

Press Release



Dennis Shen

The Economics of Hypoxia

A Study on the Impacts of Oxygen Depletion on Fisheries in the Mediterranean and Black Sea

52 pages
Environmental economics

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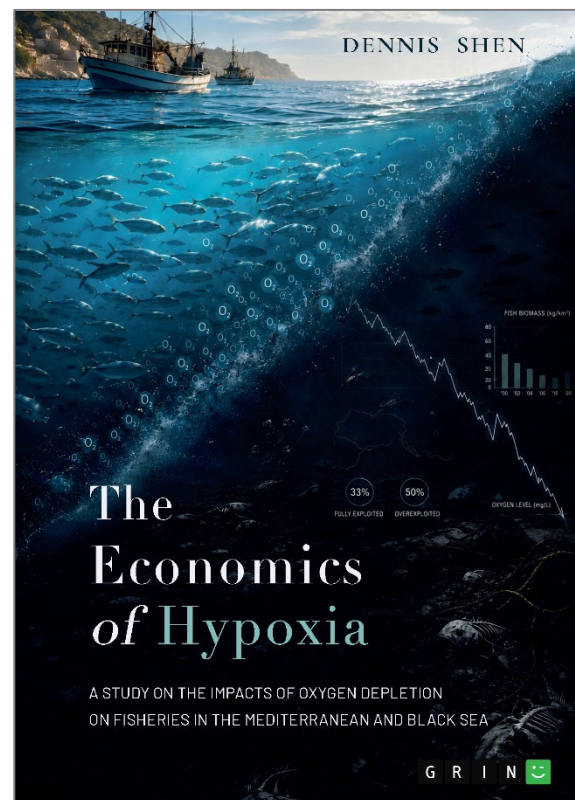
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The book was published in October 2026.

<https://www.grin.com/document/1746311>



Increasing Hypoxia in International Seas Puts Fisheries and Global Economies at Risk

Oxygen-depleted "dead zones" are not only an ecological threat but also a measurable economic risk for coastal communities and global food systems. In his book *"The Economics of Hypoxia"*, published by GRIN in October 2026, economist Dennis Shen examines how low-oxygen waters affect fish, crustacean and mollusc populations, and what the declining catch of such species means for human welfare.

Healthy oceans underpin global food security, climate regulation as well as human well-being. Nutrient pollution from human activity can trigger algal blooms whose decomposition consumes oxygen, resulting in hypoxic coastal waters in which marine organisms may struggle to survive. Focusing on the Mediterranean and Black seas, Shen connects this less-visible dimension of the crisis in our seas with its severe economic consequences and demonstrates why increasing oxygen depletion across many international bodies of water matters far beyond marine biology.

Measuring the Economic Impact of Dead Zones

Using fisheries data on the Mediterranean and Black Sea, Shen develops an index that estimates the hypoxic shares of regions of these bodies of water and examines their relationships with the levels of production of regional capture fisheries. The results associate increasing hypoxia with material

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declines in the catch of fish, bottom-dwelling crustaceans as well as bivalves. Seabed species appear especially vulnerable. The reduced catch of fish is linked primarily to mortality rather than to the migration of fish species.

The book addresses the challenge of valuing the services provided by our marine ecosystems and identifies meaningful knowledge gaps concerning hypoxia, overfishing, habitat destruction and ocean acidification. It is aimed at researchers and students in environmental economics, the marine sciences and environmental policy, as well as policymakers, marine conservationists and journalists covering our oceans, food security and ecological sustainability.

About the Author

Dennis Shen is a distinguished macroeconomist with expertise in public policy, international development, financial markets and environmental economics. He holds a Master of Public Administration in International Development from the London School of Economics and a Bachelor of Science in Financial Engineering from Cornell University. Shen has worked in institutional asset management and recently served as the Chair of the Macroeconomic Council and Lead Global Economist of the European credit rating agency, Scope. His research on economic and financial policy has been cited across international organisations and global press mediums.

Beyond his work in economics, Shen advocates for integrating environmental and climate considerations in financial decision-making. He co-founded the Junior Ocean Council of Oceana, the world's single largest organisation dedicated solely to ocean preservation, in New York and serves today on the supervisory board of the Berlin-based NGO Visioneers. In his book, Shen reflects precisely such a perspective: Rather than treating hypoxia as a purely environmental issue, he examines how changes in marine ecosystems impact the productivity of fisheries, economic value creation and human livelihood. By combining insights across environmental economics, marine sciences and public policy, he provides an inter-disciplinary perspective around an increasing crisis affecting our seas and its very direct implications for society.

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Free review copies can be obtained directly from the publisher at presse@grin.com.

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