Crocodile Specialist Group Steering Committee Meeting
Agadir, Morocco
(12 May 2026)

Australia and Oceania

Three species of crocodilian are endemic to the Australia & Oceania region; *Crocodylus porosus*, *C. novaeguineae* (Papua New Guinea only) and *C. johnstoni* (Australia only). *Crocodylus halli* (Papua New Guinea) has not been recognised by the CSG, pending further DNA analysis to confirmation its validity as a species.

Australia
In late-2021, the Department of Climate Change, Energy, the Environment and Water (DCCEEW), initiated a process to review the *Code of Practice on the Humane Treatment of Wild and Farmed Australian Crocodiles* ("the Code") in conjunction with the relevant State/Territory Governments (Western Australia, Northern Territory, Queensland). The Code, endorsed by the Natural Resource Management Ministerial Council (NRMMC) in 2009, sets out the framework and standards for the humane capture, restraining and housing of both wild and farmed crocodiles in Australia. While the intention was for the Code to be reviewed after 10 years, this has not occurred and given recent advances in science, technology, and husbandry practices, it was broadly accepted by the relevant State/Territory Governments and industry stakeholders that a review was merited. In July 2023, an independent review of the Code began, to ensure the Australian crocodile farming industry continues to be managed to world class standards. Key stakeholder consultation commenced in 2024 with the review process completed by early 2025. It is believed that the updated Code has yet to be endorsed by the Federal Minister for DCCEEW.

Northern Territory
The *C. porosus* population in the Northern Territory has increased since intensive unregulated hunting (1945-1971) and is now estimated at around 102,000 non-hatchlings, with 15% of the crocodile population currently between 2.7 m and 3.0 m in length (Fukuda and McLeod 2025). Monitoring of the population has consistently occurred since 1975, with only minor gaps in the record (see Fukuda *et al*. 2021). Results have been consistent with recent trends, showing either stable (believed to have reached an asymptote) or increases in both numbers and in biomass (more larger crocodiles observed) (Fukuda and McLeod 2025).

The risks to humans associated with *C. porosus* in the Northern Territory are managed under the "Northern Territory Saltwater Crocodile (*Crocodylus porosus*) Risk Management Framework 2021-2026" which is currently under review. The number of problem crocodiles removed for public safety and to protect stock in pastoral areas has been increasing over the last two decades, in line with the increasing crocodile population (Fukuda and McLeod 2025). In 2023-2024, 239 problem *C. porosus* (74.5% males) were removed from the wild with the majority (66.5%) from Darwin Harbour, and 93.7% from the Greater Darwin Region (Fukuda and McLeod 2025).

In 2024, the latest edition of the Management Program for the Saltwater Crocodile in the Northern Territory (2024-2034) was released. Previous programs had a 5-year lifespan, but this program will be in place for a 10-year period. Its purpose is to ensure the "*protection, conservation, sustainable use, control and management"* of *C. porosus* in accordance with the *Territory Parks and Wildlife Conservation Act 1976*. Its objectives are to maintain crocodile populations at accepted densities, enable a robust and profitable crocodile industry, enhance Aboriginal livelihoods, enhance public safety, and improve community awareness.

The year 2025 marked the review, approval and release of the latest edition of the "Wildlife Trade Management Plan (WTMP) for the *C. porosus* in the Northern Territory of Australia 2026-2030". The purpose of this document is to ensure the sustainability of commercially harvested Saltwater crocodiles in the Northern Territory, and specifically to fulfill the requirements under the Commonwealth's *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)* and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). The objective of the WTMP is to balance sustainability with industry growth, maximizing economic benefits to all stakeholders whilst promoting long-term species conservation.

In the Northern Territory, there are annual harvest ceilings of 90,000 viable eggs and 1200 non-hatchling Saltwater crocodiles that can lawfully be removed from the wild. These eggs and a proportion of these crocodiles are used to supply the crocodile farming industry. Live crocodiles that do not supply the farming industry are removed either by departmental staff, or under permit to reduce risk to humans. In 2023-2024, 46,078 viable eggs were collected and 36 non-hatchlings (+239 problem crocodiles) were removed (Fukuda and McLeod 2025). There are currently 14 facilities in the Northern Territory with permits to farm crocodiles. It is estimated the Northern Territory's crocodile industry will contribute

$AUD151 million to the local economy and support 335 direct and indirect jobs each year, with $AUD46 million of annual revenue generated directly by crocodile farms.

