



Australian Government
Australian Fisheries Management Authority



Regulation Impact Statement

Managing interactions with Dolphins in the Gillnet
Hook and Trap Sector of the Southern and Eastern
Scalefish and Shark Fishery

☞ Southern and Eastern Scalefish and Shark Fishery

☞ September 2011

Executive summary

Reporting of interactions with dolphins while gillnet fishing in South Australian waters of the Gillnet Hook and Trap (GHAT) sector of the Southern and Eastern Scalefish and Shark Fishery (SESSF) has risen in the past year and in particular in the last few months. There has been 49 dolphin interactions reported since September 2010, 47 of these have been mortalities. The reports have indicated interactions with ‘dolphins’ but the exact species of dolphins are unknown. The interactions have 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) Management must immediately decide on a course of action to minimise interactions with and deaths of dolphins consistent with the objectives of the *Fisheries Management Act 1991* (FM Act), which it 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.

A failure to take immediate and decisive action would also expose AFMA to significant legal risks, in view of AFMA’s obligations, both under the FM Act, but also under and the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The options available to AFMA to respond to the reports of dolphin mortalities are to refrain from taking immediate action, to work with industry to develop voluntary measures, or to take regulatory action, such as through closure directions or a temporary orders. Only the latter is considered to be an appropriate and proportionate response to the high number of interactions and very high (~95%) mortality rate of dolphins. The first option is considered to be inconsistent with the legislation and the second too slow a response, noting industry has been aware of the interactions for some time and has not as yet implemented a credible response.

The preferred option of a temporary order would close the ‘hotspot’ area of the GHAT to gillnetting where the majority of recent dolphin interactions have been reported, allow fishing in the area described in the order by hooks for affected gillnet concession holders, and impose mandatory observer/electronic monitoring requirements for fishing by gillnets in an adjacent area to the closed area.

Should the temporary order proceed, the impacts will be reviewed by AFMA prior to its expiry, in consultation with relevant industry members, advisory groups and other stakeholders to aid in developing longer term management measures for the Gillnet Hook and Trap sector of the fishery.

Background

Fishery history

The GHAT fishery is a sector of the Southern and Eastern Scalefish and Shark Fishery (SESSF). The GHAT 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 Gummy Shark fishery. School Shark is subject to a rebuilding strategy and AFMA is taking action 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 total annual effort has been around 17,000 km of net. 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 some operators to increase catching efficiency.

Dolphin interactions

Fishers have reported very few interactions with dolphins throughout the history of the fishery. However, in the year 2010/11 and part of the current year 2011/12, numbers have risen sharply. The following table shows the increase in reported dolphin interactions:

Year	Logbook reports
2006/07	4
2007/08	6
2008/09	3
2009/10	0
2010/11	27 (2 live)
2011/12 (part)*	22 to date

*Note- final figures for interactions are subject to logbook and other reporting and may vary as final data is processed.

The fishing year in the above table represents the SESSF fishing year which is 1 May through 30 April. By extrapolating this data AFMA estimates there will be at least 60 dolphin

interaction reports this fishing year. Given differences in reporting between boats with and without independent monitoring, it is likely that this figure underestimates the real level of interaction. The 49 reports were from eight of the 50 active boats in the fishery.

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.

AFMA Management also wrote to GHAT fishery concession holders in March 2011 reminding them of their obligation to report interactions with Threatened, Endangered and Protected species, particularly dolphins. 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 observer coverage or electronic monitoring.

The ASLMZ comprises much of the area where recent dolphin interactions have been reported. The increased level of observer coverage and greater awareness of reporting requirements may explain recent 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 proposed Dolphin gillnet closure, AFMA is unable to ascertain whether sub-populations of genetically distinct animals may be involved in the interactions. 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.

The need for action

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 takes emergency 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.

