



Guidelines for Turtle Watching in the Northern Territory

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Introduction

The Northern Territory supports globally significant nesting and feeding populations of green (*Chelonia mydas*), loggerhead (*Caretta caretta*), flatback (*Natator depressus*), olive ridley (*Lepidochelys olivacea*) and hawksbill (*Eretmochelys imbricata*) marine turtles. The leatherback (*Dermochelys coriacea*) has occasionally been recorded nesting in Australia. All marine turtles are listed as threatened species under the Australian Government's *Environment Protection and Biodiversity Conservation Act* and the *Territory Parks and Wildlife Conservation Act*. For these reasons the Guidelines for Turtle Watching in the Northern Territory was developed for tour operators and participants, so that people are aware of issues associated with marine turtle watching and ways to minimise our impact on them.

Marine turtles are highly sensitive to light and movement when on the beach. When they are disturbed during the nesting process by people seeking a turtle viewing opportunity, they abort their nesting attempt and return to the water. Repeated disturbance may result in turtles releasing their eggs at sea, and cause turtles to expend an enormous amount of energy in futile nesting attempts. Such disturbance could have a negative impact on the reproductive success of threatened marine turtle species.

Non-invasive turtle viewing requires a detailed understanding of the nesting process and appropriate interaction behaviour. Untrained and self-guided viewing often disturbs the nesting process, impacting the female turtle's valuable energy reserves and potentially, her reproductive success. Research shows that turtle viewing experiences are more likely to occur and be more rewarding for those who participate in a guided experience.

Tour Operators

Guided tours are an excellent way for people to learn about marine turtles. The following guidelines should be followed by tour operators conducting turtle watching tours:

- Tour operators should hold a permit to interfere with wildlife from Parks and Wildlife Service .
- Tour guides should undertake training in relation to marine turtle biology and watching prior to leading tours.
- In some National Parks (e.g. Garig Gunak Barlu National Park), the local rangers will provide an initial induction to ensure operators are familiar with local conditions. Obey the directions from Parks and Wildlife staff in relation to the conduct of the tours.
- First aid and emergency procedures are in place, especially where saltwater crocodiles are known to occur.
- Group size should be kept small. This ensures groups can be managed and kept safe. A suggested ratio of tour guide to participants is twelve (12) people.
- The tour guide/s is to ensure all persons are to remain with the group/tour at all times.
- A record of the species encountered during each tour should be kept and submitted with permit returns. This includes checking and recording tag numbers of nesting turtles.
- Consumption of alcohol should not occur whilst viewings are being conducted.
- Smoking should not be permitted on the beach or surrounds where the viewings are being conducted, nests are located or where the turtles move up or down the beach.
- **Go slow** in marine turtle habitats and always drive your vessel with care to avoid injuring turtles.
- If tour guides are collecting data as part of a research project, all activities need to be comply with relevant legislation, including Animals Ethics code of practice, NT Territory Parks and Wildlife Conservation Act (permits), and NT Animal Welfare Act (licence).

Checklist

The following is a checklist for each trip:

- Induct all participants in safety and emergency procedures;
- Explain turtle watching guidelines all participants;
- Record all sightings of turtles using data collection proforma

Tour Participants

There are three important stages in the reproductive process of marine turtles: mating, nesting and hatching. All of these take place along the beaches of the Northern Territory. If done correctly, marine turtles can be observed without undue disturbance to the breeding process. The following sections provide detailed guidance on how tour operators and participants can experience the wonders of marine turtles in a safe, enjoyable and sustainable manner.

Mating

There are only a few known mating areas in Northern Territory. Mating can occur all year round in the NT depending on the location and the species. Often around nesting beaches female turtles are often seen resting at the water's edge in these areas. During this time they are heavily stressed and are extremely vulnerable to both natural and human impacts. It is critical that female turtles are able to replenish their energy by resting on the shore and that NO disturbance to turtles occurs in these areas. It is therefore important to adhere to the following:

- Dogs should be kept away from turtle nesting beaches.
- If a mating area is observed stand well back from the shore, at least 30 m, so resting turtles are not forced back into the water prematurely.
- Do not touch or disturb resting, sleeping or mating turtles. Making unnecessary contact with turtles is an offence under the Territory Parks and Wildlife Conservation Act.
- Minimise any externally visible lighting onboard your vessel to avoid disturbing nesting turtles and attracting turtle hatchlings.

