




Regulation Impact Statement



Managing interactions with dolphins in the Gillnet
Hook and Trap sector of the Southern and Eastern
Scalefish and Shark Fishery

AUSTRALIAN FISHERIES MANAGEMENT AUTHORITY

 September 2013

Executive summary

This Regulation Impact Statement (RIS) outlines the need to continue measures to protect dolphins from interactions with gillnet fishing gear in parts of the Gillnet Hook and Trap Fishery (GHAT) in South Australia. Existing measures include a closure to setting gillnets in part of the fishery.

The closure to gillnet fishing was implemented after the number of reported interactions with dolphins in South Australian waters of the GHAT sector of the Southern and Eastern Scalefish and Shark Fishery (SESSF) rose sharply in the 12 months leading up to September 2011. 52 dolphin interactions were reported between September 2010 and September 2011 with 50 being mortalities. The reports indicated interactions with ‘dolphins’ but the exact species of dolphins were unknown. The interactions mainly occurred south of the Coorong in Commonwealth waters off South Australia in the area from Kangaroo Island to Cape Jaffa.

In response to this, the Australian Fisheries Management Authority (AFMA) registered the *Fisheries Management (Southern and Eastern Scalefish and Shark Fishery Management Plan 2003) Temporary Order 2011 No. 2* (the First Dolphin Temporary Order) on 22 September 2011. The Order closed an area of the GHAT Sector of the fishery off South Australia to gillnetting, established a zone adjacent to the closed area with mandatory monitoring while fishing with gillnets, and allowed for the use of hooks by affected gillnet concession holders in both the closed area and monitoring zone.

AFMA extended the regulatory measures contained within the First Dolphin Temporary Order for a period of six months upon expiry of the Order. The *Fisheries Management (Southern and Eastern Scalefish and Shark Fishery Management Plan 2003) Temporary Order 2012 No. 1* (Second Dolphin Temporary Order) was registered on 22 March 2012 and expired on 23 September 2012. This was then replaced by the *Southern and Eastern Scalefish and Shark Fishery Closures Direction No. 5 2012* which expires on 23 September 2013.

The immediate and continued response was consistent with the objectives of the *Fisheries Management Act 1991* (FM Act), which AFMA is required to pursue. These objectives specifically require measures to be taken, as far as is practicable, to protect all species of whales, which is defined to include dolphins.

AFMA considers the threat to dolphins in the area closed to gillnetting is still very high. Additional dolphin mortalities across the rest of the fishery, including in the Dolphin Observation Zone further suggest that dolphin interactions would re-occur should the currently closed area be re-opened without suitable management measures.

This Regulation Impact Statement sets out an assessment of options to address accidental dolphin mortality caused by gillnet fishing. The three objectives AFMA wishes to achieve in response to the problem include: continuing to reduce dolphin interactions, ensuring a better understanding of protected species interactions and minimising the impact of measures on affected fishing businesses.

Possible options available to AFMA in response to the problem are to do nothing, voluntary measures or a regulatory response including a closure Direction in conjunction with the development of management strategy to minimise interactions with dolphins.

Only the latter is considered to be an appropriate and proportionate immediate response to the high number of interactions and very high (~95%) mortality rate of dolphins. The first option of doing nothing, while providing a maximum potential benefit of approximately \$2.5 million per annum by allowing operators back into closed areas, is considered to be inconsistent with the legislation and may put at risk the operation of the fishery. Voluntary measures are not considered feasible as no measures have been developed by industry.

The preferred option involves a regulatory approach with the continuation of the existing dolphin closure for 12 months pending the development of formal arrangements to minimise interactions with dolphins across the GHAT. This would be achieved through:

- continuing the closure to gillnet fishing in the area of the GHAT with a high risk of dolphin interaction to gillnet fishing through the registration of a closure Direction for 12 months;
- development and implementation of a Dolphin Management Strategy that aims to minimise interactions with dolphins and would allow restricted fishing inside the closure area once implemented;
- requirement for 100 per cent monitoring of gillnet operations, either by observer coverage or electronic monitoring systems (EMS) in an area adjacent to the closure; and
- ability for affected operators to use manual hook methods instead of gillnets in closed areas.

There has been a financial impact on industry as a result of this closure being in place for two years. Based on historical catch records from the closure the cost to businesses has been estimated at up to \$2.5 million per annum assuming operators did not fish elsewhere in the fishery. Of the eight boats that fished within the Dolphin Gillnet Closure for the fishing season prior to the Temporary Orders and Closure Direction, six remained fishing with gillnets in areas outside of the closure after this date. The remaining two boats moved operations to other fisheries or ceased fishing.

The costs and risks of not taking regulatory action are such that AFMA considers that continuing the dolphin closure until formal management measures are in place is necessary. If dolphin interactions continue at previous high rates or fail to be reported, the GHAT, AFMA, the community and ultimately fishing businesses are likely to face much higher costs than those that would be incurred from taking action now. In such circumstances, the fishery may lose approvals under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and the operation of the fishery would be put at risk. This has the potential to impact on 79 gillnet concession holders and cause lost value across the GHAT of \$16.5 million.

AFMA has been working in consultation with industry to develop formal management arrangements to minimise interactions with dolphins across the GHAT. It is intended that these arrangements will form the basis of a Dolphin Management Strategy that would ultimately allow restricted fishing inside the closure area once the strategy is implemented.

There has been extensive consultation with industry on the development of the Dolphin Management Strategy through the GHAT future Directions Working Group. The development of this strategy forms part of a broader strategy to support industry in adjusting to the changes brought about through managing impacts on marine mammals. AFMA has consulted with

operators directly impacted by the dolphin closure and through the South East Management Advisory Committee. There is support for the implementation of the Dolphin Management Strategy and industry acknowledges the ongoing need for the closure pending the implementation of the Dolphin Management Strategy.

Background

Fishery history

The GHAT fishery (Figure 1) is a sector of the Southern and Eastern Scalefish and Shark Fishery (SESSF). The gillnet sector predominantly targets shark species, with Gummy Shark now the main target species. The conservation-dependant listed School Shark (under the EPBC Act) is also caught incidentally in the GHAT fishery. School Shark is subject to a rebuilding strategy and AFMA has taken a number of regulatory measures to prevent the deliberate targeted catching of School Shark by fishers.

The fishery operates in Commonwealth waters adjacent to South Australia, Victoria and Tasmania. It was originally a longline fishery targeting School Shark; however concerns with mercury levels in large School Sharks led to Gummy Shark being the principal species targeted in the fishery.

In the early 1970s, gillnets were introduced into the fishery and in 1987 fishing effort off South Australia peaked with nearly 43,000 km of net being set per annum. Management arrangements have markedly reduced Commonwealth gillnet fishing effort in the region. In recent years the total annual effort has declined as a result of spatial closures in waters off South Australia, from an average of around 17,000 km to 3,700 km of net in 2012. Gillnetting is a method of fishing whereby static nets are set in an area of water for a period of time and catch fish by way of entrapment in mesh. Depending on the size of the mesh of the net, different fish species may be targeted. If the mesh size is larger, smaller fish will be able to pass through the net unscathed.

Prior to the move to output controls in 2001, net length was used to manage fishing effort in the gillnet fishery. From 2002, following the move to output controls through catch quotas, management rules changed to allow operators to use nets up to 4200 m. This remains the standard net length in the fishery with nets of up to 6000 m used by operators in Bass Strait as part of a trial to determine the effect of net length on catch rates and efficiency.

There are currently 79 fishing concessions which allow the use of gillnets in the GHAT.

Under Offshore Constitutional Settlement Fisheries Arrangements, the Australian Government is responsible for managing Gummy Shark and associated species in waters adjacent to South Australia, Victoria and Tasmania from the low water mark to the boundary of the Australian Fishing Zone.