Even if further assessment of the fishery is not required due to dolphin deaths, the approval for the fishery is due to be reassessed by mid-2012. AFMA considers that it is unlikely that an unconditioned approval could be granted with the current level of interactions.

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.

Immediate Government action is required to put in place reasonable steps to minimise interactions with dolphins in South Australian waters by gillnets to prevent further dolphin deaths. Since May 1 2011 more than 20 dolphins have died as a result of gillnetting in South Australian waters. Consequences that may arise in the very near future should immediate action not be taken 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.

AFMA is also not fully certain of the specific species of dolphins involved in the interactions. 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 an immediate need to cease fishing by gillnets in the area off South Australia where recent 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.

Previous action

Logbook data and observer collected data has shown that interactions with dolphins were very minimal in the years 2006-2010, however in these years observer coverage was low. In 2010 and through the current 2011 year, the level of reported interactions with dolphins has risen sharply.

Level of interactions

Independent observations by both onboard observers and cameras show that interactions with dolphins and other threatened, endangered and protected (TEP) species are occurring. Observations show that interactions with dolphins and other TEP species are higher than previously reported by fishers. While most reports state interactions with 'dolphins' or

‘common dolphins’ it is unclear which dolphin species are involved. It is important to accurately confirm the species involved. The relative abundance of species involved may help guide the nature of AFMA’s response in the longer term.

The rate of interactions reported in logbooks is considerably lower than expected given the rate of interactions observed by independent monitoring. This gives rise to concern about systematic under reporting and the quality of the data available to AFMA on which it bases its fishery management measures.

Due to the increased monitoring as a result of a temporary order in place to minimise interactions with Australian Sea Lions, new data has been submitted to AFMA highlighting dolphin interactions and that around 95% of these interactions result in the death of a dolphin.

Australian Sea Lion temporary order

AFMA made a temporary order to address heightened interactions with Australian Sea Lions in areas of the GHAT in South Australia that commenced on 1 May 2011 (the sea lions temporary order). The sea lions temporary order contains the following measures:

- closes parts of the waters off South Australia to gillnet fishing by Commonwealth concession holders operating in the GHAT sector of the SESSF where Australian Sea Lion colonies were identified;
- allows the use of hooks by operators who hold a Commonwealth concession currently allowing fishing by gillnets in the areas closed to gillnetting who met eligibility criteria based on the amount of fishing effort in the period May 2009 to May 2011; and
- requires 100 percent independent monitoring of gillnet fishing in an area adjacent to the closed areas by cameras or onboard observers.

The closing of some areas of the fishery and the increased observer/monitoring in the fishery appears to have contributed to the heightened number of dolphin interactions reported in the fishery. The fishery has recently seen a shift in the location of fishing effort due to the restrictions imposed by the sea lions temporary order imposed to address interactions with Australian Sea Lions. Reports of interactions with dolphins from boats fishing in the ASLMZ subject to mandatory observer coverage/electronic monitoring has highlighted the fact that boats may have been underreporting interactions with dolphins in the past.

However, as discussed above, the sharp increase in the reports of dolphin mortalities caused by gillnet fishing in the last 12 months commenced prior to the sea lion temporary order, and is coincidental with the use of electronic monitoring equipment on some boats since September 2010. This indicates that while some fishing effort may have been displaced to the area where most of the dolphin mortalities have occurred as a result of the sea lion changes, the high level of dolphin interactions in this area was clearly occurring prior to any recently displaced effort.

E-monitoring results

Eight boats have been fitted with electronic monitoring systems (EMS) to address Australian Sea Lion interactions, and a number of these boats are fishing in the area with high dolphin interaction rates. Preliminary analysis has shown the EMS to be effective at capturing all fishing events where a captured animal breaks the surface of the water with sufficient clarity to detect interactions with animals such as dolphins.

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.

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. Objectives of the *Fisheries Management Act 1991* (FM Act) include:

- (AFMA must) ensure 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

Do Nothing

If AFMA does not take immediate action 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.

