



Unequal distribution of research into marine resources

October 15, 2020 | Andri Bryner

Topics: Biodiversity | Water & Development | Society

Exploration and utilisation of resources from the world's oceans is not equally distributed across the globe. Although many of these resources originate in the Global South, they are mostly being researched by just a few countries from the North. Accordingly, this is also where most of the benefits and profits are flowing to, despite the Convention on Biological Diversity. This was the finding of an analysis of literature from the last 50 years.

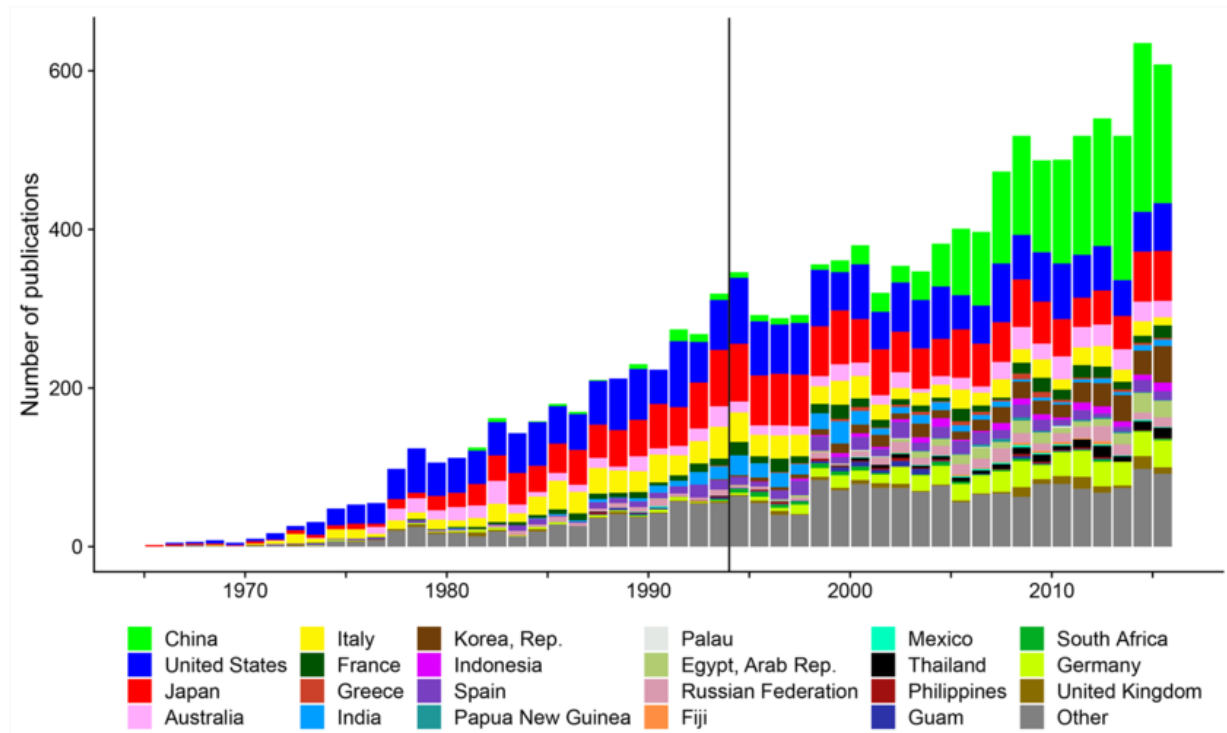
The study, which was recently published in the journal PNAS (Proceedings of the National Academy of Sciences), is controversial, as it shows just how colonial the globalised research community still is. The study involved a team of current and former Eawag researchers analysing scientific literature on resources from the world's oceans published over the last 50 years. It was found that, out of almost 10,000 studies, more than half originate from just a handful of countries in the rich North (USA, Japan, Australia and – most recently – China). This is despite the fact that the marine resources being written about in these publications – such as ones for the pharmaceutical, cosmetics and food industries – often come from coastal nations in the Global South, such as African countries or Indonesia.

Benefits of the Convention manifesting very slowly

'The results suggest that it is not only scientific kudos that is unequally distributed but also the profits from the utilisation of the resources being explored,' says co-author Moritz Lürig from Eawag. According to the researcher, this finding is particularly disappointing in light of the longstanding efforts being made to improve the situation. The Convention on Biological Diversity (CBD) was adopted in 1993 following the United Nations Conference on Environment and Development in Rio. It later gave rise to the [Nagoya Protocol](#), a supplementary agreement which aims to ensure fair access to genetic

resources and fair and equitable sharing of benefits arising from their utilisation. The Convention has so far been signed by 193 countries, and was ratified by Switzerland in 1994.

Although the diversity of the countries from where the publications originate has increased since the Convention on Biological Diversity came into force, the research landscape is still dominated by just a handful of countries. 'Unfortunately, this trend is changing only very, very slowly,' says Lürig. He adds that 'additional measures are needed to ensure that the benefits, such as those arising from marine drug research, are distributed more fairly across the globe.'



Number and origin of scientific publications on marine resources: The USA, Japan and Australia have occupied the top spots for decades, but China has overtaken them all in the last 15 years. The vertical line marks the inception of the Convention on Biological Diversity (CBD) at the end of 1993. Since then, the total number of countries writing about marine resources has increased. However, this is still happening slowly, despite political statements and intentions to the contrary.

Similarities with other fields of research?

In science, it has always been a case of 'the rich West leads the way and the rest follows'. This pattern still appears to be deeply ingrained. The methodology of analysing publications, which was chosen by the research team led by Miguel Leal from the University of Aveiro in Portugal, could also provide insights into how fairly or unfairly the international scientific community functions in other areas of research. Leal colleague Lürig has already come up with an idea on how to make things better: 'We should think more about how all partners in research can become established scientists and then conduct independent research for the benefit of their society.' This also means questioning common practices on (co-)authorship, especially in scientific collaborations between the Global North and Global South.

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Original article

Original article (open access): Fifty years of capacity building in the search for new marine natural products; Miguel C. Leal, Jaime M. Anaya-Rojas, et al. PNAS first published September 14, 2020

<https://doi.org/10.1073/pnas.2007610117>

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Convention on Biological Diversity

Access and Benefit-Sharing Clearing-House (ABSCH) platform

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Authorship in scientific publications – analysis and recommendations

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