Southern and Eastern Scalefish and Shark Fishery Commonwealth Hook Sectors and Gillnet Sector

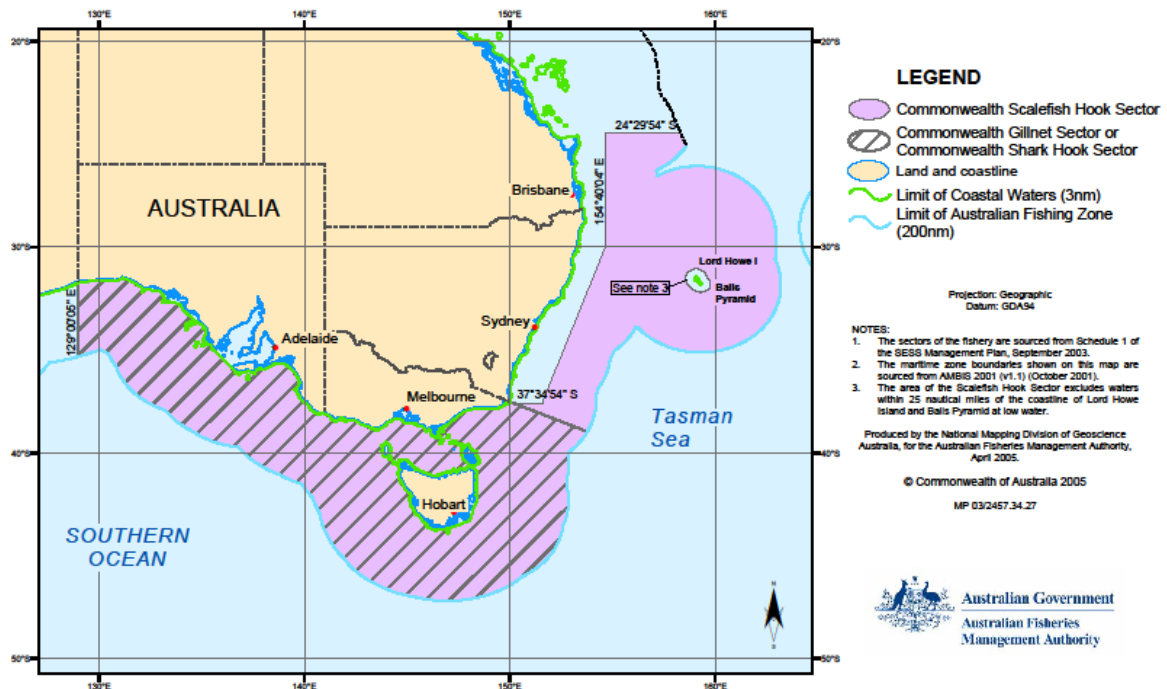


Figure 1. Area of the Gillnet Hook and Trap Fishery

Dolphin interactions

Fishers have reported very few interactions with dolphins throughout the history of the SESSF fishery. However, in the years 2010-11 and part 2011-12, numbers rose sharply. A notable decline in mortalities is demonstrated in the 2012-13 season, post implementation of the first dolphin Temporary Orders and Closure Direction. The following table shows reported dolphin interaction trends:

Season	Logbook reports
2006-07	4
2007-08	6
2008-09	3
2009-10	0
2010-11	21 (1 live)
2011-12	44 (2 live)
2012-13	19 (1 live)

Table 1. The increase in reported dolphin interactions seen in recent fishing seasons (which run from 1 May to 30 April), followed by a decline in the 2012-13 season as a result of regulatory measures implemented by AFMA.

The fishing year in the above table represents the SESSF fishing year which is 1 May through 30 April. Given differences in reporting between boats with and without independent monitoring, it is likely that this figure underestimates the real level of interaction. The 52 reports from September 2010 to September 2011 were from eight of the 50 active boats in the fishery. All of the boats reporting dolphin interactions during this period had e-monitoring systems onboard. During the 2012/13 season a number of interactions were reported from boats without e-monitoring, demonstrating that logbook reporting of TEP interactions is improving. AFMA has supported industry training to improve logbook reporting which, along with higher levels of monitoring, is likely to explain some of the increases in recent years.

In July 2010 AFMA increased observer coverage to 10 per cent in the Australian Sea Lion Management Zone (ASLMZ) adjacent to much of South Australia to better monitor gillnet fishing interactions with Australian Sea Lions. The increase in reporting of dolphin interactions appears to have commenced around September 2010 at the same time electronic monitoring systems were fitted to some boats in the fishery.

In May 2011 observer coverage was increased to 100 per cent in the ASLMZ and to 10 per cent for the rest of the fishery. The 100 percent observer coverage obligation can be met either through an on board observer or electronic monitoring.

The ASLMZ comprises much of the area where dolphin interactions have been reported. The increased level of observer coverage and greater awareness of reporting requirements may explain additional reporting of dolphin interactions.

Dolphin Conservation

There is an acknowledged paucity of management data for dolphin populations in southern Australia with ongoing uncertainty about species distribution, population size, movement and species classification. This has been highlighted recently with the identification of a new dolphin species in Port Philip Bay. While the overall population of dolphins is likely to be high in the Dolphin Gillnet Closure, AFMA is unable to ascertain whether sub-populations of genetically distinct animals may be involved in the interactions. AFMA has facilitated independent analysis of electronic monitoring camera footage to identify dolphin species. The analysis of 40 dolphin mortalities found 38 Common Dolphins and two Bottlenose Dolphins. Populations of Common Dolphins and Bottlenose Dolphins in southern Australian waters are not well understood at present, however, AFMA has recently supported a research proposal submitted by Flinders University to better understand dolphin populations in the waters off South Australia.

Further, as noted elsewhere in the RIS, the FM Act places an additional requirement on AFMA in the management of the fishery to ensure, as far as practicable, that management measures are not inconsistent with the preservation, conservation and protection of all species of whale. Application of the precautionary principle, as required by the FM Act, also supports the action proposed.

Australia has also actively supported and promoted the conservation of small cetaceans (including dolphins) at the International Whaling Commission (IWC). Acting domestically in a manner consistent with our international policy position is necessary if Australia is to remain credible at the IWC.

Protection of marine mammals – Australian Sea Lions

AFMA has introduced significant measures to protect populations of Australian Sea Lions. These are:

- The Australian Sea Lion Management Strategy.
- 30 June 2010: The *Southern and Eastern Scalefish and Shark Fishery (Closures) Direction No. 3 2010* (First Sea Lion Direction) implements closures to protect Australian Sea Lion populations in South Australia. In order to give effect to the changes urgently, *Fisheries Management (Southern and Eastern Scalefish and Shark Fishery Management Plan 2003) Temporary Order 2010* was made to waive the seven day notice period required under the *Fisheries Management Act 1991*.
- 1 May 2011: the *Fisheries Management (Southern and Eastern Scalefish and Shark Fishery Management Plan 2003) Temporary Order 2011* (First Sea Lion Temporary Order). The First Sea Lion Temporary Order was in force until 1 November 2011 and provided for:
 - the extension of the areas closed to gillnet fishing around 31 Australian Sea Lion closures. This brought the total area of closures around 48 Australian Sea Lion colonies off South Australia to 18,500 square kilometres;
 - affected gillnet operators to use hooks in the areas closed to gillnets; and
 - 100 per cent monitoring for gillnet operations in the waters adjacent to South Australia, either by onboard scientific observer or by EMS.
- 1 November 2011:
 - *Fisheries Management (Southern and Eastern Scalefish and Shark Fishery Management Plan 2003) Temporary Order 2011 No.3* (Second Sea Lion Temporary Order) commenced. This order continued the allowance for affected gillnet operators to use hook methods in gillnet closures.
 - *Southern and Eastern Scalefish and Shark Fishery (Closures) Direction No.2 2011* (Second Sea Lion Direction) extends closures contained in the First Sea Lion Temporary order for a period of 18 months to 30 April 2013.
 - also introduced at this time was an increase in the observer coverage for gillnet fishing across the GHAT to 10 per cent and precautionary Australian Sea Lion bycatch levels to trigger temporary closures.
- January 2012:
 - revised management zones and lowered bycatch levels for Australian Sea Lions to trigger closures of those management zones.
- 6 February 2012: Zone A Closure
 - *Southern and Eastern Scalefish and Shark Fishery (Closures) Direction No.1 2012* was registered to prevent gillnet fishing in Australian Sea Lion Management Zone A.
 - This closure was made as a result of a Sea Lion mortality which occurred on 15 November 2011. The Zone remained closed until 15 May 2013.

- 5 March 2012: Zone B Closure
 - *Southern and Eastern Scalefish and Shark Fishery (Closures) Direction No.2 2012* was registered to prevent gillnet fishing in Australian Sea Lion Management Zone B.
 - This closure was made as a result of three Sea Lion mortalities which occurred on 3, 9 and 10 February 2012. The Zone remained closed until 10 August 2013.
- 6 April 2012: Zone D Closure
 - *Southern and Eastern Scalefish and Shark Fishery (Closures) Direction No.3 2012* was registered to prevent gillnet fishing in Australian Sea Lion Management Zone D.
 - This closure was made as a result of a Sea Lion mortality which occurred on 23 February 2012. The Zone remained closed until 23 August 2013.

Protection of marine mammals – dolphins

Measures that have been introduced to the GHAT for the protection of dolphins include:

- 22 September 2011: *Fisheries Management (Southern and Eastern Scalefish and Shark Fishery Management Plan 2003) Temporary Order 2011 No. 2* (First Dolphin Temporary Order) was made. This was implemented to minimise the risk of dolphin interactions and was in force for six months. The First Dolphin Temporary Order:
 - closed an area of the fishery off South Australia to gillnet fishing (Dolphin Gillnet Closure). Interactions with dolphins have mainly occurred in Commonwealth waters off South Australia south of the Coorong in the area from Kangaroo Island to Cape Jaffa. The First Dolphin Temporary Order closed this ‘hotspot’ area to fishing by gillnet methods in order to minimise interactions and prevent further dolphin deaths;
 - allowed affected gillnet operators to use manually baited hooks (Manual Hooks) instead of gillnets; and
 - established the Dolphin Observation Zone adjacent to the closed area. In this area operators could fish with gillnets provided there was 100 per cent monitoring of their operations, either through independent scientific observers or electronic monitoring by cameras.
- 22 March 2012: Upon the expiry of the First Dolphin Temporary Order, it was extended for a further six months by the *Fisheries Management (Southern and Eastern Scalefish and Shark Fishery Management Plan 2003) Temporary Order 2012 No. 1* (Second Dolphin Temporary Order) until 23 September 2012.
- September 2012: Upon the expiry of the Second Dolphin Temporary Order, *Southern and Eastern Scalefish and Shark Fishery (Closures) Direction No. 5 2012* (Dolphin Closure Direction) was issued, extending the measures initially implemented under the First and Second Dolphin Temporary Orders until 23 September 2013.