There is a high likelihood that if AFMA does not take emergency action to minimise interactions with dolphins the future operation of the fishery as a whole may be at risk if the current environmental approval for the fishery is not maintained. 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.

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

Voluntary measures

Voluntary measures by the fishing industry to manage TEP interactions have previously resulted in mixed outcomes. They are dependant 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.

AFMA however does support voluntary measures to operate in non closed areas of the fishery.

As an example, the GHAT industry committed to implementing voluntary measures to assist in the management of interactions with Australian Sea Lions. Industry committed to drafting and implementing a Code of Conduct in which voluntary measures to avoid interactions with Australian Sea Lions and TEP species (including dolphins) would be included. The commitment to finalise the Code of Conduct was made some months ago and was expected to be implemented at the completion of the current temporary order. The Code of Conduct is still however in draft form and further consultation with industry and industry wide acceptance is needed.

Through consultation, industry have been made aware that should voluntary measures not be in place or effective, regulatory measures must be made to address specific issues such as Australian Sea Lion and other TEP species interactions. Since the Code of Conduct is yet to be finalised by industry members and industry support for the code is uncertain, AFMA does not regard voluntary measures as the preferred option to manage dolphin interactions for the area where the majority of interactions have been recorded. Further, while a draft Code of Conduct has been prepared, it lacks at this stage basic elements such as move-on provisions that would apply following a dolphin death.

Regulatory measures

Given that the do nothing and voluntary options are not regarded as an effective response a regulatory approach is preferred. There are several possible regulatory responses available to AFMA.

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. AFMA could choose to utilise this power and close the entire SESSF to gillnetting, or the GHAT sector of the SESSF to gillnetting. Enacting a closure whereby no gillnet effort is allowed in the whole fishery, or part of the fishery would have an immediate economic impact on the relevant concession holders.

Temporary Order

Section 43 of the FM Act gives AFMA the power to make a temporary order to enable quick action to be taken to deal with emergencies or other circumstances where urgent action is required for purposes related to the management of a fishery. Similar to a closure direction under section 41A of the FM Act, it would have an immediate economic impact on relevant concession holders.

AFMA could choose to utilise this power to address the dolphin interaction issue similarly to the decision made to address interactions with Australian Sea Lions in waters off South Australia in the GHAT sector. The temporary order would contain the following measures:

- closing a part of the waters off South Australia to gillnet fishing by Commonwealth concession holders operating in the GHAT sector of the SESSF where almost all the dolphin interactions have been reported; and
- allow the use of hooks by operators who hold a Commonwealth concession currently allowing fishing by gillnets in the Dolphin closure area who meet eligibility criteria based on the amount of fishing effort in the period May 2009 to June 2011; and
- require 100 percent independent monitoring of gillnet fishing in an area adjacent to the Dolphin closure area (Dolphin observation zone) by cameras or onboard observers.

A temporary order containing the above components 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]

In allowing those gillnet fishers most affected by the temporary order to continue to fish in areas closed to gillnet fishing using an alternative fishing method, the action would also be consistent with AFMA's further 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.

A closure Direction in combination with other measures would have the same impact on concession holders. However, a temporary order is recommended as the most appropriate mechanism because it can incorporate a combination of measures and is by definition an urgent, temporary measure. It provides sufficient time (6 months) to determine what longer term arrangements may be needed. This could be through a Direction, SFR conditions etc.

