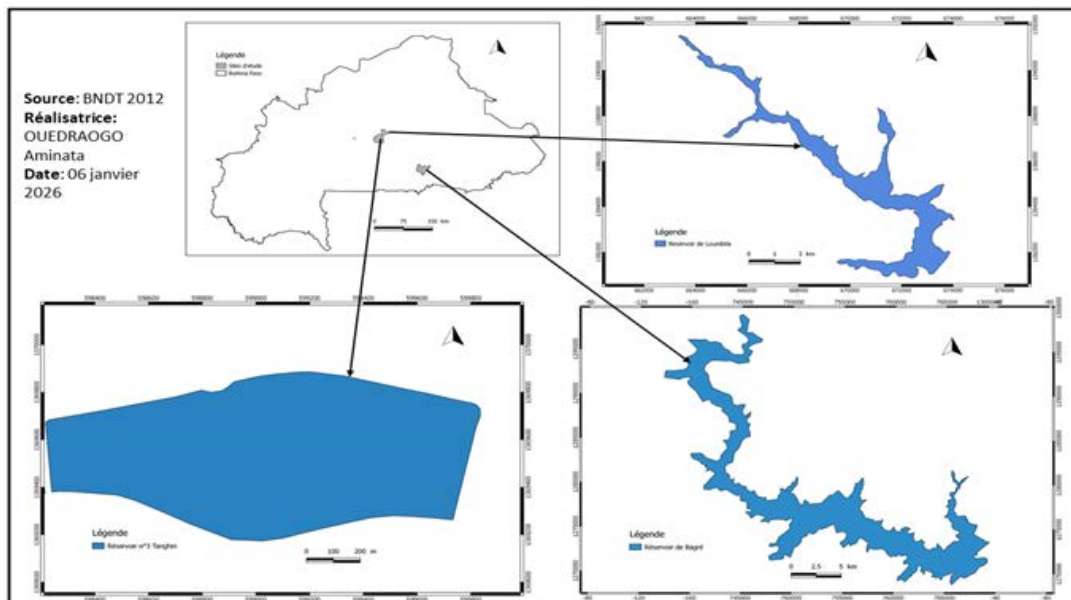
##### **2.1. Study Area**

The study was conducted in three reservoirs in Burkina Faso: Bagré, Loumbila, and reservoirs n°3 of Ouagadougou (Figure 1). These reservoirs host established crocodile populations and floating cage aquaculture operations (Figures 2 and 3). The sites vary in size, aquaculture intensity, and human activity, providing a comparative framework for assessing ecological interactions and conflict dynamics.

##### **2.2. Crocodile Surveys**

Crocodile abundance and spatial distribution were assessed using standardized direct observation protocols (Shirley and Eaton 2012). Surveys were conducted in two zones: near aquaculture cages ( $\leq 100$  m) and in areas beyond 100 m, to evaluate spatial variation relative to aquaculture activity.

Each reservoir was surveyed for a minimum of three hours per session. Systematic shoreline transects and inspections of accessible areas were performed to detect, count, and georeference (GPS) each individual. Observations were carried out during both daytime and nighttime to account for diel activity variations, with spotlight surveys conducted at night to improve detectability.



**Figure 1:** Study reservoirs



**Figure 2:** Floating cages at the Bagre reservoir. A) Students Conducting Observations on Floating Cages and B) floating cage device



**Figure 3:** Floating cages at the reservoirs no3 of Ouagadougou

### 2.3. Spatial and Statistical Analyses

Geographic Information Systems (GIS) were used to map sightings and assess spatial distribution patterns. Kernel density estimation and spatial clustering analyses were applied to identify aggregation patterns. Differences in abundance between zones ( $\leq 100$  m vs.  $> 100$  m) were tested using generalized linear models (GLMs) or generalized linear mixed models (GLMMs) when site-level variability was present. Analyses were performed in R software.

## 2.4. Socio-Ecological Surveys

Structured questionnaires were administered to fish farmers and local communities at each site to assess perceptions, attitudes, and perceived risks related to crocodile presence. Quantitative data were analyzed using descriptive statistics and inferential tests (e.g., chi-square tests, logistic regression), while qualitative responses were coded and analyzed thematically to identify recurrent patterns related to conflict dynamics and mitigation strategies.

