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Fisheries

Fishery cooperatives and the sustainable blue economy

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Scoping review shows that fishery cooperatives support a sustainable blue economy

The authors reviewed the SCOPUS database to find the relationship between fishery cooperatives and the sustainable blue economy, specifically including observations from a business perspective. Photo of artisanal fishermen by Rod Waddington from Kergunyah, Australia, via Wikimedia Commons.

The blue economy is a concept that aims to develop the global economy based on sustainable practices. The **World Bank** (https://policycommons.net/artifacts/1509557/the-potential-of-the-blue-economy/2177714/) defined it as "the sustainable use of ocean resources for economic growth, social inclusion and the preservation or improvement of livelihoods while at the same time ensuring environmental sustainability of the oceans and coastal areas." The blue economy has diverse components, including ocean industries, such as fisheries, maritime transport, and tourism. It is urged to be implemented internationally in the fisheries and marine sectors.

Fishery cooperatives are old economic entities that play a significant role in helping fishermen. They have essential roles in facilitating information exchanges, improving communities' negotiating power with market intermediaries, building partnerships, networks and linkages to other organizations, and fostering the sharing of traditional and indigenous knowledge. Through service provision and empowerment of small-scale fishers, fishery cooperatives help lift them out of poverty and build resilience to climate and market shifts.

Although the concept of a blue economy emerged in 2014, there is no research linking fishery cooperatives with the blue economy. **Previous studies** (https://doi.org/10.1186/s12302-021-00502-1) have only conducted a literature review on the blue economy in the Indian Ocean, the blue economy and coastal tourism, and the blue economy and circular economy.

This article – summarized from the **original publication** (https://doi.org/10.3390/proceedings2022083030) (Sari, D.K and A.Y. Rahmayanti. 2022. Fishery Cooperatives and Sustainable Blue Economy: Scoping Review from a Business Perspective. *Proceedings* 2022, 83(1), 30) – reports on a study reviewing available literature on fishery cooperatives and provides evidence of a relationship between fishery cooperatives and the blue economy.

Study setup

A scoping review of the literature was carried out by identifying the literature related to fishery cooperatives in the **SCOPUS** (https://www.scopus.com/) database. This review addressed the following question: "What is the role of fishery cooperatives in the blue economy from a business perspective?" Since we are undertaking a scoping review of blue economy from a business perspective, we focused on articles that discuss the impact of fishery cooperatives on economic growth. We used qualitative research types as our research design.

Relevant published articles were searched using a computer in the SCOPUS database. The keywords used in the search for articles were "fishery cooperatives" OR "fishery cooperative" OR "fishery cooperation" OR "fisheries cooperation." This research includes articles using the English language, categorized as final journal source type, and fall into the subject areas of economics, econometrics and finance, and business management and accounting.

Results and discussion

During the initial search, 184 documents were retrieved from the SCOPUS database, with 27 articles meeting the screening criteria. After the abstract screening, 15 articles were selected, of which eight articles met the inclusion criteria and were moved on to the full-text screening stage. Articles were excluded for several reasons. First, we did not have access to the text. Second, the article did not assess the study topic. Lastly, the articles have an inadequate methodology. We found that some articles are conceptual papers. Fig. 1 shows the flow diagram of research selection, and Table 1 shows a summary of the characteristics of the identified studies.

Sari, Fishery cooperatives, Table 1

Territory	Research Purposes	Fishery Cooperative Impact
Puerto Rico	Descriptive	Positive
Japan	Descriptive	Positive
Alaska	Explanatory	Positive
Cuba	Explanatory	Positive
United States	Explanatory	Positive
Mexico	Explanatory	Positive
Major oceanic regions	Explanatory	Positive
United States	Descriptive	Positive

Table 1. Research characteristics.

The research selection shows that research related to fishery cooperatives and business (economic growth) is carried out in various countries, but it mainly reflects the observed area's conditions. The purpose of this research is divided into descriptive and exploratory.

Scoping review analysis shows that fishery cooperatives in various regions can positively impact local economic growth by increasing fishermen's harvest, improving fisheries and non-fisheries sectors, and developing a sustainable environment and economy. In Alaska, fishery cooperatives can help fishermen share information with their cooperatives, which can increase their harvest. **In the United States**

