



Australian Government

Australian Fisheries Management Authority



Dolphin Strategy

 MINIMISING GILLNET BYCATCH

 SEPTEMBER 2014

Executive summary

The ultimate aim of this Dolphin Strategy (the Strategy) is to minimise the bycatch of dolphins in gillnets in the Southern and Eastern Scalefish and Shark Fishery (SESSF) to as close to zero as possible. To achieve this, the short term objective of this Strategy is for each gillnetting boat to adopt the measures best suited to their individual operation to minimise their risk of bycatch.

The Strategy is being implemented in two stages. The first stage includes new measures to:

- reduce the risk of dolphin bycatch
- improve information on factors contributing to dolphin bycatch
- introduce measures based on individual responsibility that will apply in the Coorong Zone in South Australia from mid-2014.

AFMA expects the second stage will involve applying individual responsibility based measures to gillnetting across the remainder of the SESSF 12-18 months after implementation in the Coorong Zone.

This Strategy implements an individual responsibility approach to create incentives for fishers to innovate and adopt best practices to minimise bycatch. Under the individual responsibility approach fishers are responsible for their actions to minimise bycatch and stay within defined bycatch performance criteria.

The extensive on-water experience of fishers is harnessed to minimise the risk. Individual responsibility requires camera based e-monitoring systems or an AFMA on-board observer to be feasible. The two stages of this Strategy reflect the anticipated adoption of e-monitoring by gillnet fishers.

The Strategy requires a management response for any dolphin bycatch. For any subsequent bycatch, a series of escalating management responses are applied to individual fishers culminating in closures for fishers who are unable to resolve the issues themselves.

There will also be an evaluation by AFMA and the boat involved of the factors contributing to the bycatch. If, at any time, cumulative dolphin bycatch in Coorong Zone approaches the numbers previously seen, AFMA will review the Dolphin Strategy with advice from the Marine Mammal Working Group. This is consistent with best practice adaptive management and revisions will consider the principles of individual responsibility and the ultimate aim of the strategy.

Need for change

During 2011, AFMA saw a sharp increase in reported bycatch of dolphins by fishers in South Australia using bottom-set gillnets. A total of 52 dolphins were caught over 12 months between late 2010 and late September 2011 with the majority (50) being mortalities.

To prevent further dolphin mortalities, in September 2011 AFMA temporarily closed an area of South Australian waters to gillnet fishing while longer-term arrangements were developed.

The closed area included waters known as the Coorong to the east of Kangaroo Island where most of the dolphin bycatch had occurred (the Coorong Zone). AFMA also established a monitoring zone adjacent to the closed area (Dolphin Observation Zone) in which all gillnet fishing was required to be monitored by observers or e-monitoring systems.

The closure of the Coorong Zone and the monitoring requirements in the Dolphin Observation Zone remain in place. A map of the closures is included at **Appendix A**.



The area (the Coorong Zone) closed to gillnet fishing has been a highly productive area for catching Gummy Shark, with approximately 80% of the total South Australian catch coming from this area in the years preceding the closure. This closure has significantly impacted the shark fishing operators based in key ports such as Robe and Port Adelaide as well as a number of smaller ports including Victor Harbour, Cape Jervis and Southend.

Such 'one out, all out' closures can unduly impact fishers who have avoided bycatch and do not provide incentives for individuals to develop their own strategies to minimise dolphin bycatch. This Strategy reflects a new approach to reducing the risk of dolphin bycatch in the SESSF. It requires fishers to take responsibility for bycatch of dolphins and provides incentive for fishers to adopt best practices and innovate to minimise the risk of dolphin bycatch.

Objectives

This Strategy aims to minimise the bycatch of dolphins in gillnets in the SESSF to as close to zero as possible. To achieve this, the short term objective of this Strategy is for each gillnetting boat to adopt the measures best suited to their individual operation to minimise their risk of bycatch.

This is consistent with AFMA's pursuit of its objectives to ensure that 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. In addition AFMA must also ensure, as far as practicable, that measures adopted in pursuit of those objectives must not be inconsistent with the preservation, conservation and protection of all species of whales and dolphins.