## 3. Expected Results

This study is ongoing and will continue until September 2026. The expected outcomes include:

- Determination of crocodile abundance and spatial distribution patterns in the three reservoirs;
- Assessment and characterization of damage associated with crocodile presence in aquaculture zones;
- Analysis of fish farmers' and local communities' perceptions and attitudes toward crocodiles;
- Development of evidence-based conservation and management strategies to mitigate human-crocodile conflicts while promoting sustainable coexistence.

**Prepared by:** OUEDRAOGO Ilassa and OUEDRAOGO Aminata

**Date prepared :** 5 February 2026

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## COTE D'IVOIRE

### Activity 1: Estimation of home range size of *Mecistops cataphractus* in Taï National Park

We equipped 26 individuals of *M. cataphractus* (13 females and 13 males) belonging to three different size classes (juveniles, subadults and adults) with VHF tags in Taï National Park and radio-tracked them for three years. We found that the home range occupied by the individuals is between 0.16 and 2272 ha. Males occupied larger areas than females while different sized individuals covered areas of almost similar sizes. In addition, individuals mostly exhibit short movements, disperse relatively little and remain in flooded areas adjacent to the watercourses they inhabit.

### Activity 2: Habitat selection of *M. cataphractus* in Taï National Park

We described habitat type on each crocodile location during the radio-tracking and discovered that *M. cataphractus* preferred habitats which are tangles of trunks and branches, submerged stilt roots, flooded plantations and forests, submerged overhanging vegetation, seasonally flooded bushes and submerged emergent grasses, which enhance the protection and feeding of individuals. Moreover, juveniles and subadults occupy a greater diversity of microhabitats compared to adults.

### Activity 3: Social dynamic interaction of *M. cataphractus*

We evaluated social interactions on both a static and dynamic level. To do that, we first analysed the spatial proximity between neighboring crocodiles. Secondly, we determined the dynamic interactions that quantify the probability of encounters between individuals by accounting spatial and temporal aspects of one animal's influence on another. Individuals demonstrate spatial proximity with degrees of overlap generally greater than 33%. However, neighboring crocodiles develop a strategic use of resources which allows them to coexist without conflict within the shared area. Individuals exhibit less site attachment, characterized by very little overlap in home ranges from one season to the next. This in-depth knowledge of the movement structure, home range and social organization of *M. cataphractus* will make it possible to better guide and support conservation initiatives for this species.

### Activity 4: Captive-breeding program in Abidjan Zoo

During 2024 and 2025 breeding seasons, *M. cataphractus* females laid 122 eggs and 136 eggs respectively, of whom 78% were fertile. For both years, we only recorded 5 hatchlings due to multiple electricity issues. We still have 12 individuals from the 2022 and 2023 breeding season.

**Prepared by:** Michel Ahizi and Christine Kouman

**Date prepared:** 15 April 2026

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## GABON

Over the past two years, crocodile-related activities in Gabon have focused on strengthening scientific knowledge of crocodilian species, contributing to regional conservation assessments, and developing innovative tools for data collection and community-based monitoring. Through participation in international scientific workshops, collaboration with

research institutions, and the development of local data collection systems, my work as a volunteer with the NGO Aquatic Species has helped document pressures on crocodile populations and support evidence-based conservation actions.

A major milestone was the participation of Aquatic Species in the CSG workshop held in Abidjan, Côte d'Ivoire (18-22 November 2024), which was dedicated to the evaluation of crocodile conservation status and capacity building in West and Central Africa. This participation led to the development of new projects on opportunistic data collection, database creation, and the preparation of scientific communications on human-crocodile interactions in Gabon.

Below are the main highlights of the projects and activities initiated:

## 1. Participation in the CSG Workshop (Abidjan, Côte d'Ivoire)

**Status:** Completed

**Aim:** To contribute to the regional evaluation of crocodile conservation status and strengthen scientific capacity on Red List assessment methodologies, with a focus on the African dwarf crocodile (*Osteolaemus tetraspis*).

