

Preface and Acknowledgement

The contributions included in this report originate from a workshop held from April 1st to 5th, 2000 at Dunsmuir Lodge, Sydney, Vancouver Island, B.C., and devoted to reviewing the methodology to be deployed by the research team of the *Sea Around Us Project*.

This project, fully 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 while ensuring the social and economic benefits of sustainable fisheries. The data-rich North Atlantic was selected as the target area for cast studies to be conducted in the first two years of the project, with other areas to follow in subsequent years.

The *Sea Around Us Project* aims to collate and analyze catch and ecosystem information using analytical tools being developed at the Fisheries Centre, in partnership with a global network of scientists providing data, evaluating and peer review. These elements are required in developing strategies and action plans to manage marine ecosystems.

Thus, the methodology deployed by the project includes:

1. The development of a catch and effort information system that allows in-depth analysis of fisheries catches for each ecosystem, i.e., reported landings, nominal catches, unreported catches, misreported catches, discarded by-catch, kill by ghost-fishing, 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;
3. The quantitative evaluation of the status of fisheries by sector, gear type and location using a robust and simple system of rapid appraisal that may be applied to past, present and alternative future fisheries;
4. Approaches for scaling all results to a basin-wide scale;
5. Quantification of the 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 those considered by the *Sea Around Us Project*. Thus, we were able to build on the results of traditional approaches in fisheries sciences to derive our methodology, which we hope will be seen as complementary to traditional approaches.

In fact, the *Sea Around Us Project* has much progressed since the workshop documented here was held, and already, some of the methods in this report have been modified after they were applied to a wide range of concrete situations. Interested readers are advised therefore to consult the project web page (at www.fisheries.ubc.ca/projects/SAUP) for current versions, and sample results.

We conclude by thanking the Pew Charitable Trusts for their support of the *Sea Around Us Project*. Thanks are also due to the dedicated staff of the *Sea Around Us Project*, and to our panel of invited experts: Lee Alverson, Kevern Cochrane, Poul Degnbol, Paul Fanning, Richard Grainger and Jay Maclean.

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