

AQUATIC ANIMAL WELFARE GUIDELINE

- PURSE SEINE -

The Australian commercial capture fishing sector includes operations in all states and the Northern Territory, and targets a wide range of species. The following animal welfare guideline has been developed in consultation with commercial wild capture purse seine fishers.

Development of these, and other fishing method guidelines, was an initiative of the Aquatic Animal Welfare Working Group (AAWWG), formed under the Australian Animal Welfare Strategy (AAWS). The Australian Government through the Department of Agriculture, Forestry & Fisheries provided funding for the development of these initial guidelines together with significant in-kind contribution from industry.

This Guideline sets out principles and recommendations for best practice for responsible purse seine fishing operators. It is a living document, meaning the guideline and recommendations will be reviewed regularly and improved as capture techniques evolve or understanding of aquatic animal welfare improves.

GENERAL AIMS AND PRINCIPLES

The overall aim of this guideline is to minimise stress in fish being captured within the constraint of practices inherent to the commercial purse seine fishing sector. It is recognized that there is a close relationship between animal welfare and the quality of seafood produced.

This Guideline has been written to ensure compatibility with the Aquatic Animals - Overarching Welfare Principles developed by the AAWWG and set out in Attachment A. These Principles apply to fish that are farmed, transported, captured from the wild by both commercial and recreational fishers, or in aquaria in restaurants or private homes.

Of the eight Overarching Principles, the three most relevant to the commercial wild harvest industry are:

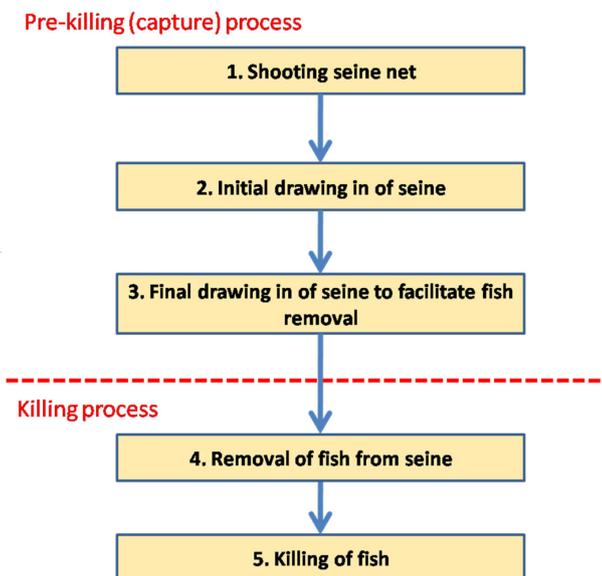
1. Timely handling from capture to death is essential to minimise stress;
2. Capture methods should be designed to minimise the capture of unwanted fish
3. Any fish selected for harvest should be killed as rapidly as possible, by humane means suitable for the species.

In general, the overall process of capturing fish by purse seine should be to minimise stress in the targeted species by minimising time from capture to death.

COMMERCIAL PURSE SEINING

Purse seining is a method used to capture fish across a variety of target species usually smaller fish that congregate in large schools (eg. pilchards, mackerel). Purse seine fishers can capture significant numbers of fish at any one time.

The steps taken to capture and kill fish in a purse seining operation are described in Figure 1.



From an animal welfare perspective, the overall goals of capturing fish by purse seine should be to:

- avoid capture and/or maximise escape of non-retained species during purse seining;
- minimise stress on captured fish by efficient hauling, sorting and processing procedures
- minimise time from capture to death of targeted species.

FISHING GEAR AND VESSEL PREPARATION

Purse seine fishers should identify and use gear, technology, and practices which:

1. Are suitable for the target species;
2. Minimise damage to captured fish species;
3. Reduce the capture and mortality of non-target catch.

Good preparation prior to fishing is important to minimizing stress in fish being captured. Efficient processing practices when hauling and processing fish will also enhance product quality.

Before each journey, fishers should ensure regular maintenance on vessels and associated gear reducing risk of malfunction delay during the purse seine operation and minimizing stress in target species.

All reasonable precautions should be taken to prevent the loss of fishing gear and fishers should make every effort to retrieve lost fishing gear.

PURSE SEINE FISHING METHOD

Step 1 – Shooting (“setting”) the seine net:

‘Shooting’ or setting the purse seine net initiates the capture process. It should be done in a manner to ensure minimal stress on captured fish.

The target fish species should be sighted prior to shooting the net. This minimises the potential capture of non-target species and allows estimation of the size of the targeted school.

There should be sufficient net capacity to encircle the targeted fish without excessive crowding. The net should be shot to encircle a quantity of fish sufficient to allow handling within the intentions of this code and according to the capacity of the vessel operations.

Step 2 – Initial drawing of seine net:

This should occur as soon as possible after encircling the targeted fish. Drawing in the seine should be done smoothly, efficiently and in a manner to ensure minimal stress on captured fish.

Step 3 - Final closing of seine net:

Commencement of the final closing of the purse seine net should not be drawn excessively at this point.

The net should only be drawn as much as is required to facilitate initial removal of captured fish. As fish are removed from the seine, the seine is drawn further to ensure removal continues smoothly and quickly. Rough handling will increase the amount of damage to fish quality and increase stress.

Step 4: Removal of fish from seine net:

This step should be done as quickly as possible after the purse seine net is drawn (Step 3).

Gear used to remove fish from the seine (eg. pumps) should be of a sufficient capacity such that removal of fish is done as quickly as possible.