Recent research involving *C. porosus* in the Northern Territory includes population genetic assignments to identify the natal origin of problem crocodiles captured in Darwin Harbour (Fukuda *et al.* 2024), evaluating insignificant influences of crocodile density on the rate of attacks (Baker *et al*. 2024), exploring possible effects of jumping crocodile tours on the increase in crocodile abundance and biomass (Baker *et al*. 2025), and quantifying the ecological role of Saltwater crocodiles by estimating energy requirements and nutrient contributions over the last 50-year population recovery (Campbell *et al*. 2025).

Monitoring of two *C. johnstoni* populations (Mary River, Daly River) in 2025 suggest that both populations continue to decline, possibly due to upstream movement of *C. porosus,* but mainly as a result of ingestion of cane toads. However, *C. johnstoni* are commonly observed in waterways.

Queensland
Unlike in the Northern Territory, Saltwater crocodile monitoring in Queensland has been sporadic and inconsistent over time, with comprehensive state-wide monitoring only occurring in the late 1980s, late 1990s/early 2000s and again in 2016-2019. A summary report of the 2016-2019 survey results and historical analyses (1985-2019) was released by the Department of Environment and Science in mid-2021. The results revealed a current population of 20,000-30,000 non-hatchlings at an average density of 1 crocodile/km, which has increased since the 1980s. However, recovery has been relatively slow and highly variable across the state at around 2% on average each year (Taplin *et al.* 2020). While numbers in some rivers appear to have stabilized as early as the 1980s (eg Wenlock River, northwestern Cape York), in other rivers (eg Norman River, Gulf of Carpentaria) numbers continue to increase. Saltwater crocodiles occupy a diverse range of habitat types in Queensland (13 defined crocodile bioregions), most of which are considered marginal or sub-optimal for crocodiles. The population is also largely riverine with the majority (>90%) found below 20 m elevation.

Saltwater crocodiles in Queensland are managed under the *Queensland Crocodile Management Plan*. Because of increasing crocodile and human populations, especially along the populated east coast between Cooktown and Ayr, there has been increasing human-crocodile conflict in Queensland over the last two decades. Since 1975, there have been 60 crocodile attacks (21 fatal, as of February 2026) on humans, with 6 fatal attacks recorded in the last 5 years. In response to the increasing conflict, the department has removed a record number of problem crocodiles (>450 total, mostly >2 m in size) over the last decade largely from the populated east coast (Cooktown-Ayr; Taplin *et al.* 2020), and an additional 353 crocodiles between 2020 and 2025. While the average size of crocodile has been increasing throughout the state, it has decreased along the populated east coast and this is believed to be a consequence of the removal program. Australian Freshwater crocodiles pose little threat to humans with attacks rare.

In 2025, the Katter Australian Party proposed a Bill to establish a Queensland Crocodile Authority to manage crocodiles in Queensland, which included culling and safari-style hunting. This was met with strong opposition from scientists, conservationists, and local councils, and was rejected. A threshold harvest model was also developed for Queensland (L. Taplin, unpubl.), should the state require a significant increase in removal, to reduce human-crocodile risk. Queensland released an updated Crocodile Management Program late in December 2025. Changes from the previous management plan were of little consequence and included simplification of management zones and inclusion of some peripheral areas of habitat.

Historically, the commercial utilization of *C. porosus* in Queensland has been restricted to captive-bred animals, problem crocodiles received through the management program, and eggs and stock imported from the Northern Territory. It only became lawful to harvest wild *C. porosus* eggs in Queensland in 2018 under the *Nature Conservation (Estuarine Crocodile) Conservation Plan 2018*, with only one group currently permitted to collect in northern Cape York Peninsula. Currently eight crocodile farms are operating in Queensland, with one new facility established in 2024.

Given the increase in human-crocodile interactions, the Queensland Government has continued to invest heavily in research to reduce the likelihood of attacks and improve detection. Ongoing research into projects developing automated mobile crocodile detection units, and the development of a sonar detection buoy are both under prototype development and testing. The intent of these systems is to provide timely localized alerts, to assist the public in assessing crocodile risk, as well as supporting crocodile management decision making. Additional work has been invested in recent years into eDNA detection of *C. porosus* from water samples, as a monitoring tool to detect cryptic individuals across the species Australian distribution (likely global - untested). The assay development led by researchers at the University of Canberra is sensitive for *C. porosus* across its global distribution, however discounts *C. johnstoni* as closest local relative. The assay has not yet been tested on other crocodilian species.