Actions to achieve objectives

The objectives are to be achieved by:

- (a) improving information on the nature of interactions between dolphins and fishing gear, particularly what species are involved;
- (b) providing incentives for individual operators to reduce dolphin bycatch and implement and develop mitigation measures best suited to their circumstances and location; and
- (c) identifying options and best practice measures to support fishers in minimising dolphin bycatch.

Needs	Actions
Good information on dolphin bycatch and supporting fishers adopt mitigation options	<ul style="list-style-type: none"> • All fishers and AFMA to complete an evaluation report for any dolphin bycatch. • Implement e-monitoring. • Industry and AFMA identify and publish best practice mitigation options (see Appendix B). • Define information needs and research priorities.
Stronger responsibility and incentives for individual fishers to minimise their	<ul style="list-style-type: none"> • Management response for any dolphin bycatch. • Staged implementation of individual responsibility. <ul style="list-style-type: none"> ○ Individual fishers are responsible for actions to minimise bycatch.



bycatch	<ul style="list-style-type: none"> ○ Escalating management response culminating in closures for those operators who are unable to minimise bycatch.
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STAGE 1: [1 SEPTEMBER] 2014

New rules for all gillnet fishers

All gillnet operators must cease fishing and move fishing operations at least five nautical miles from any point of the gear set if there is any dolphin bycatch. The purpose of this measure is to encourage fishers to adapt their fishing practices on the water and reduce the risk of further dolphin bycatch by moving away from where the dolphin bycatch occurred.

Fishers must also submit a Dolphin Bycatch Evaluation Report to AFMA and an industry association after every dolphin bycatch event. This will allow AFMA to evaluate if there are any trends or factors that contribute to bycatch.

Table 1. New measures to apply for all gillnet fishers in response to a dolphin being caught as bycatch.

Performance measure (triggers)	Fisher and management response
<p>Any dolphin bycatch</p> <p><i>Defined as:</i></p> <ul style="list-style-type: none"> • <i>one or more dolphins have been or are caught in a single gear set</i> 	<ul style="list-style-type: none"> • Operator to suspend fishing immediately, move operations by at least five nautical miles before recommencing fishing • operator to complete a Dolphin Bycatch Evaluation Report and submit it to an industry association and AFMA

New rules for those operators who want to fish in the Coorong Zone

Before fishing

All operators intending to fish in the Coorong Zone must:

- have an AFMA approved e-monitoring system (sensors, cameras and recording unit) operating during all fishing activity or an AFMA observer paid for by the operator on a fee for service basis
- use AFMA accredited electronic-logbooks
- complete a gear survey outlining current fishing gear used
- develop a Dolphin Mitigation Plan that outlines what actions are being taken by the fisher to minimise the risk of dolphin bycatch. The dolphin mitigation plan must be submitted an approved AFMA before fishing in the Coorong Zone and include a statement about actions being taken in the following areas and how this is expected to minimise bycatch:
 - fishing practices (e.g. how you are setting relative to tide etc.)
 - gear setup (e.g. any changes or modifications to gear from previous seasons)
 - mitigation devices (e.g. any mitigation or modifications)



Dolphin Mitigation Strategies should be updated by operators as appropriated with the updated version provided to AFMA before implementation.

A summary of mitigation gear and strategies developed by industry and the Marine Mammal Working Group can be found in **Appendix B**.

Reporting requirements

- The details of any dolphin mortalities must be reported to AFMA’s Service One Section on **1300 723 621** or licensing@afma.gov.au as soon as possible but in any event no later than 48 hours after the capture.
- A Dolphin Bycatch Evaluation Report must be sent to AFMA within 48 hours of landing at the end of the trip along with the Threatened Species Interaction Form included in the daily fishing logbook.

Note: In addition to the reporting requirements under AFMA legislation, all protected species interactions must be reported under requirements of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Any fishers found not to have reported an interaction will be reported to the Department of Environment for compliance action. Fishers are still required to complete Threatened Species Interaction forms in logbooks for any interaction.

