

A NON-LETHAL RESPONSE TO SHARK MANAGEMENT IN NSW



Supporting Communities - Keeping the Oceans Wild

Sharks are a reality along the NSW coast and for those who love the ocean and beach lifestyle, we live with that reality every day. Sharks and the marine life that comes with healthy and biodiverse oceans is one of the reasons we love the coast.

The Greens recognise the immense impact to individuals, families and communities from shark bites. It is understandable that these events generate fear and a desire to do something to keep people safe.

It is not enough for Governments to say ‘**use the ocean at your own risk**’ – there is a responsibility to give water users factual information, support the community to respond to local needs, ensure those involved in ocean safety and emergency response have the resources they need and to look to develop technology to better understand shark behaviours and help individuals to be safe in the water.

But Governments cannot guarantee safety in a wild environment. Communities and individual water users are not served by allowing a public debate to be driven by fear and misinformation, particularly by the media. **Communities need smart, science-based solutions not urban myths.**

“The Greens are committed to a science based approach to keep people as safe as possible whilst respecting our wild oceans and the creatures that live in it, including sharks.”

Justin Field, NSW Greens MP

The Greens non-lethal response to shark management directs limited government resources toward programs that empower local communities, improve our knowledge about sharks, ensures people have access to information about shark risks when they need it, and supports the development of new technologies, **including individual deterrent devices.** Currently the NSW Government has committed \$16m to shark management programs.

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The Greens' non-lethal response to shark management in NSW includes:

1. Supporting the roll out of ***Shark Watch*** and similar community observer programs across NSW
2. Funding observer towers for at risk beaches
3. Supporting ongoing research through tagging programs (including the targeted use of smart drum-lines)
4. Improving coordination and information sharing between lifesavers and other ocean watchers
5. The phase-out shark nets in NSW
6. Supporting the development of smart technologies including personal protection devices



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Shark nets - key facts

Shark nets give a false sense of security.

- 51 beaches along the NSW coast between Newcastle and Wollongong use shark mesh nets
- Nets are only in place between 1 September and 30 April each year
- Shark nets are only 150m long and are not a barrier. Sharks are able to swim over and around them
- 40% of sharks caught in nets are caught beach side on their way out to deeper water
- 21 shark encounters have occurred at netted beaches in NSW since 1992 (the year the current program of 51 nets started)

Photo by Marnie Johnston, Northern Star

“Shark nets are an outdated technology and we can do better. Shark nets can’t guarantee public safety but they will kill marine life including turtles and dolphins. We need to be honest about that instead of painting them as the solution.”

Justin Field, NSW Greens MP



12 February 2009

Glen Orgias (33) lost his left hand after being bitten by a 2.5m white shark while surfing at Bondi Beach while the nets were in place.

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1. Support the roll out of Shark Watch and similar

Shark net marine life impact:

- **From 1 September 2014 to 30 April 2015 189 animals were reported entangled in the nets**
- **77% (145) were threatened, protected and/or non-target animals**
- **Twenty three (23) of those 189 interactions were with threatened or protected species, including:**
 - 10 White Sharks (all dead)
 - 4 Green Turtles (3 dead, 1 released alive)
 - 4 Grey Nurse Sharks (all dead)
 - 3 Common Dolphins (all dead)
 - 1 Hawksbill Turtle (dead)
 - 1 unidentified turtle (released alive)

In addition, there were 131 interactions with other non-target species, including:

- 86 Rays (19 dead, 67 released alive)
- 42 Smooth Hammerheads (41 dead, 1 released alive)
- 1 Australian Angel Shark (dead)
- 1 Thresher Shark (dead)
- 1 Silky Shark (dead).

community programs across NSW

Communities need to be part of the solution.

Shark Watch is a community led and volunteer observer program being developed on the NSW North Coast that combines human spotters and UAVs (drones) to detect shark activity close to shore and alert ocean users when sharks are detected. **Shark Watch** and similar programs can offer a cost-effective, sustainable, non-lethal method of shark detection and alert system. It can provide a more immediate and localised alert to water users and involves the community directly in shark risk management.

The program is a local NSW version of the successful **Shark Spotters** program in South Africa. Local communities in other regions would inevitably adapt this program to support local conditions.

Estimated Cost: \$750K

Estimate: \$15k per site which includes UAV costs and training. Funding available for up to 50 sites across NSW. This is a one off initial cost with limited ongoing cost to maintain volunteer community organisations.