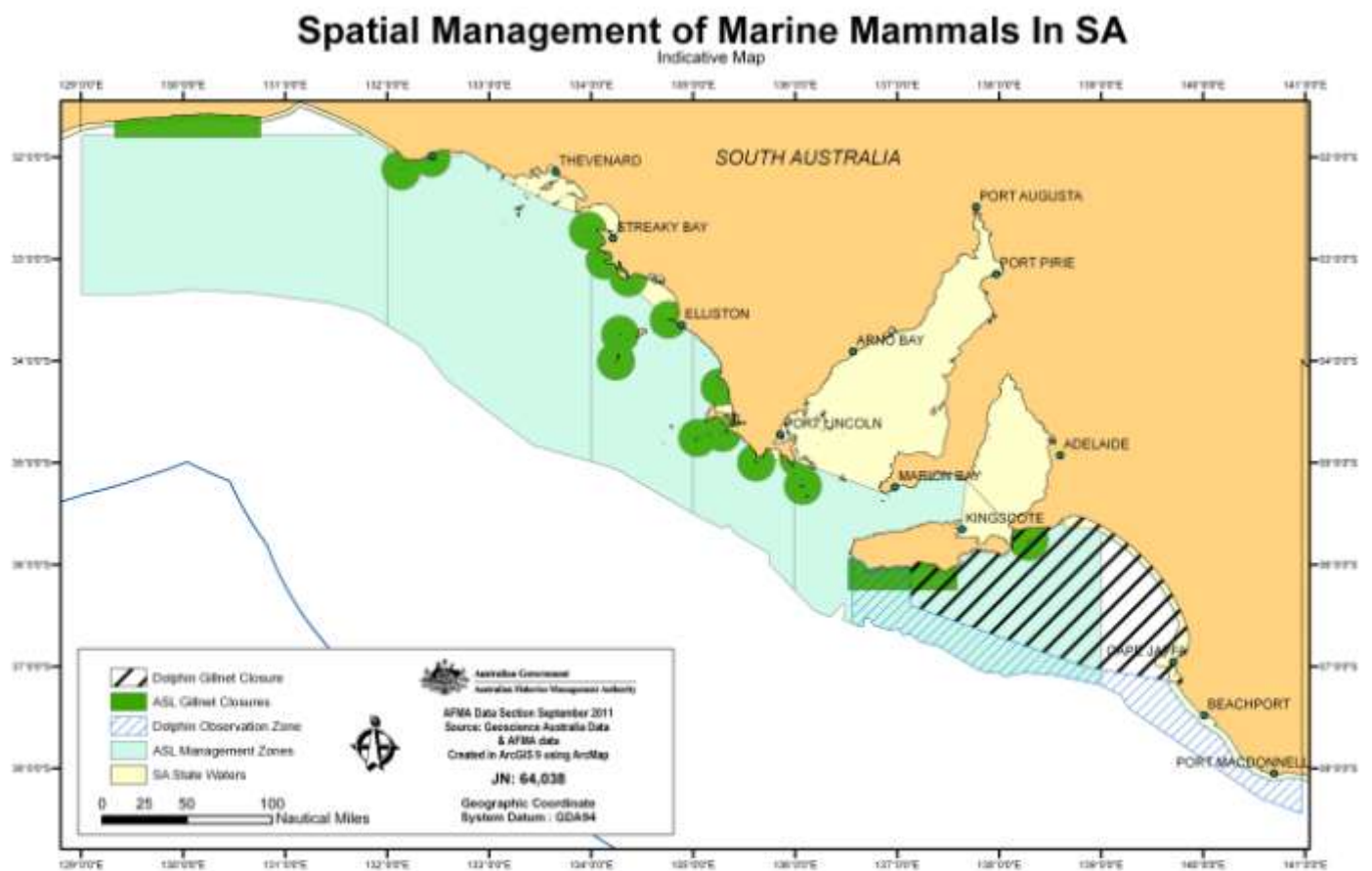
The coordinates of the *Dolphin gillnet closure* and the Dolphin observation zone are at Appendix.