The dolphin area closure is 27,239km² and is shown in figure 2. The approximate size of the GHAT gillnet area is 297,142 km².

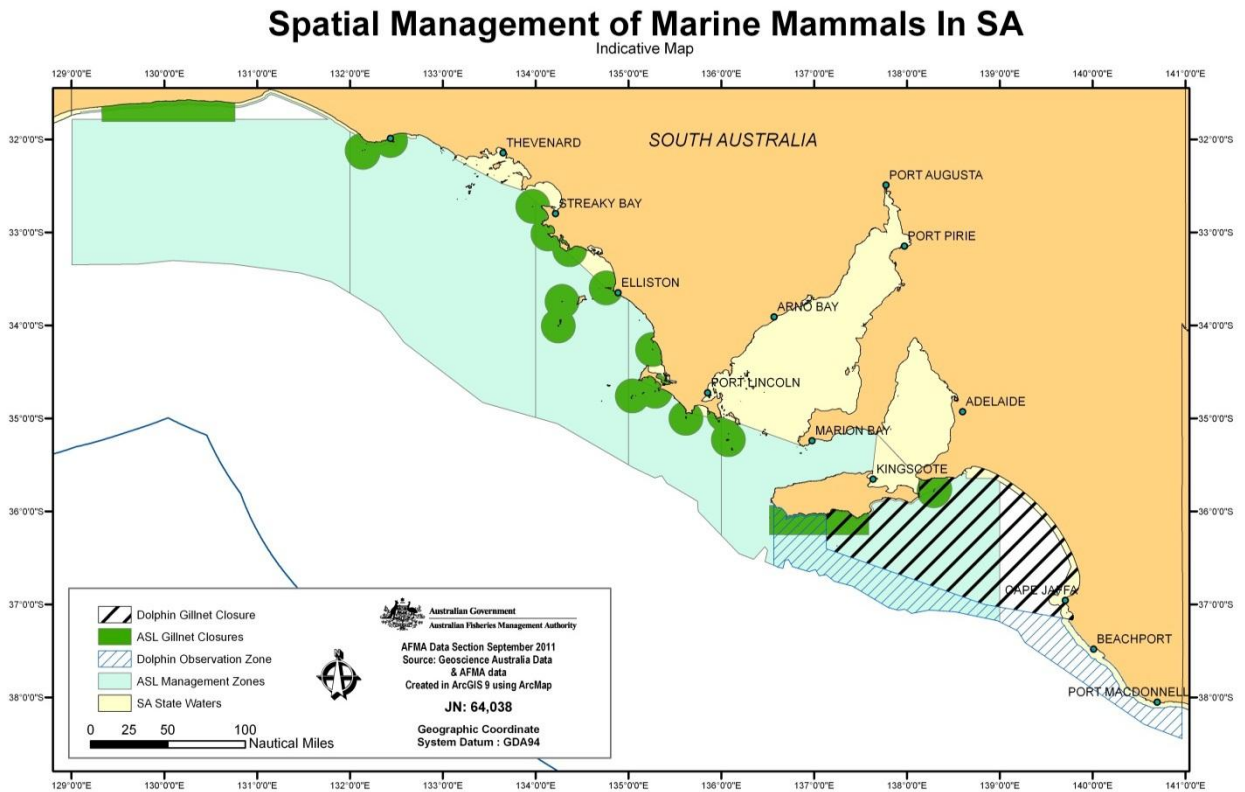


Figure 2. Chart showing the area of the dolphin closure and spatial management measures in place for protecting Australian Sea Lions.

Effects of the Dolphin Closures

Displaced fishing effort

As with the closures already implemented under the Australian Sea Lion Management Strategy, the dolphin closures made under Temporary Order and Closure Direction had consequences for the commercial viability of gillnet operators in South Australia.

For the 2012-13 fishing season mean (average) catches of the four target species in the GHAT were down approximately 32 per cent (from the 2006-07 to 2010-11 average) for the entire gillnet sector of the SESSF, while the South Australian catches from the same time periods were down 88 per cent (Figure 6). It is difficult to ascertain the direct effect of the Dolphin Temporary Orders and Closure Direction on catch figures as a number of other closures were implemented during this period in order to protect Australian Sea Lions (Figure 4). Of the eight boats which fished within the Dolphin Gillnet Closure for the 2011-12 fishing season before the First and Second Dolphin Temporary Orders, six remained fishing with gillnets in areas outside of the closure after this date (Figures 3 and 4). The remaining two boats moved operations to other fisheries or ceased fishing. Over time effort from these boats has shifted to other parts of the fishery with some boats now fishing in Eastern Bass Strait (Figure 5).

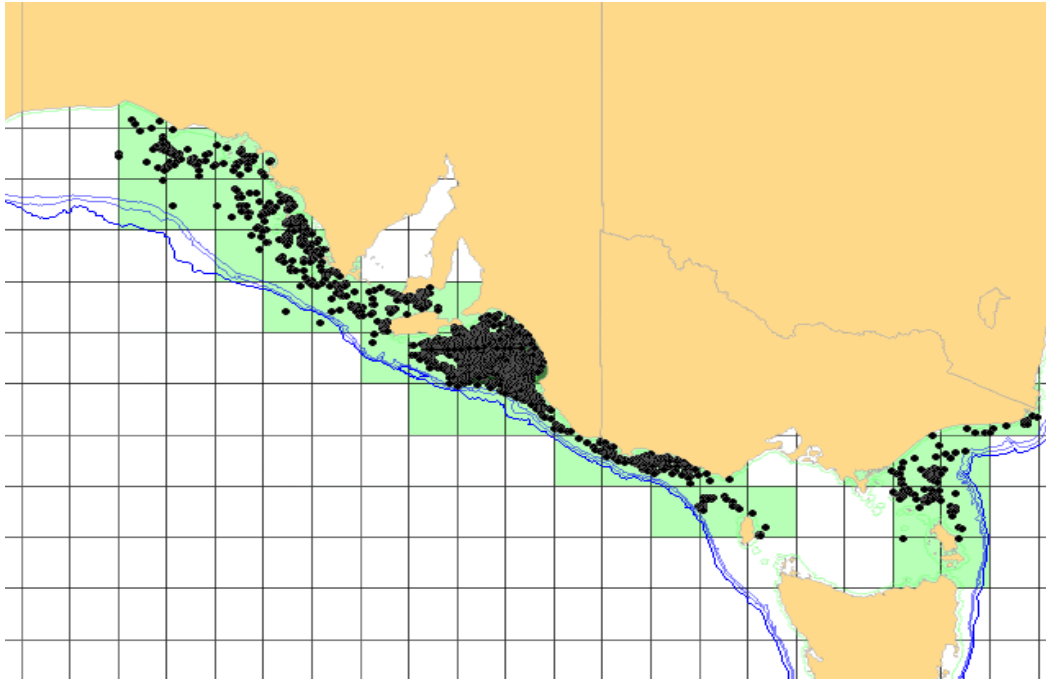


Figure 3: Gillnet shots, 1 May 2011 to 23 September 2011 for GHAT boats with a history of fishing effort within the Dolphin Closure area.

