

**BACKGROUND AND ISSUES PAPER**

# Shark–Cage Diving and Use of Berley for Fishing and Ecotourism

# Shark-Cage Diving and Use of Berley for Fishing and Ecotourism

## Background and Issues Paper

Department of Primary Industries, Parks, Water and Environment

September 2012

This background and issues paper has been developed to canvass the views of stakeholders and the community in relation to the regulation of shark-cage diving and associated activities.

This paper is not part of a statutory process. Background information is provided, together with a proposed policy framework, for comment. A finalised policy framework might then require explicit regulatory amendments. Any such change to legislation would require further consultation stipulated by the *Living Marine Resources Management Act 1995*.

Persons wishing to comment on this paper should write to:

The Director  
Marine Resources  
GPO Box 44  
HOBART TAS 7001

E-mail: [Fishing.Enquiries@dpipwe.tas.gov.au](mailto:Fishing.Enquiries@dpipwe.tas.gov.au)  
Attention: Director, Marine Resources, Shark-Cage Diving Comment

Please submit any comment by Wednesday, 31 October 2012.

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## PROPOSED POLICY FRAMEWORK

It is proposed that regulations be developed that would:

- 1. ban the use of berley to attract fish for any purpose other than fishing; and,**
  - 2. ban the use of any berley that contains mammal flesh, blood or offal (other than processed pellets).**
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## BACKGROUND

There has been speculation regarding the possible development of a shark-cage diving (SCD) tourism operation in south-east Tasmania. There is no commercial operation at present. The possibility of such an operation raises the issue of actively seeking to attract sharks, something that is done by other users of the marine environment for the purpose of fishing.

SCD diving involves observing at proximity large sharks under the water from the safety of a cage attached to a vessel, the Great White Shark (GWS) being the targeted species.

Such operations exist in other States and in other countries. Operations are based in areas where GWS are encountered on a regular basis. GWS may not be resident in such areas, but frequent them for varying lengths of time.

The experience offered relies on attracting a GWS close to the vessel on most trips.

Operators attract sharks to the boat using berley. Bait may also be used to feed sharks together with the use of 'teaser baits'.

There is at present no explicit legislation governing SCD in Tasmania.

SCD may potentially generate economic benefit through the non-destructive exploitation of GWS, and associated tourism based activity might engender an understanding of the population status of GWS and their conservation value.

However, a range of issues arise around SCD, chiefly its compatibility with other marine users. Potential impacts on the GWS are also an issue.

A key issue is the spatial overlap of different user groups. The proximity of any proposed SCD operation to frequently used areas is a concern.

There are questions about the risks associated with attracting large sharks, or habituating sharks, to popular areas. Attracting sharks to cages that have people in them may habituate sharks to humans in the water and potentially increase the likelihood of sharks attacking humans.

User groups that may overlap with SCD operations include: eco-diving operations; recreational divers (extractive/non-extractive); commercial divers (e.g., abalone divers); and swimmers.

GWS are listed as vulnerable under both the *Tasmanian Threatened Species Protection Act 1995* (TSPA) and the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*. Under the Tasmanian legislation, it is an offence to take any listed species without a permit. Under the TSPA, take is defined to include kill, injure, catch, damage, destroy and collect. If sharks were damaged or injured as a result of SCD, it might require that the operation to be permitted under the TSPA.

There are no rules under the *Living Marine Resources Management Act 1995* that restrict SCD. There are, however, rule and regulation making powers under the Act that could be used to restrict or prohibit SCD. The introduction of any such legislation would need to follow the processes stipulated by the Act, including public consultation.

Berley has long been used to attract sharks by, among others, recreational fishers and charter operators. Different berley types and methods are used to attract sharks as distinct from other species. However, berley is also used for other types of fishing such as fishing for garfish or flathead. There are no rules regarding use of berley in Tasmania.

Recreational and charter vessels may also seek to attract sharks for viewing from onboard using berley and also potentially teaser baits.

## **SHARK-CAGE DIVING EXAMPLES**

Internationally, countries where cage diving with GWS occurs include South Africa, the United States, Mexico and South Africa.

In Australia, there are two operators based in Port Lincoln, South Australia, who dive in the vicinity of the Neptune Islands.

Piniped colonies (seals and sea lions) are important feeding sites for GWS. GWS commonly travel long distances, but may return to such sites on an annual or a more frequent basis. Regular visits by GWS to seal colonies, and sometimes to sheltered waters, provide the SCD tourism opportunity regarding GWS.

