

## Summary of Submissions Report

Five Year Review and Draft 2016 Joint Management Agreement and Management Plan for the NSW Shark Meshing (Bather Protection) Program



Published by the NSW Department of Primary Industries

*Summary of Submissions Report - Five Year Review and Draft 2016 Joint Management Agreement and Management Plan for the NSW Shark Meshing (Bather Protection) Program*

First published July 2017

ISBN 978-1-76058-062-9

**More information**

[www.dpi.nsw.gov.au/fisheries/info/sharksmart/meshing](http://www.dpi.nsw.gov.au/fisheries/info/sharksmart/meshing)

*Cover image: NSW DPI*

PUB16/273

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Disclaimer: The information contained in this publication is based on knowledge and understanding at the time of writing (July 2017). However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up to date and to check currency of the information with the appropriate officer of the Department of Primary Industries or the user's independent adviser.

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## Introduction

The NSW Shark Meshing (Bather Protection) Program (SMP) was introduced on some Sydney beaches in 1937 in response to community concern about the number of shark bites, many of which were fatal. The program has expanded over time to cover 51 of the State's most popular public bathing beaches between Newcastle and Wollongong.

The NSW Government believes that the SMP has been successful in reducing the number of shark bites at those 51 beaches, but also acknowledges that it has an environmental impact on non-target marine species. The SMP is listed as a key threatening process under the State's threatened species legislation; the *Fisheries Management Act 1994* (FM Act) and the *Biodiversity Conservation Act 2016* (BC Act).

In 2009, the Government reviewed the program and introduced new management arrangements. Since August 2009, the program has been authorised by and managed in accordance with two Joint Management Agreements: one under the FM Act; and the second under the former TSC Act (now the BC Act). The agreements are underpinned by a Management Plan. The agreements and plan were developed between the NSW Department of Primary Industries and the Office of Environment and Heritage in collaboration with stakeholders and were subject to public comment.

In accordance with the Joint Management Agreements, those agreements from 2009 have been reviewed after five years. The review recommended numerous amendments to the agreements, including consolidating the two agreements into one draft agreement and updating the Management Plan. In accordance with s.221W(3) of the FM Act, a single JMA can be made under both the FM Act and the TSC Act if both agreements deal with the same subject-matter.

Before entering into one Joint Management Agreement, the Minister for Primary Industries and the Chief Executive of the Office of Environment and Heritage (OEH) must give the public an opportunity to make submissions on the draft agreement. All written submissions received before the closing date must be considered prior to finalising the Joint Management Agreement. The draft agreement may be amended to take into account any submissions received.

The draft 2016 Joint Management Agreement (JMA) and an associated draft Management Plan (MP) for the SMP were publicly exhibited from Monday 21 February to Thursday 31 March 2016. The exhibition procedure was conducted in accordance with the requirements of the FM Act and the TSC Act. A five year review report was exhibited concurrently, although this was not a statutory requirement under the FM Act and TSC Act and does not form part of the JMA or MP.

During the public exhibition period stakeholders, interested parties and other members of the public were invited to make written submissions on the documents. Statutory consultation with the Fisheries Scientific Committee (FSC) convened under the FM Act and the Scientific Committee (SC) convened under the TSC Act also occurred during this period.

The purpose of this report is to:

- Detail the community consultation process; and
- Summarise the submissions received on the draft JMA 2016, draft MP 2016 and associated Five Year Review Report.

## The consultation process

The publication and consultation requirements are set out in section 221X of the FM Act (Appendix 1). In summary, the Minister is required to:

- a) Give a copy of the draft agreement to the FSC for review; and
- b) Give the public an opportunity to make submissions on the draft agreement.

Section 284 of the FM Act regulates aspects of the public consultation procedure (Appendix 2). In summary, the Minister is required to:

- a) Exhibit the matter at the Head Office of the Department and at its regional offices; and
- b) Allow a period of not less than 30 days for public comment; and
- c) Advertise the dates and places of exhibition and the period allowed for public comment in a newspaper circulating throughout the State and (if the matter relates to a particular area only) in a local newspaper circulating in that area.