Recent genetic research found that the Saltwater crocodile population in Queensland is broadly divided into six populations with ~90% of crocodiles dispersing less than 50 km from their place of birth (Lloyd-Jones *et al*. 2023). This genetic understanding led to satellite tracking of crocodiles in the Proserpine River due to significant density of very large crocodiles, yet apparent genetic isolation of the system. Satellite telemetry data is currently under analysis against coastal surface water movements, to understand future risk to the surrounding tourist area of Airlie Beach and the Whitsunday

Islands. Additionally, significant research into the Fitzroy River *C. porosus* population, as the most southern population globally. With increasing concern of potential human interaction, planning is underway to test *in situ* translocation and satellite tracking of crocodiles within the catchment, as well as ongoing assessment of nesting and recruitment into the population. Aversive conditioning (Booth *et al.* 2020) continues to be investigated as a management tool, in areas such as national parks away from densely populated areas.

Populations of *C. johnstoni* in Queensland are considered to be secure and abundant.

Western Australia
Regular monitoring of the Saltwater crocodile population in the Cambridge Gulf region (Ord River, West Arm) occurred through aerial daytime surveys between 1992 and 2012, with spotlight surveys occurring sporadically. Currently, population monitoring is restricted to an annual spotlight survey of the King River, which has been surveyed consistently since 1989 (1989-1990, 1992-2015, 2017-2020, 2023-2024). The Ord River is surveyed less frequently (every 5 years), with the latest survey being carried out in 2024. Results for both areas indicate that the *C. porosus* population continues to increase at a relatively high rate (3-7% p.a.), with no sign of stabilizing yet. Cattle grazing remains a potential threat to some nesting habitats.

The increasing *C. porosus* population has led to increasing HCC which prompted authorities to implement a public safety program, like the "Be Crocwise" program in the Northern Territory and Queensland. Legal harvesting of juveniles, sub-adults, adults and eggs was undertaken in West Arm between 1989 and 1994 to provide stock for crocodile farms, however only one farm is currently in operation, in Broome, and it is based solely on captive breeding.

The available data suggest that *C. johnstoni* in Western Australia have not been impacted in the same manner by cane toads as have populations in the Northern Territory, where high mortalities in some areas were reported. Saltwater crocodiles have a much higher tolerance of cane toad toxin than *C. johnstoni*, and colonisation the toads is not expected to have a direct negative impact on the former. Freshwater crocodile populations in Western Australia, particularly in Lake Argyle and Lake Kununurra are large and secure.

Palau
Palau has a small stable *C. porosus* population estimated at less than 1000 individuals (Joshua Eberdong, pers. comm.). Crocodiles are not currently protected by law, and are sometimes killed and eaten, but at a rate not considered detrimental to their conservation.

Papua New Guinea
The latest report published by the Conservation and Environment Protection Authority (CEPA) indicated a fluctuating but stable Saltwater crocodile population within the area surveyed in 2020. Degradation of habitat by introduced fish species and burning during dry years continues to affect nesting habitats, although nest monitoring indicates positive trends for both *C. porosus* and *C. novaeguineae*. Due to financial constraints, the CEPA has not been able to conduct nest count surveys for *C. novaeguineae* or *C. porosus* since March 2020.

In 2024 and 2025, the annual wild *C. porosus* egg harvest in the Middle Sepik River, organized by Mainland Holdings Ltd and in collaboration with the NGO Sepik Wetlands Management Initiative, managed to harvest a combined 15,664 fertile wild *C. porosus* eggs. In 2024, 87 resources owners (from 19 villages) supplied 8899 fertile eggs and in 2025, 61 suppliers from 14 villages participated in the harvest (6765 fertile eggs harvested). Despite the many business challenges and the high inflation affecting the PNG economy, Mainland Holdings Ltd continues to support the crocodile conservation program in PNG with its annual wild crocodile eggs harvest in the Middle Sepik River that has the full backing of the local communities.

As previously reported, the quantity of wild skins exported from PNG is still experiencing a downward trend. Since the Covid-19 pandemic, Mainland Holdings Ltd is now the only remaining exporter of wild crocodile skins from PNG. This is mainly due to a combination of low prices, the prohibitive cost of domestic transport and often challenging logistical difficulties to travel in PNG and, of course, the ever-stricter grading standards imposed by the industry, making it often uneconomical for the local hunters living in the remote areas to sell and deliver their croc skins. Starting in early 2025, at the request of its customer because of low demand by the manufacturers of crocodilian leather products and the general low quality of the wild skins, the company also stopped purchasing *C. novaeguineae* from local hunters. The increasing number of crocodile attacks in major coastal tributaries has also been attributed to a reduction in wild hunting by landowners due to the tighter grading and people venturing into alternative businesses that have greater returns on effort.