**Progress:** Aquatic Species NGO actively participated in the workshop sessions dedicated to crocodile status assessment and conservation strategies. A scientific presentation was delivered in collaboration with the Smithsonian Institution on the situation of *O. tetraspis* in Gabon (Figure 1), highlighting distribution patterns, pressures, and existing data gaps. The organization also took part in group work on the evaluation of the conservation status of *O. tetraspis* using available regional information, providing national-level data from Gabon.



**Figure 1:** Overview of scientific presentation realized by Aquatic Species NGO and Smithsonian during workshop in Ivory coast.

## 2. Development of an Opportunistic Crocodile Data Collection Project (Estuary Region, Gabon)

**Status:** Ongoing

**Aim:** To establish a system for collecting opportunistic data on crocodilian species (alive and dead) in the Estuary region of Gabon, particularly in Kango, in order to document pressures, mortality causes, and distribution trends.

**Progress:** A project was developed in 2025 focusing on community-based and opportunistic data collection. A standardized protocol was designed to record observations, including location, date, species, condition (alive or dead), and probable cause of mortality (Figure 2). Initial observations revealed that most recorded individuals were *O. tetraspis* found dead, mainly linked to commercialization and bushmeat trade.



**Figure 2:** Dwarf crocodile dead observed in landing site (Kango, Gabon).

### 3. Development of a Data Collection Matrix for a Mobile Application

**Status:** Ongoing

**Aim:** To design a standardized digital tool for real-time reporting of crocodile observations by scientists and citizens.

**Progress:** A data collection matrix was created in preparation for the development of a mobile application that will allow users to report crocodile sightings (alive or dead) and visualize data in real time when internet access is available (Figure 3). The application aims to support citizen science, improve surveillance of crocodile populations, and generate spatial data on species distribution and threats.

Proposed Data Collection Matrix – Crocodile Observation App		
<b>Section A. Observer Information</b>		
Variable	Description	Type
Observer_ID	Unique observer code	Text / Auto
Observer_Name	Name of observer (optional)	Text
Observer_Type	Scientist / Citizen / Fisher / Ranger / Student	Dropdown
Contact	Phone or email (optional)	Text
Date_Entry	Date of data submission	Date
<b>Section B. Observation Details</b>		
Variable	Description	Type
Observation_ID	Unique observation code	Auto
Date_Observation	Date of observation	Date

**Figure 3:** example section of the data collection matrix

### 4. Scientific Communication on Human-Crocodile Conflicts in Gabon

**Status:** Submitted

**Aim:** To disseminate scientific knowledge on conflicts between artisanal fishers and crocodiles using local ecological knowledge.

**Progress:** A scientific abstract entitled: “Conflicts of use between artisanal fishers and crocodiles in aquatic systems of the Nyanga River region (Ramsar site of Setté Cama, Gabon): an analysis based on local ecological knowledge” was submitted to an international multidisciplinary conference to be held at Omar Bongo University (Libreville) from 11 to 13 November 2026. This work highlights human-crocodile interactions and supports the integration of social data into conservation planning.

**Prepared by:** Regis Kema Kema

**Date prepared:** 24 January 2026

Two Gabonese participated in the Dwarf Crocodile Red Listing & Conservation Planning Workshop in Abidjan, Hotel Belle Côte, in Ivory Coast, November 18-21 2024 for the assessment and planning for the *Osteolaemus* genus for the implementation of effective sustainable management. One physically participated (Regis Kema Kema) and another one virtually (Elie TOBI).

The Smithsonian Gabon Biodiversity Program (GBP) continued supporting biodiversity conservation activities through biodiversity research and monitoring of focal taxa, including hippopotamus, forest elephants and crocodiles in the Gamba Complex of Protected Areas, SW Gabon. Regarding crocodiles, in 2025, GBP conducted structured interviews with local fishers from at least 15 sites to gain a better understanding of local crocodile populations and threats to guide further conservation actions. The project included two activities as follows:

**Activity 1:** Socio-ecological surveys with fishermen in the southern Gamba Complex of Protected Areas to evaluate the distribution of, and threats to crocodiles, hippos and manatees (McNamara *et al.* 2024). In this report, we only provide the crocodile findings.