In addition, section 124 of the TSC Act requires the Chief Executive of OEH to publish notice of the preparation of the draft JMA in the NSW Government Gazette, and in a newspaper circulating generally throughout the State and in a newspaper circulating generally in the area or areas likely to be affected by the agreement. The notice must:

- a) State that the draft JMA has been prepared; and
- b) Specify the address of the place at which copies of the draft JMA may be inspected; and
- c) Invite persons to make written submissions about the draft JMA; and
- d) Specify the address of the place to which submissions about the draft JMA may be forwarded and the date by which submissions must be made.

### Advertising and media

Display advertisements were placed in the Sydney Morning Herald, Daily Telegraph and The Australian newspapers on 27 January 2016 (Appendix 3). OEH placed a notification of the exhibition in NSW Government Gazette No 5 on Friday 29 January 2016 (Appendix 4).

In addition, notices, invitations to comment, and an online submission form were provided on the DPI and OEH websites: [www.dpi.nsw.gov.au](http://www.dpi.nsw.gov.au) and [www.environment.nsw.gov.au](http://www.environment.nsw.gov.au)

The Minister for Primary Industries also distributed a Media Release dated Monday 1 February 2016 (Appendix 5).

Media reports related to the draft JMA and five year review featured in the Daily Telegraph on 31 January 2016 and on ABC Radio National on 17 February 2016.

### Places of exhibition

Section 284 of the FM Act requires that the DPI must exhibit the matter at the Head Office of the Department and at its regional offices. The TSC Act does not have specific exhibition requirements.

Printed copies of the draft JMA and draft MP were made freely available for inspection or collection at the following locations:

- NSW DPI Head Office, 161 Kite Street, Orange
- NSW DPI Coastal Fisheries Offices (15)
- OEH Head Office, Level 14, 59-61 Goulburn Street, Sydney
- OEH Newcastle, 117 Bull Street, Newcastle West
- OEH Central Coast, 207 Albany Street North, Gosford
- OEH Illawarra, 84 Crown Street, Wollongong

Copies were also made available at the library of NSW DPI.

## Summary of submissions

### Submissions by stakeholder category

A total of 25 submissions were received in response to the draft JMA 2016 and associated documents. The submissions were grouped (Figure 1) according to the following categories:

- Individuals (16) - consisting of 7 individual submissions and 9 form letter submissions containing the same text;
- A local council and a regional organisation of councils (2);
- Government advisory bodies (2); and
- Environmental non-government organisations (5).

**Figure 1. Submissions by category**

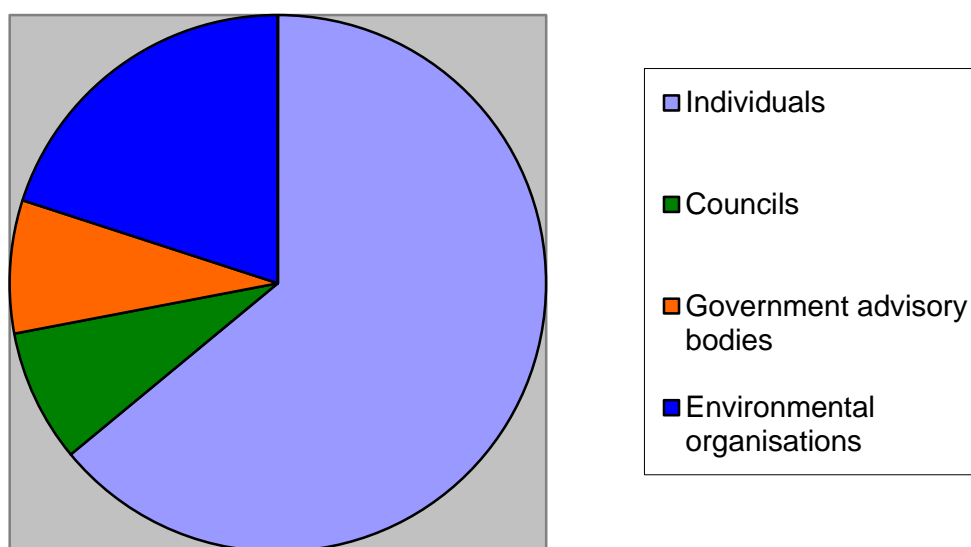


Figure 1: Submissions by category

### Analysis of submissions by category

This section discusses each submission category and summarises the key issues.