In addition to penalties that may apply under the EPBC Act, failure to report any dolphin mortality will result in being excluded from the Coorong Zone for a period of one year.

Performance criteria and management responses

The performance criteria defined here have been designed to manage and mitigate an increasing bycatch problem for a fishing operator using gillnets. For each criterion there is an associated management response that escalates to the point where an individual fisher cannot continue fishing with gillnets in the Coorong Zone.

An operator is excluded from fishing with gillnets in the Coorong Zone if they exceed a bycatch rate assessed over a six month Review Period of 1 dolphin mortality per 50 gear sets. Note that when the Coorong Zone was closed to all gillnet fishing in 2011, the bycatch rate prior to the closure was one dolphin in 30 gillnets sets. The bycatch rate used in this strategy is more precautionary than previously and is now being applied for individual boats to determine the point at which AFMA considers it is no longer acceptable to continue fishing.

The escalating responses and performance criteria are set out in **Table 2** and ensure that a fisher cannot continue fishing unchecked if they have significant dolphin mortalities in a trip or an ongoing bycatch problem.

Table 2: Performance criteria and escalating management responses applying in the Coorong Zone

Performance criteria (triggers)	Fisher and management response
<p>Any dolphin bycatch</p> <p><i>Where:</i></p> <ul style="list-style-type: none"> • <i>one or two dolphins are or have been caught in a single gear set.</i> 	<p>Cease fishing and move away</p> <ul style="list-style-type: none"> • Operator to cease fishing immediately and move operations by at least five nautical miles before recommencing fishing • Operator to complete a Dolphin Bycatch Evaluation Report and submit it to AFMA and an industry association within 48 hours of landing at the end of the trip • AFMA to contact operator and evaluate



	circumstances of the bycatch
<p>Additional dolphin bycatch</p> <p>Where:</p> <ul style="list-style-type: none"> • <i>there are two or more dolphin mortalities over different gear sets during a trip; or</i> • <i>three or more dolphin mortalities in a trip.</i> • <i>dolphin mortalities occur during three different trips in a six month Review Period.</i> 	<p>Return to port for review</p> <ul style="list-style-type: none"> • Operator must cease fishing with gillnets and return to port and complete a Dolphin Bycatch Evaluation Report and submit it to AFMA and an industry association within 48 hours of landing at the end of the trip • AFMA officers to inspect boat and review bycatch factors (fee for service charge) before operator can continue fishing with gillnets in the Coorong Zone
<p>Review and bycatch rate</p> <p>Where:</p> <ul style="list-style-type: none"> • <i>at the end of a Review Period the bycatch rate exceeds the Maximum Bycatch Rate; or</i> • <i>the bycatch rate, given the maximum number of sets for a six month period, will exceed the Maximum Bycatch Rate at the end of a Review Period*</i> <p><i>*Because an operator is unlikely to conduct more than 300 shots within a Review Period, AFMA will not await the end of the dolphin season before excluding an operator. This will prevent significant dolphin mortalities accumulating within a season.</i></p>	<p>Six month closure</p> <ul style="list-style-type: none"> • Operator will be excluded from fishing with gillnets in the Coorong Zone for six months. • AFMA officers to inspect boat and review bycatch factors (fee for service) before operator can continue fishing with gillnets in the Coorong Zone
<p>Failure to report</p> <p>Where:</p> <ul style="list-style-type: none"> • <i>the operator fails to report a dolphin interaction defined by logbooks</i> 	<p>12 month closure</p> <ul style="list-style-type: none"> • Operator excluded from fishing with gillnets in the Coorong Zone for 12 months. • Potential penalties apply under the Fisheries Management Act 1991 and the EPBC Act.

STAGE 2: OUTSIDE THE COORONG ZONE

In the second stage of this Strategy it is intended that measures based on individual responsibility in the Coorong Zone will be implemented for all gillnet fishers. Stage two is scheduled to commence following the outcome of a review of the first 12 months of this strategy and the implementation of e-monitoring across the gillnet fleet.

The performance measures and management responses outlined in this strategy (**Table 2**) have been designed specifically for the Coorong Zone. Further consultation will take place to determine appropriate performance criteria and management measures for other areas of the fishery.



