

Appendix 3: Results of Managers Questionnaire on Dugong & Turtle Tourism

To determine current policy, permits and guidelines relating to dugong and turtle tourism of relevant State and Commonwealth Government management agencies, a Management Agency Questionnaire was developed and distributed to the following agencies:

- Great Barrier Reef Marine Park Authority (GBRMPA)
- Commonwealth Department of the Environment & Heritage (DEH)
- Department of Environment and Conservation – Parks & Wildlife Division (P&WD) NSW
- Marine Parks Authority – (NSWMPA)
- Parks and Wildlife Commission – Northern Territory (PWCNT)
- Environmental Protection Agency – Queensland Parks & Wildlife Service – EPA
- Department of Conservation & Land Management – Western Australia (CALM)

The questionnaire (Appendix 2) sought to determine existing management and legislative frameworks at state and national level. Managing agencies were asked to highlight current codes of practice, voluntary guidelines and permitted tourism operations. They were also asked to identify general permit conditions that applied to dedicated commercial tourism operations and the types of management actions relating to incidental tourism interactions with the target species.

1. Permits

Dedicated and advertised tourism operations involving both dugongs and turtles require permitting either by state or Commonwealth authorities. The physical location of where the tourism operations are to take place determines whether State or Commonwealth legislation is relevant. The Northern Territory assesses each permit application on a case-by-case basis within the framework of their *Parks and Wildlife Conservation Act 2001* (NT). Western Australia park managers issue permits under the provisions of the *Wildlife Conservation Act 1950* (WA), *Wildlife Conservation Regulations 1970* (WA) and *Wildlife Conservation Notice 1998* (WA). In Queensland, the *Nature Conservation Act 1992* (QLD) and *Marine Parks Act* preclude any commercial dugong and turtle watching activities. In New South Wales, the *Marine Parks Regulation 1999* (NSW) provides the basis for the Marine Parks Authority NSW to issue permits to undertake commercial tour operations within a marine park.

The principal Commonwealth legislation is the *Environment Protection & Biodiversity Conservation Act 1999*. This dictates policy for all Commonwealth marine protected areas as managed by the Commonwealth Department of the Environment and Heritage. Tourism activities undertaken within the

Great Barrier Reef Marine Park must also conform to the provisions of both the *Great Barrier Reef Marine Park Act 1975* and the *Great Barrier Reef Marine Park Regulations 1983*.

Table 1: Existing legislative and policy framework for free ranging marine wildlife tourism permits

Jurisdiction	Department	Dugong	Turtle	Legislation	Comments
<i>Commonwealth</i>					
Great Barrier Reef Marine Park	Great Barrier Reef Marine Park Authority	Yes	Yes	<i>Great Barrier Reef Marine Park Act 1975</i> <i>Great Barrier Reef Marine Park Regs. 1983</i>	Subject to GBR Zoning Plans Permits assessed on case by case basis Plans of Management, Policy
Australian External Territories	Department of the Environment and Heritage	Yes	Yes	<i>Environment Protection & Biodiversity Conservation Act 1999</i>	Enforceable within C'wlth waters & C'wlth Marine Protected Areas
<i>State</i>					
Western Australia	Department of Conservation and Land Management	Yes	Yes	<i>Wildlife Conservation Act 1950,</i> <i>Wildlife Conservation Regulations 1970 (Reg.15)</i> <i>Wildlife Conservation Notice 1998</i> <i>Conservation & Land Management Regs. 2002</i>	-
Northern Territory	Parks & Wildlife Commission	Yes	Yes	<i>Parks & Wildlife Conservation Act 2001</i>	Permits assessed on case by case basis
Queensland	Environmental Protection Agency; Parks & Wildlife Service	No	No	<i>Marine Parks Act 1982</i> <i>Nature Conservation Act 1992</i> <i>Nature Conservation & Other Legislation Amendment Regulation 2003</i>	Current legislation does not permit dedicated dugong or turtle watching tourism
New South Wales	Department of Environment and Conservation; Parks & Wildlife Division	No	No	N/A	-
New South Wales	Marine Parks Authority NSW	No	Yes	<i>Marine Parks Regulation 1999, Clause 24</i>	Non-dedicated multi-species tour permits within Marine Parks

2. Scope and scale of current tourism permits in place

Current levels of licensing and permitting being undertaken by either state or federal bodies to guide dedicated dugong and turtle commercial tourism activities are limited. The largest number of permits have been issued in Western Australia with a total of six tourism licences in effect – two for dugong watching and four permits for dedicated turtle tourism activities. Permissions for both dedicated dugong and turtle tourism activities in WA have shown a decline in numbers of permits issued in recent years. The Northern Territory has one current licence permitting land based turtle watching tourism and GBRMPA have issued a Commonwealth permit allowing vessel-borne dugong watching activities on a test case basis in the Hinchinbrook area of North Queensland.