Three species of crocodile have been identified in the Gamba complex of Protected Areas in the southwestern Gabon: Slender-snouted crocodile (*M. leptorhynchus*): not yet classified by the IUCN Red List, African Dwarf crocodile (*O. tetraspis*): classified as Vulnerable. Nile crocodile (*C. niloticus*): classified as Least Concern.

#### Spatial distribution

Crocodiles are widespread in the fishing areas of the Gamba complex, but their frequency of observation varies depending on the species and area. The slender-snouted crocodile is the most frequently observed species, with particularly rich areas such as Sounga, Lake Mandza, Malabi, Mafoumi, Mbissi, and Mbigu. The dwarf crocodile was observed in 33 of the 44 geolocated areas, with frequent sightings in Sounga, Setté Cama, Malabi, Mafoumi, and Mbissi, while the Nile crocodile was less frequently observed, mainly in the Nyanga River and at the mouth of Setté Cama.

#### Frequency of encounters

The slender-snouted crocodile is observed at least once a week by 70% of fishermen, the Dwarf crocodile once a week by 48% of fishermen and the Nile crocodile is observed at least once a week by 20% of fishermen.

#### Population trends

When asked about changes in crocodile abundance over the past 5 years, most fishermen reported that populations were stable. However, when changes were reported, declines were much more common than increases: 75% said that the Slender-snouted crocodile population was stable, 71% for the Dwarf crocodile population, and 64% for the Nile crocodile population. However, 25% reported a decline in the Slender-snouted crocodile, 35% in the Dwarf crocodile, and 27% in the Nile crocodile.

#### Threats

The main threats identified are hunting (64% of responses), followed by human disturbance and habitat loss (20% of responses) and the illegal fishing technique locally called “tapé-tapé” (7% of responses).

#### Accidental capture (Bycatch)

63% of fishermen reported accidentally catching crocodiles in their nets. The Slender-snouted crocodile is most often caught accidentally (92% of cases). Crocodiles caught are generally consumed or sold for their meat (91% of fishermen).

#### Fishermen's perceptions

Fishermen perception varies between conflicts. 96% of fishermen identified damage to nets as a major problem. However, 78% of fishermen do not consider crocodiles to be a serious problem for fishing. Crocodiles are perceived as useful for tourism (76%) and for cleaning ecosystems by removing dead or diseased fish (84%) and cultural importance (21%), often associated with spiritual beliefs.

#### Recommendations for conservation

1. Strengthen enforcement of fishing regulations, particularly in sensitive areas such as Sounga, the Nyanga River, Malabi, and Mafoumi.
2. Raise awareness among fishermen about sustainable practices, including avoiding placing nets parallel to the banks to reduce bycatch.
3. Integrate local customs and cultural beliefs into conservation efforts.
4. Develop a crocodile conservation and monitoring program, with a focus on the Slender-snouted crocodile.
5. Invest in additional research to monitor population trends and threats.
6. Examine the crocodile meat trade in detail to understand targeted demand and supply chains.
7. This report highlights the importance of the Gamba Complex of Protected Areas for the conservation of crocodiles and other aquatic species, while emphasizing the challenges and opportunities for sustainable biodiversity management.

**Activity 2:** Monitoring hippos, manatees and crocodiles in eight localities in the southern concessions of Assala Gabon including Nyanga and Mouambi Rivers (McNamara *et al.* 2025).

Four missions conducted on the Nyanga and Mouambi Rivers in July and September 2024 revealed 4 Nile crocodiles (two for each river) and 6 Slender-snouted crocodiles (2 on the Nyanga River and 4 on the Mouambi River). In 2025, we observed 18 Nile crocodiles on the Nyanga River, and only 2 Nile crocodiles on the Mouambi River. The nidification site where we monitored Nile crocodile nesting on the Mouambi River is very disturbed now by human activities. People settle fishing camps on the nesting site and also collect eggs. These data confirm that the Dwarf crocodile prefer swampy forested areas to rivers. Indeed, an anecdotal observation of Dwarf crocodiles one-week-old hatchlings was made on the Ndougou Lagoon swampy side by a freelance naturalist who sent pictures and GPS position (2°31'47'' S 9°45'42''; Figure 1).

