

# AQUATIC ANIMAL WELFARE GUIDELINE

## - POT / TRAP FISHING -

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 pot/trap 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 pot/trap 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 pot/trap 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:

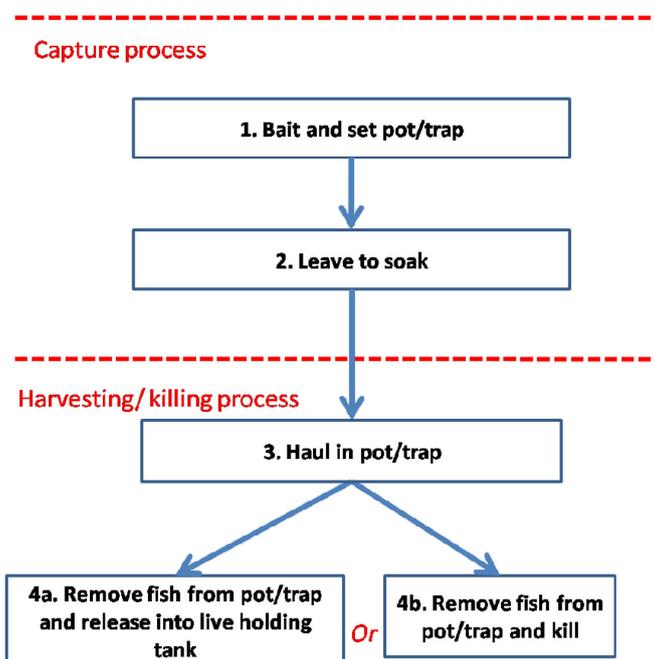
1. Timely handling from capture to death is essential to minimise stress;
2. Capture methods should be designed to minimise the capture of unwanted fish
3. Any fish selected for harvest should be killed as rapidly as possible, by humane means suitable for the species.

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

### COMMERCIAL POT/TRAP FISHING

The general steps taken to capture and harvest/kill fish in pot and trap fishing are described in Figure 1.

#### Pot/trap fishing



From an animal welfare perspective, the overall goals of capturing fish by pot/trap should be to:

- avoid capture and/or maximise escape of non-retained species during pot/trap fishing;
- 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

Pot and trap fishers should identify and use gear, technology, and practices which:

- are suitable for the target species
- minimise damage to captured fish species
- reduce the capture and mortality of non-retained catch.

Good preparation prior to fishing is critical to minimizing stress of fish being captured. Efficient processing practices will also enhance product quality and safety.

Before each journey, fishers should ensure regular maintenance of the vessel and gear to minimize malfunction of the fishing operations, fish suffering unnecessary stress and maximize quality of product.

### POT/TRAP FISHING METHODS

Step 1 – Setting the Pots/Traps:

Setting the pots/traps is the first step in the capture process.

The pot/trap used should be designed to minimize the capture of non-targeted species. The inside surfaces of the pot/trap should be smooth to avoid damaging fish once they enter and particularly while pots/traps are hauled to the surface (Step 3).

Escape gaps and mesh sizes to allow juvenile fish to leave the pot/trap on hauling are used in several fisheries.

Step 2 – Set time for Pots/traps:

The amount of time that pot/traps are set (time in water) is important for the welfare and quality of the fish. The set/soak time should be long enough to allow a commercial catch of target fish and where possible, keep target and non-target fish alive and under minimum stress when the pot/trap is retrieved.

Step 3 – Hauling in pots/traps:

The hauling of pots/traps to the vessel deck should be done at the appropriate ascent rate to minimise stress to captured fish. Hauling from deeper than 30m should be at a rate that will not decompress the fish.

Step 4a- Release of fish into live holding tanks:

Some pot/trap fishers sell fish as live product. To accommodate this vessels should have controlled temperature, refrigerated, recirculating sea water holding tanks.

Targeted species to be kept alive should be released into the holding tanks immediately they are removed from the pot/trap. Exposure to air should be reduced to a minimum. The key parameters (temperature, salinity, pH, dissolved oxygen, and metabolites) of the water in the holding tanks should be maintained within the species' natural range of tolerance. Research projects have been completed for most species to provide this information for fishers.

Non-retained species or undersized fish should be removed immediately and returned to the water.

Ensuring that there is no danger of being spiked, bitten, cut or stung, fishers should use the following procedures

- use wet gloved hands if handling fish
- release the fish quickly and handle it as little as possible
- support the body of the fish to avoid damage to internal organs or to the backbone

Step 4B- Killing of fish:

Death of targeted fish should not be delayed once removed from the pot/trap. Fish should be killed by the 'ike jimi' spiking method.

Iki Jime is a traditional Japanese technique used to kill fish by brain ablation (Figure 1).

To use the iki jime technique:

- Hold the fish firmly and insert a spike into the brain. This should be done as soon as possible after capture.
- Bleed the fish by cutting through the top of the gills. Access the gills by lifting the gill cover.
- Place the fish in an ice slurry to produce a slurry with the consistency of wet concrete and a temperature between  $-1^{\circ}\text{C}$  and  $+4^{\circ}\text{C}$ .
- Remove fish from the ice slurry and process further or store as required.

An interactive learning tool via electronic media has been developed including a demonstration video on a new dedicated website [www.ikijime.com](http://www.ikijime.com).

Only using a bleeding out technique can often result in several minutes for the fish to die, during which time the animal exhibits normal escape response behavior and stress.



Figure 1 – Iki Jime method

Smaller fish may best be handled through placing in ice slurry or refrigerated sea water. These methods assist by immediately reducing the internal temperature of the fish. Methods to ensure cessation of brain activity occurs as quickly as possible using these methods are under investigation (Fig 2). An ice slurry should have the consistency of wet cement and a temperature between  $-1^{\circ}\text{C}$  and  $+4^{\circ}\text{C}$



Figure 2 – Ice slurry

## 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 upmost 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

Pot/Trap fishing is a method used to capture fish across a variety of target species. There is limited information that identifies valid, robust and practically feasible indicators to evaluate the welfare of these species during the capture and killing process.

Pot/Trap fishers should continue to actively pursue research and information gathering to assist in the evaluation of capture, handling and killing techniques (where fish are killed) and continuously improve methods for capture, handling and if applicable killing of the different targeted species. Fishers should communicate information on any new methods or information to other fishers through industry associations.

## 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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