

AQUATIC ANIMAL WELFARE GUIDELINE

- COMMERCIAL ROD / HANDLINE 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 rod/handline 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 rod/handline 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 rod/handline 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 rod/handline should be to minimise stress in the targeted species by minimising time from capture to death.

COMMERCIAL ROD/HANDLINE FISHING

General steps taken to capture and process fish in rod/handline fishing sector are described in Figure 1.

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

- avoid capture and/or maximise escape of non-target species during fishing;
- minimise stress on captured fish by line retrieval, sorting and processing procedures
- minimise time from capture to death of targeted species.

FISHING GEAR AND VESSEL PREPARATION

Commercial rod/handline fishers should identify and use gear, technology and practices that:

- is suitable for the target species;
- minimises damage to captured target species;
- is efficient to minimize stress in fish and enhance product quality during processing.
- reduce the capture and mortality of non-retained catch.

Good preparation prior to fishing is critical to minimising suffering of fish being captured. Fishers should ensure regular maintenance of the vessel and associated gear to reduce risk of malfunction.

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

ROD/HANDLINE FISHING METHOD

Step 1 – Soaking the line:

Soaking the line is the first step in the capture process. Lines should also be of a suitable breaking strain to minimise the chance of breaking when fish are caught.

The hook size selection is important to minimize the capture of non-target species and undersize fish.

Step 2 – Retrieving the line:

Rod/Handline fishers have the advantage of “feeling” when a fish has been hooked and hence can retrieve the fish almost immediately.

The retrieval of lines to the vessel deck should be done at the appropriate ascent rate to minimise stress in captured fish.

Retrieval from deeper than 30m should be at a rate that will not decompress the fish.

Step 3 – Removal of fish from line:

All fish should be removed from the hook immediately and non-commercial species returned to the water as carefully as possible.

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

- Use wet gloved hands when 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

Rough handling will increase the amount of damage and increase stress in the fish and reduce the quality of the final product.

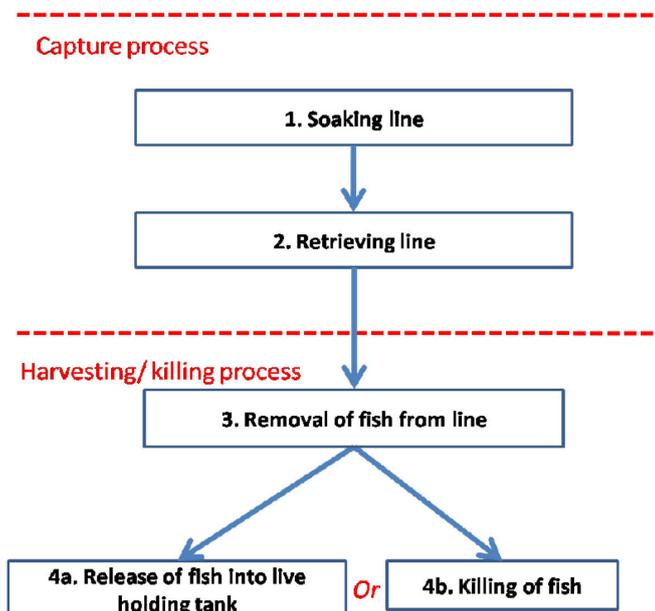
- Fish for the ‘live’ market should be immediately removed from the hook and placed into a live holding tank (see 3a below).
- Fish to be processed should be killed either before or immediately after removing from the hook (see 3b below).

Step 3A- Release of fish into live holding tanks:

Some line fishers sell fish as ‘live’ product. To accommodate live fish vessels should have large, controlled temperature, recirculating water holding tanks.

Fish that are to be kept alive should be released into the live holding tanks as soon as they are removed from the hook. Exposure to air should be minimised. The key parameters (temperature, salinity, pH, dissolved oxygen, and metabolites) of the water in the tanks should be maintained within the species’ natural range of tolerance.

Rod/handline fishing



Step 3B- Processing of fish:

Fish may be killed either immediately before or immediately after removal from the hook. Death of targeted fish should not be delayed.

Fish can be killed by the 'ike jime' method (Figure 1). Iki Jime is a traditional Japanese technique used to kill fish by brain ablation. A major benefit of the Iki Jime technique is that it is more humane than by other methods.

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 with the consistency of wet cement and a temperature between -1°C and $+4^{\circ}\text{C}$

An interactive learning tool via electronic media has been developed including a demonstration video on a new dedicated website www.ikijime.com.

Just allowing a fish to bleed out can often take several minutes for the fish to die during which time the animal exhibits normal escape response behavior and increases stress. The 'ike jime' method removes this 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 (Figure 2). An ice slurry should have the consistency of wet cement and a temperature between -1°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

Rod and handline 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.

Line fishers should continue to actively pursue research and information gathering to assist in the evaluation of capture, handling and killing techniques given the conditions under which they fish. They should use this information to 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 anaesthetic 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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