

# West coast experiencing decreasing trends in salmon spawning

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The number of adult sockeye salmon produced per spawner has been decreasing over the last decade or more along the western coast of North America, from Washington state up through British Columbia and southeast Alaska. A new study published in the *Canadian Journal of Fisheries and Aquatic Sciences* says that this widespread decrease in productivity has important implications for management of salmon stocks and requires research into its potential causes to help determine future management strategies.

"It is possible that the downward trends in productivity across the sockeye stocks south of central Alaska result from a variety of causes, such as freshwater [habitat degradation](#) or [contaminants](#), that have each independently affected many small regions," says Randall Peterman. "However, the large spatial extent of similar time trends in productivity for over 25 stocks has occurred in both relatively pristine and heavily disturbed habitats. This suggests that shared mechanisms are a more likely explanation – for example, high mortality owing to predators, pathogens, or poor food supply that occurs across Washington, B.C., southeast Alaska, and the Yakutat region of Alaska."

The authors analyzed productivity of 64 sockeye salmon populations and found that the decline in productivity of Fraser River, British Columbia sockeye salmon was not unique to that river system, and that productivity has also declined rapidly in many other populations since the 1990s. The authors also found that the region with downward trends in productivity has spread further north over the past two decades, an

observation that is consistent with large-scale changes in climate-driven oceanographic patterns that were previously implicated as drivers of sockeye productivity.

The study "A widespread decrease in productivity of sockeye [salmon](#) (*Oncorhynchus nerka*) populations in western North America" appears in the August issue of *Canadian Journal of Fisheries and Aquatic Sciences*.

**More information:** Peterman, R.M., and Dorner B. A widespread decrease in productivity of sockeye salmon (*Oncorhynchus nerka*) populations in western North America. *Canadian Journal of Fisheries and Aquatic Sciences*, 69(8): 1255-1260, doi: 10.1139/ F2012-063

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