There are three turtle watching tourism operations permitted by the Commonwealth on the National Nature Reserves of Coringa-Herald & Lihou Reefs in the Coral Sea. These Commonwealth Marine Protected Areas are permitted by DEH. In the Ningaloo Marine Park, DEH have also issued sixteen permits to fishing charter boats – from which incidental interactions are occasionally reported. A summary of licences is shown as Table 2.

Table 2. Scope of dedicated/advertised and incidental dugong and turtle tourism operations

Legislature	Dugong			Turtle		
	No of Permits	Spatial Limits & Location	Permit Status	No of Permits	Spatial Limits & Location	Permit Status
<i>State</i>						
NSW	0	-	-	0	-	-
NT	0	-	-	1	Unspecified turtle nest area	Inactive
WA	2	Limited to Shark Bay	Down from 5 in 1998	4	Limited to Pilbara coast	Down from 5 in 2003
QLD	0	-	-	0	-	-
<i>Commonwealth</i>						
GBRMPA	1	Hinchinbrook area	Current test case	0	-	-
DEH	16 ^a	Ningaloo Reef, WA	Current	3	Coringa-Herald & Lihou Reef, Coral Sea	Current
Totals	3			8		

^a denotes licences issued for charter fishing operations

3. Limits on permits and determining carrying capacity

Due to limited demand for this form of wildlife tourism, there has been little need to establish limits on the numbers of permits issued to allow these types of tourism activities. A notable exception to this however is found in Western Australia where CALM has limited the number of dedicated dugong tourism permissions to only five (5) licences for activities undertaken in Shark Bay. CALM has also restricted the number of licences issued for marine turtles tourism watching until the impact and value of regulation is determined. These licences have been restricted to the Pilbara coasts where there has been a history of unlicensed tourism interactions for some time (CALM, 2004).

4. Permit conditions

Permits issued to tour operators associated with dedicated dugong and turtle watching contain conditions dependent upon the activities being either water-borne and terrestrial in nature. No permit conditions have been implemented for land-based dugong watching, nor for water-based interactions with turtles.

Table 3 and Table 4 respectively show summaries of (1) permit conditions appropriate to marine based dugong tourism, and (2) permit conditions pertaining to terrestrial turtle nesting /watching tourism.

Table 3. Summary of permit conditions for tourist operations with dugongs

Permit Conditions	GBRMPA	CALM
Shall not herd, intercept path of travel or chase marine mammals	✓	✓
Shall not come between a mother and calf	✓	✓
Shall not feed marine mammals or throw any object in the water near marine mammals	✓	✓
No person shall enter the water, swim or dive during any interactions with dugongs	✓	✓
Abandon contact if dugong becomes distressed or alarmed	✓	✓
Following dugong interaction, no further contact with that animal is to be sought by operator	✓	✓
Minimum approach distance to dugong at speed greater than 5 knots	100 mtr ¹	100 mtr
Minimum approach distance to dugong while under power or steerage	50 mtr	40 mtr
On departing interaction, distance before engaging propeller and increasing speed to 5 knots	50 mtr	300 mtr ²
Shall not touch or alarm a dugong during any interaction	✓	-
Mandatory animal sightings data supplied at specified intervals	3 months	-
Shall not separate a group of marine mammals	-	✓
Shall not restrict the normal behaviour of marine mammals	-	✓
Shall dedicate a crew member as a marine animal lookout	-	✓
Shall not restrict the normal behaviour of marine mammals	-	✓
Shall not 'box in' dugongs	-	✓
Shall not approach dugongs "head on" under power	-	✓
Maximum interaction time (if in close proximity < 40 mtr)	-	15 mins
Operator's fixed wing aircraft not to fly lower than 300 metres or within a horizontal distance of 300 metres of dugongs	-	✓
Rotary aircraft must <i>not</i> be utilised for dugong observation	-	✓
Distance at which tour operator must position vessel if marine mammal if dugong is being observed by research or other licenced vessel	-	200 mtr
Tour operator shall promote appreciation of mammals separate from those already under observation from research vessels	-	✓

¹ GBRMPA specify at planing speed rather than five knots ² CALM specify leaving the vicinity at no greater than five knots before picking up speed at 300m distance.

