



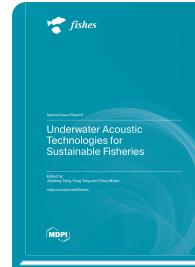
Special Issue Reprint

Underwater Acoustic Technologies for Sustainable Fisheries

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This Reprint brings together nine studies that illustrate the essential role of acoustic methods in modern fisheries science and ecosystem conservation. It highlights practical and advanced applications that support sustainable fisheries, enhance monitoring accuracy, and facilitate broader ecological research.

Key topics include foundational work on Target Strength (TS) estimation, crucial for species identification and biomass assessment. Several papers address challenges in broadband quantification, validate theoretical models such as the KRM, and establish TS-length relationships important for reliable resource evaluation. Other contributions examine the use of scientific echosounders to analyze species' spatiotemporal distribution and to assess fish stock recovery in inland waters, offering strong evidence for the effectiveness of conservation policies such as China's fishing ban.

This Reprint also features studies that utilize acoustic cameras to monitor large aquatic organisms. Some works combine imaging acoustics with deep learning and tracking algorithms to achieve automated and efficient target identification and counting. This Reprint also extends to passive acoustic monitoring, which provides non-invasive insights into endangered species such as the Yangtze Finless Porpoise, informing conservation strategies.



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