This finding gives us a path where to organize comprehensive research to document the ecology of the *O. tetraspis* in the locality.



**Figure 1:** *Osteolaemus tetraspis* hatchling on Ndougou Lagoon. Photo: Swan Kyle

## References

- McNamara, J., Koumba G, Tchignoumba L, and Feistner, A (2024) *Socioeconomic survey of fishers in the southern Gamba Complex of Protected Areas, Gabon*. Unpubl. report, Gabon Biodiversity Program, Smithsonian National Zoo and Conservation Biology Institute.
- McNamara, J., Koumba G., Tchignoumba L., and Feistner, A (2025) *Evaluating the distribution of, and threats to, crocodiles, hippos and manatees, through socio-ecological surveys with fishers in the southern Gamba Complex of Protected Areas, Gabon*. Unpubl. report, Gabon Biodiversity Program, Smithsonian National Zoo and Conservation Biology Institute.

**Prepared by:** Elie TOBI

**Date prepared:** 28 January 2026

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## GHANA

Over the past two years, the Ghana Crocodile Team has made substantial progress in advancing crocodile research and conservation across the country. Building on existing foundations, we have strengthened collaborations with key stakeholders while establishing new and equally strategic partnerships to enhance conservation impact at both local and national levels. Under the leadership of the Threatened Species Conservation Alliance (THRESCOAL), a range of targeted conservation interventions have been successfully implemented. These include the rehabilitation of degraded nesting habitats, the delivery of community-based awareness campaigns, the implementation of demand-driven ecological research, and the development of capacity-building programmes for local stakeholders. Collectively, these actions have contributed to improving habitat quality, strengthening community stewardship, and generating critical scientific data to inform conservation planning.

A major milestone was achieved in September 2025 with the establishment of Africa's first crocodile protected area, the Tano River Crocodile Sanctuary, located along the upstream section of the Tano River. The Sanctuary protects a 40-km

stretch of riverine habitat, encompassing approximately 971 acres of riparian buffer, and currently supports the largest known population of the Critically Endangered West African Slender-snouted crocodile (*M. cataphractus*). Beyond its immediate conservation value, the designation of the sanctuary represents a significant step toward safeguarding the broader upstream ecosystem of the Tano River, which extends over 150 km of relatively intact habitat and culturally protected landscapes. This initiative not only strengthens species conservation but also reinforces the integration of traditional knowledge and community governance into formal conservation frameworks. Below are the brief highlights of the projects initiated in the last two years.

### 1. Establishment of the Tano River Crocodile Sanctuary

**Status:** completed

**Aim:** This project aims to secure legal protection of a 40-km stretch of Tano River through the creation of a 40-km riparian buffer to safeguard the habitat of one of the known significant populations of the Critically Endangered West African slender-snouted crocodile.

**Progress:** The habitat was officially gazetted on 24 September 2025 as the Tano River Crocodile Sanctuary, thereby securing formal legal protection for this critical ecosystem. Through this initiative, over 250 landowners who voluntarily contributed land to the protected area have benefited from alternative livelihood programs including sheep farming, snail farming, piggery, and mushroom cultivation providing tangible incentives that strengthen community support for conservation efforts. Boundary demarcation and the installation of signage are currently underway, with the official launch of the Sanctuary scheduled for 17 April 2026.

### 2. Integrating sustainable agriculture to conserve the West African Slender-snouted crocodile

**Status:** Ongoing

**Aim:** This project seeks to build the capacity of landowners that share boundaries with the Tano River Crocodile Sanctuary in sustainable farming practices to improve yields while minimizing their impact on the ecosystem.

**Progress:** Plans are advanced to train and support over 250 landowners in sustainable agriculture practices.

### 3. Exploratory Surveys of Selected Potential West Africa Dwarf Crocodile Habitats Across Ghana

**Status:** Ongoing

**Aim:** This project aims at assessing the population status, threats and habitat suitability of West Africa Dwarf crocodile within potential hotspots in Ghana

**Progress:** Through the West and Central Africa crocodile research capacity-building programme, initiated by the THRESCOAL in partnership with Project Mecistops, 7 early-career researchers from Ghana, Nigeria, and Cameroon were supported to compile Dwarf crocodile occurrence data and develop preliminary species distribution maps. Building on this foundation, each national team conducted exploratory field surveys to assess the presence of Dwarf crocodiles within priority habitats. In Ghana, these efforts led to the identification of two previously undocumented dwarf crocodile habitats in the Ahafo Region and a new record of a West African crocodile population in the Volta Region. Follow-up surveys are currently being planned to assess population status, distribution, and conservation needs within these newly identified sites.

