

## FAQ – How can recreational fishers reduce waste?



**June 2015**

The simple answer to reducing waste when recreational fishing is to kill fewer small fish, or best of all avoid catching them in the first place.

Killing small fish keeps the stock size low. Harvesting mature fish with decent sized fillets is more productive, and there is more total yield than killing juvenile fish.

Gut hooked fish have very poor survival rates (5-15%) so the best strategy is to take steps to reduce your chances of gut hooking any fish.

In comparison, the survival rate for released, lip hooked fish is high. A pilot study in the Hauraki Gulf found the survival rate of lip hooked snapper that had the hook removed immediately was around 90-95%, for fish caught in depths between 14 and 20 metres.

Some fish, when brought up from deep, have their stomach protruding out of their mouth. An Australian study tested post-release survival rates of line-caught pink snapper in this condition. Fish tested were from three depth ranges, 37-50m, 51-100 and 101-180 metres. Researchers used a 16-gauge hypodermic needle to release pressure from the swim bladder (side venting) or to pierce the protruding stomach before releasing the fish. A high survival rate, of 88%, was observed for these fish.

**Recreational anglers need to reduce waste by killing fewer small fish and avoiding gut hooking – this is now a priority as we embrace rebuilding the inshore fish stocks.**

If fishing for snapper recreational fishers can employ the LegaSea Fish Handling Guide (under development). It incorporates some best practice techniques, including the following:

- **#1 Avoid catching small fish**
- Move away from areas holding large numbers of small fish
- Use soft baits or jigs that tend to target larger fish, with a high proportion lip hooked
- When bait fishing use big baits on large hooks, 7/0 or 8/0s
- Use hooks with a wire appendage designed to reduce the capture and gut hooking of small fish
- Use circle hooks
- Fish actively, by keeping in touch with your bait or jig to avoid gut hooking
- If planning to release fish, keep angling time to a minimum
- Release fish in the water to reduce air time and stress on the fish

- If a fish must be removed from the water prior to release use a rubber net and place the fish on a wet, cool surface. Rubber nets will hold the fish with minimal damage to their eyes and skin
- Learn about and utilise new tools that quickly return fish to a comfortable depth and help avoid predators. Useful tools are release weights and weighted fish grips
- Quickly kill and chill in ice or slurry any fish being kept for eating
- Use the [www.FreeFishHeads.co.nz](http://www.FreeFishHeads.co.nz) service to share unwanted heads and frames.

We will not achieve abundance if we continue to kill small fish. If fishing in grounds holding high numbers of small fish the solution is to either move on or use appropriate angling techniques.

If we reduce waste caused by recreational fishing productivity will increase as the fishery rebuilds, because the average size of fish is expected to increase.

Education, encouragement and peer pressure are required to achieve the necessary change to recreational fishing habits and culture.

LegaSea encourages all anglers to reduce juvenile mortality by adopting practices to decrease the number of small fish caught, and ensure a high survival rate for released fish.

### **Further Reading**

Holdsworth, J.C.; Boyd, R.O. (2008a). Size, condition and estimated release mortality of snapper (*Pagrus auratus*) caught in the SNA1 recreational fishery, 2004–05 and 2005–06. New Zealand Fisheries Assessment Report 2008/45. 45 p. <http://fs.fish.govt.nz/Page.aspx?pk=113&dk=17194>

Holdsworth, J.C.; Boyd, R.O. (2008b). Size, condition and estimated release mortality of snapper (*Pagrus auratus*) caught in the SNA1 recreational fishery, 2006–07. New Zealand Fisheries Assessment Report 2008/53. 37 p. <http://fs.fish.govt.nz/Page.aspx?pk=113&dk=17186>

McKenzie, J.; Holdsworth, J.C. (1997). Investigation of snapper (*Pagrus auratus*) release mortality from recreational line. Contract report for the Ministry of Fisheries (ISN717), (Unpublished report held at the Ministry of Fisheries, Wellington.)

Muoneke, M. I.; Childress, W. M. (1994). Hooking mortality: A review for recreational fisheries. *Reviews in Fisheries Science* 2 (2): 123–156.

Stewart, J. (2008). Capture depth related mortality of discarded snapper (*Pagrus auratus*) and implications for management *Fisheries Research* 90. pp 289–295.

McLennan, M. F., M. J. Campbell, and W. D. Sumpton. "Surviving the effects of barotrauma: assessing treatment options and a 'natural' remedy to enhance the release survival of line caught pink snapper (*Pagrus auratus*)." *Fisheries Management and Ecology* 21.4 (2014): 330-337.

## What can you do?

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