Brandon Sideleau (Charles Darwin University) completed fieldwork for his PhD work, dealing with HCC throughout PNG. Surveys involved interviews with residents and community leaders, and police/medical presence was absent in most areas, so secondary verification was impossible. Most incidents were reported from the East Sepik, followed by West New Britain, Western Province, and Gulf Province over the 2015-2024 period. Most victims were male, and most attacks occurred during fishing or activities related to deficiencies in Water, Sanitation and Hygiene (WASH) infrastructure. No significant change in overall attack frequency was detected over the study period, except for a significant increase in non-fatal attacks in East Sepik Province; this absence of temporal trend may reflect inaccuracies

in residents' recall of incident dates or may indicate that attacks have been a persistent problem in PNG for many decades with little change. Brandon was supported by Jerry Wana (Sepik Wetlands Management Initiative) who conducted the East Sepik surveys, and Prof. Ralph Mana who did Central and Manus. Results of this study will be reported at the Working Meeting.

The drafting of an Amendments Bill to amend the Crocodile Trade (Protection) Act 1974 was announced by the Managing Director for Conservation and Environment Protection Authority in June 2021. The process was completed with the involvement and review of the current legislation and a series of consultations to assess the needs and priorities of PNG's crocodile skin trade. The Amendments Bill had some structural issues and was returned to CEPA by the Department of Justice and Attorney General (DJAG) - Office of the State Solicitor, on 28 October 2024: the Bill had to be tidied up to reflect the indention behind the proposed provisions; certain provision of the bill were obsolete or did not exist; and, it had to repeal and replace the entire legislation as opposed to trying to fit into new concepts of the existing law. The matrix was sent to CEPA towards the end of 2024, and in 2025 changes were made to that effect to respond to the matrix sent by DJAG. At this stage, the Bill is still with CEPA, and although it has been finalized, it has not yet been sent to DJAG. Once DJAG is satisfied with all the structural issues of the Bill, the submission will then go to the Legislative Counsel for endorsement to Parliament.

Timor-Leste
The Government of the Northern Territory of Australia (NTG) was recently asked to form a partnership with the Timor-Leste Government (GoTL) to explore the first steps in developing a Saltwater crocodile management program. The program would aim at reducing the risk to humans as there is a growing interest in marketing Timor-Leste as an international destination for tourists interested in scenic beaches and water-based activities. Five NTG staff (Griffiths, McLeod, Fukuda, Jacobson and Ewin) visited Timor-Leste in October and November 2025, to open dialogue with GoTL officials, politicians and on-ground staff which indicated support for the development of a crocodile management program. A workshop was held where multiple GoTL departments were represented, and potential strategies presented. Preliminary field surveys aimed at upskilling staff in survey techniques were also conducted near Baucau and Lospalos (Lake Ira Lalaro). Given the cultural significance of *C. porosus* in Timor-Leste, cost-effective management could integrate stakeholder groups, especially traditional elders and local knowledge holders (Brackhane *et al.* 2019, 2024).

In response to crocodile attacks, the GoTL has established warning signs at known crocodile spots and is regularly visiting affected communities to raise public awareness. Government has also constructed a crocodile enclosure in Hera, near Dili, to facilitate the housing of problem crocodiles. Community-based monitoring has been conducted in various communities in Lautem and Viqueque to assess data on crocodile habitat and attacks, integrating the knowledge of local stakeholders (Brackhane *et al.* 2019, 2024).

DNA analysis of *C. porosus* samples collected from across both north and south coasts showed no genetic connectivity between Timor-Leste and Australia. Genetically, the Timorese *C. porosus* were much closer to populations from other Asian countries than to those from Australia.

Solomon Islands
The Saltwater crocodile population in SI has recovered significantly, leading to increasing conflict, including attacks. Activities since 2024 include:

- Implementation of a national management plan (2023-2027) via Ministry of Environment Climate Change Disaster Management (MECDM) and Meteorology and Environment and Conservation Division (ECD) annual workplans and MFMR work programs.
- Reviewing of proposal with the CITES Management Authority (ECD) to lift the Fisheries ban regulation.
- Awareness activities: materials, international-day events, school engagement, radio talk-back shows.
- Ongoing monitoring and data collection (including crocodile attacks).

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