



## Research & Education

# Do hooked fish survive well when released?

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*Legal Minimum Lengths (LML) are one measure used by fisheries managers to ensure the fish stocks are not over harvested. These limits are aimed at protecting small fish, allowing them to grow and reproduce before they can be legally caught and thus ensuring future generations of fish. Anglers catching fish below the LML are required to return the fish to the water alive.*

In Victorian waters over 30 species of fish are subject to LMLs, and in some fisheries, large numbers of under-sized fish are caught and released.

Recent creel surveys from the Gippsland Lakes showed that for every bream of legal size landed, more than five under-sized bream were caught and released. Similarly in Port Phillip Bay, creel surveys have indicated that 4 to 10 under-sized snapper are taken and released for every legal-sized snapper caught.

Anglers are releasing under-sized fish in compliance with LMLs, but the released fish must survive for these regulations to have value. If the vast majority of these fish do survive, then the LMLs are effective as a stock protection measure.

There are no current estimates of the level of mortality for any fish species caught and released by Victorian anglers.

To generate these estimates fisheries scientists from DPI's Marine and Freshwater Systems Platform (the former MAFRI), with funding from Fisheries Victoria and the Recreational Fishing Licence Trust Account, are trialing methods to determine which is the best way to study the responses of under-sized fish to the catch and release processes.

The study is being conducted in Port Phillip Bay and in the Glenelg River, and will develop methods to assess the

post-release survival of snapper and black bream respectively.

The project uses the "Reel Scientists" – our corps of expert anglers (see MAFRI Research and Education Note no. 542) – to catch the fish and transport them to holding cages, where their fate is monitored by Marine and Freshwater Systems' project staff.

"Our expert anglers also record the type of hook used to catch the fish and where the fish was hooked – in the mouth or deep in the throat – to see if these factors influence the survival rate," by Marine and Freshwater Systems' Project Leader, Mr Simon Conron says "

While still preliminary, the study has developed and successfully trialed methods for both black bream and snapper.

These tests were conducted over the last summer and determined the survival of hooked black bream and snapper.

"Happily for these under-sized fish, our initial results suggest they survive the catch and release process very well," Mr Conron says.

The "Reel Scientists" and DPI's project staff will be in the field this month to complete the winter trials for black bream.

"While these very early results are promising," Mr Conron explains, "we need to repeat these experiments with many more fish, before we can be certain of these results."

Further research is required before definitive judgements can be made about the whether the current management



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measures for recreational fishing do protect small fish as they were intended to do.

For further information about this project please contact Simon Conron, at DPI's Marine and Freshwater Systems Platform on 5258 0111.

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