

## SMALL FISH LIVE TO SEE ANOTHER DAY

*Principal researchers: Sandy Morison*

Very few small fish caught by haul seines die after being released. This was one of the findings from a recent study by the Marine and Freshwater Resources Institute (MAFRI) at Queenscliff. The 3-year study was funded by Fisheries Victoria and the Fisheries Research and Development Corporation.

Haul seines nets are set in a large U-shape and then the ends are slowly drawn together to concentrate the fish and catch them in a pocket of the net called the bag or cod end. The method is used to catch fresh fish for local markets such as King George whiting, snapper, calamari, garfish, and black bream from areas such as Port Phillip Bay, Corner Inlet and the Gippsland Lakes.

As with many commercial fisheries, there was a growing public concern that haul seines captured and killed large numbers of undersized and unwanted fish species. To look at this issue, fish that were discarded from the nets were placed in sea cages and monitored for a week. Mr. Sandy Morison, marine scientist at MAFRI said that the experiments showed that the chances of survival for caught and released fish were very good, and survival across all species averaged 89%. A trial with small snapper that were caught and would have been released recorded 100% survival.

The study also found that nets made of polyethylene were over 20 times less likely to “mesh” undersized King George whiting than the more common nylon nets. Meshing is when fish are captured by their gill covers in the mesh of the net – mortality of these fish is usually quite high.

“By simply replacing the traditional nylon mesh with stiffer polyethylene mesh in the nets, fishers have been able to greatly reduce the numbers of young fish that become meshed in the nets”, explained Sandy. “Fishers have been quick to switch to this new type net material”.

The study also found that up to 60% of small fish simply avoid capture by passing through the seine nets. This showed fishers that their nets were actually quite selective for the sizes and types of fish that they were after.

The results of all experiments were combined to show the fate of fish that encounter a haul seine net. “These estimates showed that haul seines cause much less mortality of undersized and unwanted fish that was previously thought”, explained Sandy.

When results were averaged across all species they showed that for every 100 fish encountering the net, 44 pass through without being caught, 18 are retained and marketed, 34 are released and survive and only 4 are released but die.

Values for individual species will obviously vary from these averages. For every 100 King George whiting encountering the net, 66 pass through, 21 are retained and marketed, 11 are released and survive and 2 are released but die.

The project’s findings should increase the public’s confidence in the haul seine fishery. The results challenge the public perception that haul seines frequently cause significant deaths of unwanted and undersized fish. When haul seines are used with care and fishers follow careful handling practices, the fishing technique is very efficient in terms of the proportion of the catch that is retained and marketed, compared to that which is released.

For more information about this project, contact Sandy Morison at MAFRI on 5258 0111.