Table 4. Summary of permit conditions for terrestrial tourist operations with turtles

Conditions	GBRMPA ¹	DEH	EPA	CALM	PWCNT
Pre-nesting phase					
Do not move close to or approach turtle leaving water and moving up the beach	✓		✓	✓	
Do not shine torch on turtle leaving water and moving up beach	✓		✓		✓
Specified minimum distance to pre-nesting turtle				15 mtr	
Nest building phase	GBRMPA¹	DEH	EPA	CALM	PWCNT
Do not shine torch on turtle while nest building	✓		✓		✓
Tour operator may approach turtle from behind to establish nesting phase for photography				✓	
Minimum distance but directly behind a turtle excavating her nest				1 mtr ²	
Do not touch turtle during nest building			✓		
Egg laying phase	GBRMPA¹	DEH	EPA	CALM	PWCNT
Do not shine torch directly on turtle laying eggs	✓				✓
Minimum distance to egg-laying turtle staying behind rear flippers				0.5 mtr	
Avoid loud noises while turtle is laying eggs	✓		✓		
Avoid sudden movements while turtle is laying eggs	✓		✓		
Use of soft lights permitted during laying			✓		
Occasional gentle touching permitted during laying			✓		
Flash photography permitted			✓		
Post laying / nesting phase	GBRMPA¹	DEH	EPA	CALM	PWCNT
Minimum distance to nest covering activity from rear				2 mtr	
Do not touch the eggs	✓				✓
Photography and lighting permitted after laying					✓
Do not shine torch on turtle leaving nest and returning to sea			✓		✓
Do not impede turtle or position humans between the turtle and the sea	✓			✓	
Do not disturb or dig up unhatched nests				✓	✓

Management of Hatchlings	GBRMPA¹	DEH	EPA	CALM	PWCNT
Do not touch or handle the hatchlings	✓		✓	✓ ³	✓ ⁴
Do not impede movement of hatchling or come between hatchling and the sea	✓		✓	✓	
Minimum distance to hatchling				1 mtr	
Do not use torch on hatchlings as they make their way to sea			✓	✓	
Do not illuminate hatchlings once they have reached sea as they may be attracted by lights and return			✓		
No. of known hatched nests permitted to be opened per tour					3
General Guidelines	GBRMPA¹	DEH	EPA	CALM	PWCNT
Do not touch any turtle, nesting or otherwise	✓			✓ ³	
Keep use of torches to a minimum – 2 cell 3 volt hand-held	✓ ⁵		✓	✓	✓
Keep dogs and other pets away	✓	✓			✓
Do not light campfires on turtle nesting beaches.	✓	✓			
Minimum tour guide on-site training – 1 day and 1 night					✓
Mandatory turtle sightings data supplied at specified intervals	✓	✓			
Limited number of tourists at sighting		30	70	15 + 2 ⁶	12 – 200
Do not feed or discard food or waste near turtles				✓	✓
No flash photography on turtle nesting beach between sunset and sunrise				✓	
No noise making or noise amplification devices permitted				✓	

¹ denotes Environmental Best Practice adopted by GBRMPA. ² Minimum distance permitted for tour operator or guide and two tourists. ³ Notwithstanding provisions of Regulation 28A of *Wildlife Conservation Regulations 1970*. ⁴ PWCNT Education program permits tourist photo opportunity holding hatchling. ⁵ GBRMPA recommend red cloth or cellophane filter over light. ⁶ Maximum size group permitted at each turtle interaction by CALM is 15 tourists and 2 guides.

5. Monitoring requirements for tourism operators

Monitoring systems and requirements have been developed by management agencies aimed at improving the management of tourism associated with both dugongs and turtles. GBRMPA specifies that permit holders must report any activity which results in the killing or injuring of a dugong within the permitted area; and suspend all tours until methods can be reviewed. DEH stipulate that any tourism activity which involves the incidental killing, injuring, taking, hunting, trading, keeping or moving, intentional or otherwise of the species must comply with the provisions of the *Environment Protection & Biodiversity Conservation Act 1999*.

