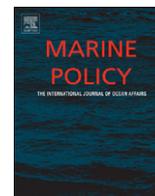




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The role of law in shark-based eco-tourism: Lessons from Australia

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ABSTRACT

Marine-based tourism offers opportunities for economic, educational and environmental benefits but is not without risks to people, animals and the environment. If the benefits of this sector are to be harnessed it will require an increasing focus upon law and policy governing the industry. This is particularly the case for shark eco-tourism, which can be an important conservation tool for these species. Australia has a longstanding history of tourism involving whale sharks and great white sharks and an examination of Australian law and policy in shark eco-tourism provides a powerful case study. This article identifies lessons that may be learnt from Australian shark eco-tourism as a first step towards identification of best practice legal strategies that both support the industry and ensure environmental integrity.

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1. Introduction

The last two decades have seen rapid growth in nature-based tourism including for marine areas and species [1]. Tourism can provide multiple benefits, ranging from educating the public and raising awareness about species and their conservation status, to creating economic incentives and advantages for those who would otherwise be involved in destructive practices [2]. However, it can have negative impacts, for both the species concerned and the marine environment, if poorly managed [3]. Appropriate legal frameworks are a crucial dimension. Case studies of longstanding successful initiatives provide a critical insight into the various regulatory options that might be utilised in other countries or involving other species. It is in this context that the governance of shark-based eco-tourism in Australia is explored here.

The diminishing conservation status of many shark species¹ has prompted a range of responses, including the implementation of legal mechanisms at both the national and international level [4]. Shark-based eco-tourism is an emerging conservation

tool, as it prompts recreational use of marine protected areas, can create alternative livelihoods for fishers, facilitate marine research and promote public awareness of the plight of particular shark species. Although there is a significant body of literature from physical and social scientists, there is relatively little research exploring the legal governance of this sector [5]. This article examines the role that law can play in promoting shark-based eco-tourism as a conservation tool, and highlights Australian approaches and the lessons they offer in determining best practice legal strategies. The focus is upon two different types of shark-based eco-tourism, both of which originated in Australia: swimming with whale sharks and cage-diving with great white sharks. The longstanding history of shark-based eco-tourism in Australia, combined with the well-developed regulatory framework, make this jurisdiction a powerful case study.

The article commences by introducing these two principal shark-based tourism operations before considering the specific law and policy by reference to the Australian experience. An analysis is provided of the lessons that may be learned from these areas and the article concludes with recommendations aimed at ensuring the future of this industry, not only in Australia but relevant to other states cultivating this marine activity.

2. Shark-based eco-tourism in Australia

Shark dive sites are found in 40 different countries, involving at least 24 different species including many endangered animals [5,6]. Shark-based eco-tourism in Australia is the longest standing example of such tourism in wild environments in the world [7].

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¹ More than 17% of all shark species are considered to be Critically Endangered, Endangered or Vulnerable and the status of a further 47% is unknown: Lack M, Sant G. Trends in global shark catch and recent developments in management. TRAFFIC International: 2009. Available at <www.traffic.org/%20species-reports/traffic_species_fish34.pdf>. See also IUCN Red List of Threatened Species. Available at <www.iucnredlist.org>.

It predominantly falls into two categories:² snorkelling or swimming with docile whale sharks; and cage diving with great white sharks.

Swimming with whale sharks was established at Ningaloo Reef in Western Australia in the late 1980s [7] and is the oldest and most researched shark tourism site in the world [8]. The area has natural site fidelity, with whale sharks congregating annually in large numbers [9]. Their arrival is seasonal, lasting for four to five months of the year, when the whale sharks feed in the shallow waters off the coast. Although the whale shark is a plankton feeder and presents less human safety risks than more predatory species, its docility encourages close human interaction with greater potential species impacts.

In Western Australia, there are a maximum of 15 licensed operators, with the industry worth over AUD \$12 million annually to the region [10]. All tour operators run day trips rather than longer live-aboard experiences. Spotter planes locate the whale sharks, relaying the information to tour boats that travel to the site, and thereafter tourists swim and snorkel with the shark in the open ocean. In terms of regulation, it is important to note that the industry is confined to the Ningaloo Marine Park, which is governed by protected area management legislation. Ningaloo Reef has recently been inscribed on the World Heritage list [11], and this in itself may prompt a further review of tourism operations.