Information Needs and research

Information and data

To ensure that the management actions described in the Strategy continue to be effective at minimising dolphin bycatch in gillnets, AFMA will collect the following information:

- the quantity and nature of dolphin bycatch
- spatial and temporal information on dolphin bycatch
- effectiveness of mitigation strategies (gear type & behavioural adaptation)

This information will be collected through the analysis of e-monitoring footage as well as through Dolphin Bycatch Evaluation Reports submitted to AFMA by industry following any dolphin bycatch.

Research Priorities

The Dolphin Mitigation Sub-committee of the Marine Mammal Working Group has identified four key research priority areas.

- Study to determine which acoustic mitigation options (pingers) are most suitable for use in SESSF gillnet sector.
- Passive acoustic monitoring project to determine when bycatch is occurring during fishing operations.
- Study to establish population estimates for Common Dolphins and Bottlenose Dolphins.
- Surveys to determine temporal patterns of dolphin distribution and abundance in the area.

AFMA is supportive of these research priorities, noting the limited capacity AFMA has for directly carrying out this research. AFMA will support industry or third party applications to conduct this research through AFMA's linkages with research programs and funding bodies such as CommFRAB and the FRDC.

Review and performance of the strategy

Performance of individual fishers will be monitored continuously against the criteria set out in this strategy.

AFMA will monitor cumulative dolphin bycatch and will consult the Marine Mammal Working Group if dolphin bycatch approaches the levels seen prior to the previous closure of the Coorong Zone.

An initial review of this Strategy against its objectives will be conducted by AFMA and the Marine Mammal Working Group after 12 months.

The outcomes of this review will form the basis for considering how individual responsibility arrangements can be implemented for all gillnet fishers in stage two. It is envisaged that this Strategy will be updated with specific performance measures (triggers) and management responses that will apply across gillnetting areas in the SESSF.

AFMA will consider amending this strategy over time to include other fishing methods if they are shown to have a bycatch problem with dolphins.



Definitions

Bycatch – The unintentional catch of a species of animal during fishing operations

Coorong Zone – The area of the Coorong Zone is the part of the Australian Fishing Zone and coastal waters of the State of South Australia contained within and bounded by a line:

- a) Starting at the intersection of 137° 08'E and the low water mark of Kangaroo Island;
- b) Then south to 36° 24'S 137° 08'E;
- c) Then southeast to 37° 00'S 138° 50'E;
- d) 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;
- e) Then generally northwest along the coast of mainland Australia to the intersection of 138° 08'E and the low water mark;
- f) Then south to the intersection of 138° 08'E and the low water mark of Kangaroo Island in the vicinity of Cape Willoughby;
- g) Then generally southwest along the coast to the point of commencement.

Dolphin – A marine mammal in the family Delphinidae

Dolphin mortality – A dolphin caught in a gillnet shall be considered a mortality if:

1. It is obviously dead (i.e. shows no muscle movement or corneal reflex); or
2. it is landed alive but displays any of the following pathologies that may lead to its death after release:
 - a. Minimal movement and hangs limp when released into the water; or
 - b. Has visible injuries.

Dolphin Observation Zone – the 'Dolphin Observation Zone' means the area of waters:

- (a) starting at the intersection of longitude 136° 33' 55"E and the low water mark on the southern coast of Kangaroo Island;
- (b) then South to the intersection of 36° 34' 44"S and 136° 33' 55"E;
- (c) then following the Shark Hook and Gillnet Deepwater Closure line in a SE direction (via points of the Shark Hook and Gillnet Deepwater Closure line) to 38° 26' 35"S and 140° 58'E;
- (d) then North to the intersection with the 3 nautical mile line at 38° 06' 29"S and 140° 58'E;
- (e) following the 3 nm line North West to 37° 08' 42"S off Cape Dombey and 139° 40' 30"E
- (f) then North West to 37° 00'S 138° 50'E;
- (g) then North West to 36° 24'S 137° 08'E;
- (h) then North to the intersection of 137° 08' and the low water mark on the southern coast of Kangaroo Island; and



(i) then West to the point of commencement.