### 4. Status survey and conservation of the West African Dwarf Crocodile in the Bono-East Region of Ghana

**Status:** Ongoing

**Aim:** This project aims to assess the population status and threats of the West African dwarf crocodile in the Chirehin and Paninamisa community lands in Ghana

**Progress:** We conducted a field survey in Pannimisa in January 2026, recording a total of 133 direct encounters of the West African dwarf crocodile over a cumulative survey distance of 18 km. The population structure was strongly skewed towards juveniles (n= 50), followed by adults (n= 29), hatchlings (n= 20), sub-adults (n= 18), and individuals recorded as eyes only (EO; n= 16). Major preliminary threats identified including illegal logging of trees and clearing of critical nesting habitat for dry season vegetable farming and the excessive use of synthetic agrochemicals. Plans are underway to survey Chirehin. These two sites are traditionally protected and are currently among the strongholds for the West African dwarf crocodile.

### 5. Challenges, experiences and lessons from urban in-situ conservation of the vulnerable West African dwarf crocodile in Ghana

**Status:** Ongoing

**Aim:** To safeguard the Kwame Nkrumah University of Science and Technology (KNUST) population and its habitat through restoration measures and farmer sensitization campaigns.

**Progress:** In 2017, we initiated urban conservation programme in Kumasi, Ghana's second-largest city, to identify and protect remnant populations of the Vulnerable West African dwarf crocodile. In 2019, we conducted habitat assessments across six known dwarf crocodile habitats. We found widespread encroachments from infrastructure expansion and other competing land uses and domestic waste pollution across five sites.

However, the Wewe stream within the KNUST campus showed strong potential as an urban refuge with the Botanical Gardens currently holding the highest concentration of dwarf crocodiles and best habitat conditions. To safeguard this critical population and its habitat, restoration measures and farmer sensitization campaigns were initiated planting and nurturing 5500 mixed indigenous tree species.

We share here the challenges, experiences, and lessons from these efforts to guide ongoing management and inform similar urban biodiversity restoration initiatives. We encountered significant challenges, including deliberate destruction of planted seedlings through burning, uprooting, and scalding with hot water by vegetable farmers. These actions are largely driven by land scarcity, complex land tenure arrangements, and the high opportunity cost of land in urban environments.

Despite sustained stakeholder engagement and awareness-raising by project implementers and university authorities, resistance from sections of the farming community remained significant. The findings underscore that awareness creation alone is insufficient to secure local support for urban habitat restoration. Addressing underlying socio-economic drivers, particularly land insecurity and livelihood dependency, is critical.

We recommend integrating alternative livelihood support, participatory land-use planning, and clearer tenure arrangements into urban conservation strategies. Sustainable urban biodiversity conservation will require not only ecological restoration but also inclusive socio-economic solutions that reconcile conservation objectives with local livelihood realities.

