

Skill triumphs over fish scarcity and draws experienced anglers back to overfished lakes

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Fishermen care about more than the quantity of fish in a pond. Access, beauty, distance from home and fishing regulations play into the choice of which lake to fish on a given Saturday. How deep into the woods will fishermen hike to find a lake brimming with fish? Do recreational fishermen avoid overfished lakes?

In the October [Ecological Applications](#), Len Hunt (Centre for Northern Forest Ecosystem Research, Ontario Ministry of Natural Resources) and colleagues report that when catching fish is at the top of the priority list, [overfishing](#) goes down in regions with few fishermen, but up in regions with many. Because motivations are mixed and feedback on choices isn't obvious, a self-regulating system in which fishermen naturally pick the most productive lakes and spread their impact evenly over a region can't be expected, according to the authors.

Some [fish species](#) are actually as easy, or easier, to catch when their numbers are few because they school together and stick to predictable habitat corners. Experienced anglers use knowledge, and tools like bathymetric maps and depth-sounders, to locate [fish](#), and may catch almost as many in an overfished [lake](#) as in a thriving one.

Drawing on data from 157 lakes and diaries tracking fisherman's preferences, the authors model the effects of weighting different priorities on the health of walleye stocks in the Thunder Bay region of Ontario, on the north shore of Lake Superior. The authors recommend adapting management strategies to usage patterns, the arrangement of

lakes throughout the landscape lake biology, and the dynamic relationships between them.. Simple, region-wide solutions like limiting fishing licenses can exacerbate population crashes at popular lakes. But they note that the ongoing monitoring required to tailor management is expensive and that modeling could help target landscape-scale efforts.

"Because timely monitoring of literally hundreds of lakes in a landscape will be virtually impossible, "adaptive," integrative social-ecological models such as ours, extended to include regulatory tools, might provide informed solutions that are open to experimental reassessments and modification."

More information: Read more at:

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