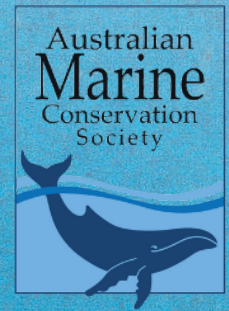


MODERNISING SHARK SAFETY IN NSW



HUMANE SOCIETY
INTERNATIONAL
AUSTRALIA



IT IS TIME TO RELY ON TODAY'S TECHNOLOGY AND RETIRE OUTDATED SHARK NETS

Operated by the New South Wales Department of Primary Industries (DPI), the Shark Meshing Program (SMP) began on Sydney's ocean beaches in 1937, intended to kill sharks on the hope of reducing the risk of shark bite.

Every year the program uses shark nets at 51 ocean beaches from Newcastle to Wollongong from 1 September to 30 April. They consistently catch and kill hundreds of marine animals when much more effective non-lethal measures are in place to rely on for shark safety.

Problem: Shark nets kill indiscriminately

- Shark nets **catch and drown** dolphins, turtles, rays and sharks
- In the last decade, **92%** of animals caught in the nets were **not** the targeted shark species
- One threatened turtle was caught **every 6 days** last summer, and **half** of them drowned
- **59** Critically Endangered grey nurse sharks have been **killed** in the nets in the past decade
- **2,090** animals are known to have died in the shark nets since 2012, many more have suffered injury and trauma. Even released animals are **not guaranteed** to survive
- Last year 61% of animals caught were protected and threatened species*

Problem: Shark nets do reduce the risk of shark bite

- Shark nets are not barriers to the open sea, in fact **40%** of sharks caught are on the **beach side** of the net
- Entangled animals **attract** large sharks to shore
- **36** shark/human interactions have occurred at **netted beaches** in NSW

IT IS TIME TO RETIRE THE SHARK NETS FOR GOOD.

Problem: Shark nets kill indiscriminately

SINCE 2012 NSW SHARK NETS HAVE KILLED:



54

DOLPHINS



104

TURTLES



382

RAYS



59

CRITICALLY ENDANGERED
GREY NURSE SHARKS



1,322

NON-TARGET SHARKS

**IN THE LAST DECADE 3,638
ANIMALS WERE CAUGHT
IN NSW SHARK NETS
—57% WERE KILLED.**

**92% OF SPECIES CAUGHT IN
NSW SHARK NETS IN
THE LAST DECADE WERE
NON-TARGET SPECIES.**

Shark nets are recognised in law as a **'key threatening process'** for threatened species under the *NSW Fisheries Management Act 1994* and the *NSW Biodiversity Conservation Act 2016*.

**55% OF ANIMALS CAUGHT IN
NSW SHARK NETS IN THE LAST
DECADE WERE THREATENED
OR PROTECTED SPECIES.***

In 2022, the NSW Threatened Species Scientific Committee (TSSC) reviewed the shark net program and concluded that it was **failing** to reduce the risk of shark bites and minimise the impacts to threatened species, remarking, *"The consistent annual record of non-target species being caught in nets is of significant concern to the NSW TSSC,"* and that, ***"Overall, we are extremely concerned that the current management actions are not meeting either of the objectives."***

*Threatened species were determined as those listed on international conservation instruments such as the IUCN Redlist, the UN Convention for International Trade in Endangered Species and the UN Convention for Migratory Species.

Problem: Shark nets do not reduce the risk of shark bite

DID YOU KNOW?

- Shark nets are **not** barriers to the open sea
- Entangled animals can **attract** large sharks to shore
- Since the introduction of the shark meshing program in 1937, there have been **36 unprovoked** shark interactions at meshed beaches:
 - **1 fatality;**
 - **24 serious or minor injuries; and**
 - **11 incidents where the person was not bitten.**¹
- **40%*** of sharks are caught on the **inside** (beach side) of the nets ²

There is a misconception that shark nets are barriers separating the beach from the open ocean. This is not the case. Rather than spanning the beach, shark nets are only 150m in length. They are 6m high and set in 10m depth about 500 m offshore.

They were originally designed to cull local shark populations, but we now know there is no relationship between shark abundance and the number of bites in an area. Bites are rare and random.

Shark nets provide a 'perception' of safety but there is no scientific evidence to support an actual reduction in risk.