Fishing Season – The 12 month fishing season as determined for the Southern and Eastern Scalefish and Shark Fishery commencing on 1 May and concluding on 30 April in the following year.

Fishing Trip – The duration of time between leaving port and returning to port and unloading.

Gear Set – The act of deploying gillnet fishing equipment equivalent to 4200m of gillnet.

Industry association – Means either the Southern Shark Industry Alliance Inc or Sustainable Shark Fishing Inc.

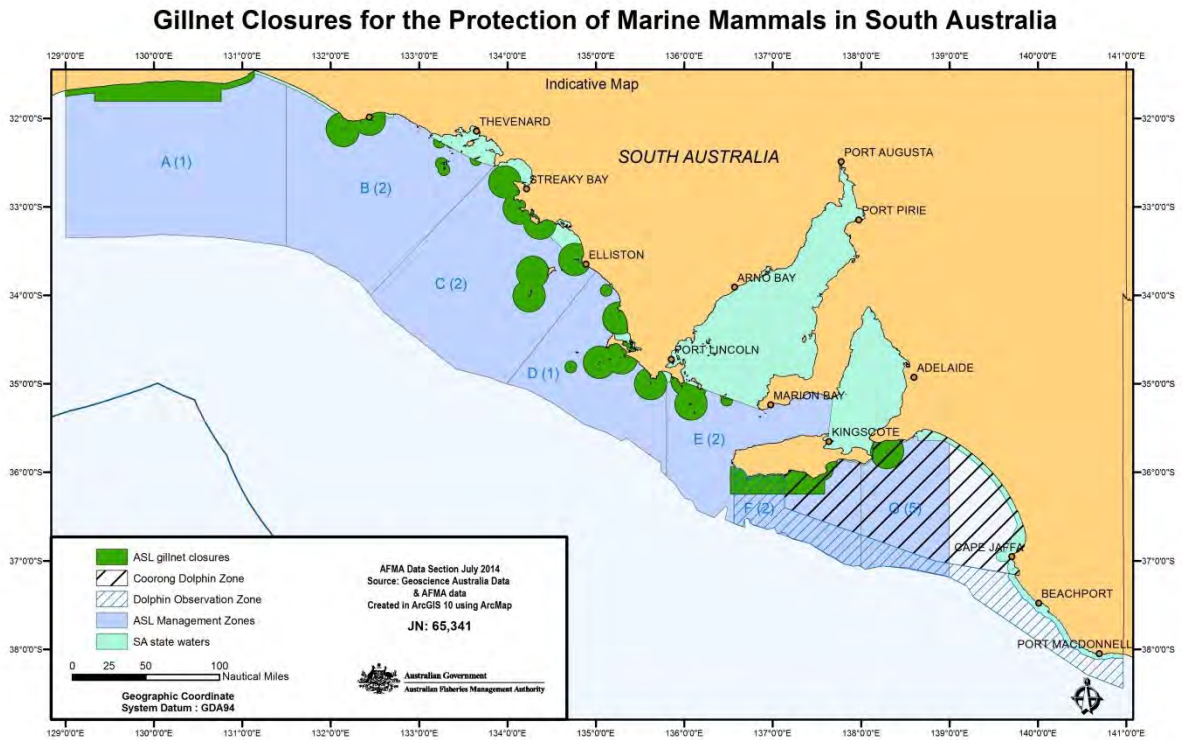
Marine Mammal Working Group – Is the group established by AFMA to advise on issues relating to marine mammals in the Gillnet, Hook and Trap sector. It consists of scientists and representatives from State and Federal government departments, environmental groups and the fishing industry.

Maximum Bycatch Rate - One dolphin mortality per 50 gear sets.

Review Period – Each of the first six months and second six months of the Fishing Season.



Appendix A: Chart of the Coorong Zone and Dolphin observation zone in Australia.