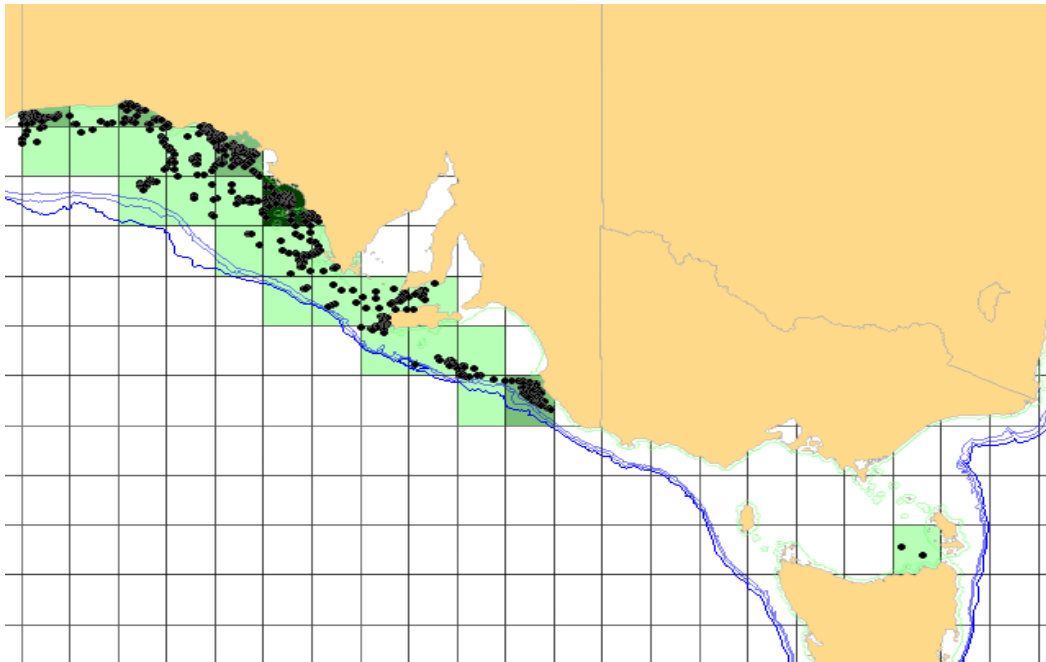


Figure 4: Gillnet shots, 23 September 2011 to 30 April 2012 for GHAT boats with a history of fishing effort within the Dolphin Closure area.



Figure 5: Gillnet shots for GHAT boats with a history of fishing effort within the Dolphin Closure area for 1 May 2012 – 30 April 2013 (first full season post Dolphin Closure implementation). Note the shift in effort concentration from the Coorong region to eastern Bass Strait.

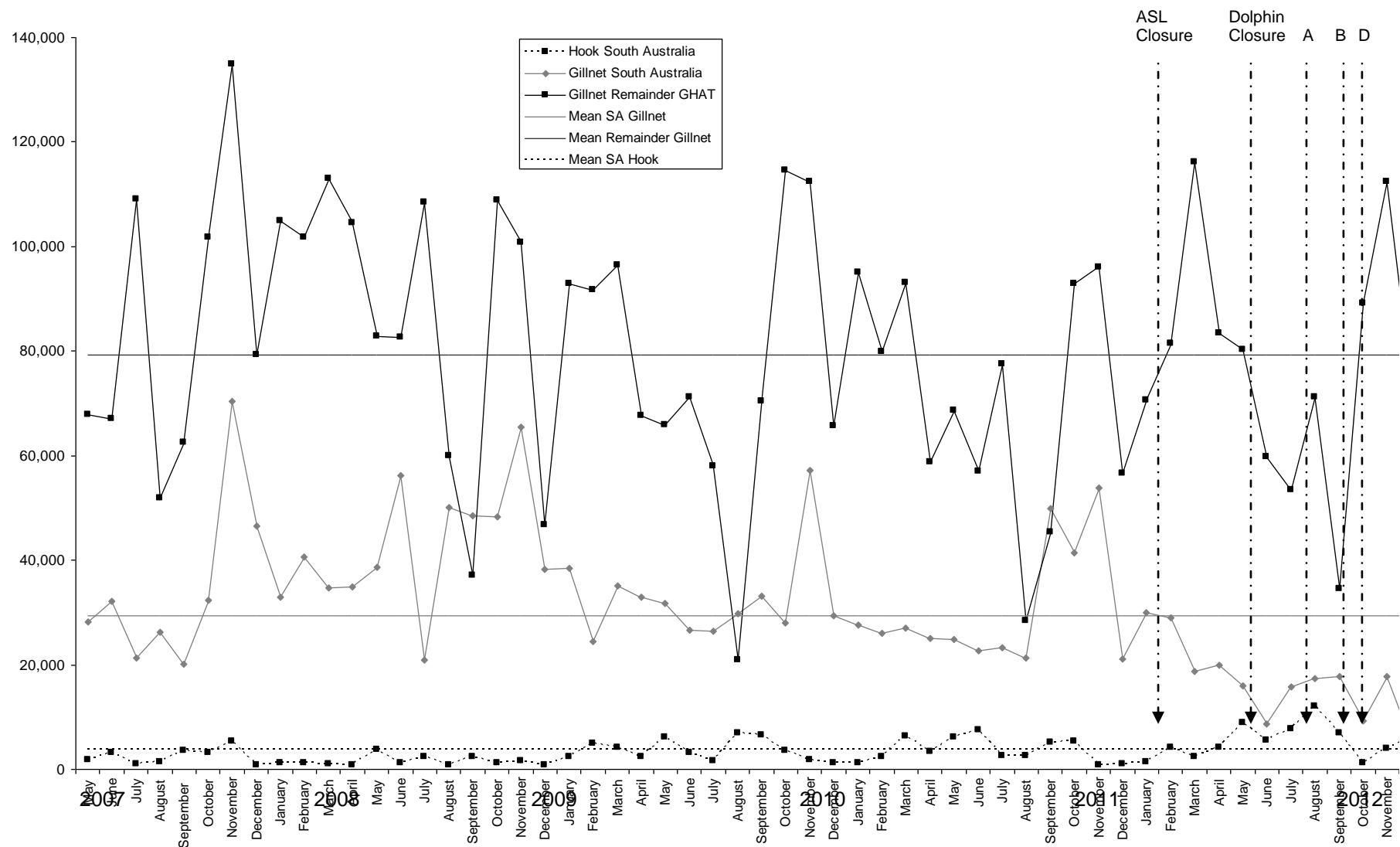


Figure 6: Gummy Shark catch (kg) for GHAT gillnet sector, South Australian gillnet sector and Shark Hook sector between May 2007 and April 2012. ‘ASL Closure’ refers to SESSF Temporary Order No. 1 2011; ‘Dolphin Closure’ refers to SESSF Temporary Order No. 2 2011; ‘A’, ‘B’ and ‘C’ refer to SESSF Directions No. 1, 2 and 3 2012.

Modification of gillnet concessions to allow the use of hooks

It's difficult to quantify whether allowing gillnet concession holders to use hooks in the closed area has had an effect on those concession holders, or other concession holders in the broader fishery. At present five boats have used temporary hook permits to access Gummy Shark in the dolphin closure area. The cost of changing from gillnet to hook fishing methods is highly variable between boats however the conversion has been estimated at around \$30,000. Similarly, converting a boat back to gillnet methods is comparable in cost. Hook fishing catch has increased after the implementation of the Temporary Orders and Closure Direction but remains at relatively low levels (Figure 3).

Assessment of Dolphin Mitigation Measures

Since the implementation of the Temporary Orders and Closure Direction, AFMA has been closely monitoring reports of dolphin interactions. AFMA continues to assess the effectiveness of the current measures in place to minimise interactions with dolphins. AFMA is assessing a number of factors including:

- the spatial and temporal nature of additional dolphin interactions across the rest of the fishery (Figure 7);
- the efficacy of industry voluntary measures under their Code of Conduct including gear modifications, mitigation devices and fishing practices e.g. move-on provisions; and
- the results of any future research on mitigation options.

AFMA commissioned research to be undertaken by ABARES to analyse trends in dolphin by-catch from boats in South Australian waters. The data was from the period 12/09/2010 to 31/08/2012, and consisted of 2909 individual net-shots that recorded 53 dolphin mortalities from 10 boats. The data included details of net-shots, net-lengths, fishing position, and water depth. This data was used to determine an interaction rate from the period prior to the implementation of the Temporary Order. The results of the analysis detailed a notable increase in the number of dolphin interactions occurring in the Coorong area when compared to the rest of the fishery.

There is a strong likelihood that if the Coorong area was re-opened to gillnet fishing without the implementation of dolphin mitigation measures, the rate of dolphin interactions would notably increase.

AFMA has been discussing research on mitigation measures to reduce dolphin mortalities with industry. The GHAT Future Directions Working Group has also discussed long term solutions for mitigating the incidental bycatch of marine mammals, as well as simplification of access rights and cost effective monitoring of TEP interactions.

AFMA also supported a trial of auto-longlines to catch GHAT target species in areas closed to gillnetting. Auto-longline fishing is a hook method where by an automatic baiting machine deploys baited longlines of hooks from the fishing boat and allows for more hooks to be deployed in less labour intensive manner than manual baited hook fishing. AFMA is expecting to receive the final report detailing the results of the trial in October 2013.