Cage-diving with great white sharks was established in the 1970s in the Neptune Islands in South Australia. Great white sharks do not live permanently at this site but are naturally attracted to the region as they feed on Australian sea lions and New Zealand fur seals. Tours can be taken year-round although the prime viewing seasons are from May–October and December–February. The shark-based eco-tourism experience can involve surface cages for the less-experienced visitor or ocean-floor cage dives involving SCUBA equipment. The sharks are attracted to the vessels through berleying.³ There are currently four licensed operators although only two have licences to berley. Of these two, one offers overnight live-aboard trips and the other day trips. As with the Western Australian experience, the cage dives in South Australia all occur within a marine protected area—in this case the Neptune Islands Conservation Park [12].

3. The legal framework in Australia

At the outset, it should be stated that there is no single regulatory instrument governing tourism in Australia. Federal legislation is important for marine eco-tourism in two principal ways. First, the Commonwealth may enter into international treaties that are subsequently implemented under federal legislation and will apply in the states. There is no binding international law relating specifically to the conservation and management of sharks, nor on eco-tourism. However, sharks may be listed as endangered species under international trade law or harvesting prohibited under regional fisheries agreements. Australia has agreed to such limitations for the whale shark and the great white shark, and these prohibitions on harvesting are enacted under the *Environmental Protection and Biodiversity Conservation Act 1999*, and its regulations. The Federal government has also established Recovery Plans in respect of both the whale shark [13] and great white shark [14]. As protected species, the establishment of

fisheries limitations benefits shark eco-tourism operations. Second, federal legislation will also be important where a particular marine protected area is inscribed on the World Heritage List. Ningaloo Reef is one such site and no doubt federal-state cooperative agreements will be forthcoming and the *Environmental Protection and Biodiversity Conservation Act* and regulations will also apply.

State legislation applies to the types of sharks found in coastal waters and tourism activities conducted close to shore. Government regulation has favoured the use of management and action plans, with an emphasis on licensing schemes and codes of conduct. These are examined below in relation to the two case study areas.

The key legislation in Western Australia includes the *Conservation and Land Management Act 1984 (CALMA)*, *Wildlife Conservation Act 1950*, and the *Fish Resources Management Act 1994*. The CALMA covers marine parks and so encompasses Ningaloo Reef. Whale shark tourism operators are required to hold a Commercial Tourist Activity Licence under the CALMA. This has the object of ‘enabl[ing] the management of fishing ... aquatic eco-tourism and other tourism reliant on fishing’.⁴ Whale sharks are listed as ‘totally protected fish’ meaning that they cannot be taken, possessed, sold or purchased, and there are penalties for offenders.⁵ Whale sharks are also protected under the *Wildlife Conservation Act* and therefore any activity that interferes with them requires an additional ‘wildlife interaction’ licence. Tourism operators may hold multiple wildlife interaction licences as even on a dedicated whale shark tour other species may be encountered such as whales and dugong.

The key statutes in South Australia, relevant to marine eco-tourism, are the *Wilderness Protection Act 1992* and its regulations (amending the *National Parks and Wildlife Act 1972* and regulations, under which the Neptune Islands Conservation Park was originally listed), the *Fisheries Management Act 2007* and the *Marine Parks Act 2007*. Tour operators are required to hold a commercial tour operator licence under the *National Parks and Wildlife Act 1972*. In addition, the great white shark is listed as a protected species in schedule 5 of the *Fisheries Management (General) Regulations 2007*, which provide that the use of berley is not allowed within 2 nautical miles of land exposed at the low water mark. As such, a permit is required to use berley to attract sharks within the Neptune Islands Conservation Park.

4. Legal and management issues

It is clear that appropriate management frameworks are essential for the sustainable development of the shark eco-tourism industry and to facilitate a quality experience while minimising impacts on animals [15]. There is a potential conflict between tourism exploitation of marine species and their conservation and although recreational use is an important element, maintenance of conservation values must take priority [9]. Therefore, in designing legal frameworks, the fundamental purpose and philosophy of ensuring environmental quality needs to be assured.

Looking more closely at the literature on governance of marine-based tourism operations, Davis et al. (1997) have identified four considerations to be taken into account for the sustainable management of shark-based eco-tourism [9]. Each of these elements are explored below and highlight relevant Australian law and practice.

² Although there are other examples of shark-based tourism in Australia, such as diving with reef sharks and grey nurse sharks, they are not examined here as tours are not usually solely directed at shark interactions and the regulatory frameworks are less specific and well-developed.

³ Berleying, also known as chumming or ground baiting, is when fish blood, oil or parts are used to lure sharks.

⁴ *Fish Resources Management Act 1994*, section 3(2) (c).

⁵ *Fish Resources Management Act 1994*, section 46.

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