

Other practices to help increase fish survival

Consider the effects of 'barotrauma' when fishing in waters 10m or deeper.

- If symptoms are mild release fish quickly without treatment.
- If symptoms are extreme and likely to seriously affect buoyancy, then assisted release is preferred. Use a release weight. As a last resort, vent the fish.

Use suitable tackle

for the species you are targeting and minimise the time spent to land the fish.

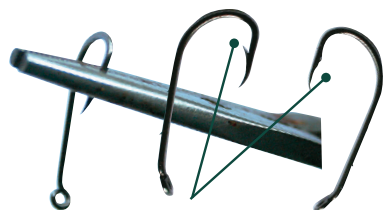
Use barbless hooks or hooks with reduced barbs to make hook removal easier and to minimise hook damage. This can be achieved by squeezing barbs down with pliers, or filing down larger barbs.



Use wet hands or wet gloves when handling fish to minimise damage to their skin.

Don't hold fish by the gills or eyes.

Revive fish upon release if they appear exhausted. Gently hold or push the fish through the water so that it obtains a good flow of water over its gills. If there is any water current, hold the fish upright in the water facing towards the current.



*Squeeze barbs down with pliers,
or file down larger barbs*

4 quick tips to improve survival



1. Use suitable tackle for your target fish

2. Support the fish properly for photos



3. Gently lower your catch into the water

4. Revive the fish before release if necessary

Further work is being undertaken with recreational fishers to estimate and maximise survival of other important species in NSW.

The research was funded by your NSW Recreational Fishing Fee and is part of an ongoing commitment by NSW DPI and the NSW Recreational Fishing Trusts to improve recreational fishing in NSW.

For more information, check out the NSW DPI website:

www.dpi.nsw.gov.au/fisheries

or call NSW DPI Fisheries on
02 4916 3827



Department of
Primary Industries

Improved catch and release techniques

FOR BETTER FISH SURVIVAL



dpi.nsw.gov.au

16355_JAN20

Catch and release

An increase in the popularity of catch and release fishing along with regulatory bag and legal size limits has resulted in a significant proportion of angler-caught fish now being released.

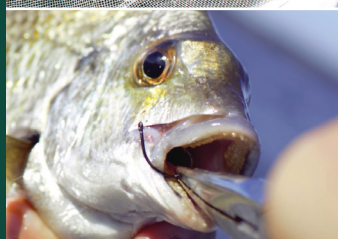
Recent research has shown that most fish survive using current catch and release fishing techniques.

SPECIES	% SURVIVAL	MAIN FACTORS FOR REDUCED SURVIVAL
Dusky Flathead	91-96	Poor handling and sub-optimal live-well water quality
Luderick	99	Poor handling
Mulloway	73-81	Deep hooking and poor handling
Pearl Perch	91	Deep hooking
Sand Whiting	93	Deep hooking
Silver Trevally	63-98	Excessive time in poorly designed live-wells
Snapper	67-92	Deep hooking and poor handling
Tailor	92	Deep hooking
Yellowfin Bream	72-97	Deep hooking
Yellowtail Kingfish	85	Deep hooking
Australian Bass	92-100	Deep hooking
Freshwater Catfish	97	Deep hooking
Golden Perch	73-100	Poor handling, sub-optimal live-well conditions and high water temps
Murray Cod	85	Deep hooking, excessive handling, sub-optimal live-well conditions



The main factors found to reduce survival were deep hooking and poor handling

This research suggests the following improved fishing practices to maximise fish survival



1

Use non-offset circle hooks and artificial lures

Use methods and rigs that reduce deep hooking:

- Target fish with artificial lures.
- Choose non-offset circle hooks when using bait.

Non-offset circle hooks are recommended

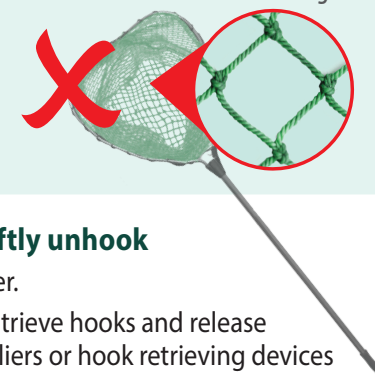


2

Use knotless mesh nets

Use fish-friendly landing nets with knotless mesh. Avoid knotted landing nets which may damage the fish's scales, skin, eyes and fins.

Knotted landing nets



3

Minimise the fish's time out of water and swiftly unhook

Minimise the length of time the fish is out of the water.

Ideally unhook the fish whilst it is still in the water. Retrieve hooks and release fish as quickly as possible. The use of needle-nosed pliers or hook retrieving devices can greatly reduce time spent unhooking.

4

If deeply hooked, cut the line close to mouth

If the fish is hooked deeply, cut the line as close as possible to the fish's mouth. Do not try to remove the hook.

Compared to removing swallowed hooks from Bream and Mulloway, cutting the line increased their short-term survival from 12% to more than 85%. Up to 76% of released line-cut, gut-hooked bream shed their hooks within three weeks. Similarly, cutting the line from deep-hooked Silver Perch increased their short-term survival from 29% to more than 70%.

5

Measuring and photographing fish

Have a brag mat and camera ready as the fish is landed to minimise the fish's time out of the water.

Wet the brag mat before placing the fish on it to prevent damage to the fish. When photographing, hold the fish firmly supporting its body weight.

6

Maintain good water quality in live-wells

If live-wells are used, ensure they are of sufficient size and maintain good water quality by using flow through, aerated systems. This is especially important during the summer months when water temperatures are high.

Poorly designed live-wells reduce fish survival—particularly Silver Trevally where survival dropped from 98% to 63%.