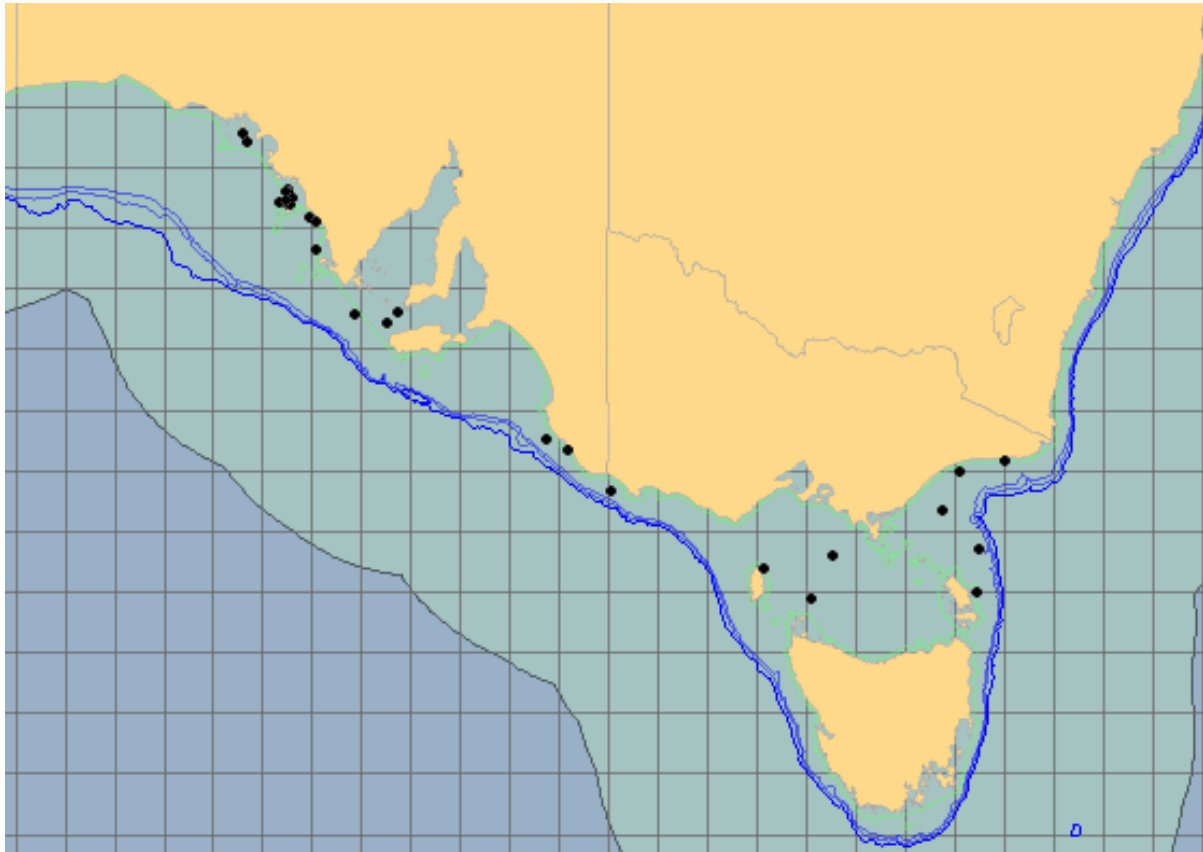


Figure 7: Recorded dolphin interactions in the GHAT fishery since the introduction of the Dolphin Temporary Order which was registered on 23 September 2011.

E-monitoring results

Currently 10 GHAT boats are fitted with electronic monitoring systems (EMS) to assist in addressing marine mammal interactions. Analysis has shown the EMS to be effective at capturing all fishing events where a captured dolphin breaks the surface of the water or is brought within the close proximity of a boat under the water surface.

The majority of dolphin interactions have been reported on boats where EMS are installed. AFMA is confident in the ability of the systems to monitor dolphin interactions based on their ability to detect other large catch items, including animals which drop out of the net before landing.

The need for action

The Dolphin Closure Direction expires on 23 September 2013 at which time the measures contained therein to minimise interactions with dolphins cease to have effect. The closure to gillnetting of the area where dolphin interactions were recorded under the Temporary Orders and Closure Direction have achieved the desired result of minimising interactions with dolphins (detailed in Table 1). Since the commencement of the Dolphin closures on 23 September 2011, AFMA has been notified of 33 additional dolphin mortalities and one non-fatal interaction. Due to these reported interactions there is still a high level of perceived risk that interactions with dolphins would increase should the current measures contained in the Dolphin Closure Direction not be continued.

The SESSF Management Plan has been accredited by the Minister for Sustainability, Environment, Water, Population and Communities under Part 13 of the EPBC Act. The EPBC Act (Section 152, Division 2) provides that further assessment of the fishery must be made if the impact of actions in the fishery is significantly greater than assessed under an earlier agreement. Given the high level of dolphin deaths in the GHAT, further assessment of the fishery is likely unless AFMA continues action to minimise interactions with dolphins. The outcomes and subsequent approvals from a new assessment of the fishery are uncertain and may not allow, or significantly restrict, fishing, if appropriate dolphin management measures are not in place.

Under the EPBC Act all cetaceans are protected in Australian waters. The environmental assessment and approvals process allows the accidental take of whale species (including dolphins) in fisheries, providing fishing is conducted in accordance with an approved fisheries Management Plan and all reasonable steps are taken to avoid interactions.

Government action is required to continue necessary steps to minimise interactions with dolphins in South Australian waters by gillnets to prevent further dolphin deaths. Consequences that may arise in the very near future should action not be continued include:

- increased dolphin deaths;
- significant public criticism of AFMA and the Australian Government; and
- the possible loss of environmental accreditation of the SESSF Management Plan which will result in all SESSF concession holders losing the right to export fish taken in the fishery.

There is a risk some of the dolphins involved are classified listed species under the EPBC Act and therefore require particular conservation management. There is a continued need to prohibit fishing by gillnets in the area off South Australia where interactions have been recorded to avoid the potential continued take of endangered species.

AFMA's internal Legal Section has advised that there is a risk of legal action based on AFMA not acting in accordance with its objectives under the FM Act relating to ecological sustainability and the management of dolphins, such as an application to the Federal Court on the basis of AFMA failing to take appropriate action.

Objective of regulatory change

The broad objectives are to ensure the exploitation of fisheries resources is sustainable with regard to target and non-target species as well as the broader marine environment, and to maximise the net economic returns to the Australian community from the management of Australian fisheries.

AFMA is required to manage the impact of fishing on the marine environment, with particular emphasis on the conservation of whales noting that the legislation includes dolphins and porpoises in this definition. AFMA must pursue the objectives of the *Fisheries Management Act 1991* (FM Act) include:

- ensuring that the exploitation of fisheries resources and the carrying on of any related activities are conducted in a manner consistent with the principles of ecologically sustainable development (which include the exercise of the precautionary principle), in

particular the need to have regard to the impact of fishing on non-target species and the long term sustainability of the marine environment.

- In meeting objectives of the Act, AFMA must ensure, as far as practicable, that measures adopted in pursuit of the objectives of the Act must not be inconsistent with the preservation, conservation and protection of all species of whales.

AFMA is also subject to general obligations for interactions with protected species under the EPBC Act.

Options to address the issue

The options available to AFMA once the Dolphin Closure Direction expires are: to do nothing; to allow industry to develop voluntary measures and self-regulate; or to take regulatory action, including registering a closure Direction.

Do nothing

AFMA may decide to do nothing and allow the Dolphin Closure Direction to expire. This would mean that on 23 September 2013, the area currently closed to gillnetting would reopen to fishing by gillnet methods.

AFMA considers that by doing nothing to minimise interactions with dolphins, it will not be meeting the legislative objectives of the FM Act or the fisheries requirement of the EPBC Act.

AFMA further considers that the environmental conditions which are likely to be causative factors for higher rates of dolphin interactions in the Dolphin Gillnet Closure persist and further dolphin interactions would be likely if gillnet fishing increased.

If AFMA adopted a do nothing approach, the requirement for 100 per cent monitoring would remain only in that part of the Dolphin Observation Zone that overlaps with the Australian Sea Lion Management Zone. This would mean that approximately half the Dolphin Observation Zone would not be subject to the current requirement for 100 per cent monitoring.

There is a high likelihood that if AFMA does not continue action to minimise interactions with dolphins the future operation of the fishery as a whole may be put at risk by jeopardising the current environmental approval for the fishery. This would have an immediate and dramatic effect on industry as it would lose the approval to fish in the fishery and/or export fish from the fishery.

Doing nothing to address dolphin interactions and deaths may also result in significant public criticism of AFMA and the Australian government. Dolphin deaths are a sensitive public issue and inaction would lead to increased public pressure on AFMA and the Australian government to take decisive action.

Environmental groups such as the Humane Society International are aware of recent dolphin deaths by gillnetting and have certain expectations of AFMA as the governing regulatory body to take action.

While this option is not preferable to achieve the desired objectives, it provides a useful benchmark for assessing the impact of other options. AFMA considers that if no further regulatory action was taken when the Dolphin Closure Direction expired:

- Fishing businesses currently affected by the Dolphin Gillnet Closure would initially benefit from being allowed into the area to fish with gillnets. Although not quantifiable with certainty, the Dolphin Gillnet Closure previously yielded catch of up to 205 tonnes per annum and revenue of approximately \$2.5 million per annum. Reopening the closure would allow operators to increase revenue by operating more efficiently (although, because effort has been displaced, the net effect of reopening the closure would be less than \$2.5 million).
- Fishing businesses may benefit from not having to pay costs associated with 100% monitoring in those parts of the Dolphin Observation Zone that do not overlap the Australian Sea Lion Management Zone. This would represent savings for set up costs of EMS which can be up to approximately \$21,000 and \$400 per day for analysis of electronic monitoring footage. Alternatively, operators who would have used onboard observers instead of EMS would save approximately \$1200 per day. Operations in the Australian Sea Lion Management Zone would still require 100 per cent monitoring.