#### Individuals

Individual submissions made up the largest group of submissions, but more than half were form letters based on a template provided by an environmental non-government organisation (ENGO). The individual submissions raised the issues of: the effectiveness of the SMP in reducing shark attacks; alternatives to the use of netting; and the need for beach visitation data. Two individuals provided support for the SMP, and in particular considered that the protection of human safety should take precedence over other concerns. Other individuals called for the program to be stopped as the nets were indiscriminate fishing gear that affected more non-target than target species, and proposed a shorter meshing season or the use of non-lethal alternatives.

The form letter submissions expressed concern that in their opinion the draft JMA proposed an increase in fishing effort in the SMP from 17 days per month to every day of the month during the meshing season. They called for a reduction in the days of meshing effort and introduction of a trial of non-lethal mitigation methods over the next five years in line with the NSW Premier's commitment to finding alternative, non-lethal ways to mitigate shark bites in NSW.

### **Councils**

The two submissions received from council organisations were concerned about a range of issues related to the operation of the SMP. These included the deployment and dimensions of the mesh nets used in the SMP and whether the characteristics of the gear (such as size of mesh) could be optimized to reduce by-catch and better target large sharks that are a threat to bathers. Other issues raised were the need to reduce humpback whale entanglements (and support for an Incident Action Plan and disentanglement teams for such events), more statistical analysis and independent review of trigger points, reducing the meshing season by removing September (and potentially March and April) from the program, the overall impact of the SMP on non-target species, and listing 'whaler' shark species as 'non-target species' rather than 'target species' in the SMP.

A recurrent theme was the need for more research and monitoring (including vessel monitoring and beach use data) and strong support for the NSW Government's investigation and trial of non-lethal methods to ensure bather protection.

### **Government advisory bodies**

The FM Act and BC Act (formerly TSC Act) require the NSW Scientific Committee and Fisheries Scientific Committee to review the draft JMA. Accordingly, both Committees reviewed the exhibition documents and provided written comments during the exhibition period.

Both Committees were particularly concerned with the impact of the SMP on threatened species and non-target species and the effectiveness of the proposed new trigger points in the draft JMA.

The Fisheries Scientific Committee recommended further work on the revised trigger points to better understand the impact of the proposed changes. The Committee also commented on the need for genetic analysis of shark species caught, especially hammerhead sharks, as well as maintained its concern over the use of aerial surveys in the SMP region. The Committee welcomed the additional resources allocated to shark research and supported development of potential collaborative research projects associated with the SMP program and collection of beach visitation data (Appendix 6).

The NSW Scientific Committee also commented on the proposed trigger points recommending some additional adjustment to make them more biologically relevant and for their performance to be monitored and reviewed. Other issues raised included humpback whale entanglements and response strategies, modifications of meshing season, beach coverage and frequency of net inspections to reduce mortality of non-target species, and need for collection of data on water users throughout the year (Appendix 7).

### **Environmental non-government organisations**

Submissions opposing the SMP were received from Humane Society International, Sea Shepherd Australia, No Shark Cull, Sea Life Trust (Australia/NZ), and Manly Environment Centre.

The ENGO submissions were strongly against the continuation of the SMP and particularly concerned about impacts on non-target species, including dolphins, whales, turtles, seals and non-target sharks and rays.

All of the ENGO submissions stressed the need to use non-lethal alternatives instead of shark nets. Most submissions also proposed a reduction in the SMP meshing season (removing September) and concerns were expressed that the draft JMA proposed an increase in fishing effort in the SMP from 17 days per month to every day of the month during the meshing season.

The Sea Shepherd submission claimed that the justification for the SMP is flawed as the State of NSW is not responsible for the actions of surfers and swimmers or ensuring their protection (under duty of care), but in contrast does have a legal duty under various State legislation to conserve biological diversity.

Other issues raised in the submissions included removing the full complex of ‘whaler’ sharks as SMP target species, making more SMP information publicly available, independent scientific review of proposed trigger points and the need for further research and education of beach users.

### Recurring themes

A review of all submissions identified a number of recurring themes, and their frequency is shown in Figure 2.