2. Shark towers for at-risk beaches

Maximising the chance of observing local shark activity

Many beaches lack an elevated position to best monitor and sound an alarm to warn swimmers and other users of the presence of a shark. The existing towers program is not sufficient to allow surf lifesaving clubs or local councils to fund appropriate towers. Shark watch towers need to be of a suitable height, have special glass to ensure the best observation on glary days and be sufficiently sturdy to withstand tough coastal conditions.

Towers would be available to surf lifesaving clubs, local councils or other groups with a co-contribution from the state government.

Estimate: \$50k per tower to support volunteer and professional lifeguards to ensure better visual surveillance of beaches. Funding available as a co-contribution to support **100 towers across at risk beaches**.

Estimated cost: \$2.5m state government contribution

3. Support ongoing research through tagging programs (including the targeted use of smart drum-lines)

Smart, science-based solutions

The Greens support the existing 'smart' drum-line technology that allows trained fisheries scientists to temporarily capture sharks using baited drum-lines. **The receiver technology ensures a quick response so a shark can be tagged, moved from the immediate area and safely released.**

The experience of smart drum-lines in NSW in the last year has seen **42 white and bull sharks caught, tagged and released** on the North Coast using 15 smart drum-lines. This information is available to scientists across the country and has been valuable for the study of shark behaviours and to better understand how to improve community safety.

The Government's proposal for 100 drum-lines is excessive and will not be able to be serviced at a level that can guarantee sharks and other animals won't be killed. **It will also consume significant resources that could be put to other programs.**

The smart drum-line program should be targeted to support scientific understanding, and not be presented as a solution to reduce the likelihood of sharks being present at a particular location.

\$250k was allocated to operating 15 smart drum-lines on the North Coast. The rollout of the government's proposed 100 smart drum-line strategy puts the cost at more than **\$1.5m**. The current program can be maintained and targeted at significantly reduced cost whilst maintaining the scientific value of the program.

Estimated savings: \$1m minimum

4. Improve coordination between lifesavers and other ocean watchers

Making the most of the people and resources we have

On any given day across NSW beaches, volunteer and professional lifeguards, marine rescue, marine surveillance flights and other services have eyes on the water or have direct contact with those in the water.

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Governments can do more to ensure those who are watching the water have the knowledge and tools to identify shark risks, and to make appropriate and rapid decisions to alert local authorities and water users to the risk.

Local **Shark Watch** programs would also need to be included in a coordinated approach and would likely save significant resources currently allocated to helicopter based surveillance.

This information should be able to feed into the *SharkSmart App* and be available for developers to use to improve the dissemination of locally important information and for scientific purposes.

This coordination will maximise the chances of sharks being seen, improve the ability for users to access locally specific information and for local warnings to be given and improve the collection of information about shark activity to improve scientific understanding.

Supported with existing resources with expected savings

5. Phase out of shark nets in NSW

Shark nets provide a false sense of security

Currently there are 51 shark nets on beaches between Newcastle and Wollongong. Each net is 150m long and 6m deep and is installed between September 1 and 30 April each year.

Shark nets are not a barrier and sharks can **swim over and around them**. Shark bites still occur on netted beaches. 40% of sharks caught in the nets are caught beach-side of the nets on their way back out to deep water.

The existing shark nets provide a false sense of security to water users who believe they protect them on beaches.

Sharks nets cause significant collateral damage to other marine life, including non-dangerous and endangered sharks. From 1 September 2014 to 30 April 2015 189 animals were reported entangled in the nets and that 77% (145) were of threatened, protected and/or non-target animals.

A phase out program for shark mesh nets may include:

- Installing enclosure nets on suitable beaches to provide 100% secure areas.
- Reducing the time nets are in the water each year to avoid potential impacts to migrating species.
- Technologies like Clever Buoy or other sensors to ensure swimmers can be alerted to sharks in the area.
- Selective replacement of nets with smart drum-lines for scientific purposes.

Estimate: The current **cost of the Shark Meshing Program in NSW is over \$1m per annum.** These funds should be progressively redirected towards non-lethal alternatives.

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This program would redirect existing resources.

6. Support the development of smart technologies including personal protection devices

Supporting ocean users to protect themselves

There are already a number of personal protection devices on the market including '*Shark Shield*' and innovative wetsuit designs. These devices and products are already used by divers and some surfers.

The Greens support the Department of Primary Industries (DPI) working with product developers to research and bring to market more quickly and cheaply personal protection devices against shark bites.

This program would ensure existing DPI data, knowledge and skills is available and can be used to support product development.

Supported within existing resources.