Other specific monitoring requirements include:

- The mandatory completion and submission of sighting sheets for dugong watching tours irrespective of whether or not dugongs were encountered (GBRMPA)
- The completion of sighting sheets for sea turtles by permit holders within National Nature Reserves (DEH). CALM does not place such a reporting requirement on operators because they have alternative species status and monitoring programmes in place.
- CALM monitors the activities of tourism operators but this monitoring is limited to ensuring compliance within its jurisdictions.
- The Northern Territory apply permit conditions limiting monitoring by tour operators to data collection as per approved data collection sheets supplied by NTU researchers. No tagging of turtles is permitted but tag details are recorded on tagged turtles.
- In issuing commercial tour permits for utilisation of Coringa-Herald and Lihou Reef National Nature Reserves, DEH also require permit holders to complete records of tours undertaken to reserves within its jurisdiction. These records must show numbers of visitors and the nature of the activities undertaken on each tour.
- DEH stipulate that rangers or wardens must be given unlimited access to any permitted vessel engaged in such activities.

6. Additional monitoring by tour operators or others

Additional monitoring of both dugongs and turtles includes:

- Extensive population trend monitoring of the Great Barrier Reef coastal dugong population through GBRMPA and JCU.
- Reporting of incidental sightings in Northern Territory Parks and Wildlife Commission coastal wildlife databases (PWCNT) and in NSW DEC Parks and Wildlife Division wildlife sightings database (NSW).

- EPA through QPWS coordinates a State-wide marine animal Stranding Network, processing information from the public, tour operators, recreational and commercial fishers, Coastwatch, Queensland Boating and Fisheries Patrol, and Surf Lifesavers Australia (EPA, 2004).
- EPA also facilitates the recovery of stranded or dead dugongs, turtles, whales, dolphins and other marine animals. Organisations such as the GBRMPA and JCU are involved in performing necropsies to establish cause of death when required; whereas Sea World and Underwater World are involved in the rehabilitation of stranded animals.
- EPA through the Wildlife Watching section of its website encourages any turtle sightings to be recorded. Information sought includes the environment in which the sighting took place, (ie. nesting/at sea, and when) and attempts made to identify species and number of turtles seen together with details of any ID tags if applicable.
- Numerous agencies and research institutes undertake monitoring of other known nesting and habitat areas
- ‘Eye of the Reef’ Programme – joint monitoring initiative between GBRMPA and tour operators (GBRMPA).
- Extensive use of Injured Animal Hotlines eg:
 - Marine Animal Hotline 1300 360 898 (GBRMPA, EPA)

7. Management of private recreational activities

Much of the management of private recreational activities which might include the incidental interaction with both dugongs and turtles relates to compliance and the prosecution of offences under the relevant state and federal legislations. DEH is empowered under the *Environment Protection & Biodiversity Conservation Act 1999* to manage certain activities if these activities are deemed to be impacting upon matters of *National Environmental Significance*. An example of where such a referral was triggered was the possible introduction of hovercraft tourism operations at Cocos-Keeling Island and the concerns raised for the resident dugong and turtle populations (DEH, 2004).

7.1 Management of private dugong interactions

Other active management of private recreational activities includes the introduction of certain measures by GBRMPA for the Hinchinbrook section of the GBRMP. These comprise limits to the operation of aircraft in the Hinchinbrook Passage, and establishing a network of speed regulated vessel transit lanes accessing the Hinchinbrook Passage and Missionary Bay areas. The intention is to concentrate boat traffic away from the shallow sea-grass foraging areas of the Hinchinbrook Passage to mitigate the potential of boat strike on resident dugong populations. Positive flow-on effects for the area’s turtles are also expected.

Within Moreton Bay in Queensland, zoning plans include five areas designated as 'Turtle and Dugong Go Slow Areas'. Non-compliance of speed restrictions and traffic controls can result in a fine of \$300 per offence. Information sheets and a television advertisement were developed to assist in recreational user's awareness of these measures. CALM has developed Closed Season legislation for marine mammals and action to afford similar levels of protection is being considered for sea turtles. Western Australia has also instigated the closure of significant breeding beaches within Ningaloo Marine Park to all vehicular traffic from November to April.

7.2 Management of private turtle interactions – Mon Repos

At the heavily frequented turtle nesting area within the Mon Repos Conservation Park on the central Queensland coast, considerable demand for turtle watching has necessitated high levels of management by EPA. Charging an evening entrance charge of between \$3.00 and \$5.50 per person, groups of up to 70 persons will be escorted onto the beach by a minimum of two QPWS rangers or Senior Volunteer Turtle Guides to witness either a single nesting or hatching event. No advance bookings are accepted for this activity and during peak season from November to late March, it is usual for between four to five groups (or 280-350 visitors) per night to be managed in this manner. On occasion, this number may balloon to eight groups or greater than 500 visitors (S. Emerick, EPA, personal communication, 19th April, 2004).

