



BERGEN SUMMER RESEARCH SCHOOL POLICY BRIEF | JUNE 2021

Transdisciplinary partnerships are needed to obtain sustainable fisheries across the globe



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▶ ▶ ▶ With increasing overfishing threatening the world's oceans, we must work together to ensure sustainability and improvement of life below water. Combining strong institutions, global partnerships and quality education can help to achieve SDG target 14.4.

The sustainable development goal target 14.4 aims to effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans by 2020. In order to achieve this, we need to take into account the nexus between SDG 14 “life below water”, SDG 16 “peace, justice and strong institutions” and SDG 4 “quality education”.

3 key points

- Overfishing is still increasing and continues to be a global issue threatening the eco-systems of the world's oceans
- There is considerable regional variation in the achievement of target 14.4 with some fisheries showing improved management and others showing worsening trends
- Strong institutions and a strong justice system which can ensure the sustainability and improvement of life below water are lacking in many fisheries

Introduction

Even though up to 10 % of the global population relies on fisheries for their livelihoods (FAO, 2020), and the sustainable development of fisheries (SDG 14.4) was one of the prioritized SDGs for 2020, overfishing and an unequal distribution of the ocean's resources continue to be major global issues.

Despite significant positive effects on the sustainability of countries adhering to the 1995 International Code of Conduct for Responsible Fisheries, global scale analysis indicates low compliance with the code. (Coll et al., 2013). The majority of the members of the Food and Agriculture Organization of the United Nations have reported a need for access to more human resources; training and awareness raising, showing the need for more transdisciplinary collaborations (FAO, 2020).

If policies do not fit the complexities of fisheries, they might address the symptoms but not solve the root of the problem. Therefore, it is necessary to approach the problem holistically from a trans-disciplinary point of view. As a relatively new approach that tries to facilitate the understanding of the complexity of problems in small-scale fisheries, trans-disciplinary collaborations and research provides us with tools and methods to look at the concerns and to inform policies.

Through social learning, team members become better positioned and confident to interact, and also are capable of developing the respect and empathy needed to work in a heterogeneous team. Bringing together different and distinct disciplines and integrating them to investigate a research problem has been applied in small-scale fisheries research and studies. Choi and Pak (2006) refer to this concept as ‘multiple disciplinary’ research, while others use more common terms like multi-disciplinarity and inter-disciplinarity to describe their research. In different ways and in varying degrees, these approaches have applied the concept of a trans-disciplinary approach to identify problems of small-scale fishing industry.

Analysis

Fish provides more than 3.3 billion people with 20 percent of their average per capita intake of high-quality animal proteins, as well as with essential amino acids, fatty acids and micronutrients (FAO, 2020). Global pressure on fisheries through overfishing, illegal, unreported and unregulated fishing continues to put the sustained supply of already limited fisheries resources further at risk.

Indicator 14.4.1 distinguishes fish stocks that are biologically unsustainable, with abundances below the maximum sustainable yield (MSY) level, from those which are biologically sustainable, with abundances at or greater than the level that can produce a MSY. According to the FAO's latest report on the State of the World's Fisheries, the percentage of fish stocks that are biologically unsustainable has increased from 10% in 1974 to 34.2 percent in 2017 (FAO, 2020).

Despite an increasing global focus on how to achieve more sustainable fisheries, unsustainable fishing methods are still used in fisheries across the world. However, there remains considerable regional variation with respect to how fisheries are managed, with overfishing and market demands putting at risk marine ecosystems and biodiversity (FAO, 2020). Points which were highlighted at

the International Symposium on Fisheries Sustainability (COFI) of 2020, show the need for more rapid changes in the institutional arrangements and for securing further development of sector specific policies (COFI, 2021). Thus, facilitating a more just system for sustaining marine resources in relation to SDGs 14.4 and 16.

The continued variations in how sustainably fisheries are managed and indications of low compliance with the Code of Conduct, show the need for arenas for more cross-cultural collaborations and transdisciplinary knowledge exchange. Reports indicate that managed well, fisheries can contribute to a more peaceful and equitable world (FAO, 2020).

Institutions are a key concept in fisheries management discourse, because through institutions management systems work. Therefore, institutions are essential to not only fisheries but fishers and the ecosystem itself (Jentoft, 2004). To ensure the norms, values and knowledge that is needed for sustainable fishing practices, we need healthy communities and strong institutions.

Institutions can provide standards, guidelines, perspectives, and warnings. Because of climate change, conditions are already changing for fishers nowadays and they will change even more in the future. Local communities are apt to implement rapid changes and thus develop their methods to achieve more sustainable fisheries. We need strong institutions to establish more transdisciplinary collaborations between the different actors in fishery and to make sure existing regulatory agreements are fulfilled (COFI, 2021).

Strong institutions to regulate harmful fishing practices provide a promising tool to sustainably harvest and manage our valuable but scarce fisheries resources in the long run (Costello et al., 2008). Yet the adoption, implementation and enforcement of institutions and sustainable management practices vary considerably between fisheries across the globe.

We are in urgent need of strategies for scaling up capacity development in data sharing especially in technically limited countries and regions. It is necessary to work globally to be able to impose and maintain sustainability. The increasing use of artificial intelligence can increase the accessibility and use and support data sharing, collaboration and inclusiveness globally. Moreover, it is important to educate children on the new data and development globally in order to ensure the continuation of sustainable fisheries (COFI, 2021).

If fishers receive the right kind of education about the dangerous effects of some fishing practices, there will be good environmental condition for life below water which would provide the necessary condition for enough seafood. Fishers would then get enough to provide food for nourishment and a better livelihood for themselves. Quality marine education is needed to inform the culture, religion, and the way of life of the fisherfolk, especially those residing along the shores of the sea.

Conclusions

Concerted international efforts, partnerships, and new forms of collaboration at the level of practitioners, as well as scientists and policymakers are crucial in order to support those lagging behind and advance education on sustainable fisheries management and comprehensive implementation of institutions on a global scale.

Global, transdisciplinary partnership to improve education and secure the sharing of knowledge can contribute to collective learning of how to manage global fisheries.

With widespread quality education on the benefits and accessible options of sustainable fisheries management, as well as collaboration on the development of needed alternatives, stakeholders in fisheries can be empowered and supported to make a move towards the adoption of institutions.

Better institutions are also needed to manage fisheries sustainably which will lead to the possibility of more stability in marine fish stocks and subsequently better livelihoods for the fisherfolk.

Thus, to further the achievement of SDG target 14.4, it's interlinkages with SDG 4 and SDG 16 need to be recognized and capitalized on.

Recommendations

- Establishing an equitable digital meeting ground for knowledge sharing and education for key actors in fisheries at local, regional and global level.
- Quality marine education which is aimed towards all groups of stakeholders is impetus for sustainable fisheries and life below water.
- Global partnerships can help reduce regional differences, enforce existing policies and build stronger institutions which reflect sustainable standards in fisheries by sharing best practices.

Further relevant SDGs



IMPRINT

SDG Bergen Science Advice (Professor Edvard Hviding, Senior Adviser Bjørn Erik Andersen and Senior Adviser/policy brief editor Sverre Ole Drønen) in collaboration with Bergen Summer Research School course holders PhD for Innovation (Professor Birgit Kopainsky, Dr. Hiwa Målen and Dr. Ingunn Johanne Ness).

Relevance to the 2030 Agenda

SDG 14.4 is one of the ten targets under SDG 14: *Life below Water*, building towards the 2030 Agenda; sustainable development of fishery was one of the prioritized SDGs for 2020, but overfishing and unfair distribution of the ocean's resources continue to be major global issues.

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