Director's Foreword

Who would have thought that every single one of the major international agencies set up with such hope in the 1950s and 1960s to manage fisheries on North Atlantic fish populations would have been found, by 2000, to have totally failed in their mandate? This series of four reports[1], presenting the output of the first two-year phase of the *Sea Around Us* project (SAU), makes a detailed and solid case for this spectacular and depressing failure.

Two questions immediately arise. Why did this happen? What can we do in the future?

A search for causes raises many further questions. Were stock assessments misleading? Did stock assessments miss the big picture by ignoring ecosystem effects? Were unreported catches large enough to cause declines invisible to conventional stock assessment? Was the ability of fish population age structure to buffer climate fluctuations ignored? Did political pressure cause quotas approved by scientists to be raised? Was industry locked into serial depletion by area, species and habitat? Was industry driven by a perverse economic investment ratchet? Was industry seduced by subsidies that turned money-losing fisheries into money-makers? It is quite likely that all of the above apply and the work reported here addresses many of these questions.

But how can a major industry have caused a disaster on such a scale? If we understand this 'meta-question' we may be able to find a solution. So we will try to address this in the next two-year phase of the *Sea Around Us* project.

The Fisheries Centre at the University of British Columbia supports research that first clarifies, and then finds ways to mitigate, the impacts of fisheries on aquatic ecosystems. Only with such insight of how whole aquatic ecosystems function can management policies aim to reconcile the extraction of living resources for food with the conservation of biodiversity, with the maintenance of ecosystem services, with amenity and with other multiple uses of aquatic ecosystems. Indeed, the present dire state of marine ecosystems and their fisheries around the globe signals a pressing need for what may be termed the 'ecosystem imperative'.

Although ecosystem agendas of this kind has recently become embodied in the legislative goals of many nations, and are an integral part of the FAO Code of Conduct for Responsible Fisheries, in practice there have been few attempts to work out how it might actually be done. In sponsoring the Sea Around Us project, the Pew Charitable Trusts[2] of Philadelphia, USA, have devoted a significant amount of funding to an ambitious pilot project focuses on the North Atlantic that aims to address this question. The research team[3] of senior scientists, postdoctoral research assistants, graduate students, consultants and support staff commenced work in late 1999.

The first two-year phase has focussed on the fisheries and ecosystems of the North Atlantic. In addition a book for the general public is being published[4]. Members of this team have been excited and challenged by the unprecedented scope of the research work. Most of the methods used to tackle the problem are new[5] (see Pauly *et al.* 2000), and many of the measures developed by the team have been translated into a revolutionary new mapping system.

These reports are the latest in a series of *Fisheries Centre Research Reports* published by the UBC Fisheries Centre. A full list is shown on our web site at www.fisheries.ubc.ca, and the series is fully abstracted in the *Aquatic Sciences and Fisheries Abstracts (ASFA)*. The research report series aims to focus on broad multidisciplinary problems in fisheries management, to provide a synoptic overview of the foundations and themes of current research, to report on research work-in-progress, and to identify the next steps and ways that research may be improved. *Fisheries Centre Research Reports* are distributed free to all project or workshop participants. Further copies are available on request for a modest cost-recovery charge. Please contact the Fisheries Centre by mail, fax or e-mail to 'office@fisheries.ubc.ca'.

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1 Zeller, D., Watson, R. and Pauly, D. (eds) (2001) Fisheries Impacts on North Atlantic Ecosystems: Catch, Effort and National/Regional Data Sets. Fisheries Centre Research Reports 9 (3): 254 pp.
Guénette, S., Christensen, V. and Pauly, D. (eds) (2001) Fisheries Impacts on North Atlantic Ecosystems: Models and Analyses. Fisheries Centre Research Reports 9 (4).
Pitcher, T.J., Sumaila, R. and Pauly, D. (eds) (2001) Fisheries Impacts on North Atlantic Ecosystems: Evaluations and Policy Exploration. Fisheries Centre Research Reports 9 (5): 94 pp.
Pitcher, T. J., Alder, J. and Pauly, D. (eds) (2002) Fisheries Impacts on North Atlantic Ecosystems: Rapid Appraisal of the Status of North Atlantic Fisheries. Fisheries Centre Research Reports (*In prep*).

2 *Sea Around Us* is a Fisheries Centre partnership with the Pew Charitable Trusts of Philadelphia, USA. The Trusts support non-profit activities in the areas of culture, education, the environment, health and human services, public policy and religion. Based in Philadelphia, the Trusts make strategic investments to help organizations and citizens develop practical solutions to difficult problems. In 2000, with approximately $4.8 billion in assets, the Trusts committed over $235 million to 302 nonprofit organizations.

3 A list of SAU team members may be found in Annex 1 of Zeller *et al.* (2001).

4 *In a Perfect Ocean*. Island Press. (*in press)*.

5 Pauly, D. and Pitcher T.J. (eds) (2000) Methods for assessing the impact of fisheries on marine ecosystems of the North Atlantic. Fisheries Centre Research Reports 8(2): 195pp.