Blue Gold

A study illustrates the deep influences that guide the gilded ocean economy: just 100 companies generated 60 per cent of revenues from the largest ocean-based industries in 2018

The promise and potential of the ocean as an 'economic frontier' in the 21st century has attracted attention from governments, the private sector, philanthropies and civil society. Often, this is in pursuit of a 'blue economy' that is defined in different ways. This aspiration reflects, at least partially, a rapid 'blue acceleration' over the last two decades in economic activity linked to the oceans.

Consider: since 2000 almost I million km of submarine fiberoptic cables have been buried in the seabed to carry almost all international digital information; the annual volume of cargo transported by container shipping has quadrupled; the offshore wind energy capacity installed has increased 400 times over; the number of passengers carried on cruise tourism boats has almost tripled; most of the major discoveries of oil and gas deposits have been in the ocean; over 13,000 marine genetic sequences have been patented; and the area of the sea legally designated for protection has increased to roughly 30 million sq km.

This growth and industrialization of the ocean or blue economy is paralleled by an increased understanding of the vulnerabilities and disproportionate impacts of environmental harms on coastal communities. This entails the growing realization that, one, local actors may not be adequately represented in decision-making processes associated with marine and/or, coastal resources; two, communities may not obtain a fair share of the benefits from marine resources.

In this context, small-scale fisheries are increasingly squeezed between competing uses for space and resources, including by large-scale, industrial fishing fleets and aquaculture, or marine protected areas (that prohibit traditional access for fishing), pursuit of minerals and hydrocarbons in the

seabed, and coastal development. These uses are likely driven by a few transnational corporations with large revenues, similar to many other parts of the global economy. This is certainly the case in the seafood industry, for example, that features the most highly traded food internationally. Together with a group of colleagues, we wanted to find out if this is the case for economic use of the oceans more broadly: are the core marine-based industries dominated by a small number of transnational corporations and, if so, which ones are they?

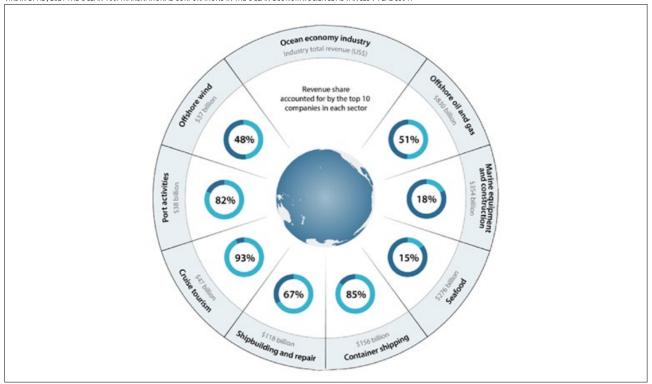
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Largest companies

We looked across eight industries that the Organization for Economic Cooperation and Development (OECD) has defined as core to the ocean or blue economy: container shipping, cruise tourism, marine equipment and construction, offshore oil and gas, offshore wind, port activities, large-scale or industrial seafood, and shipbuilding and repair. Of note, we did not include small-scale fisheries in the review-neither does OECD-due to lack of data, with hopes that the upcoming Illuminating Hidden Harvest study led by the Food and Agriculture Organization of the United Nations (FAO), WorldFish and Duke University will make such an analysis possible.

Perhaps unsurprisingly, we found that in each of these eight industries, on average, the 10 largest companies generated 45 per cent of all revenues in 2018. (Seafood was the least This article is by **John Virdin** (john.virdin@ duke.edu), Duke University Nicholas Institute for Environmental Policy Solutions, Durham, North Carolina, United States and **Henrik Österblom** (henrik.osterblom@su.se), Stockholm Resilience Centre, Stockholm University, Stockholm, Sweden





Concentration in the Ocean Economy. More broadly, in terms of how governments make decisions and regulations for ocean use, this level of concentration can enable targeted lobbying and influence that further marginalize small-scale fisheries

concentrated, with the top 10 companies generating 15 per cent of all revenues). Aggregating across these industries, the top 100 companies—we call them 'the Ocean 100'—generated 60 per cent of all revenues from these ocean-based industries in 2018, with the offshore oil and gas industry by far the largest, accounting for almost two-thirds of the total revenues from these industries. In sum, the majority of the revenues in most of the ocean-based industries were generated by a relatively small number of large companies in 2018.

Also unsurprising was the fact that the biggest industry in the Ocean 100 group was offshore oil and gas (65 percent of the total revenues), followed by container shipping (12 percent), shipbuilding and repair (8 percent), maritime equipment and construction (5 percent), seafood production (4 percent), cruise tourism (3 percent) and port activities (2 percent). Recreating the Ocean 100 list without the offshore oil and gas companies showed a broader spread of industries, with the biggest being container shipping (30 percent), followed by shipbuilding and repair (23 percent), maritime equipment and construction (16 percent), seafood

production (13 percent), cruise tourism and port activities (8 percent each) and offshore wind (2 percent).