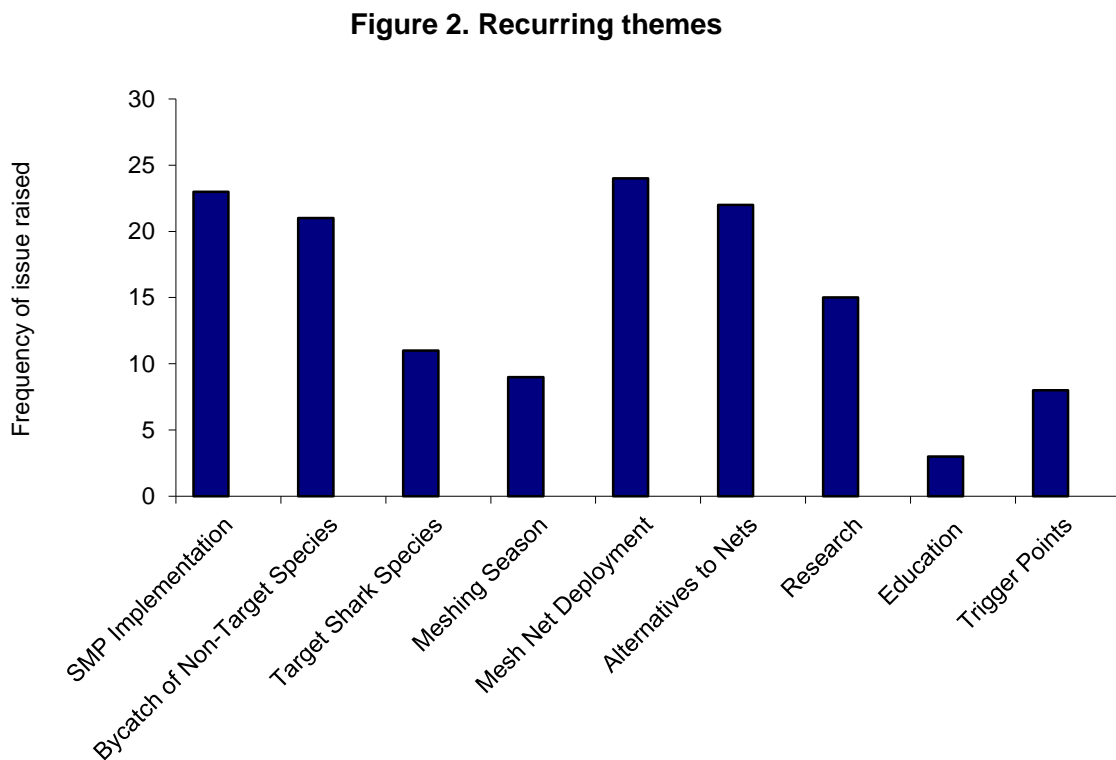


Figure 2: Recurring themes

### Implementation of the SMP

Most submissions commented about specific issues related to the current implementation of the SMP including its perceived effectiveness or lack thereof, the quality of annual and monthly reporting and the observer program. Some indicated that catch information should be made publicly available on a more regular basis.



### By-catch of Non-Target Species

The level of by-catch of non-target species in the SMP (such as dolphins, whales and non-target sharks and rays) is cited as a major concern in the majority of submissions. Many suggest the perceived benefit to bather protection from the SMP does not justify its impact on non-target marine species.

Suggestions put forward to address this issue include:

- Setting of nets off the bottom of the seabed to reduce by-catch of species such as rays;
- Increased observer coverage and more frequent net inspections;
- Omitting September from the SMP; and
- Phasing out the SMP and implementing alternative non-lethal measures.

### Target Shark Species

Around half of the submissions commented on issues related to shark species targeted by the SMP, especially White Sharks which are classified as 'threatened' under NSW and Commonwealth threatened species legislation. The ecological role of sharks and increasing knowledge of their movements and behaviour were noted in several submissions. Some proposed the target shark species in the SMP should be limited to White Shark, Tiger Shark and Bull Shark based on known shark encounters in NSW.

### Meshing season

A number of submissions called for the removal of the month of September from the SMP meshing season (and one submission also proposed March and April as well) to reduce by-catch (specifically the prevention of entanglement of whales and impacts on Grey Nurse Sharks).