8. Management of incidental effects of tourism and recreational activities

Aside from those management actions previously addressed, the Environmental Impact Monitoring Unit within GBRMPA specifically manages environmental impact assessments and permitting. The determining of tourism permit conditions are assessed as part of the permit application process where it is perceived there may be a direct or indirect impact on the species from incidental effects of other tourism activities.

EPA in Queensland has assisted local council authorities in sensitising residents, caravan operators and residential developers in the Mon Repos district to mitigate against the negative impacts of inappropriate lighting on turtle hatchlings. Other aspects of incidental effects of tourism and recreational activities have been addressed in the previous sections.

9. Identification of problems with managing tourism associated with dugongs and turtles

Management agencies seemingly do not face significant problems in respect of the management of tourism and the activities of tour operators associated with these species. One notable exception to this however is the growing demand from visitors for QPWS operated tours at Mon Repos to witness loggerhead turtle nesting. Visitor behaviour and contact with these nesting turtles at this site necessitates an active QPWS presence, which places additional pressure on agency resources.

Throughout Australia, only a limited number of offences involving either dugongs or turtles have been recorded. Not including the illegal take, hunting or killing of such species; there have been two successful prosecutions by authorities, specifically for non-compliance with tourism activity permit conditions. Both of these prosecutions were against tourism operators in Western Australia – one case involving a tour operator vessel which separated a mother from her calf and a second incident where the vessel breached minimum approach distances (UNEP, 2001).

10. Voluntary measures assisting Dugong or Turtle watching by tourism or recreational users

Environmental Best Practice guidelines have been developed for both dugongs and turtles through GBRMPA. These guidelines can be accessed through:

- GBRMPA Turtle Watching Best Environmental Practices at http://www.gbrmpa.gov.au/corp_site/key_issues/tourism/turtle_watching.html and;
- GBRMPA Dugong Watching Best Environmental Practices at http://www.gbrmpa.gov.au/corp_site/key_issues/tourism/dugong_watching.html

EPA in Queensland also provide guidance and information to web viewers regarding turtle viewing at http://www.epa.qld.gov.au/nature_conservation/wildlife/watching_wildlife/turtles

Some training programmes have been developed for volunteers to assist with the monitoring of key breeding beaches for turtles – aspects of this being utilised in an interpretative display centre in Western Australia. Further, Northern Territory agencies have developed some interpretation aimed at guiding tourist behaviour during turtle encounters in and around Darwin’s beaches.

11. Agency supplied materials directed to tourism proponents and developers

For those seeking to develop a commercial tourism operation focussing on the two target species, Table 5 summarises resources and information which might be sent to tourism proponents.

Table 5. Agency materials distributed to tourism proponents

Legislature	Department	Comments
<i>State</i>		
New South Wales	P&WD	Policy and procedural guidelines outlining the rescue and rehabilitation of marine turtles from NSW waters
New South Wales	NSWMPA	Speirs, Marissa. 2002. A study of Marine Turtle Populations at the Julian Rocks Aquatic Reserve, northern New South Wales. Honours Thesis.
Western Australia	CALM	Marine mammal interaction licence conditions Turtle interaction licence conditions Copy of Wildlife Conservation (Close season for marine mammals) Notice 1998
Northern Territory	PWCNT	Not specified
Queensland	EPA	Formal advice from EPA indicating that commercial dugong and turtle watching activities cannot be authorised in Queensland waters
<i>Commonwealth</i>		
GBRMPA	GBRMPA	Permit Application Form Permit and Assessment fee form (PAAF)
DEH	DEH	Link to the Recovery Plan for Marine Turtles in Australia Link to UNEPs Dugong Status Report and Action Plans for Countries and Territories

12. Other key management issues to address

“Our experience to date with ecotourism is that despite all claims to the contrary the commercial imperative invariably gets in the way of safe sustainable interactions at some point in time for many operators. As such regulation via legislation and enforcement is necessary and self-regulation via codes of practice do not work well enough” (P. Mawson, CALM, personal communication, April 2004).

“Determining the tolerances all species have for contact with vessels and people activity and recommendations for reducing the above impacts” (EPA, 2004).

13. References

- Government of Queensland - Environmental Protection Agency (2004) Turtles: Turtle watching — experience an ancient ritual. Retrieved 22nd April, 2004 from the world wide web http://www.epa.qld.gov.au/nature_conservation/wildlife/watching_wildlife/turtles
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