Appendix B: Best Practice Mitigation

Dolphin mitigation strategies for gillnets in the GHAT remain untested though there is a considerable amount of literature from other fisheries and industry experiences that can provide fishers with information to aid in minimising dolphin bycatch. The Marine Mammal Working Group dolphin mitigation sub-committee, consisting of industry representatives, mitigation experts and researchers, met during February 2014. The group put forward the best current knowledge of practices that may aid the reduction in dolphin mortalities.

While AFMA and the sub-committee cannot guarantee that any single or combination of mitigation recommendations will prevent all dolphin bycatch it is expected that following the recommendations will reduce the risk of bycatch. In addition, improved data collection of what fishing practices are being used will improve the fishery’s knowledge of successful mitigation practices.

Mitigation measures have been broken down into three broad categories gear, fishing practices and technology. Industry representatives from the Dolphin Mitigation Sub-Committee made a number of recommendations (**Table 3**) which can be implemented to reduce dolphin bycatch with gillnets.

Table 3: Best practice mitigation measures for reducing dolphin bycatch with gillnets recommended by industry through the Dolphin Mitigation Sub-Committee.

Recommendation	Benefits
Use of large anchors	<ul style="list-style-type: none"> • Increases horizontal tension • Reduces gear movement • Increases sink rate of net • Reduces likelihood of net folding over
Increase head rope flotation	<ul style="list-style-type: none"> • Increases vertical tension • Reduces likelihood of net folding over
Set with tide	<ul style="list-style-type: none"> • Increases horizontal tension • Reduces likelihood of gear twisting • Maintain selectivity characteristics of net mesh
Minimum 300g/m footrope weighting	<ul style="list-style-type: none"> • Increases vertical and horizontal tension • Increases sink rate
Use of additional weights	<ul style="list-style-type: none"> • Increases vertical and horizontal tension • Increases sink rate
Maintain gear condition	<ul style="list-style-type: none"> • Maintain selectivity characteristics of net mesh
Shoot gear in multiple fleets	<ul style="list-style-type: none"> • Increase sink rate • Reduce likelihood of gear twisting



Appendix C: Conservation status of dolphin species in southern Australian waters

There is an acknowledged lack of data available to management on populations of dolphin species in southern Australia. There remains uncertainty about species distribution, population size, movement and species classification. There are 13 species of oceanic dolphins (species of the Cetacean family Delphinidae) that have been documented as occurring in the gillnet fishing areas of the SESSF.

AFMA commissioned a marine mammal expert to attempt to identify dolphin mortalities for vessels using e-monitoring systems in 2012. The analysis of recorded fishing footage found that 38 of the 40 dolphins identified were Common Dolphins (*Delphinus delphis*) and two were species from the genus *Tursiops*, (Bottlenose dolphins) most likely to be *Tursiops truncatus*. The current conservation status for these species is listed as no category assigned due to insufficient information (Bannister et al. 1996). While the overall population of these species of dolphins is likely to be not threatened, i.e. not at risk from fishing, it has not yet been determined if sub-populations of genetically distinct animals may be at risk from fishing gear. It is envisaged that the Dolphin Strategy can be adapted if the conservation status of a species of dolphin changes.

Table 3: Species of the Cetacean family Delphinidae that have been documented as occurring in the area of the SESSF (Source Ross 2006)

Species	Conservation status under Bannister et al. (1996)*/IUCN#	Comment	Anthropogenic threats (Culik 2004)^
Common Dolphin (<i>Delphinus delphis</i>)	NCA(a)/ DD	Previously recorded in gillnets southern Australia	Catch, bycatch, culling, pollution, habitat degradation, overfishing
Bottlenose Dolphin (<i>Tursiops truncatus</i>)	NCA(a)/ DD	Previously recorded in gillnets southern Australia	Catch, bycatch, culling, pollution, overfishing
Indo-Pacific Bottlenose Dolphin (<i>Tursiops aduncus</i>)	NCA(a)/DD	Previously recorded in gillnets in southern Australia	Unknown
Risso's Dolphin (<i>Grampus griseus</i>)	NCA(a)/ DD	Not previously recorded in gillnet in Southern Australia. Has been caught in gillnets in other areas worldwide.	Catch, bycatch, culling, pollution
Rough-toothed Dolphin (<i>Steno bredanensis</i>)	NCA(a)/ DD	Not previously recorded in gillnet in Southern Australia. Has been caught in gillnets in other areas worldwide. Most likely not residents but vagrants from northern Australia.	Mass stranding, bycatch, pollution
Spectacled Porpoise (<i>Phocoena dioptrica</i>)	NCA(a)/ DD	Not previously recorded in gillnet in Southern Australia. Most likely not residents but vagrants from colder waters.	Catch, bycatch