### Mesh net deployment

The majority of submissions made specific comments about the deployment of mesh nets in the SMP. These included the frequency of netting, net configuration, placement and monitoring, mesh size and frequency of inspections. The form-letter submissions expressed concern that in their opinion the draft JMA as written seemed to indicate an increase in fishing effort in the SMP from 17 days per month to every day of the month during the meshing season. Some submissions suggested the frequency of net inspections should be increased to every 24 hours.

### Alternatives to Nets

Nearly all submissions recommended that alternative methods to mesh nets be used for bather protection in NSW. Most supported the trial and phasing in over the next five years of various non-lethal alternatives such as a Shark Spotters program, Eco Shark Barriers, Clever Buoys, aerial shark detection from planes or drones, and development of personal protection devices for surfers and divers (including new wetsuit and surfboard designs).

### Research

Many submissions supported ongoing shark research and monitoring of shark movements as well as further investigation of emerging alternative non-lethal technologies. Key issues raised were the need to improve current knowledge and understanding of shark behaviour and collect more data on beach use by the community both within and outside the SMP region.

### Education

A few submissions identified a need for further education to increase awareness and understanding of sharks and the ways to minimise the risk of shark encounters.

### Trigger Points

A number of submissions welcomed the proposed changes to the trigger points in the JMA but suggested they needed further refinement and monitoring of their performance.

## Appendix 1: Section 221X of the Fisheries Management Act 1994

### **221X Publication of draft joint management agreement**

The Minister must, before entering into a joint management agreement:

- (a) give a copy of the draft agreement to the Fisheries Scientific Committee for review, and
- (b) give the public an opportunity to make submissions on the draft agreement.

**Note.** Section 284 regulates the public consultation procedure. It requires copies of the draft agreement to be publicly exhibited and a period of at least 30 days for public comment.

## Appendix 2: Section 284 of the Fisheries Management Act 1994

### 284 Public consultation procedure

(1) This section applies to the requirement under this Act for a person or body to give the public an opportunity to make submissions on the following:


- (a) a fisheries management plan (including any amendment or new plan),
- (b) the determination of a total allowable catch by the TAC Committee,
- (b1) an acquisition declaration under Division 4B of Part 2,
- (c) a management plan, or supporting plan, for a share management fishery (including any amendment or new plan),
- (d) an aquaculture industry development plan (including any amendment or new plan),
- (e) a habitat protection plan (including any amendment or new plan),
- (e1) a management plan for an aquatic reserve (including any amendment or new plan),
- (f) a determination for listing, a declaration of critical habitat, a recovery plan, a threat abatement plan or a joint management agreement under Part 7A,
- (g) a Ministerial order (but not an interim order) made under Subdivision 1A of Division 6 of Part 7A,
- (h) a draft Priorities Action Statement or amendment of such a Statement under Division 5A of Part 7A.

(2) In order to give the public an opportunity to make submissions on any such matter, the person or body to whom the requirement applies must:

- (a) exhibit the matter at the Head Office of the Department and at its regional offices, and
- (b) allow a period of not less than 30 days for public comment, and
- (c) before the matter is exhibited, advertise the dates and places of exhibition and the period allowed for public comment in a newspaper circulating throughout the State and (if the matter relates to a particular area only) in a local newspaper circulating in or near that area.

(3) A requirement under this Act to consult relevant commercial or recreational fishing industry bodies in connection with any such public opportunity to make submissions on a matter is a requirement to consult such bodies as the person or body to whom the requirement applies considers have a sufficient interest in the matter.

## Appendix 3: Newspaper advertisements of 27 January 2016



**Department of  
Primary Industries**

**NOTICE OF PREPARATION OF A DRAFT  
JOINT MANAGEMENT AGREEMENT FOR  
THE NSW SHARK MESHING  
(BATHER PROTECTION) PROGRAM**

A draft Joint Management Agreement for the NSW Shark Meshing (Bather Protection) Program has been prepared between the Minister for Primary Industries and the Chief Executive of the Office of Environment and Heritage.