However, some monitoring would still be required. AFMA has policies in place such as the Integrated Scientific Modelling Program which specifies a minimum amount of observer coverage for fisheries. Currently in the GHAT sector of the SESSF, concession holders are subject to 10 per cent observer coverage.

The potential benefits to fishing businesses are short-term, and must be considered in light of risks and future potential costs associated from continuing the same fishing practices in the Dolphin Gillnet Closure. These include the risk of the loss of accreditation of the SESSF Management Plan under the EPBC Act as highlighted above.

Consumers may benefit from the do nothing approach through increased availability of Gummy Shark (sold as 'flake' at take away fish and chip shops) sold at a lower price.

While difficult to quantify, the likely costs to the community are a reduction in the protection of a valued marine mammal.

For the reasons above, doing nothing is not considered the preferred option.

Voluntary measures

AFMA could rely on the fishing industry to implement voluntary measures to manage interactions with dolphins. This could include an industry code of practice, voluntary closures and self-reporting to achieve the primary objective of minimising dolphin interactions and, depending on the implementation of the arrangements, provide for ongoing monitoring. One benefit of the self-regulation approach is that, by being industry developed and implemented, it would likely minimise the impact of measures on fishing businesses. The AFMA Commission and SEMAC have recommended the introduction of a voluntary industry code of conduct which deals with marine mammal interactions. To date, industry is yet to formalise a voluntary code of conduct.

Self-regulation to reduce interactions with dolphins and other species listed as protected or conservation dependent under the EPBC Act (threatened, endangered and protected species, or TEPs) have previously resulted in mixed outcomes. They are dependent on uptake and a uniform commitment to follow procedures by all relevant industry stakeholders and tend to work best when there is a strong industry association to monitor and enforce the arrangements.

The GHAT does not have a representative industry association, and the fishery is characterised by strong regional differences with respect to interactions, with sea lion and dolphin issues occurring mainly in the western part of the fishery.

Self-regulation would provide the fishing industry with the opportunity to develop and implement appropriate arrangements to reduce dolphin interactions. The set up costs and initial management costs are likely to be comparatively low for this approach because operators would seek out the most efficient response. Consumers, particularly those in South Australia, are likely to benefit from self-regulation through greater availability of Gummy Shark at lower prices.

However, the operators in the GHAT do not have a sole representative industry association and, despite the enactment of the Dolphin Temporary Orders, and Closure Direction, industry has not developed effective measures for dolphin protection. It is highly unlikely that industry arrangements could be developed before the Dolphin Closure Direction expires nor are they likely to be adhered to by a significant part of industry. As such, there are significant risks from a self-regulation approach to:

- The Australian Government, in particular AFMA, by not acting in pursuit of its legislative objectives; and
- The community, which places a high environmental value on the protection of dolphins.

AFMA does not regard voluntary as the preferred option to manage dolphin interactions for the area where the majority of interactions have been recorded.

Regulatory measures

Given that the do nothing and voluntary measures are not regarded as an effective response, a regulatory approach is preferred. The most appropriate regulatory responses available to AFMA are to register a Closure Direction and re-grant temporary fishing permits whilst a Dolphin Management Strategy is developed.

Closure Direction

Section 41A of the FM Act gives AFMA the power to direct that fishing not be engaged in any part of a fishery, or in a particular part of a fishery. Under this section, AFMA could continue the Dolphin Gillnet Closure beyond the expiry date of the dolphin Closure Direction for a period of 12 months. Registering a new Closure Direction for an additional 12 months is required as a temporary measure, until the Dolphin Management Strategy is implemented.

This measure would be consistent with AFMA's legislative obligation to pursue its objectives. These include the objective of ensuring that the exploitation of fisheries resources is conducted in a manner consistent with the principles of ecologically sustainable development (which include the exercise of the precautionary principle), and in particular the need to have regard to the impact of fishing activities on non-target species and the long term sustainability of the marine environment. In the Act the precautionary principle means "*Where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.*" [1992, *Inter Governmental Agreement on the Environment*, section 3.5.1]

Development of the Dolphin Management Strategy

Following the success of AFMA's Australian Sea Lion Management Strategy in reducing ASL mortalities, the preferred approach for dolphin mitigation is to develop a Dolphin Management Strategy. AFMA has consulted with industry through the GHAT Future Directions Working Group on the type of management measures to be included in the Dolphin Management Strategy.

The recommendations from AFMA and the working group are to proceed with developing a management strategy that includes elements of co-regulation with fishers being individually accountable for minimising their interactions with dolphins. AFMA would regulate a threshold rate of dolphin interactions and individual fishers would be responsible for employing mitigation measures of their choice to ensure that they remain below this threshold. Operators that exceed this threshold may be excluded from fishing in a certain area of the fishery for a period of time. This provides the strongest incentives for individuals to minimise dolphin interactions through changing fishing behaviours and using mitigation strategies best suited to their circumstances and location.

AFMA is working with industry to implement the Dolphin Management Strategy by mid-2014.

Grant of Fishing Permits

AFMA is considering whether to allow alternative access to fishers displaced from the dolphin closure area through the grant of temporary hook permits.

Section 32 of the FM Act gives AFMA the power to grant fishing permits authorising the use of an Australian boat for fishing in a specified area of the Australian Fishing Zone or a specified fishery.

Similarly to addressing interactions with Australian Sea Lions, AFMA could choose to utilise this power to address the dolphin interaction issue in combination with a closure Direction.

The grant of temporary fishing permits allows the use of hooks by gillnet who can not fish in the Dolphin Closure with gillnets. This allowance would be available to concession holders who meet eligibility criteria based on the amount of fishing effort in the period between March 2007 and 22 September 2011 when the closure was first implemented.

AFMA has already granted temporary fishing permits allowing the use of hooks to concession holders who met eligibility criteria for fishing in the Australian Sea Lion Zone. Many of these concession holders would be eligible under criteria for fishing history in the Dolphin Gillnet closure given the areas overlap considerably. Any concession holder which can demonstrate fishing history in the area not covered by the Australian Sea Lion Zone and has not already been granted a fishing permit allowing the use of hooks, would be eligible for the grant of a temporary fishing permit.

Granting temporary fishing permits would be consistent with AFMA's legislative obligation to pursue its objectives. In allowing those gillnet fishers most affected by the closure Direction to continue to fish in areas closed to gillnet fishing using an alternative fishing method, the action would be consistent with AFMA's objective of maximising the net economic returns to the Australian community from the management of Australian fisheries. This would at least reduce the economic impact of any gillnet closure.

The existing temporary hook fishing permits expire on 25 October 2013. AFMA is consulting with stakeholders about whether to continue these alternative access arrangements through granting new temporary fishing persons to eligible persons for up to 24 months. The time would allow AFMA and industry members to consider longer term management options for the fishery.

Existing Regulatory Powers

Regulation 9F of the *Fisheries Management Regulations 1992* (the Regulations) gives AFMA the power to direct that an observer be carried on a nominated boat for a fishing trip. Gillnet Boat Statutory Fishing Right (SFR), conditions state that if gillnet fishing occurs in the dolphin observation zone (waters adjacent to the closed area) the concession holder must carry an observer on board the nominated boat or have an electronic monitoring device fitted to the boat.

Details of proposed arrangements

Closure of area with heightened dolphin interactions by Direction

Interactions with dolphins have mainly occurred south of the Coorong in Commonwealth waters off South Australia in the area from Kangaroo Island to Cape Jaffa. The Direction would continue the closure in this ‘hotspot’ area to fishing by gillnet method in order to continue to minimise interactions and prevent further dolphin deaths. This closure Direction will be registered for a period of 12 months but will be revoked should the Dolphin Management Strategy be implemented prior to expiry.

The expected impact of extending the Dolphin Gillnet Closure Direction is informed by data from the Temporary Orders and Closure Direction, which together have been in force for approximately 23 months. While there are significant uncertainties with the data used for the impact analysis, available relevant information to inform the decision making process is detailed under *Economic impact* in the following pages.

Dolphin Management Strategy

AFMA is developing a formal management strategy for minimising interactions with dolphins in the GHAT. The core of the strategy would involve concession holders being individually responsible for minimising interactions with dolphins. Each boat would also be required to remain below an acceptable threshold of dolphin interactions/mortalities. Boats that exceed this threshold may be excluded from fishing an area for a specified period of time.

AFMA will submit a public consultation paper that will be circulated to all industry members and broader stakeholders in mid-September 2013. The focus of the consultation paper is to seek comments on proposed management arrangements for dolphins as well as other management changes arising from the recommendations of the future direction working group.

