

# NATIONALLY AGREED STANDARD OPERATING PROCEDURE (NASOP)

**Title:** Working safely in estuarine crocodile habitats

**Version:** 1.1

**Prepared by:** Subcommittee on Emergency Animal Disease

**Approved by:** Animal Health Committee

Revision history:	Version	Date of approval	Comments
	1.0	28/04/09	AHA Website
	1.1	02/05/11	Approved by AHC

NASOPs support national consistency and provide guidance to response personnel undertaking operational tasks.

## 1. Purpose

- To identify general occupational health and safety principles to be applied when managing risks to personnel operating in estuarine crocodile habitats.

## 2. Application/Scope

- These procedures can be applied to any emergency animal disease (EAD) response conducted in northern Australia where field staff may be operating in estuarine crocodile habitats.
- These procedures are specifically targeted to manage the risk to personal safety posed by estuarine crocodiles.
- This NASOP recognises that the normal background risks are increased due to presence of carcasses during an EAD response.
- Risks may also be increased due to staff unfamiliar with estuarine crocodile habitats being assigned to work in these areas.
- These procedures do not support the destruction of estuarine crocodiles.
- The procedures are particularly relevant during higher risk times such as the breeding and nesting season when estuarine crocodiles are more aggressive.

## 3. Resources/equipment

- Briefing to staff outlining potential crocodile hazards and the need for vigilance
- 1 x dedicated observer per group
- 1 x communication system for all staff in each group/vehicle – for example, hand held radios for communication between staff plus a phone or sat phone per group for communication with the operations centre
- 1 x head spotlight per person (if working at night)
- 1 x first aid field kit. This must be carried in all vehicles, including all terrain vehicles, boats and other modes of transport
- GPS unit to mark sites of carcasses
- Appropriate footwear for all persons
- Consider the need for a firearm for personal protection

#### 4. Warnings

- Do not work in known crocodile habitats unless absolutely unavoidable.
- Working in estuarine crocodile habitats presents additional hazards to field staff.
- Obtain knowledge about the environment and of risk situations contained in it. Note that:
  - All estuarine crocodiles are potentially dangerous.
  - It must be assumed that any body of water in northern Australia may contain large and potentially dangerous estuarine crocodiles.
  - Estuarine crocodiles are most active at night.
  - Estuarine crocodiles can be more aggressive during the breeding season, from September to April.
  - Female crocodiles can be particularly aggressive when defending their nests and young hatchlings. Nesting generally occurs during the wet season and incubation can take around 90 days.
  - Estuarine crocodiles live mainly in tidal reaches of rivers, as well as in fresh water sections of lagoons, swamps and waterways up to hundreds of kilometres from the sea, but most often within 100 km of the coast. They can even occur along some beaches and around offshore islands.
  - Estuarine crocodiles camouflage themselves well in lagoons, swamps and waterways and every care must be taken when travelling in these areas, especially when walking in tall grass.
- Obey crocodile warning signs, if present.
- Never provoke, harass or interfere with crocodiles, even small ones.
- Never knowingly approach a crocodile.
- Minimum safety distance is at least 25 metres, noting that a large crocodile can launch itself from water at speeds up to 60 km/h.
- Boats and vehicles must never knowingly be brought within 10 metres of a crocodile.
- Never swim or wade through any water in the area. Only cross rivers at shallow water sites or rocky areas in the narrowest section. Do not cross the river if the water is more than knee deep (30 cm).
- Avoid sites where carcasses are concentrated as crocodiles may have congregated in that area.
- If camping, pitch your tent at least 50 m from any water or high tide line.
  - Do not conduct post mortems at the camp site
  - Do not leave or discard rubbish or food scraps, including fish, around your camp site.
  - Do not prepare food, wash dishes or pursue any other activities near the water's edge or adjacent sloping banks.
  - Do not collect water from the same location every day. Always obtain water from shallow flowing water sites.
  - If fishing, stand at least a few metres back from the water's edge and do not stand on logs, branches or rocks that overhang deep pools.
- Never ride an all terrain vehicle through flood water greater than 0.3 m.
- Where ever possible park vehicles at least 5 meters from the water's edge and in a clear area to avoid surprises. Always check for the presence of crocodiles before alighting.
- Stay well back from any crocodile slide marks. Crocodiles may still be close by and may approach people, boats or vehicles.
- Everyone MUST carry some form of communications equipment and know how to use it.
- Each group must be able to communicate with the operations centre.
- Avoid working at night. If you must work at night, be especially careful. Ensure that you are wearing a head spotlight with one person experienced in the detection of

crocodiles dedicated as an observer. Check the area frequently for any eye-shine or other signs of crocodile activity.

- Be careful when walking through long grass, especially during the breeding season.
- If crunching sounds in the undergrowth are heard, leave the area immediately.
- Action to take if confronted by aggressive crocodile:
  - safety to self
    - Maintain sight of crocodile while retreating as rapidly as possible
    - Climb a tree or get into a safe place (vehicle)
  - safety to group
    - Raise the alarm and identify location of crocodile to others
    - Ensure all team members are accounted for and uninjured
  - safety to others in vicinity – use communications to inform others.
- Ensure you have the necessary equipment, know where it is and know how to use it (e.g. first aid kit).

## 5. Description of activities

- Personnel should be made aware that estuarine or saltwater crocodiles are an important part of northern Australian wetlands, freshwater and marine areas. They are the largest predator in these areas and help to maintain the overall health and balance of these ecosystems.
- All activities which may be carried out routinely during an EAD response will have to be carefully evaluated prior to entering known crocodile habitats
- When working in crocodile habitats, always work in groups of at least 2, with one person who has work experience in crocodile habitats as a dedicated observer.
- As far as is possible the location of all carcasses should be recorded using a GPS and the coordinates mapped at the operations centre. This will enable other operational teams avoid areas where crocodiles may have congregated.
- This advice is provided as a guide only. You are responsible for your own safety, so remain vigilant at all times and work safely.
- Obtain advice from crocodile experts.

## 6. References

- Environmental Protection Agency/Queensland Parks and Wildlife Service. *Walk safely and softly*, 20 July 2007.
  - [http://www.epa.qld.gov.au/parks\\_and\\_forests/great\\_walks/wet\\_tropics/walk\\_safely\\_and\\_softly/](http://www.epa.qld.gov.au/parks_and_forests/great_walks/wet_tropics/walk_safely_and_softly/)

## 7. Appendices

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