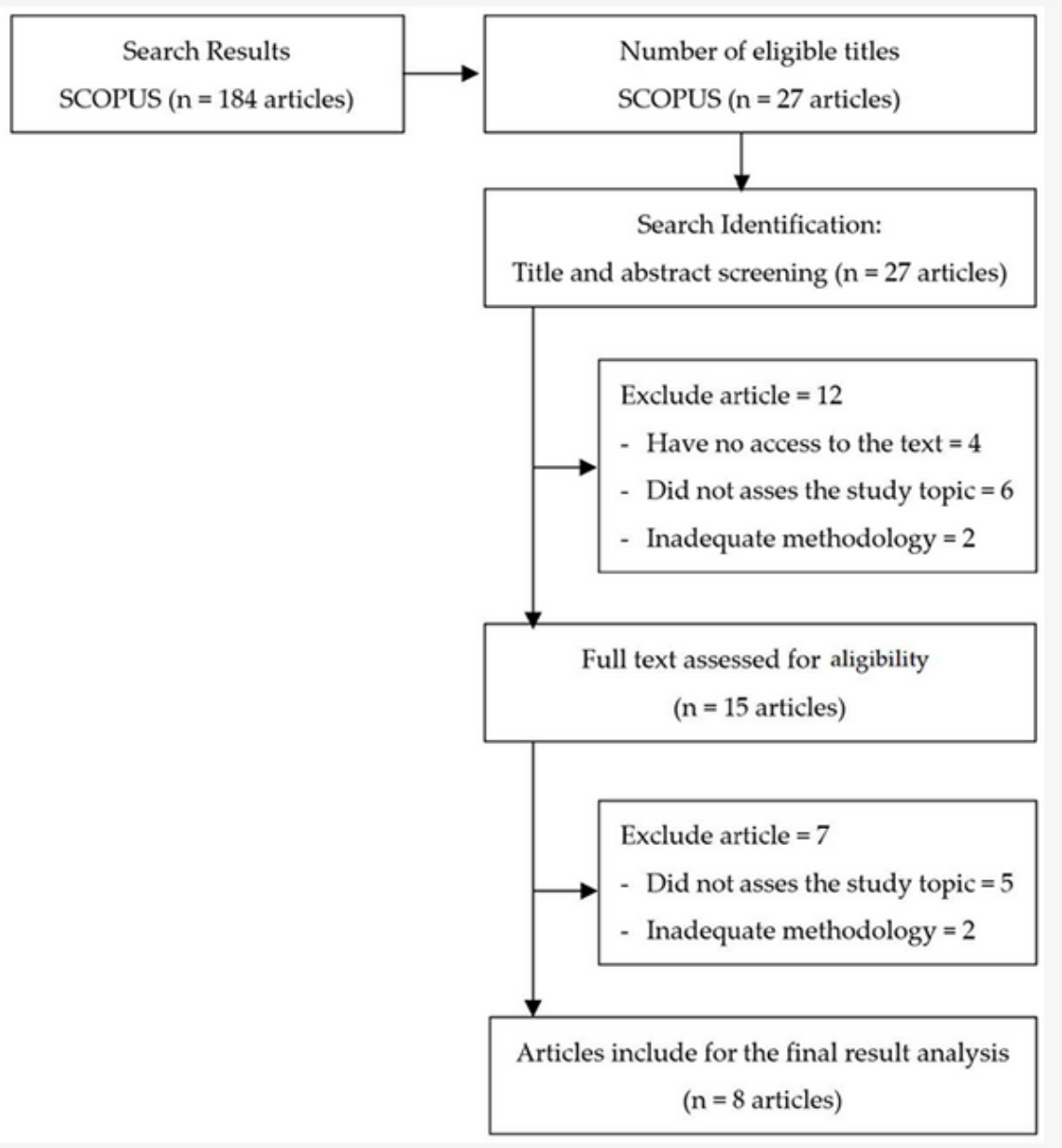

Fig. 1: A flow diagram of the research selection.

(https://doi.org/10.1016/S0308-597X(03)00050-2), fishery cooperatives have proven to make fishermen more efficient, reduce fishing costs and minimize transaction costs for negotiating contracts.

Well-designed cooperative fisheries have proven to be able to help improve the fisheries sector in **Cuba** (https://doi.org/10.1016/j.marpol.2013.11.019), overcoming non-industrial fisheries challenges in the **United States** (https://doi.org/10.1016/j.marpol.2013.08.005). They have also proven to be an alternative solution during a crisis of fish shortages in **Puerto Rico** (https://doi.org/10.1016/j.marpol.2021.104809). Even on **Mexico's Pacific coast** (https://doi.org/10.1016/j.marpol.2013.08.001), local communities benefit significantly from managing community-based fishery cooperatives. Moreover, with the poor conditions of government services, the local community depends on cooperatives for their survival.

The study conducted by **Ovando et al.** (https://doi.org/10.1016/j.marpol.2012.03.012)was the only study in this scoping review that used global data. The data includes 67 cooperatives from the world's foremost marine areas of developed and developing countries. The results of the empirical analysis show that cooperatives have the potential to improve economic conditions and reduce the environmental impact that has destroyed many fisheries around the world.

Scoping review analysis also shows that Japanese society is one step ahead in managing fisheries and the environment. In Japan, local fishery cooperatives apply local wisdom called **Satoumi** (https://doi.org/10.1016/j.marpol.2017.01.020). This approach combines traditional and modern knowledge to achieve environmental and economic sustainability through careful human–nature interaction (fishery cooperative management).

The results of this scoping review have practical implications for the government as a policymaker. The government should be more focused on paying attention to and developing fishery cooperatives because fishery cooperatives play a vital role in a sustainable blue economy.

This scoping review still had several limitations. First, this scoping review only uses the SCOPUS database. Future research should use more databases to enrich the literature sources and results. Second, this research only uses economics, econometrics and finance, business management and accounting subject areas. Future research should also use the social science subject area to capture the benefits of fishery cooperatives on the blue economy, which may be rich in the socio-economic area.

Perspectives

This scoping review uses the SCOPUS database to find the relationship between fishery cooperatives and the sustainable blue economy. The scoping review specifically includes observations from a business perspective. Although most research on fishery cooperatives is carried out through observation of specific areas, all the results show that fishery cooperatives support the realization of a sustainable blue economy. This is because the existence of fishery cooperatives can increase local economic growth by increasing fishermen's harvest, improving fisheries and non-fisheries sectors, and developing a sustainable environment and economy.

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