In relation to gillnet fishing in the existing dolphin closure, subject to comments received during consultation, eligible boats will be able to fish in that part of the fishery. AFMA anticipates that eligibility criteria will involve meeting training requirements, using mitigation measures, being subject to a mortality threshold and monitoring provisions. If any of the

eligibility criteria are breached then that boat may be excluded from fishing in the area of the existing dolphin closure.

All existing measures for Australian Sea Lions would continue to apply and boats fishing under the proposed Dolphin Management Strategy would be subject to 100% monitoring. AFMA is working towards having this management strategy developed and implemented by mid-2014 for boats that have electronic monitoring in place.

Granting of temporary fishing permit to allow the use of hooks

Noting that the use of hook fishing methods poses a much lower risk than gillnets to most TEP species, particularly dolphins, AFMA is considering granting temporary fishing permits to allow gillnet operators to use hooks in some circumstances in those areas closed to gillnetting under the Direction and other areas of the GHAT Sector. This measure would only apply to concession holders with a history of fishing in the Dolphin Gillnet Closure.

AFMA has already granted temporary hook permits to concession holders allowing the use of hooks in the Australian Sea Lion Management Zone which partially overlaps the Dolphin Gillnet Closure. Those eligible concession holders who did not receive a hook permit under criteria for the Australian Sea Lion Zone will be granted a permit allowing the use of the hooks in the Dolphin Gillnet Closure.

For the purpose of this interim measure, concession holders with a history over a set reference period with more than 25 per cent of their fishing (measures in net length used) in the Dolphin Gillnet Closure would qualify for the grant of a fishing permit to use hook methods to target shark in the dolphin closure area.

The consequences of this might include a change in the value of concessions which currently allow the use of hooks in the areas closed to gillnets. Setting strict eligibility criteria for the use of hooks by operators with significant previous effort in the Dolphin Gillnet Closure should significantly limit the number of eligible concession holders.

The Shark Resource Assessment Group (SharkRAG) has previously expressed concerns with moving from gillnets to hooks including:

- a decrease in catch selectivity for both target and non-target species;
- the cost of converting large gillnet boats to hook boats; and
- the amount of time needed for both suppliers and operators to move to hooks.

The alternative of preventing the use of gillnets without providing an option for concession holders to fish with another method would have a major economic impact on the fishery. Allowing the use of hooks by eligible concession holders in the Dolphin Gillnet Closure is a medium term measure and on balance is preferred to not enabling the use of hooks.

The cost of converting gillnet boats to hooks depends on the size of the boat and the configuration of hook fishing, but has been estimated at around \$30,000. Conversion of boats to hook methods may take some weeks, and this would depend on the availability of equipment and location. Manual hook fishing is less efficient and more expensive than gillnet fishing with more labour required and additional costs for bait. However, hook caught shark can attract a small price premium based on freshness and condition. As the majority of recent

fishing effort in the proposed Dolphin Gillnet Closure was by the gillnet method, the efficiency of fishing the same area with hooks is difficult to quantify.

To address the Shark RAG's concerns, in addition to granting permits allowing for the use of hooks, AFMA has supported a trial in the use of auto-longline gear, funded by the Fisheries Research Development Council (FRDC). The trial investigated the impact of hook methods on target, bycatch and TEP species and the economic viability of hook fishing methods in targeting Gummy Shark. The final report for the project is due for completion in October 2013.

AFMA has investigated the potential for a scientific trial into the use of acoustic 'pinger' devices in the dolphin closure area. Due to the increased risk of dolphin mortalities associated with fishing in the closure area, it has been determined that if a scientific trial is to be undertaken, it will not involve fishing in the area currently closed.

Given the current closures in place which prevent gillnetting, allowing gillnet boats flexibility to use hook methods appears to be a medium to long term solution for affected fishers. Converting boats to hook fishing methods will allow for fishing in more areas of the GHAT in the medium term and possibly the longer term depending on the results of trials and data received from the dolphin/Australia Sea Lion mitigation measures.

AFMA will not be providing any direct financial assistance to concession holders affected by the proposed closure Direction.

Economic impact

The impacts of the Dolphin Gillnet Closure on gillnet operators in South Australia was considerable.

Cost of lost catch: gillnet operators in South Australia are likely to face costs through lost catch as a result of not being able to fish with gillnets in the Dolphin Gillnet Closure. Prior to the implementation of the Temporary Orders and Closure direction, 15 of the 50 active gillnet boats in the GHAT had a history of fishing in the Dolphin Gillnet Closure area over the last five years.

Of the eight boats which fished within the Dolphin Closure for the 2011-12 fishing season before the Dolphin Temporary Orders and Closure Direction, six remained fishing with gillnets in areas outside of the closure after this date (Figures. 1 2 and 3). Effort moved to western regions of South Australia and east to the waters near the Victorian/ South Australian border (Figures. 1 2 and 3).

Cost of displaced effort: while the Dolphin Gillnet Closure will be closed to gillnetting, affected concession holders still have a large area of the fishery in which they can operate by the gillnet method. However, there are likely to be associated costs including higher fuel bills from fishing in new areas and possible increased effort in other parts of the fishery leading to lower catches in the future but this is hard to quantify at this stage.

Table 2: SESSF Gillnet catch for Gummy Shark, School Shark, Elephant Fish and Saw Sharks and estimated GVP values 2006-2012/3. Source: AFMA Catch Disposal Records and Logbook data. July 2012. Estimated using mean value per kilogram, ABARES Fisheries Status Reports 2008-11.

Season	Total catch (kg) gillnet GHAT	Total gillnet catch (kg) all South Australia	Total gillnet catch (kg) in Dolphin Gillnet Closure	Proportion of gillnet catch in Dolphin Gillnet Closure	Estimated GVP of gillnet catch Dolphin Gillnet Closure *
2006-07	1,637,920	589,799	218,633	13%	\$3,513,432
2007-08	1,816,309	533,010	198,164	11%	\$2,158,006
2008-09	1,763,213	604,211	198,588	11%	\$2,349,296
2009-10	1,507,770	448,147	167,045	11%	\$1,780,700
2010-11	1,468,968	420,388	243,824	17%	\$2,694,255
2011-12	1,200,109	165,413	37,503*	3%	\$416,658
2012-13	1,179,827	61,419	0	0%	\$0
Mean 2006-2011	1,638,836	519,111	205,251	13%	\$2,499,138

*Catch from 2011-12 season only accounts for approximately 5 months of effort in the Dolphin Gillnet Closure area, due to the Frist Temporary Order being implemented 23 September 2011.

The Dolphin Gillnet Closure accounts for approximately 13 per cent of fishing effort for the entire GHAT sector based on historical fishing records. The estimated mean Gross Value of Production for the Dolphin Gillnet Closure was \$2.5 million per annum over the 2006-07 to 2010-11 seasons (Table 2). Note that the current impact on industry Gross Value of Production is likely to be less than this amount because some effort has been displaced to other areas of the fishery (see Figure 1 and 3).

There is also a risk of reduction in allowable catches if more catch is taken in a smaller area of the fishery accounting for potential impacts on smaller localised stocks.

The area proposed to be closed under the Direction accounts for approximately 22 per cent of fishing effort for the entire GHAT sector based on historical catch records. Gross Value of Production for the GHAT sector of the SESSF in 2010-11 was \$23.8 million.

It should be noted that the fishery is managed though an access Statutory Fishing Right, which limits entry to the fishery, and catch quotas allocated as Statutory Fishing Rights. As a transitional or limited term measure the proposed closure Direction may have a short term impact; however the underlying value of the fishing rights may be unaffected in the longer term, depending on future arrangements.

While fishing in the Dolphin Gillnet Closure will be restricted, the fishery is quota managed and it is possible for quota to be caught across the fishery, or by using other fishing methods. Quota owners are able to sell or lease out quota at any time. Some concession holders also currently have permits allowing the use of hooks and gillnets and are equipped for both methods, meaning that no additional costs would be incurred to change fishing methods.

Additional observer coverage and monitoring

Under Regulation 9F of the Fisheries Management Regulations 1992 AFMA has the power to direct a fishing concession holder to carry an observer. The cost of an observer to be carried onboard a boat is approximately \$1200 per day and is cost recovered from industry in full. AFMA has various policies in place such as the Integrated Scientific Monitoring Program

which specify the amount of observer coverage needed for fisheries or areas of a fishery. In addition to this, specific circumstances will arise whereby concession holders are directed to carry an observer. Observer coverage allows for a better understanding of any by-catch mitigation strategies that need to be put in place, if required.

Currently in the GHAT sector of the SESSF concession holders are subject to 10 percent observer coverage. Additionally, specific areas of the fishery are subject to 100 percent observer coverage if fishing is undertaken using gillnets. In the areas subject to 100 percent observer coverage, a concession holder may choose to instead use Electronic Monitoring (EM) systems utilising onboard cameras to monitor fishing activities.

Initially, all cameras were installed at a cost to AFMA as part of the implementation of camera systems. Boats were chosen on the criteria of:

- interest in EM before the Australian Sea Lion temporary order was registered; and
- were equipped with gillnetting equipment and operate in the gillnet fishery; and
- had a demonstrated historical fishing activity in the Australian Sea Lion Management Zone.