**Prepared by:** Emmanuel Amoah, Clement Sullibie Saagulo Naabeh, Akwasi Anokye and Daniel Konzin

**Date prepared:** 27 March 2026

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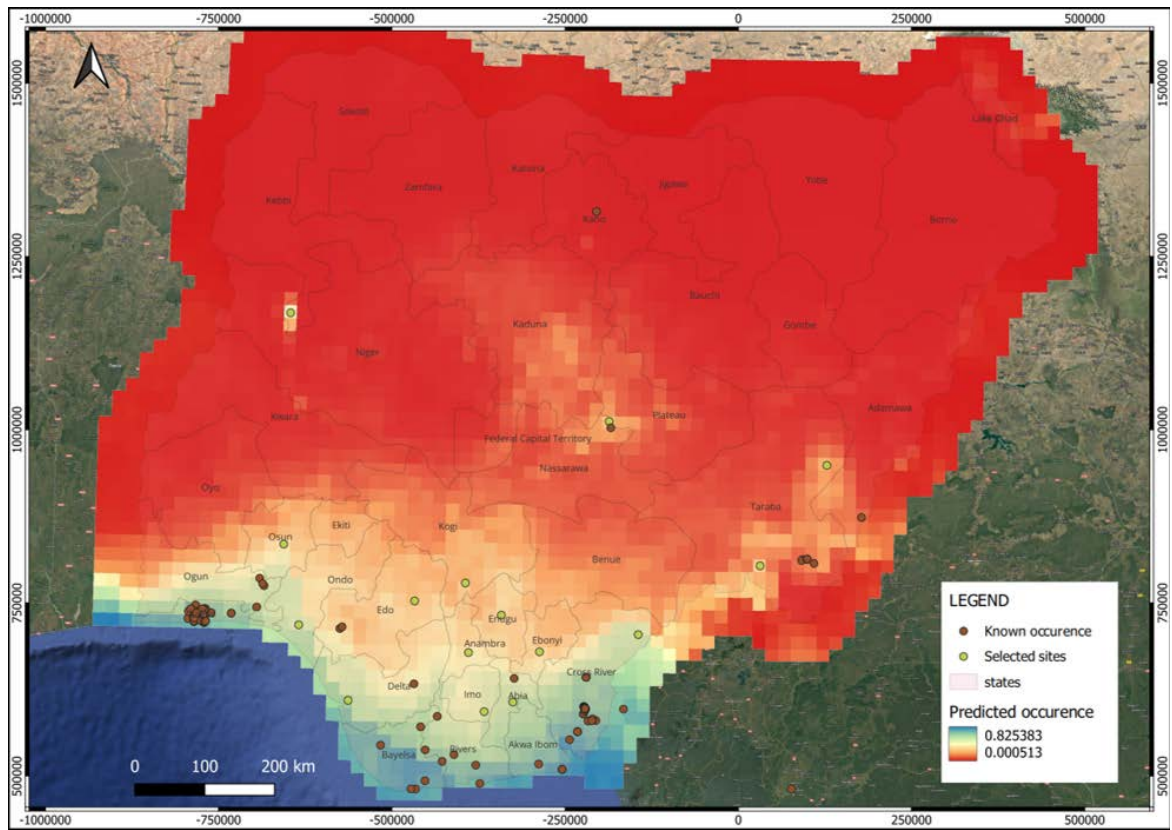
## NIGERIA

Two Nigerian conservation scientists, Nnebechukwu John and Abanyam Peter, have received mentorship from Dr. Matt Shirley over the last three years and designed a pilot study to document habitats of *O. tetraspis* in Nigeria. In 2025, a comprehensive desktop study was conducted to collate available *O. tetraspis* georeferenced occurrence data across its range in Nigeria. Data were retrieved from online biodiversity repositories and databases such as iNaturalist and GBIF, as well as scientific and grey literature, social media, and field data from contacted researchers and conservation organizations.

After rigorous data retrieval, wrangling, sorting and cleaning, a total of 141 entries were documented. The data was then used to run a species distribution model (SDM) in Wallace and visualised in QGIS to predict suitable habitats for the species across Nigeria. The model informed the selection of sites for surveys focusing on areas without prior records of the species (Figure 1).

Both ecological and social surveys targeting *O. tetraspis* were conducted in locations in Osun and Kogi states, Nigeria. The survey team confirmed and documented *O. tetraspis* in locations where they were previously not known from within the two states. The study profiled threats, documenting habitat conversion and fragmentation, hunting, insecurity and unsustainable fishing as key challenges for *O. tetraspis* across these sites. Therefore, with high prospects for new locations of crocodile presence in Nigeria, there are plans to survey new sites and repeat surveys in visited sites for both wet and dry seasons. Findings showed that pet and meat trade (as local people captured and kept hatchlings and juvenile *O. tetraspis* at home, hoping that when it grows to adult, they'll kill for meat; Figure 2) is one of the growing threats to *O. tetraspis* in Nigeria. This amplifies the need for urgent *O. tetraspis* conservation action in Nigeria. We recommend a nation-wide research strategy for *O. tetraspis* including community engagement (especially where insecurity is a threat), habitat restoration, sensitisation, habitat protection, and livelihood intervention.