Details of proposed arrangements

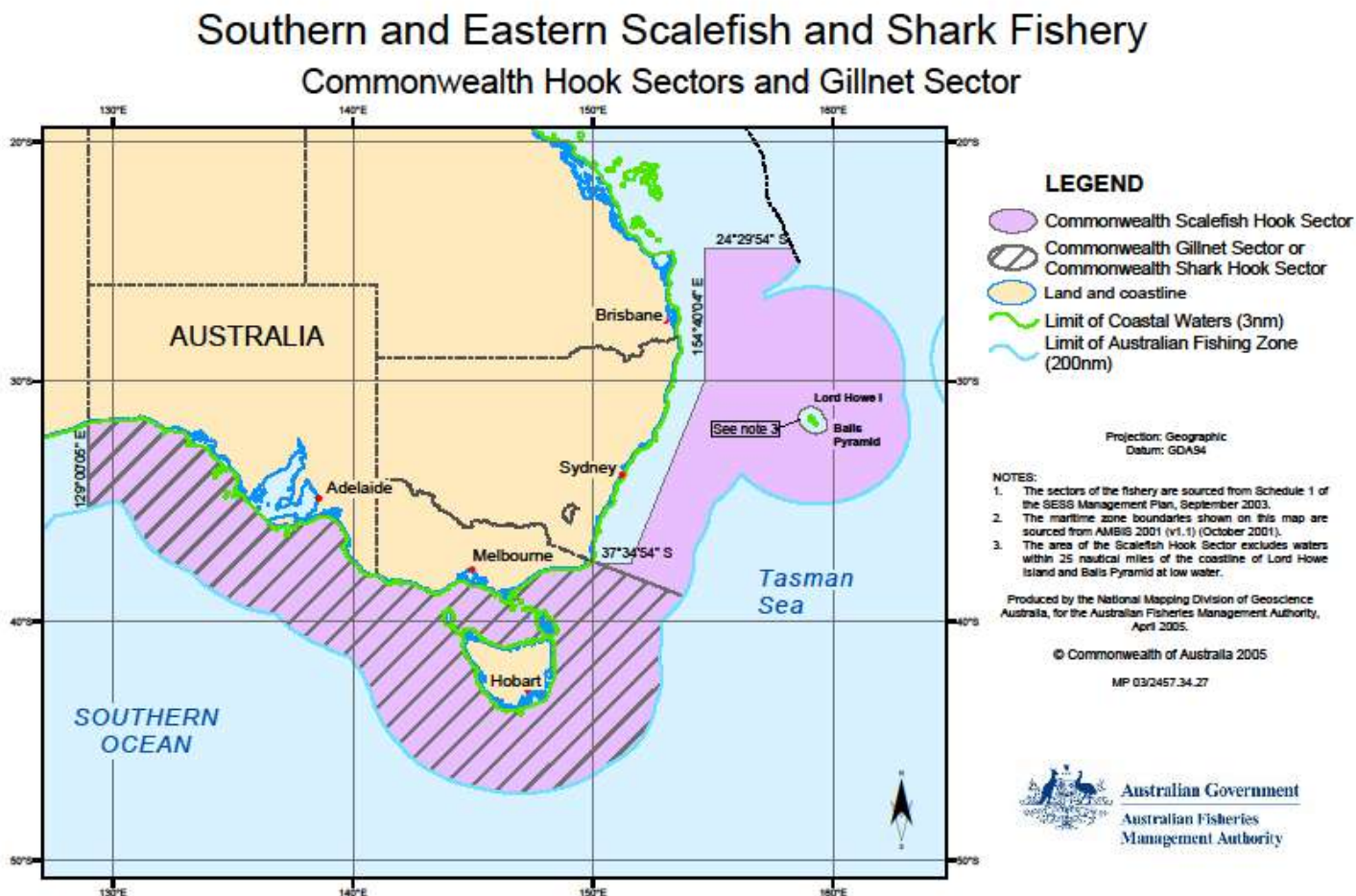
Closure of area with heightened dolphin interactions

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 temporary order would close this 'hotspot' area to fishing by gillnet method in order to minimise interactions and prevent further dolphin deaths.

The below map shows the proposed Dolphin gillnet closure and the Dolphin observation zone. It also shows the zones and closures in place under the current Australian Sea Lion temporary order.