It is acknowledged that future improvements in the technology associated with removal of fish may assist in the speed and efficiency to remove fish. Purse seiners should continue to actively pursue investigation of improvements in technology. Options include brail, impeller pump or vacuum pump.

Excessive handling of unwanted fish species will increase the amount of damage and potentially create a greater risk of infection that can lead to the death of the fish after release. While firstly ensuring that there is no danger of being spiked, bitten, cut or stung, fishers should use the following procedures:



Figure 1 - Brailing fish from net

- Use wet gloved hands to handle fish
- Release the fish into water quickly, handling fish as little as possible
- Support the body of the fish to avoid damage to internal organs or to the backbone

Step 5- Killing of fish

In the purse seine industry, the smaller size of the species of fish captured, the larger numbers captured per shot and need to process fish quickly, would currently preclude the use of such individual fish killing technology. In addition, prolonging the overall pre-killing (capture and sorting) process in an attempt to individually kill each fish may increase the overall stress of the captured population as a whole in commercial trawl operations. It may also compromise the safety of the crew and quality of the product.

Target fish should be immediately pumped or placed directly into an ice slurry or refrigerated salt water (RSW) to induce death through cold stunning. Exposure to air should be reduced to a minimum.

The smaller species size and larger numbers usually captured using the purse seining method precludes the application of individual fish killing techniques or technology without prolonging the time between capture and slaughter thus increasing stress.

Prolonging the capture process to facilitate the killing individually of fish may increase the overall stress of the captured population and compromise the safety of the crew and quality of the product.



Figure 2 – using a pump to transfer fish



Figure 3 – using a sling net to transfer fish to refrigerated sea water

DUTY OF CARE

While the goal of fishers should be to apply the principles in this Guideline if ever a situation arises where a decision needs to be made between following the principles outlined in this Guideline and ensuring worker safety then AT ALL TIMES worker safety must take precedence.

Workplace safety is of the utmost of importance and must not be compromised under any circumstances.

It is acknowledged that employers have a duty of care to provide individual fishers with a safe workplace and to adhere to all laws and standards to prevent unsafe practices.

Individual fishers have a duty of care to work in a safe manner and at all time to adhere to the work standards and levels of safety stipulated by the vessel owners and managers.

RESEARCH AND INFORMATION GATHERING

Purse seine fishers should continue to actively pursue research and information to assist in the evaluation of the capture and handling techniques in their industry, continuously improving methods for targeted and non-retained species.

Fishers are encouraged to communicate information on any new methods or information to other fishers through relevant industry associations. As effective, practical and cost-effective methods become available to kill captured fish, these methods should be adopted by industry to enhance fish welfare.

ATTACHMENT A

Aquatic Animal Welfare – Overarching Principles

In the context of Aquatic Sector of the Aquatic Animal Welfare Working Group under the Australian Animal Welfare Strategy (AAWS), only vertebrate finfish are considered Aquatic Animals; other aquatic vertebrates are considered under other Sectors of AAWS. (**Note 1**)

The approach taken with animal welfare to date within the Aquatic Animal sector has been to establish overarching Principles against which sub-sectors can build their specific best practice guidelines to achieve animal welfare. (**Note 2**)

The overall aim of the aquatic sector (fish that are farmed, being transported, kept in aquaria, captured from the wild both commercial and recreational, or in aquaria in restaurants) should be to minimise suffering within the constraint of practices inherent to that sub-sector. (**Note 3**)

Specific measures include:

1. For fish held in captivity, the key parameters (temperature, salinity, pH, dissolved oxygen, and metabolites) of the aquatic environment in which fish are maintained should be within the species' natural range of tolerance.
2. For fish held in captivity, the holding unit in which they are normally housed should provide
 - safety from predators,
 - refuge from environmental extremes beyond their natural range of tolerance,
 - appropriate space,
 - appropriate space and/or water flow to avoid chronic degradation of water quality parameters referred to in point 1 above. (**Note 4**)
3. For fish held in captivity the feed supplied should meet known nutritional requirements, and be distributed in a manner and frequency which avoids starvation for periods longer than the species natural range of tolerance.
4. For fish held in captivity, any visibly damaged or sick fish should be assessed and either treated appropriately or promptly removed for killing by humane means suitable for the species.
5. During any handling of live fish,
 - care should be taken to avoid any damage to the fish
 - for prolonged handling of fish out of water (e.g. health checks, vet treatment, artificial reproduction, etc), an anesthetic appropriate for the species and frequent irrigation of skin and gills is essential
 - fish intended to remain alive should be returned to the water promptly.
6. Any fish selected for harvest should be killed as rapidly as possible, by humane means suitable for the species
7. For fish harvested from the wild timely handling from capture to death is essential to minimise suffering. (**Note 5**)
8. Capture methods should be designed to minimise the capture of unwanted fish.

EXPLANATORY NOTES

Note 1: The duty of care principles are couched within the Australian Animal Welfare Strategy under which these specific aquatic animal principles will be applied.

Note 2: As a code there is no legislative basis. Words such as 'must' hold no relevance. Animal Welfare legislation is the place for definitives and the code assists operators to meet those definitives through words such as 'should'.

Note 3: Suffering is inclusive of pain and other issues of animal welfare.

Note 4: This principle when read with principle 1 covers all aspects. The detail of parameters such as water flow, stocking density, behavioural aspects and space will be in the sub-sector code themselves depending on operational method and species.

Note 5: 'Capture' as defined in sub-sector codes.

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