Dusky Dolphin (<i>Lagenorhynchus obscurus</i>)	NCA(a)/ DD	Not previously recorded in gillnet in Southern Australia. Most likely not residents but vagrants from colder waters.	Catch, bycatch
Fraser's Dolphin (<i>Lagenodelphis hosei</i>)	NCA(a)/ DD	Not previously recorded in gillnet in Southern Australia. Has been caught in gillnets in other areas worldwide. Most likely not residents but vagrants from northern Australia.	Catch, bycatch
Southern Right Whale Dolphin (<i>Lissodelphis peronii</i>)	NCA(a)/ DD	Not previously recorded in gillnet in Southern Australia. A pelagic species, usually well offshore but if inshore, in deep water. On outer edge of continental shelf. In northern parts of distribution, associated with cold currents and upwelling conditions.	Catch, bycatch
False Killer Whale (<i>Pseudorca crassidens</i>)	NCA(b)/ LC	Not previously recorded in gillnet in Southern Australia. They approach close to land only where the continental shelf is narrow., possibly attracted to zones of enhanced prey abundance along the continental slope (Bannister et al. 1996).	Catch, bycatch, culling, pollution
Long-finned Pilot Whale (<i>Globicephala melas</i>)	NCA(b)/ LC	Not previously recorded in gillnet in Southern Australia. This species inhabits temperate (10-20°C) and subantarctic (1-8°C) deep oceanic waters. and zones of higher productivity along the continental slope, apparently venturing into the shallower waters of the shelf (<200 m) in pursuit of favoured prey species.	Catch, bycatch, overfishing, pollution
Short-finned Pilot Whale (<i>Globicephala macrorhynchus</i>)	NCA(b)/ LR (cd)	Not previously recorded in gillnet in Southern Australia. Distribution in Australian region includes oceanic waters and continental seas.	Catch, bycatch, pollution
Killer Whale (<i>Orcinus orca</i>)	NCA(b)/ LR (cd)	Not previously recorded in gillnet in Southern Australia. This species is cosmopolitan, from polar	Bycatch, culling, pollution, habitat degradation, overfishing



		regions to the equator in all oceans.	
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**No category assigned, (a) because of insufficient information (NCA(a)); No category assigned, (b), but possibly secure (NCA(b)); No category assigned, but probably secure (NCA(c)).*

DD data deficient, LR lower risk, LC Least concern.

^Threats fall into 8 categories: unknown (insufficient knowledge of the species:

Culling (killing of species by fishermen because these are judged to be unwanted competitors:), Bycatch (in sink-net, gillnet, driftnet and other fisheries targeted at various fish species), Overfishing (70% of the world fisheries are over-fished and outcompeting prey species). Pollution, eg. contamination with heavy metals, organochlorines or ingestion of anthropogenic materials such as waste: noise avoidance reaction to vessel traffic or damage from military sonar systems). Habitat degradation (through the building of barrages and dams, siltation, heavy boat traffic).

Appendix C references:

Bannister, J.L., Kemper, C.M. and Warneke, R.M. (1996). The Action Plan for Australian Cetaceans. Australian Nature Conservation Agency: Canberra vii 242 pp.

Culik, B. M. 2004. Review of Small Cetaceans. Distribution, Behaviour, Migration and Threats. Compiled for CMS. Illustrations by Maurizio Wurtz, Artescienza. UNEP / CMS Secretariat, Bonn, Germany. 343 pages.

Ross, G.J.B 2006. Review of the Conservation Status of Australia's Smaller Whales and Dolphins. Department of Environment: Canberra 124 pp.