In terms of size, the proposed dolphin area closure is 27,239km². The approximate size of the GHAT gillnet area is 297,142 km². The below map shows the area of the GHAT Sector of the Southern and Eastern Scalefish and Shark Fishery.



As with the closures in place under the Australian Sea Lion temporary order, it is likely that the proposed Dolphin gillnet closure will have consequences for the commercial viability of gillnet operators in South Australia. These include the value of lost catch, additional costs associated with fishing in new areas or by different methods and possible increased effort in other parts of the fishery. In a bid to minimise the impact to South Australian gillnet operators however, AFMA will allow gillnet operators that have fished extensively in the affected areas the option of using hooks in the area covered by the proposed temporary order.

The amount of fishing effort lost should the temporary order go ahead is uncertain. 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. Affected concession holders will also be allowed to fish in the area covered by the proposed temporary order with hooks if they choose, a method otherwise not allowed for under their fishing concession.

It is uncertain whether the closure of waters where recent dolphin interactions have occurred will mean fishing effort with gillnets will shift to a new area, and potentially simply shift the problem elsewhere. The proposed closure area is the only area of waters in the GHAT that recent observer and logbook data has shown has high levels of interactions with dolphins.

Should operators choose to fish in the proposed closure area with hooks, the chance of interactions with dolphins and other TEP species is dramatically reduced. Dolphins are much less likely to die as a result of fishing by baited hooks than they are by gillnets.

Modification of gillnet concessions 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 proposing to allow gillnet operators to use hooks in some circumstances in those areas closed to gillnetting under the temporary order. This measure will only apply to concession holders with a recent history of fishing 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 will qualify 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 significant economic impact on the fishery. Allowing the use hooks by eligible concession holders in the Dolphin gillnet closure is a short term measure and on balance is preferred to not enabling the use of hooks. To address the Shark RAG's first point AFMA has secured funding from the Fisheries Research and Development Corporation (FRDC) to assist with hook trials during the remainder of 2011/12.

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, but this would depend on the availability of equipment and location. Manual hook fishing is likely to be less efficient, and therefore more expensive than gillnet fishing, however hook caught shark attract a small price premium to 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. AFMA intends to review the results of data collected from proposed hook trials to analyse both the impact and efficiency of fishing by hook methods. These trials will enable AFMA to make long term decisions regarding fishing methods in this area of the GHAT sector.

AFMA will not be providing any assistance to concession holders affected by the proposed temporary order.

Economic impact

The area proposed to be closed under the temporary order accounts for approximately 22 per cent of fishing effort for the entire GHAT sector based on recent fishing history. Gross Value of Production for the GHAT sector of the SESSF in 2009-10 was \$24.5 million.

It should be noted that the fishery is managed through 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 temporary order 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

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 \$1000 per day and is cost recovered from industry in full. AFMA has various policies in place such as the Integrated Scientific Modelling 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, under the current Australian Sea Lion temporary order, 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 an onboard camera to monitor fishing activities. Onboard cameras may be purchased at an approximate cost to operators of \$21,000. The wait time on a suitable camera is currently 8-9 weeks. In addition operators will need to cover the costs of data processing and analyses which will cost \$60 per hour of footage analysed, \$300 per disc analysed and \$300 per disc report. There are currently 8 boats fitted with suitable camera systems with another 4 installations to be completed. 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 e-Monitoring 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.

It is proposed that the current 100 percent observer zone when fishing with gillnets under the Australian Sea Lion temporary order be increased under the dolphin temporary order (see attached map). A proportion of the mandatory observer/monitoring zone will overlap the current monitoring zone in place under the Australian Sea Lion temporary order.

Consultation

AFMA has been working with stakeholders for over a year in the development of strategies to reduce the level of TEP interactions in the GHAT fishery. This culminated in the development of the Australian Sea Lion Management Strategy in June 2010 which further led to the implementation of the Australian Sea Lion temporary order to minimise interactions with Australian Sea Lions.