COMMUNITY SENTIMENT

In April 2019, DPI surveyed NSW coastal communities and councils about their preferred methods of shark bite risk reduction. All 8 of the councils with shark nets in their jurisdictions told DPI they don't support them. They all went on to pass council motions opposing the continued use of shark nets.

A report produced by DPI following the survey concluded that, *"Shark Nets are no longer suitable as a shark bite risk mitigation measure due to their inability to protect ocean-users, the impact on marine wildlife and their resultant unpopularity. Alternative measures can actually reduce the risk via detection (drone surveillance) and deterrence (personal shark deterrents, SMART drumlines, etc.) without the cost to marine wildlife."*

In 2021, the NSW Local Government Association unanimously resolved in support of a motion to phase out shark nets altogether.

Independent polling of coastal communities in NSW revealed:

- **support** for drone surveillance **(88.1%)**
- **support** for personal shark deterrents **(82.6%)**
- **support** for SMART drumlines **(74.3%).**
- **opposition** to the use of shark nets **(60.4%)**
- **support** for moving to all non-lethal forms of swimmer protection rather than lethal methods (such as shark nets and regular drumlines) **(73.7%)**

1 (<https://www.sharksmart.nsw.gov.au/shark-nets>)

2 (McPhee, D. 2012. Likely effectiveness of netting or other capture programs as a shark hazard mitigation strategy in Western Australia)

SOLUTIONS

MODERN TECHNOLOGIES ARE ALREADY WORKING EFFECTIVELY TO REDUCE SHARK RISKS

DRONE SURVEILLANCE

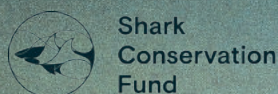
Surf Life Saving NSW is already using drones across 50 beaches as a part of a 85.6 million dollar Shark Management Strategy over the next 4 years. Drones represent the cutting edge of beach safety, with battery, mobility, and detection technologies constantly improving. They allow lifesavers to detect a risk and immediately implement measures to prevent a incident. Additionally, drones can sound alarms and drop personal flotation devices to swimmers in peril, thereby also mitigating the much more common risk of drowning.

HSI AND AMCS SUPPORT THE USE OF DRONE SURVEILLANCE.

PERSONAL SHARK DETERRENTS

Reduce the chance of a shark interaction by emitting an electromagnetic field. They can be worn by a person or attached to a surfboard or boat. Certain products have been independently tested on great white, tiger, and bull sharks and results demonstrate effectiveness. Western Australia has been offering \$200 rebates for the devices since May 2017.

HSI AND AMCS SUPPORT THE USE OF VERIFIED PERSONAL SHARK DETERRENTS.



This work was funded by the Shark Conservation Fund, a philanthropic collaborative pooling expertise and resources to meet the threats facing the world's sharks and rays. The Shark Conservation Fund is a project of Rockefeller Philanthropy Advisors.

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PUBLIC AWARENESS AND EDUCATION

Most importantly, DPI has launched the Shark Smart program to educate and engage with the community to understand the relationship between people, communities and sharks. Shark incidents are rare, and the risk of their occurrence can be further reduced by informed decision-making by the public. Ocean-users must understand situations and conditions that increase their risk.

HSI AND AMCS SUPPORT ALL PUBLIC AWARENESS AND EDUCATION EFFORTS.

SMART DRUMLINES

Shark Management Alert in Real Time drumlines are baited hooks fitted with transceivers to alert a contractor when the bait is taken. Any catch is attended to in real time, reducing mortality. Non-target animals are immediately released, target sharks are tagged and relocated away from the shore. NSW DPI now operates 170 SMART drumlines throughout NSW.

SMART drumlines are certainly far less lethal than the nets, but they are still baited hooks that can lethally injure some species¹ and affect the natural migratory behaviour of sharks². SMART drumlines and shark nets are currently being used simultaneously at our beaches, amplifying the impact on marine life. SMART drumlines are a step in the right direction and should only used if directly replacing a shark net. We are able to tag and track target sharks without the use of SMART drumlines.

IT IS TIME TO RETIRE THE SHARK NETS FOR GOOD.

¹ <https://onlinelibrary.wiley.com/doi/full/10.1111/fme.12489>

² <https://www.sharksmart.nsw.gov.au/technology-trials-and-research/smart-drumlines>