

Keep big fish in their small ponds -- or in the ocean, says research

November 27 2008

(PhysOrg.com) -- Scientists at the University of Toronto analysed Canadian fisheries data to determine the effect of the "keep the large ones" policy that is typical of fisheries. What they found is that the effect of this policy is an unsustainable fishery.

In fact, the opposite policy (keep the small young ones and throw back the large old ones) would result in a more sustainable fishery. In short -- a big fish in the water is worth two in the net.

Put simply, a fish population will produce more young -- and therefore sustain more fishing -- if it is made up of big, old fish.

The team of scientists, led by Paul Venturelli, a graduate student in the Department of Ecology and Evolutionary Biology, used a simple population model, as well as evaluating data from 25 marine fish species. They also tailored their methods to allow for other possible causes for the results, such as the effect of climate.

Finding ways to replenish fishery stocks and improve management provides both ecological and financial benefits.

The research is published in the *Proceedings of the Royal Society B*.

Provided by University of Toronto

Citation: Keep big fish in their small ponds -- or in the ocean, says research (2008, November 27) retrieved 20 March 2024 from <https://phys.org/news/2008-11-big-fish-small-ponds-.html>

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