

Abstract

The contributions in this report stem from a workshop held in April 2000 to review the methodology deployed by the research team of the *Sea Around Us Project*. This project, funded by The Pew Charitable Trusts, Philadelphia, USA, is designed to provide an integrated analysis of the impacts of fisheries on marine ecosystems, and to devise policies that can mitigate and reverse harmful trends whilst ensuring the social and economic benefits of sustainable fisheries. The data-rich North Atlantic was selected as the target area for case studies to be conducted in the first two years of the project, with other areas to follow in subsequent years. The methodology deployed by the project includes: (1) the development of a spatially explicit catch and effort information system that allows in-depth analysis of fisheries catches for various large marine ecosystems, i.e., reported landings, nominal catches, unreported catches, misreported catches, and discarded by-catch, sorted by species and sector; (2) the quantification of the biological and economic impacts of the present fishing trends or a change thereof on the ecosystems, with reference to past ecosystems reconstructed from time series of scientific data and the Ecopath with Ecosim software; (3) the quantitative evaluation of the status of fisheries by sector, gear type and location using a robust and simple system of rapid appraisal (Rapfish) that may be applied to past, present and alternative future fisheries; (4) approaches for scaling all results to a basin-wide scale; and (5) quantification of the economic and

other benefits to be gained from re-establishing healthy ecosystems, relative to the losses expected from a continuation of the status quo. An important feature of the methodology assembled to meet these requirements is that it does not compete with the elaborate single-species methodology conventionally applied to the management of fisheries, and which generally pertain to geographic and temporal scales much smaller than the basin-wide scale considered by the *Sea Around Us Project*.

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