

# Mathematics and the Ocean

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## Marine ecosystems conservation – the importance of multidisciplinary scientific advice

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Oceans cover 3/4 of the Earth's surface and support 80 % of all life. The conservation of marine ecosystems and the maintenance of biodiversity are fundamental for a sustainable future, as explicitly referred under UN Sustainable Development Goal 14. This requires that fish and other exploited marine resources, despite their utmost role on the world food system, need to be sustainably managed. The science that scientifically supports management is multidisciplinary in nature. Particularly, mathematical and statistical modeling are quite relevant for describing the real phenomena, namely, providing estimates and their uncertainties, to predict and to evaluate the adequacy of management options.