More recently, AFMA has consulted with industry, environment groups and scientists on the issue of dolphin interactions. AFMA has discussed dolphin interactions with the Shark Resource Assessment Group (SharkRAG). SharkRAG considered options to address the issue 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 has 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, 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.

At a meeting on 19 September 2011 an agenda item was tabled outlining the dolphin interaction issue. Voluntary measures were discussed but AFMA noted that to be effective a fishery wide industry body would probably be necessary to oversee voluntary compliance and ensure uniform application across the fishery. It was outlined in the agenda paper that in the absence of an effective or credible industry response AFMA would need to regulate fishing to address dolphin interactions. 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.

Conclusion

The preferred option to address the issue of interactions with dolphins in waters off South Australia by gillnet operators in the GHAT sector of the SESSF is to implement a temporary order to close an area of the fishery South East of Kangaroo Island to gillnetting, allow for the

use of hooks by those eligible operators in the closed area of the fishery and require mandatory observer/electronic monitoring in an area adjacent to the closed area.

AFMA is unsure of the species of dolphins involved in the reported interactions, and the exact number of each species and subjected to injury or death is therefore unknown. However, consistent with the principles of ecologically sustainable development (which include the exercise of the precautionary principle) AFMA must take urgent action.

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. Affected concession holders however will benefit economically from being allowed to use hooks in the closed area under the temporary order, 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 temporary order.

The costs and benefits of the proposed temporary order 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 address this emergency situation. It is proposed that new arrangements be put in place as soon as possible. The registration of a temporary order, should that option be decided, will take effect on the date it is registered with the Federal Register of Legislative Instruments or a date specified in the instrument.

Under the Act, the temporary order may be registered for a maximum of six months with the possibility for one six month extension.

The impacts of the temporary order, should it proceed will be reviewed before the Order expires. The major objective of the temporary order will be to significantly and immediately reduce the number of dolphin interactions with gillnets. This will be constantly monitored by AFMA.

The period of the temporary order will allow AFMA and the fishing industry to consider the longer term use of gillnets in the fishery and to gather information on alternative fishing methods. A trial of hook fishing methods is planned for early summer, and result may be available early next year. 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.

Appendix

The *Dolphin Gillnet Closure* is the area of waters adjacent to the coast of South Australia:

- Starting at the intersection of 137° 08'E and the low water mark of Kangaroo Island;
- Then south to 36° 24'S 137° 08'E;
- Then southeast to 37° 00'S 138° 50'E;
- Then southeast to the intersection of 37° 09' 24"S and the low water mark of the coast of mainland Australia in the vicinity of Cape Dombey;
- Then generally northwest along the coast of mainland Australia to the intersection of 138° 08'E and the low water mark;
- Then south to the intersection of 138° 08'E and the low water mark of Kangaroo Island in the vicinity of Cape Willoughby;
- Then generally southwest along the coast to the point of commencement.

The *Dolphin Observation Zone* is the area of waters:

- Starting at the intersection of longitude 136° 33' 55"E and the low water mark on the southern coast of Kangaroo Island;
- Then South to the intersection with the 183m line at 36° 34' 44"S and 136° 33' 55"E;
- Then following the 183m line in a SE direction (via points 22 to 42 of the 183m gillnet closure) to 38° 26' 35"S and 140° 58'E;
- Then North to the intersection with the 3 nautical mile line at 38° 06' 29"S and 140° 58'E;
- Following the 3 nm line North West to 37° 08' 42"S off Cape Dombey and 139° 40' 30"E
- Then North West to 37° 00'S 138° 50'E;
- Then North West to 36° 24'S 137° 08'E;
- Then North to the intersection of 137° 08'E and the low water mark on the southern coast of Kangaroo Island;
- Then West to the point of commencement.