

# Jellyfish on the rise: study

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This is a map of population trends of native and invasive species of jellyfish by LME. Red: increase (high certainty); orange: increase (low certainty); green stable/variable; blue decrease, gray: no data. Circles represent jellyfish populations with relative sizes reflecting confidence in the data. Credit: Brotz et al, *Hydrobiologia*

Jellyfish are increasing in the majority of the world's coastal ecosystems, according to the first global study of jellyfish abundance by University of British Columbia researchers.

In a study published in this month's edition of the journal *Hydrobiologia*, UBC scientists examined data for numerous species of jellyfish for 45 of the world's 66 Large [Marine Ecosystems](#). They found increasing jellyfish populations in 62 per cent of the regions analyzed, including East Asia, the [Black Sea](#), the [Mediterranean](#), the Northeast U.S. Shelf, Hawaii, and [Antarctica](#).

"There has been anecdotal evidence that jellyfish were on the rise in

recent decades, but there hasn't been a global study that gathered together all the existing data until now," says Lucas Brotz, a PhD student with the Sea Around Us Project at UBC and lead author of the study.



Giant jellyfish (*Nemopilema nomurai*) interfere with fishing in Japan. Credit: Niu Fisheries Cooperative

"Our study confirms these observations scientifically after analysis of available information from 1950 to the present for more than 138 different jellyfish populations around the world."

Jellyfish directly interfere with many human activities – by stinging swimmers, clogging intakes of power plants, and interfering with fishing. Some species of jellyfish are now a food source in some parts of the world.

"By combining published scientific data with other unpublished data and observations, we could make this study truly global – and offer the best available scientific estimate of a phenomenon that has been widely discussed," says Daniel Pauly, principal investigator of the Sea Around Us Project and co-author of the study. "We can also see that the places

where we see rising numbers of jellyfish are often areas heavily impacted by humans, through pollution, overfishing, and warming waters."



This is a bloom of moon jellyfish (*Aurelia sp.*) near Denmark. Credit: Casper Tybjerg, <http://www.ttf.dk>.

Pauly adds that increasing anecdotal reports of jellyfish abundance may have resulted from an expansion of human activities in marine habitats, so the study also provides a concrete baseline for future studies.

The study also notes decreases in [jellyfish](#) abundance in seven per cent of coastal regions, while the remainder of the marine ecosystems showed no obvious trend.

**More information:** A world map indicating jellyfish abundance and photos of different types of jellyfish interfering with fishing in various habitats are available at [www.publicaffairs.ubc.ca/?p=41229](http://www.publicaffairs.ubc.ca/?p=41229)

Provided by University of British Columbia

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