

Project overview

Despite awareness of what makes up strong fisheries management, there is a lack publicly available information on the status of fisheries management globally. To address this need, Ray Hilborn and Michael Melnychuk from the University of Washington conducted an analysis to further understanding of the effectiveness of management approaches at regulating fishing mortality.

The study included an independent survey completed by experts of a country's fisheries, providing an initial rapid assessment of fisheries management and governance systems. A total of 129 surveys across 28 countries were returned, including the 20 countries that catch the most fish in the world. For each country, respondents were presented with a list of ten species: four with the highest volume of landings, four with the greatest estimated landed value, and the remaining 2–6 species were sampled randomly in proportion to their landings and landed value.

The fisheries management survey characterized four dimensions of fisheries governance. Within each dimension, between 8–14 questions were asked about the use and effectiveness of specific management strategies and tactics employed.

Research, monitoring
and assessment

Management response
to stock status

Enforcement of
management measures

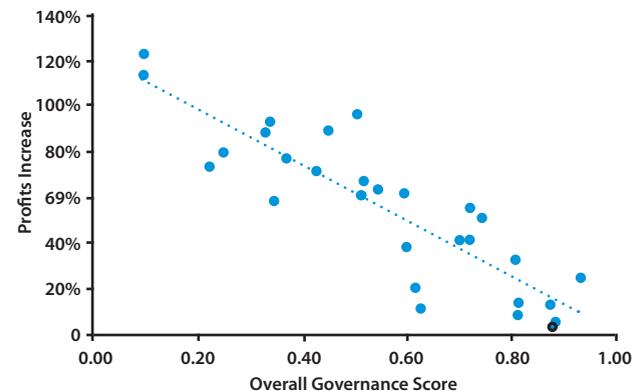
Social and
economic aspects

The survey results indicated opportunities for improvement in these four key dimensions of fisheries governance.

Governance predicts upside potential

It appears that the governance index largely explains the level of upside profit being presented at the World Ocean Summit by Chris Costello at University of California Santa Barbara and collaborators.

As a whole, the new governance index provides important insights in identifying the specific areas in which countries are performing well and in which areas they can improve their fisheries management systems to unlock ocean prosperity.



Countries with high governance scores have reasonably little potential to increase the profitability of their fisheries, whereas countries with low governance have great potential.



Governance & Marine Fisheries

COMPARING ACROSS
COUNTRIES AND STOCKS



New survey to characterize fisheries management systems

The elements of effective fisheries management are well-understood. Strong management means enacting measures to both prevent overfishing and, more importantly, implementing measures to reduce fishing pressure if stocks become depleted. Key practices include evaluating the status of fish and shellfish stocks, designing appropriate management measures to limit fishing mortality, and enforcing these regulations to prevent or reduce negative fishing impacts.

Effectiveness of fishery governance by country

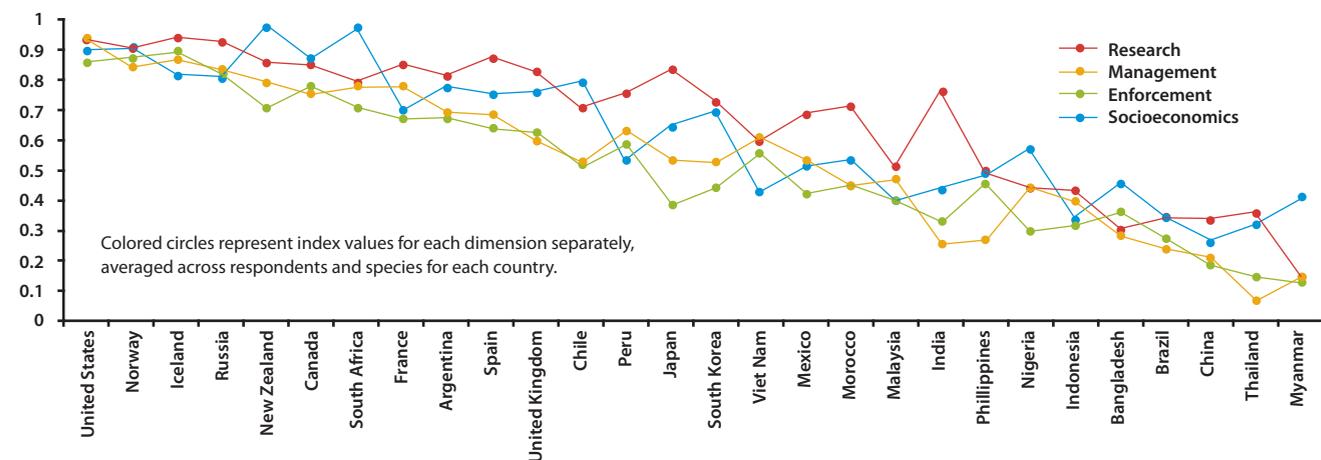
The results for each country are aggregates of survey answers for multiple species, multiple fishery expert respondents, and multiple criteria within and across the four dimensions of fisheries governance shown below. These answers, represent a country-level index of the effectiveness of fisheries governance systems. Although only 28 of the world's countries were covered by the study, together they represent more than 80% of the world's total catch.

Country	Index	Country	Index
United States	0.91	South Korea	0.59
Norway	0.88	Viet Nam	0.54
Iceland	0.88	Mexico	0.54
Russia	0.85	Morocco	0.54
New Zealand	0.83	Malaysia	0.44
Canada	0.81	India	0.44
South Africa	0.81	Philippines	0.42
France	0.75	Nigeria	0.39
Argentina	0.74	Indonesia	0.37
Spain	0.73	Bangladesh	0.35
United Kingdom	0.70	Brazil	0.30
Chile	0.63	China	0.25
Peru	0.62	Thailand	0.22
Japan	0.60	Myanmar	0.20

Results by dimension

Though the countries with the lowest index values—including China, Thailand, and Myanmar—currently have low assessments across all dimensions (see figure below), these results highlight the opportunity for comprehensive improvements in fisheries management.

Further, countries that fall towards the bottom of the index—including Indonesia and Brazil—are in the midst of introducing large reforms that could help tip the scales toward more positive rankings in the coming years. In Brazil, new leadership and a commitment to implement an ambitious fisheries management plan positions the country to improve its governance system in the areas of management and enforcement. Similarly, Indonesia is introducing measures intended to improve fisheries governance, such as fighting illegal fishing, particularly targeted at foreign fleets.



Governance index by dimension and country

What the results mean

A major benefit of this study is the ability to identify in which specific areas, and for which species, countries are performing well, and where they stand to improve. For instance, Japan and India have relatively strong research capabilities, but there are opportunities for improvements in management and enforcement dimensions. One caveat of the methodology is that results are susceptible to potential biases of self-reporting, since individuals most commonly responded for the countries in which they work and reside. Moreover, countries with poor regulation of corruption may rank higher, as the assessors may have rated the systems more in theory than in practice.

Among emerging markets, four countries that performed well in the survey are South Africa, Argentina, Chile, and Peru. South Africa, with an especially high

index value in the socioeconomic dimension, has strong regulation of industrial fleets and has recently introduced policies to benefit previously disenfranchised coastal communities. Chile is also frequently cited as a model for its well-crafted artisanal fishing policies, which empower local communities to develop their own management strategies for high-value shellfish. The survey questions did not distinguish community-based management from centralized government management systems, but instead focused on how effective the system was at limiting fishing pressure irrespective of the level of centralization.