The Neptune Islands supports the largest aggregation of pinipeds in Australia and is a feeding ground for GWS. The waters out to two nautical miles from the Neptune Islands have been a marine protected area since 2009.

The Neptune Islands is some 70 kilometres from Port Lincoln. As such, it is a significant distance from populated areas, thus reducing possible interactions between SCD operations and other users.

The two SCD operations require a licence under the *National Parks and Wildlife Act 1972* and an exemption under the *Fisheries Act 1982* to berley, which may be fish-based berley only.

These operations have been running for more than 20 years and, combined, are active for approximately 270 days each year. Research into their impacts has been conducted by the CSIRO. In August 2011, a report on the impacts of SCD on GWS behaviour at the Neptune Islands was published by Bruce and Bradford<sup>1</sup>.

The study confirmed that GWS were visitors to the area. The study found that:

- the average time individual sharks spent in the area doubled over the last decade;
- the number of consecutive days spent by individual sharks in the area increased;
- the average number of sharks seen by operators increased (and the same sharks were seen more often); and,
- shark movements changed to match more closely the presence of SCD operators.

These results indicate that GWS behaviour has been changed by SCD at Neptune Island, i.e., time spent in the area by GWS increased. However, it should be noted that these operations

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<sup>1</sup> The effects of berleying on the distribution and behaviour of white sharks, *Carcharodon carcharias*, at Neptune Islands, South Australia: Final report to the Department of Environment and Natural Resources, South Australia / B. D. Bruce; and R. W. Bradford.

have been operating for a significant period of time and that activity levels are high (270 days per year).

Recommendations in the report included that the amount of berleying be reduced and that the use of teaser baits be of the minimum size possible.

## **SOUTH-EAST TASMANIA**

The abundance of GWS in south-east Tasmanian waters is unknown, although certain areas are considered to be 'sharky' spots. A hotspot such as that at the Neptune Islands is considered unlikely.

The likely success of a SCD operation in south-east Tasmania is unknown. The likely interaction rate with GWS is unknown, and the effects of prevailing sea conditions on such an operation are also unknown.

As noted, GWS move long distances and a SCD operation is unlikely to attract additional sharks to an area. Behaviour at a specific location may, however, be affected.

The inshore area of south-east Tasmania is frequented by a range of different types of users. Though the area has much coastline, it is small in terms of open water and there would almost certainly be overlap of existing users by any SCD operation. The question remains as to the compatibility of such uses.

## **EXISTING USE OF BERLEY**

Recreational fishers and charter operations already use berley to attract sharks to catch (e.g., mako sharks). This is a long-standing practice that has attracted little concern. Targeted shark fishing is often undertaken offshore away from many other types of users.

Teaser or feeder baits are not used in most fishing activities.

Non-extractive recreational and charter vessels may also attempt to attract sharks for observation from the boat; this might include the use of teaser baits.

In Victoria, berley cannot be used to attract fish for any purpose other than fishing. Berley is defined as any plant or animal tissue, or extract that is placed in the water for the purpose of attracting fish. The use of berley that contains mammal blood or offal is prohibited, though this does not apply to bait pellets. No more than 10 litres of berley can be used to attract a shark.

In South Australia, the blood, bone, meat, offal or the skin of an animal may not be used as berley when fishing in marine waters within two nautical miles of land.

In Western Australia, non-extractive charter vessels are required to be licensed. There are no licensed SCD operators. The Western Australian Government is currently drafting legislation for a State ban on dedicated SCD shark tourism operations, due to concerns about attracting sharks.

The Government of New South Wales has introduced arrangements to prevent attracting and catching GWS. It is an offence to interfere with a threatened species, where "interfere" includes "harass, chase, tag or mark the fish or engage in any activity for the purposes of attracting or repelling".

## **MANAGEMENT PROPOSAL**

Following precedents in Victoria and New South Wales, and most recently in Western Australia, it is proposed that attracting sharks for SCD should be prohibited.

Additionally, a proposal banning the use of mammal blood is now put forward, as is implemented in Victoria and SA, that minimises the likelihood of habituating sharks to the 'smell' of mammal blood and food, with possible ramifications for interactions with humans and sharks.

It is proposed that regulations be developed that would:

- 1. ban the use of berley to attract fish for any purpose other than fishing; and,**
- 2. ban the use of any berley that contains mammal flesh, blood or offal (other than processed pellets).**