

## Improving the Chances of Survival for Bycatch Fish

One quarter of the world's total commercial catch is discarded because it is not the right species or size. It is generally assumed that these discarded fish do not survive after capture and release. However, recent experiments conducted in various locations on the British Columbia coast indicate that it is possible to revive commercially captured non-target salmon and significantly improve their chances of long-term survival after release. In 1998, in response to conservation concerns for coho salmon on Canada's west coast, Fisheries and Oceans Canada established a policy of Selective Fisheries, defined as "the ability to avoid known, non-target species and stocks or, if encountered, to release them alive and unharmed". Over the course of three summers, a unique partnership of academic and government scientists, commercial fishermen, members of the fishing industry, First Nations, coastal communities and Fisheries and Oceans Canada collaborated on experiments to test how to improve the chances of survival of salmon when released after capture by the commercial fishing fleet. Physiological parameters of muscle metabolism and post-capture stress and measures of swimming performance were indicators of recovery and delayed mortality following capture. Results of these experiments and follow-up actions will be discussed. The findings bring into question the practices of commercial fisheries globally with regard to the treatment of bycatch and stress the importance of experimenting with methods that could increase the chances for long-term survival of non-target, non-retention fish following release after capture.

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