Nesting

Turtle watching is becoming an increasingly popular activity in Northern Territory. Unfortunately, humans seeking turtle encounters on the beach easily disturb marine turtles. Such disturbances often result in female turtles abandoning their nesting attempt and returning to the sea. To reduce the chance of disturbing turtles, increase their nesting success and support long term survival of the species, it is important that you follow the guidelines listed below:

- **No Glow** - refrain from using torches to search for turtles. This discourages turtles from emerging and may make nesting turtles return to the water.
- **Move Slow** - turtles can detect sudden movements so move slowly at all times when on the beach.
- **Stay Low** - walk on the beach close to the water's edge. Stay low and out of sight of nesting turtles.
- If you see a marine turtle nearby, "**STOP**" - where you are, "**DROP**" - slowly to a sitting position and stay very still like a "**ROCK**". Wait here until she has moved up the beach to begin digging.
- Walk or sit on the beach in a tight group.
- Avoid excess noise.

- Do not shine lights on turtles and avoid flash photography at all times.
- When you can see sand being flicked into the air, stay at least 15 m away.
- When sand flicking has stopped you may approach a nesting turtle. Wait until she is laying before crawling up behind her on your stomach ("commando crawl").
- Do not move closer than 1 m behind her. She will be quite still when laying her eggs - if sand is spraying or she is using her flippers, she is not laying.
- Always position yourself behind the turtle and stay low (sit, crouch or lie on the sand). If you are getting covered in sand as she digs YOU ARE TOO CLOSE!
- Be patient. She may take time to rest or abandon the nest for a variety of reasons, including hitting an obstacle or the sand being too dry.
- Let her return to the ocean unimpeded. Stand behind her at all times, no closer than 2 m. Remember it is illegal to touch marine turtles.
- Campfires should not be lit on nesting beaches - light can deter nesting turtles and disorientate hatchlings
- Do not litter on nesting beaches or anywhere within the Northern Territory.
- Please depart all beaches by 11 pm to allow a period of undisturbed nesting to occur.

Hatching

In natural conditions very few marine turtle hatchlings survive to adulthood. Additional, human induced pressures have further decreased their likelihood of survival. Please ensure you follow the guidelines below to minimise human impact on hatchlings:

- Do not touch or handle the hatchlings.
- Do not use any form of light or flash photography - this will disturb and disorientate hatchlings.
- Disorientated hatchlings are exposed to greater predation and risk of being stranded on the beach, where they will dehydrate and die.
- Do not disturb the nest.
- Stand at least 1 m away from the nest.
- Do not compact the sand - other hatchlings may still be in the nest waiting to emerge.
- Stand still when hatchlings are moving down the beach to avoid stepping on them.
- Allow hatchlings to move to the sea without disturbance or assistance. It is important that hatchlings make their own way to the ocean by using their flippers. This helps to exercise their lungs, allowing them to swim and dive when they reach the water. As a result hatchlings are able to relocate their nesting beach when they are mature enough to breed.
- Remain behind hatchlings at all times.
- Do not illuminate hatchlings in the water.
- Please do not drive your vehicle on turtle nesting beaches. Hatchlings become trapped in wheel ruts, greatly decreasing their chance of survival.

Attachment I Six stages of turtle nesting

Times taken vary for each species – green turtles take the longest, and hawksbills are the quickest.

Stage of nesting	Identification of stage	Time taken	Vulnerability to disturbance	Torch use	Distance from Turtle
1. Emerging	Crawls from the ocean towards the dunes	5–20 mins	HIGH	No	Stay still – at least 15 m away
2. Digging the body pit	Uses her front flippers to throw large quantities of sand behind her	20–40 mins	HIGH	No	Stay still – at least 15 m away
3. Excavating the egg chamber	Uses her rear flippers only, creating a rocking motion as she digs	10–20 mins	MEDIUM	No	3 people at a time only. At least 1 m behind turtle
4. Laying eggs	Remains very still with a gentle heaving motion	3-10 mins	LOW	OK from behind if kept low & partially covered 1m from rear of turtle	Stay at least 1 m away behind turtle
5. Covering & camouflaging the nest	Covers the nest and compacts the sand with her rear flippers only, then gradually moves forward throwing large quantities of sand behind her, using her front flippers	20–40 mins	LOW	No	Stay still - at least 2 m behind turtle
6. Returning to the ocean.	Crawls from the dunes to the ocean	5–10 mins	LOW	No	Remain 2 m behind turtle