The draft Agreement and supporting documents can be inspected during ordinary office hours from **1 February 2016** at the following locations:

- NSW DPI HEAD OFFICE, 161 Kite Street, Orange
- NSW DPI Fisheries, coastal offices
- OEH HEAD OFFICE, Level 14, 59-61 Goulburn Street, Sydney
- OEH NEWCASTLE, 117 Bull Street, Newcastle West
- OEH CENTRAL COAST, 207 Albany Street North, Gosford
- OEH ILLAWARRA, 84 Crown Street, Wollongong

Copies of the draft Agreement are available online at:  
[www.dpi.nsw.gov.au](http://www.dpi.nsw.gov.au) or [www.environment.nsw.gov.au](http://www.environment.nsw.gov.au)

Written submissions are invited and can be made by:

- email to: [jma.2016review@dpi.nsw.gov.au](mailto:jma.2016review@dpi.nsw.gov.au)
- writing to: JMA Review Submissions  
NSW DPI  
Locked Bag 1  
Nelson Bay NSW 2315

Submissions will be dealt with in accordance with the *NSW Privacy and Personal Information Protection Act 1998*.

**Submissions must be received by 31 March 2016.**

8571/208693

## Appendix 4: NSW Government Gazette No. 5 of 29 January 2016

**THREATENED SPECIES CONSERVATION ACT 1995**  
**Notice of Preparation of**  
**Draft Joint Management Agreement for the**  
**NSW Shark Meshing (Bather Protection) Program**

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Written submissions are invited and can be made by:

- email to: [jma.2016review@dpi.nsw.gov.au](mailto:jma.2016review@dpi.nsw.gov.au)
- writing to: JMA Review Submissions

NSW DPI  
Locked Bag 1  
Nelson Bay NSW 2315

Submissions must be received by 31 March 2016 and will be dealt with in accordance with the *NSW Privacy and Personal Information Protection Act 1998*.

TERRY BAILEY

Chief Executive

NSW Office of Environment and Heritage

## Appendix 5: Media release by the Minister for Primary Industries

1 FEBRUARY 2016

**Niall Blair**

**Minister for Primary Industries, and Minister for Lands and Water**

**Draft Joint Management Agreement for the NSW Shark Meshing (Bather Protection)  
Program placed on public exhibition**

The 2016 draft Joint Management Agreement for the shark meshing program goes on public exhibition today with Primary Industries Minister Niall Blair urging interested members of the public to make submissions.

“Since 2009, the program has been authorised by and managed in accordance with two Joint Management Agreements and a Management Plan under the State’s threatened species legislation.

The Agreements made provision for a 5-year Review, which has been completed by the Department of Primary Industries and the Office of Environment and Heritage. The 5-year Review recommended some changes to the two Agreements from 2009, including consolidating them into a single draft Agreement and adapting some trigger points.”

The draft Joint Management Agreement, the draft Management Plan, and the 5-year Review go on exhibition today for public comment. This is a chance for the people of NSW to comment on management of the State’s shark meshing program, which occurs on 51 beaches between Newcastle and Wollongong.

Minister Blair said despite shark bites and sightings up and down the coast in 2015, the Government currently had no plans to expand the area of the meshing program, but is committed to increasing bather safety at NSW beaches whilst minimising the potential impacts.

“In 2015, this Government funded an independent review of emerging technologies for beachgoer protection; held a Summit for over 70 shark experts to assess those technologies; and in October announced the \$16M NSW Shark Management Strategy to trial some of the most promising technologies, including increased aerial surveillance, shark barriers, and shark-detecting sonar.

Minister Blair also said that contrary to some misinformed media articles, the Government is not currently proposing to shorten the meshing season to seven months by some secretive arrangements, nor did it neglect its 5-year review obligations in the JMA.

The Government sought public tenders in 2015 for the netting component of the shark meshing program. The tenders sought pricing for the existing eight month meshing season, as well as a seven month season. This provided a contractual contingency in the event that the concurrent 5-year Review on the draft Agreement indicated a change was required. The actual publication of the 5-year review was slightly delayed because the Government priorities and fast-tracked the implementation of its \$16M Strategy to trial non-lethal emerging technologies. And now the 5-year Review will be out for comment for two months.

“How secret is a public tender process and a public submission phase that is twice the legal requirement? Unlike the Opposition, this Government listens to the people of NSW and would never make secretive and substantial changes to such an important program without extensive community consultation.”

