

## Earth & Space

# The Ocean 100: the big fishes of the blue economy

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### ABSTRACT

Who are the “big fish” in what is often called the ocean economy? The ocean economy is the part of the global economy that is linked to sea, for example, as an operating space or an input to a company’s production. Collectively, this ocean-linked economic activity has been growing rapidly over the last two decades, in what has been called a “blue acceleration”. Diverse and competing interests for ocean space include, for example, offshore oil and gas, shipping of goods and materials for global trade, offshore wind, coastal and cruise tourism, seafood from wild-caught fisheries and aquaculture, among others.



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At the same time that the ocean economy has grown, ocean ecosystems have been changing, leading governments to set international goals for ocean conservation by 2030. However, progress towards these goals is lagging, and their achievement may depend upon the role played by private actors in the ocean economy. For this reason, we aimed to identify who these actors are, and if there are a relatively small number that could have considerable influence, much like keystone species in an ecosystem. Previous studies have found that in many other

large industries interacting directly with nature, such as agriculture, forestry, seafood, cement, minerals and fossil energy, a relatively small number of companies have disproportionate size and power.

To identify these “keystone actors” in the ocean, we looked across the 8 core industries of the ocean economy: offshore oil and gas, marine equipment and construction, seafood, container shipping, shipbuilding and repair, cruise tourism, port activities and offshore wind.

For each of these industries, we found estimates of the total revenues generated in 2018, and then we searched the company and industry reports to build a database of the largest companies in each (by annual revenues).

From this exercise, we were able to see a clear pattern across these key ocean-based industries: the majority of the revenues were generated by a relatively small number of large companies. For each of the 8 core ocean-based industries, the 10 largest companies generated on average almost half of all revenues (45%) in 2018. We also looked at the aggregate concentration across these industries, for the ocean economy as a whole. We found that the top 100 companies (the “Ocean 100”) generated 60% of all revenues in these ocean-based industries. Far and away offshore oil and gas was the largest industry (65% of the total revenues), followed by shipping, shipbuilding and repair.

These findings and this measure of the Ocean 100, indicates that the ocean-based economy is highly concentrated in a relatively small number of large international companies, consistent with the structure of the global economy and its multi-national supply chains. Perhaps, this is not surprising, given that a lot of expertise and capital are required to operate in the ocean environment, and these requirements may serve as a barrier to entry by newer and smaller companies.

The implications of a highly concentrated ocean economy for global conservation goals are likely to be both negative and positive. In terms of the negative implications, the risks from such concentration are that a small group of big companies can exert pressure on governments to weaken the rules of the game for using the oceans. This is particularly a risk for artisanal fisheries and fishing communities, who may lose access to ocean resources to

bigger companies (e.g. if offshore oil platforms are leased in traditional fishing grounds).

The positive implications from this high concentration, are that voluntary action by a relatively small number of companies could have global impact on ocean conservation. With their large supply chains, a shared understanding of their role in the ocean economy could lead Ocean 100 companies to take voluntary initiatives that set new norms throughout the industries. Evidence of such efforts by large companies is scarce, though several factors may converge to incentivize action: an awareness that these efforts would enhance companies’ reputations with changing consumers, as well as with external stakeholders such as non-governmental organizations or financiers.

With both the negative and positive implications in mind, high concentration in the ocean economy suggests that engaging these “big fish” with the best available science could spur large-scale change and progress towards international ocean conservation goals. While caution and critical review remain necessary, science-based engagement with the Ocean 100 could aim to encourage commitments for: (i) uniform reporting of progress toward conservation goals, (ii) leadership toward a low-carbon ocean economy, and (iii) additional funding for shared needs in the ocean (e.g. pollution cleanups, ecological restoration, etc.).