There are currently 14 EM systems owned by AFMA, distributed throughout the fishery to boats which will provide the greatest saving on observer coverage. The cost of reviewing EM footage is directly recovered from the levy base.

AFMA is investigating the potential for externally contracting an EM service provider, which would see a significant increase AFMA's EM capabilities. This increase in EM coverage would support the Dolphin Management Strategy and is expected to deliver savings in management costs across the fishery.

Consultation

AFMA has been working with stakeholders over the last few years in the development of strategies to reduce the level of TEP interactions in the GHAT. This culminated in the development of the Australian Sea Lion Management Strategy in June 2010 which was further revised in 2011.

AFMA formed the Future Directions Working Group in 2012 to consult with industry on alternative management arrangements to prevent interactions with threatened species and provide fishers with more economic certainty. The working group, which consists of six industry representatives, has met three times between November 2012 and April 2013. Fishers involved in the working group are those directly affected by the proposed dolphin closure. Preliminary recommendations from the working group have identified the key issues facing industry. These fall into the following main categories:

- Access arrangements: new permit types to give fishers the ability to use other fishing methods;
- Input controls: investigation of the requirement of restrictions on fishing gear and areas;
- At sea monitoring: use of camera systems to monitor fishing operation in a cost effective manner;

- Individual accountability: investigating measures to implement management measures to reduce protected species interactions on individual fishers rather than the entire fishing sector; and
- Managing impacts on Dolphins and TEP species: research and management of mitigation devices and strategies to reduce protected species interactions.

The working group supported the development of a Dolphin Management Strategy to minimise interactions with dolphins across the GHAT. Industry members in the group acknowledged the need for the dolphin closure to remain in place pending the implementation of more formal measures to mitigate dolphin interactions across the GHAT.

Recommendations from the working group were presented to the Southern and Eastern Management Advisory Committee in June 2013 and the AFMA Commission in August 2013. Broader stakeholder consultation will also be conducted later in September 2013 through a public consultation paper.

A meeting of the marine mammal working group is planned for late September 2013 to discuss arrangements under the Dolphin Management Strategy. The marine mammal working group is made up of scientists and representatives from industry, government and environmental groups.

AFMA has also discussed dolphin interactions with the Shark Resource Assessment Group (SharkRAG), which comprises scientists, industry, economists, and representatives from the environment sector and AFMA representatives. SharkRAG provides expert scientific advice to AFMA and the AFMA Commission for decision. SharkRAG considered options to address the initial dolphin closure at their meeting of 29-30 August 2011. SharkRAG heard from industry participants on efforts to develop industry based voluntary compliance measures. Some industry members favoured an immediate closure of the Coorong area to gillnet fishing, while others argued for additional observer coverage. Other industry members noted the economic significance of the area of concern to SA gillnet fishers.

AFMA also discussed the issue of dolphin interactions with the South East Management Advisory Committee (SEMAC). SEMAC is an expert body which provides advice to the AFMA Commission on fisheries management issues, specifically the South Eastern Fisheries including the GHAT. It is comprised of industry, scientific, recreational, AFMA and conservation members. SEMAC members represent the interests of all stakeholders in the SESSF, and includes members from the GHAT sector which is the sector most likely to be affected by the proposed measures. The advice of SEMAC is not binding, but is taken into account by the AFMA Commission.

SEMAC first considered details of dolphin interactions at its meeting on 19 September 2011. The notion of spatial closures was tabled for discussion in the agenda paper. At the meeting, a number of SEMAC members supported an immediate closure to gillnet fishing in the area of high interactions, combined with additional observer coverage outside the closed area and the further refinement of voluntary industry measures to operate outside the closed area.

SEMAC has been provided with regular updates of dolphin interactions across the fishery including at the most recent meeting in June 2013. SEMAC was also consulted out of session on 29 August 2013 regarding the continuation of the dolphin closure. Two members expressed disappointment with the time taken for AFMA to implement an alternative management strategy to continued closures. The SEMAC Chair supported the continuation of the closure

noting the lack of scientific information on the species of dolphins encountered and the population status of such species.

AFMA has also consulted directly with industry members representing those directly affected by the closures. This has included multiple phone calls and written letters. The primary concerns raised by industry relate to the need for business certainty and a clear strategy on how to mitigate dolphin interactions. Following these phone calls AFMA has written to the industry representatives confirming that the proposed approach involves developing the Dolphin Management Strategy and maintaining the closure until the strategy is implemented.

Section 41A(2) states that AFMA must consult with the management advisory committee for the fishery before a closure Direction is made. AFMA consulted with SEMAC out of session in August 2013 about the continuation of dolphin mitigation measures, specifically about a closure Direction extending to the end date as now proposed.

AFMA will continue to consult with SEMAC and SharkRAG, industry members and other stakeholders, in developing the Dolphin Management Strategy and other long term strategies to achieve the objectives of these measures.

The agency has prepared a single-stage RIS, and as no decision has been previously announced, an options-stage RIS is not required.

Conclusion

AFMA considers that the options described above of doing nothing and voluntary measures would not be effective in continuing protection of dolphins following the high rates of dolphin interaction in certain parts of the GHAT. Therefore the preferred approach to solve the issue is to take regulatory action.

The impact analysis indicates that the appropriate and proportionate response to prevent further interactions with dolphins is to extend the current Dolphin Closure for 12 months. In conjunction with continuing the closure AFMA is developing a Dolphin Management Strategy that would allow restricted fishing inside the closure area and is designed to minimise interactions with dolphins across the gillnet fishery.

This would be achieved through:

- continuing the existing closure to gillnet fishing in the area of the GHAT with a high risk of dolphin interaction through the registration of a closure Direction for up to 12 months;
- development and implementation of a Dolphin Management Strategy that aims to minimise interactions with dolphins and would allow restricted fishing inside the closure area once implemented;
- requirement for 100 per cent monitoring of gillnet operations, either by observer coverage or electronic monitoring systems (EMS) in an area adjacent to the closure; and
- potentially extending the ability for affected operators to use hook methods instead of gillnets in closed areas.

Consistent with the principles of ecologically sustainable development (which include the exercise of the precautionary principle) AFMA must take action to ensure the measures currently in place to minimise interactions with dolphins are continued.

There will be increased costs to operators should they wish to fish by gillnet method in the area of waters requiring mandatory observer/electronic monitoring. However, affected concession holders will benefit economically from being allowed to use hooks in the closed area under temporary fishing permits, a method they are otherwise not entitled to deploy. Affected concession holders also have a large proportion of the fishery in which they may fish by gillnets outside of the area of the closure Direction.

The costs and benefits of the proposed regulatory measures are more favourable to industry when compared to other options such as shutting the entire GHAT sector to gillnetting by a closure Direction or not taking any action and potentially losing environmental accreditations for the SESSF as a whole and/or having the current management arrangements being subject to legal challenge.

Implementation and Review

Timing of measures

AFMA needs to urgently address interactions with dolphins in the GHAT sector of the SESSF. AFMA considers that, given the continuation of conditions that gave rise to an increase in reports of dolphin interactions, dolphin mortalities would continue in the Dolphin Gillnet Closure if it was reopened to gillnetting without sufficient management measures in place. AFMA anticipates that the Dolphin Management Strategy will be implemented by mid-2014.

The Dolphin Closure Direction expires on 23 September 2013 at which time the measures contained therein to minimise interactions with dolphins cease to have effect.

It is proposed that a continuation of current arrangements be put in place upon expiry of the Dolphin Closure Direction. The registration of a new closure Direction, should that option be decided, will take effect on 23 September 2013 and remain in effect for a period of 12 months. The closure will only be in place until the Dolphin Management Strategy has been fully implemented. In the event that the Dolphin Management Strategy is fully implemented prior to 23 September 2014, the proposed Closure Direction will be revoked.

It is likely that persons who meet eligibility criteria will be invited to apply for a temporary fishing permit allowing the use of hooks. These permits will be granted for a period of 24 months.

The impacts of the closure Direction, should it proceed, will be reviewed before the Direction expires. The major objective of the Direction will be to prevent dolphin interactions with gillnets whilst AFMA develops the Dolphin Management Strategy, detailing ongoing management arrangements for the fishery.

The period of the Direction and temporary fishing permits will allow AFMA and the fishing industry to consider the longer term use of gillnets in the fishery and to gather information on alternative mitigation methods and fishing practices. Any proposed measures will be reviewed by SEMAC and SharkRAG prior to implementation.

Any conversion of the current fishery in the long term to a hook fishery is complex, with potential impacts on other species of conservation concern, and changes in assets values and fishing efficiency.

If the measures currently in place are extended, AFMA will gain valuable data and knowledge that will help to determine the major factors that contribute to interactions with dolphins and other protected species especially through continued observation measures. This information is valuable to the development of the Dolphin Management Strategy and the closure is necessary to ensure adequate protection pending the implementation of formal management measures to minimise interactions with dolphins.