

# Study offers pearls of wisdom in contested New York oyster restoration

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Cornell students Jennifer Zhu and Gavriela Carver prepare an oyster restoration experiment on Governor Island, facing toward the East River entrance with the Brooklyn Bridge in the background. Credit: Cornell University

In addition to being a tasty delicacy, oysters provide a variety of ecosystem services. They filter water and cycle vital nutrients. By cementing themselves into complex shell reefs, they provide habitat for hundreds of invertebrate and fish species and reduce storm surges and

erosion. These characteristics make oysters a unique tool for restoring polluted coastal waterways.

However, oyster [restoration](#) has been a hotly contested issue in urban regions like New York City, where public health regulations have closed the surrounding polluted waters for commercial and recreational oyster harvesting. These regulations have also limited oyster restoration projects, fearing that poached oysters could wind up on dinner plates and sicken consumers as well as harm restaurants and aquaculture businesses. Such rules essentially pit conservationists and nongovernmental organizations that favor oyster restoration against state environmental agencies and industry members.

A new study finds these stakeholder groups actually share many of the same concerns, notably risks to public health and the economy, while also acknowledging the potential ecological benefits. This means that both groups may be receptive to similar appeals for oyster restoration projects in the future.

"There is a lay theory in the scientific literature that if you want to bolster support for oyster restoration, you have to design messages that are different for nongovernmental organizations and restoration advocates compared to commercial aquaculture folks who do the harvesting and farming," said Jason Holley, the paper's lead author and a Ph.D. student in the field of communication at Cornell University. "Essentially what we found is no, we don't have to design messages that are tailored to these specific groups. It's interesting because it runs counter to the common assumption."



Oyster tire 'rings' with algae in the New York Harbor. Credit: NY/NJ Baykeepers/Provided

Study co-author Katherine McComas, professor in the Department of Communication, added: "When you take into consideration the perceived risks and perceived benefits and the confidence in the regulating authorities, it's not group membership that predicts support for oyster restoration. It's how people perceive these other aspects."

The researchers focused on the Hudson-Raritan Estuary, an area bordered by the Raritan Bay and the East River. The estuary is an ideal location for oysters, which thrive in intermediate zones where they can avoid predators and pathogens from the ocean as well as the fresh water they would encounter farther upriver. While oysters were once abundant in the estuary, overfishing and the rise of urbanization depleted most populations, although there are still outliers. For example, there is a vibrant oyster population near the Gov. Mario M. Cuomo Bridge (formerly the Tappan Zee Bridge). Overall, however, the waterways around the five boroughs are sufficiently polluted that oyster harvesting and consumption have been stopped by regulatory authorities.

"From a regulatory sense, there is a lot of hesitation to scale up oyster restoration because of the risk that poached oysters will get into the marketplace and make people sick or get into the headlines and curb appetites," said study co-author Matthew Hare, associate professor in the Department of Natural Resources. "Either one of those things could have negative impacts on the commercial fishery and aquaculture that is elsewhere in the state and in New England."

The researchers found that support for [oyster](#) restoration was tied less to group membership than to the perceived risks to [public health](#) and the

economy and perceived ecological benefits. And that knowledge could help both sides find some middle ground.

Provided by Cornell University

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