In April 2024, there was reported killing of an adult West African slender-snouted crocodile in Nigeria. The crocodile was killed in a swampy river in Abia state by a local fisherman. This comes after many years of searching for the species with no result. This development presents a glimmer of hope, but with some uncertainty as the record is yet to be verified/confirmed by a third/independent researcher/ investigator.



**Figure 1:** SDM showing available occurrence data and habitat suitability prediction for *Osteolaemus tetraspis* in Nigeria.

Four field assistants have also been trained to assist in the ecological and social *O. tetraspis* survey in 2024.

John and Peter are now well involved in crocodylian species conservation in Nigeria, participated actively in the IUCN assessments and Conservation Action Planning for *O. tetraspis* and are hoping to be admitted into the CSG, ultimately advancing the conservation of crocodiles in Nigeria.

**Prepared by:** Nnebechukwu John and Abanyam Peter

**Date prepared:** 24 January 2026



**Figure 2:** Crocodiles kept in very dirty/ unkept enclosure, and persecuted in Kogi State, Nigeria.



**Figure 3:** An adult *Osteolaemus tetraspis* killed by a fisherman in Osogbo, Nigeria

## SIERRA LEONE

In 2025, reports of the presence of crocodiles from most coastal and freshwater communities in the north and southern Sierra Leone were common during opportunistic interviews conducted by staff of the Reptile and Amphibian Program - Sierra Leone (RAP-SL). What remained unresolved from the interviews is the species. Three species of crocodiles including the West African crocodile (*C. suchus*), West African dwarf crocodile (*O. sp. nov. cf. tetraspis*) and West African slender-snouted crocodile (*M. cataphractus*) are known to occur (Zug 1987; Okoni-Williams *et al.* 2004; Aruna *et al.* 2013, 2014, 2015). Of the three species, the Dwarf crocodiles occur in a large number at the Mamuta Mayosso Wildlife Sanctuary (Okoni-Williams *et al.* 2004), while the dwarf and the other two species continue to be sparsely distributed in streams, estuaries and other wetland areas in Sierra Leone.

RAP-SL, Conservation Society of Sierra Leone (CSSL), and Save the Crocs Initiative, continue to be the leading CSOs/NGOs campaigning for the protection of crocodilians while government entities including the Wildlife Conservation Department under the Forestry Division at the Ministry of Environment and Climate Change (MoECC) continue to collaboratively provide support against the killing of the species in Sierra Leone.

Due to the conservation effort by both government and conservation NGOs in Sierra Leone, crocodiles are no longer hunted. However, juvenile crocodiles continue to be entangled in local fishing nets. Trapped or strayed juveniles are mostly reported to either the Croc Sanctuary or to RAP-SL for release. This happens because most locals are now aware of laws that prohibit the killing or keeping of the species as pets while few are engaged in the clandestine killing of the species once caught in their fishing nets.

- Aruna, E. (2015) Environmental Impact Assessment of the TIMIS Mining Company, Herpetofauna Species Assessment Report. Page 20, (unpub)
- Aruna, E. *et al.* (2014) Report on the Herpetological Survey in the Western Area Peninsula Forest and Environ. Page 12 (unpub)
- Aruna, E. Johnny, J. and Jalloh, J. (2013): Follow-up Survey of Reptile and Amphibians of Bumbuna H Hydroelectric Project Area. Pages 10, 25 (unpub). (<https://www.youtube.com/watch?v=VpiCZgMg-2E>).
- Okoni-Williams, A.D., Thompson, H.S., Koroma, A.P. and Wood P. (2004). Important Bird Areas in Sierra Leone: Priorities for biodiversity Conservation. Conservation Society of Sierra Leone and Forestry Division, GOSL.
- Zug, G. (1987) Amphibians and Reptiles of the Outamba-Kilimi Region, Sierra Leone. Journal of Herpetological Association of Africa. 33:1-4.

**Prepared by:** Edward Aruna

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