Of note, the seafood companies in this second list are (from highest to lowest revenues in 2018): Maruha Nichiro Corporation, Nippon Suisan Kaisha, Dongwon Enterprise, Mowi, Union Group, Mitsubishi Corporation, OUG Holdings, Austevoll Seafood, Trident Seafoods, Kyokuyo, Charoen Pokphand Foods, Red Chamber Group, Marubeni, Cooke, Chuo Gyorui, Pacific Seafood Group, SalMar, FCF Co, Parlevliet & Van der Plas, Bright Food Group, Maruichi Co, Nueva Pescanova, Daisui and Tohto Suisan.

Transnational scope

These large companies operating in the ocean are transnational in scope; the location of their headquarters, however, gives insight into where the revenues and benefits from ocean use are distributed. Some 12 percent of the revenues generated by this group were from Ocean 100 companies based in the US, followed by Saudi Arabia and China (8 percent each), Norway (7 percent), France (6 percent), the UK (5 percent) and South Korea, Brazil, Iran,

the Netherlands and Mexico (4 percent each). The industries also show distinct regional patterns of distribution. For example, with Saudi Arabia, Brazil, Iran, Mexico and the US, respectively, home to the largest offshore oil and gas companies, while China, South Korea and the US host the largest shipbuilding and repair companies, and South Korea, China and Italy are home to the largest maritime equipment and construction companies.

These findings suggest that in economic terms, capital in the ocean economy may be concentrated in the hands of a few companies headquartered in a handful of countries-largely in high- or middle-income countrieseven as most of the labour is found in small-scale fisheries, the largest employer sector in the ocean. More broadly, in terms of how governments make decisions and regulations for ocean use, this level of concentration can enable targeted lobbying and influence that further marginalize the concerns and needs of small-scale fisheries and the communities that depend upon them. We are talking about 'ocean grab'.

That inequity is a systemic feature of humanity's current economic use of the oceans is certainly not news. Neither that the benefits are accumulated by a few, while many of the harms are borne by the most vulnerable. What we hope will be useful from this study is that we now know who the largest beneficiaries are, in terms of annual revenues from large, ocean-based industries. While this group of companies is highly diverse and likely has different motivations, we hope that identifying the biggest companies operating in the oceans can be a foundation for action, for increasing transparency and accountability.

The most powerful actors are obtaining a large proportion of the benefits. It can also be expected that they should then also take on a leadership role in advancing ocean stewardship. A healthy ocean is of benefit both to them and to the communities that they work with. Over the last few years, the Seafood Business for Ocean Stewardship (SeaBOS) has initiated such work, where the largest industry actors from seafood are working together with scientists, aiming to improve the prospects for a sustainable ocean and associated communities.

The initiative has, for instance, addressed questions associated with the labour practices of these companies. It has worked to ensure that they are reporting on their activities in a transparent way, in accordance with best practices. Further work in this coalition of companies is likely to focus on ocean equity, including issues associated with whether the companies are operating in ways that may conflict with small-scale fisheries, and if their operations are regulated in a manner consistent with the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines).

These are just a few of the questions we would like to answer more broadly throughout the ocean economy, now that we know where to look. Beyond these efforts, if the majority of revenues generated from economic use of the oceans is in the hands of a relatively few companies, then perhaps we need to create mechanisms to help fund public goods in the ocean, and particularly support small-scale fishing to communities. This was proposed in a recent paper prepared for the 2020 High-Level Panel for a Sustainable Ocean Economy (a panel of 14 heads of state from around the world), suggesting the creation of a global tax on the profits of these ocean-linked industries. For example, a o.i percent global ocean tax on the revenues of the Ocean 100 companies (excluding their terrestrial operations) could generate US\$1.1 billion annually to support shared or public goods in the ocean (for example, small-scale fisheries).

This idea is still nascent. The aim is to look for mechanisms that might reduce inequality from economic ocean use, contributing more towards public or common goods in the oceans. Essentially, it is just one application of the findings from the study. Most importantly, our hope is that this list of the Ocean 100 can serve as a resource for the associations and organizations representing many small-scale fishers and fishworkers, as a small starting point to push for greater transparency and accountability of large-scale ocean industries.

For more

Ocean grabbing

https://www.sciencedirect.com/science/article/pii/S0308597X15000755

Securing a Just Space for Small-Scale Fisheries in the Blue Economy https://www.frontiersin.org/ articles/10.3389/fmars.2019.00171/full

Transnational corporations and the challenge of biosphere stewardship https://www.nature.com/articles/s41559-019-0978-z

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https://www.nature.com/articles/s41559-016-0017

The Ocean Economy in 2030

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Transnational corporations as 'keystone actors' in marine ecosystems

https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0127533