The draft Joint Management Agreements, the draft Management Plan and the 5-Year Review of the 2009 Joint Management Agreements can be found on the Department of Primary Industries website: [www.dpi.nsw.gov.au/fisheries/info/sharksmart/meshing](http://www.dpi.nsw.gov.au/fisheries/info/sharksmart/meshing)

Hard copies will also be available for inspection at DPI Head Office and coastal offices of DPI Fisheries NSW from today.

The public exhibition period ends on **31 March 2016**.

## Appendix 6: Recommendations of the Fisheries Scientific Committee

<b>General comments on Five Year Review Report and draft JMA and MP 2016</b>	
	<b>Recommendation/comment</b>
The Five Year Review Report and draft JMA and Management Plan	The Committee commends DPI for the effort made to produce these documents considering the current high demand on shark management resources.
Amalgamation of JMAs	Combining two previously separate JMAs into a single document is commended as this will hopefully streamline and expedite management and reporting requirements.
Trigger points	Some of the Committee's previous concerns regarding trigger points have been addressed but the new approach based on standard deviations needs more thought and potential modelling to better understand the impact of the changes. This should include data distribution assessment as the new approach may increase trigger point abundance in some cases.
Genetic analysis of catch data	A significant concern is the unknown accuracy of observer and reported catch data, particularly for hammerhead sharks. The genetic samples library for shark species needs to be regularly analysed to confirm if threatened hammerhead shark species (Scalloped or Great Hammerhead) were captured. If resources preclude a full analysis then a scientifically-based subsample needs to be analysed each year.
Aerial surveys	The Committee has consistently expressed concerns over the use of aerial surveys in the SMP and continuing the surveys creates a dangerous scenario where bathers may incorrectly assume any shark in the area will be spotted by a plane overhead. Published evidence of the low detection rates of sharks from aerial surveys provides a sound basis to cease use of aerial surveillance in the Sydney region.
Shark research	The Committee welcomes the additional resources for shark research allocated under the NSW Shark Management Strategy but believes more transparency is needed for the funding opportunities and development of potential collaborative research projects associated with the SMP program.
Beach visitation data	There is value in assessing shark encounters across all beaches in the area covered by the SMP. Collection of beach visitation data is essential to allow comparison of encounter rates at both meshed and unmeshed beaches and mechanisms for the collection of such data should be explored.



## Appendix 7: Recommendations of the NSW Scientific Committee

<b>Comments on Trigger Point Review Reports</b>	
	<b>Recommendation/comment</b>
Humpback whale entanglements	<p>The fate of the two whales entangled in nets in 2012 is unknown but highly likely proved fatal. Strategies for rapid response rescue programs should be developed and maintained in NSW with additional funding if required for management and training.</p> <p>Additional dolphin ‘pingers’ and whale alarms are welcome but research into their effectiveness is required.</p>
Submission of Annual Performance Report	The trigger points were not properly addressed on four occasions as the review reports were not prepared in the required time frame and no consequences or solutions offered. It is not clear how this will be addressed in future and no additional funding has been allocated.
<b>Comments on outcomes of the Five Year Review</b>	
Amalgamation of JMAs	The amalgamation of the two existing JMAs into a single JMA seems reasonable and is likely to reduce inconsistencies.
Trigger points	The change to a tiered system of trigger points reflecting different threat levels is welcome although their performance needs to be monitored and reviewed. Some additional adjustment to make them more biologically relevant is recommended. Trigger points should be reconsidered taking into account generation length, population size, demographic structure and breeding biology of each threatened and non-target species affected by the SMP.
Seasonal netting	<p>Review should consider and evaluate options to focus netting on particular beaches or a combination of those and other operational factors. Reducing any causes of mortality will be beneficial to threatened species especially those that are long lived and have long generation lengths.</p> <p>Discontinue of meshing in September could be supplemented with alternative shark monitoring activities such as aerial surveillance. A compromise could be discontinuing netting during September only at those beaches that are near important non-target species habitat, such as Greynurse Shark aggregation sites.</p> <p>Data on numbers of water users throughout the year is required to make accurate assessment of risk/benefit. Funding should be allocated to obtain this critical data for proper assessment of strategies.</p> <p>The Committee reiterates its request for more frequent net inspections to maximise post-release survival of entangled non-target species.</p>