

**Submission
No 60**

MANAGEMENT OF SHARKS IN NEW SOUTH WALES WATERS

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Submission to
NSW Parliamentary Inquiry into
Management of Sharks in NSW waters
by Manly Environment Centre

A) *The impact of shark attacks on tourism and related industries:*

- Ballina Chamber of Commerce executive officer Nadia Elliott- Burgess said the survey found fewer than 15% reported a downturn in business, all of which were tourism-based. Protecting sharks and rays is an urgent need if we want to protect the jobs and revenue generated by the global diving industry.
- Recreational Diving is not only an educational hobby – it is a very relevant industry generating billions of dollars in jobs and income worldwide, providing enormous benefits especially for coastal communities in developing countries.
- The estimated annual value of shark and ray viewing in Australia is about \$17 million per year. This shows that Australia benefits from this type of tourism and reinforces the demand to support shark conservation.
- In a recent survey, 80 per cent of Ballina, Byron Bay and Lennox Head residents declared they oppose a shark cull, and instead are pleading for the government to educate people about sharks. Ballina mayor, David Wright, was exempt from the 2015 Scientific Shark Summit, as he is not on the shark advisory committee. A shark summit in Ballina will be held on 14 October, followed by a public forum.

B) Changes in shark numbers, behaviour or habitat:

- Sharks are an apex predator and have roamed the world's oceans for hundreds of millions of years, and have become essential to maintain the health of marine ecosystems. Scientific research has proven beyond doubt that their role as top predators is key to the functioning of complex food webs, and the continued existence of environments from coral reefs to seagrass meadows.
- Sharks tend to eat very efficiently, going after the old, sick, or slower fish in a population that they prey upon, keeping that population healthier. They groom many populations of marine life to the right size so that those prey species don't cause harm to the ecosystem by becoming too populous.
- Scientists in Hawaii found that tiger sharks had a positive impact on the health of sea grass beds. Turtles, which are the tiger sharks' prey, graze on sea grass. In the absence of tiger sharks, the turtles spent all of their time grazing on the best quality, most nutritious sea grass, and these habitats were soon destroyed. When tiger sharks are in the area, however, turtles graze over a broader area and do not overgraze one region.
- Mankind has killed 99% of sharks in the world's oceans. Humans kill 100 million sharks per year worldwide.
- On average, sharks kill 5 humans per year worldwide. We are the slowest animals in the ocean. If sharks wished to eat us, they would. We are not on the menu!

C) Adequacy of management strategies:

- Nets are not a complete barrier headland to headland. Sharks can swim over, under and around the nets. NSW Fisheries have not actually done any scientific studies to prove that nets have been successful.
- The meshing program runs just for 8 months of the year, from first September till the end of April and it is designed to cull sharks.
- In 2009 the NSW government released a “Shark Meshing Program Report”. It stated that the annual “rate of attack was the same both before and after meshing commenced.”
- When whales migrate with calves and come close to shore to rest and protect calves, nets are in place for those 3 months of the year.
- Burying around drum lines in the vicinity of the nets attracts bait fish and other fish and these attract sharks to come in closer to where people are in the water. The odour of dead fish caught on drum line hooks or in the net also attracts sharks.
- The nets are indiscriminate killers of marine life. For every one potentially dangerous shark caught in the nets, the number of non- dangerous animals caught including turtles, rays, dugongs, dolphins and whales are approximately 20.
- Many animals caught in the nets are endangered animals with protected status or are listed as near threatened. The nets are listed as a key threatening process as they adversely affect many threatened species and could cause non- threatened species to become threatened.

Victims of Shark Nets Include:

• **Queensland Shark Control Program 1962-2014:**

**84,800 ensnared and entangled in the drum lines & shark nets
8,504 federally protected**

- 265 Grey nurse sharks (**CR**)
- 18,110 Rays / 442 Manta rays (**VU**)
- 1,014 Dolphins / 2 Snubfin dolphins / 56 Irrawaddy dolphins (**VU**)
- 14,370 Hammerhead sharks / 857 Scalloped hammerhead (**EN**) / 283 great hammerheads (**EN**)
- 13 Whale sharks (**VU**)
- 785 White sharks (**VU**)
- 689 Dugongs (**VU**)
- 120 Whales

• **NSW Shark Meshing Program 1 September 2013- 30 April 2014:**

Non- targeted	Targeted
22 Smooth hammerheads (VU)	10 Dusky whalers
6 Australian Angel sharks	9 Common blacktip sharks
4 Grey nurse sharks (CR)	6 Tiger sharks
2 Port Jackson sharks	6 White sharks (VU)
90 Rays	5 Shortfin makos (VU)
1 Longtail tuna	3 Broadnose sevengill sharks
10 Green sea turtles (EN)	3 Bronze whalers
4 Common dolphins	1 Bull shark
2 Leatherback turtles (VU)	3 Non- identified whalers
2 Indo Pacific bottlenose dolphins	
1 Humpback whale calf(protected)	

CR – Critically Endangered; EN – Endangered; VU – Vulnerable

D) Measures to prevent attacks by sharks, including strategies adopted in other jurisdictions:

Clever Buoy:

It uses sonar to detect the shark's distinct movements. Once a shark has been detected, the Clever Buoy sends a message via the strength of the Optus Network. The message is then instantly relayed to lifeguards on the beach, so they can raise the alarm.

Aircraft:

A suitable and cost effective solution available using fully certified gyro planes. It's highly manoeuvrable and has diverse flight speed range and has even landed on beaches to physically remove people from the ocean. The concept is to get volunteer organisations such as surf lifesaving and coastal patrol to have autonomous air support being provided in a similar manner to surf live saving volunteers running inflatable rubber boats. The aircraft are promoted as extremely safe and relatively easy to fly in diverse and even difficult flying conditions.

Other options:

- Diverter wetsuit
- Tag and Track
- Shark spotters
- SurfSAFE boards
- Ocean pool
- Kelp field
- Heli- patrols

E) Any other related matters:

As shark nets are considerably shorter than the length of the beach, they do not keep people or marine life safe. Netted beaches only provide an illusion of safety and can become just another way of culling not only sharks but other wildlife, including endangered and threatened species.

In most cases, the nets are not in the water all the year round or even in the swimming season not each day of the month.

ALL SHARK NETS ARE ONLY 150 METRES LONG, COMPARE THIS WITH THE LENGTH OF THE BEACHES LISTED BELOW:

- **Bondi Beach** (1 km long) – The nets are in the water 14 days of each month to cull, not as a barrier.
- **Avoca Beach** (1.7 km long) – Only 2 minor shark incidents ever recorded on this beach and the net did nothing to prevent it happening. October 2014 – 13yo female surfer bitten on lower leg. “It was my fault I dropped in and landed on the shark”
- **Maroubra Beach** (1 km long) – 9 Grey Nurse sharks were caught in NSW nets in the 2012-13 shark meshing season. NSW dept fisheries estimates of the critically endangered population are less than 500.
- **The Entrance Beach** (5 km long) – The Central Coast NSW shark meshing began in 1987 and has been operational for 27 years. There has not been a shark bite recorded on this beach in the last 50 years. With or without nets.
- **Cronulla** (6 km long stretch includes 4 beaches) – 4 shark nets, each positioned in front of surf clubs. No shark bites recorded ever before or after shark net program began.
- **Mona Vale Beach** (1 km long) – Humpback calf died October 2013