

Thirteen corporations control up to 40 per cent of world's most valuable fisheries

May 28 2015

Just thirteen corporations control 19-40% of the largest and most valuable stocks and 11-16 % of the global marine catch, according to new research. These "keystone" corporations of the global seafood industry critically shape the future of marine ecosystems, but have yet to assume this responsibility at the global scale.

The new study, published in the journal *PLOS ONE*, makes an analogy between the largest companies in [seafood industry](#) and keystone species in ecological communities. Keystone species in nature have a profound effect on the structure and function of the ecosystem and disproportionately determine the prevalence and activities of other species. For example just a small number of sea otters can determine urchin numbers, or a few grey wolves determine the size of bison, deer or elk populations.

Likewise, the study found that the average annual revenues of the 160 largest companies in 2012 exhibit a distinct keystone pattern, where the top 10% account for 38 % of total revenues. The identified thirteen companies (box) shape very large [marine ecosystems](#) around the world and are involved in both wild capture fisheries and aquaculture, including whitefish, tuna, salmon, shellfish, fishmeal, fish oil, and aqua feeds. Their combined annual revenues correspond to 18% of the global value of seafood production in 2012 (US\$ 252 billion).

This handful of corporations (representing 0.5% of 2250 registered fishing and aquaculture companies worldwide) dominate all parts of

seafood production, operate through an extensive global network of subsidiaries and are profoundly involved in fisheries and aquaculture decision-making. Such omnipotence represents both a challenge and an opportunity for the governance of global fisheries.

"The phenomenon of keystone actors is an increasingly important feature of our human-dominated world. Active leadership in sustainability initiatives by these corporations could result in a cascade through the entire seafood industry towards improved management of marine living resources and ecosystems," says lead author Henrik Österblom, Deputy Science Director of the Stockholm Resilience Centre.

"Increasing demand for seafood has contributed to a global fisheries crisis, with consequences for marine ecosystems around the world," Österblom adds. Existing analyses of global fisheries operations have, however, so far largely focused on the role of countries, rather than industry corporations.

"Several of the fishing companies we investigated are larger than most nations in terms of their share of global catches. Our study reframes the responsibility for fishing in terms of transnational corporations, illustrating that they must be included into the equation if we are to solve the global sustainability crisis in marine ecosystems," says co-author Jean-Baptiste Jouffray of the Global Economic Dynamics and the Biosphere Academy Programme at the Royal Swedish Academy of Sciences.

Such keystone actors among [corporations](#), the authors say, can be defined by the following characteristics: a) they dominate global production revenues and volumes within a particular sector, b) [control](#) globally relevant segments of production, c) connect ecosystems globally through subsidiaries, and d) influence global governance processes and institutions.

"Similar keystone actors also exist in other sectors, like meat and grain production, and they all have high relevance for sustainable management of natural resources and the environment. Our study illustrates a key feature of globalization that opens up for novel opportunities to think about ways to address current challenges," concludes co-author Carl Folke, Science Director of the Stockholm Resilience Centre and the Director of the Beijer Institute of Ecological Economics.

More information: "Transnational corporations as 'keystone actors' in marine ecosystems" [dx.plos.org/10.1371/journal.pone.0127533](https://doi.org/10.1371/journal.pone.0127533)

Provided by Stockholm University

Citation: Thirteen corporations control up to 40 per cent of world's most valuable fisheries (2015, May 28) retrieved 4 May 2024 from <https://phys.org/news/2015-05-thirteen-corporations-cent-world-valuable.html>

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