

Curriculum Vitae

Dr. Jake Rice
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Personal History:

Born - 26 June 1948; Homer, New York U.S.A.
Canadian Citizen, Landed Immigrant – 1970; Naturalized Citizen - 1986

Education:

B.Sc.: Cornell University 1970 Ithaca, New York, U.S.A.
Major: Conservation

Ph.D.: University of Toronto 1974
Toronto, Ontario, Canada
Major: Zoology

Employment:

09/07 – present - Senior National Advisor, Ecosystem Science; Department of Fisheries and Oceans
Serve as expert advisor to senior Ministry officials on all aspects of ecosystem science, ecosystem approaches to management, and related issues. Special priority to serve as science advisor and credentialed member of Canadian Delegations to international marine policy meetings at United Nations (ICP, BBNJ etc), Convention on Biological Diversity (COP, SBSTTA etc), FAO, etc. Chair many Canadian and international peer review and advisory meetings on marine ecosystem and biodiversity issues. Conduct original research on marine ecosystem structure and function, impacts of human activities on ecosystems, and ecosystem approaches to integrated management of human activities in the sea.

02/96 - 09/07 - Director – Scientific Advice and Peer Review
(Until 02/2004, title was Director - Canadian Science Advisory Secretariat)
DFO - National Headquarters

I am responsible for coordinating peer review and provision of scientific advice on all fisheries and marine science issues within the Department of Fisheries and Oceans. DFO's peer review and advisory processes are committed to rigorous quality control of data and analyses; reliability, objectivity, and clarity of conclusions and advice; integration of traditional knowledge with scientific results; and running open and transparent advisory processes. Chair meetings and workshops and national working groups, and serve as Headquarters liaison for many Regional science review and advisory groups. Represent Canada at many international fisheries and marine science bodies. I retain some research activities in the areas of ecosystem dynamics, ecosystem management, the effects of fishing on marine ecosystems, and integrating traditional and modern scientific knowledge in the development of advice on resource management.

8/98 - 02/98 - Guest Professor - University of Copenhagen (Royal Danish Academy of Sciences)
Danish Institute of Marine Research

Charlottenlund Castle
Charlottenlund, Denmark

I taught a course for graduate students and advanced undergraduates on the interface between theoretical ecology and fisheries science, and co-advised several graduate students. Research activities centered on investigating ways to quantify the effects of fishing on ecosystem structure in the North and Baltic Seas.

09/90 - 09/96 - Head - Marine Fish Division
Pacific Region - Department of Fisheries and Oceans
Pacific Biological Station
Nanaimo, B.C, Canada.

I provided scientific and administrative leadership for Division of approximately 50 full-time staff, plus additional term, graduate student, and student-cooperative staff. The Division was responsible for the scientific research and status assessments in support of all marine fisheries in the Canadian Pacific, including research on biological oceanography and ecosystem processes. My personal research included developing analytical methods for quantifying uncertainty in fisheries advice, methods for relating variation in biological systems to forcing by ocean physics, forecasting methods for recruitment, and inclusion of users knowledge in stock assessments.

02/88-09/90 - Head - Groundfish Division
Newfoundland Region - Department of Fisheries & Oceans
Northwest Atlantic Fisheries Centre
St. Johns, Newfoundland, Canada

I provided scientific and administrative leadership for Division of approximately 70 employees, plus additional term and student-cooperative staff. The Division was responsible for scientific research and assessments of all demersal stocks in the Newfoundland Region, as well as ecological research in support of these fisheries. In the last 6 months in the position, I served concurrently as the first Special Director of the Northern Cod Science program. My research activities continued work done as Head of Groundfish Ecology Section.

06/82-02/88 - Head - Fisheries Ecology Section, Groundfish Division
Newfoundland Region - Department of Fisheries & Oceans

I was Head of Section responsible for ecological research on demersal stocks in the Grand Banks and Labrador Sea. Section research programs focused on marine community structure, ecosystem dynamics, trophic interactions, recruitment processes, and migration studies. My own research projects focused on analytical approaches to community and trophic dynamics, methods for recruitment forecasting, and quantifying how oceanographic features influenced the distribution and availability of groundfish.

05/87-06/82 Visiting Professor - Center for Environmental Studies
Arizona State University
Tempe, Arizona, U.S.A.

I held this position jointly with my professorship at Memorial University. I visited 4 months each year, until 1990 when 8 month blocks were alternated between sites. I supervised graduate students, taught graduate courses, and coordinated data analysis and modelling for a study of population and community dynamics of desert riparian bird communities. I also developed applied land use planning models to quantify the effects of alternative land use decisions on Sonoran desert riparian vertebrate populations.

01/76-06/82 Assistant and Associate Professor - Department of Biology
Memorial University of Newfoundland
St. John's, Newfoundland, Canada

Courses I taught included biometrics, quantitative ecology, animal behaviour, and evolution. My research program investigated seabird ecology and behaviour at Witless Bay, Newfoundland; funded by the Canadian National Science and Engineering Research Council. I supervised honours and graduate students in community ecology, fisheries, and animal behaviour.

I continued as Adjunct Professor from 1982-1990, while working for DFO, and taught Graduate courses in fisheries, ecological modelling, and quantitative ecology, and supervised graduate students.

SCIENTIFIC PUBLICATIONS

Refereed Primary Literature:

Halpern, B.S. and 18 co-authors including J.C. Rice. 2012. Near-term priorities for the science, policy and practice of Coastal and Marine Spatial Planning (CMSP) *Marine Policy* 36:198-205

Rice, J.C., and 11 co-authors. 2012. Indicators for sea-floor integrity under the European Marine Strategy Framework Directive. *Ecological Indicators* 12:174-184.

Rice, J.C. 2011, Advocacy Science and Fisheries Decision-Making. *ICES Journal of Marine Science* 68: doi:10.1093/icesjms/fsr154.

Rice, J.C. 2011. Achieving coherent policies for conservation and sustainable use of marine ecosystems. (invited editorial). *Conservation Biology*.

Cowan, J. Jr., Rice, J.C., Walters, C., Hilborn, R., Essington, T., and Day, J. in press. The Big Challenges to Implementing an Ecosystem Approach to Fisheries. *Marine and Coastal Fisheries*. 39 pp.

Rice, J.C. and K.A. Houston. 2011. Representativity and networks of Marine Protected Areas. *Aquatic Conservation: Marine and Freshwater Ecosystems*, DOI: 10.1002/aqc.1232

Daan, N., Gislason, H.L., Pope, J.G., and Rice, J.C. 2011. Apocalypse in global fisheries: “the report of their deaths are greatly exaggerated”. *ICES Journal of Marine Science*. 68:1375-1378.

Salomon, A.K., Gaichas, S., Jensen, O., Agostini, V., Sloan, N.A., Rice, J.C., McClanahan, T., Fujita, R., Ruckelshaus, M., Levin, P., Dulvy, N.K., and Babcock, E.A. 2011 Bridging The Divide Between Fisheries And Marine Conservation Science. *Bulletin of Marine Science* 87:251-274.

Rice, J.C. and S.M. Garcia. 2011. Fisheries, Food Security, Biodiversity and Climate Change. *ICES Journal of Marine Science*. 68:1343-1353

- Plater, A.J. and J.C. Rice. 2011. Review of existing approaches to marine spatial planning and management. Pp 174-201 in *The Ecosystem Approach to Marine Planning and Management*, S.L.Kidd, A.J. Plater, and C.J.L. Frid (eds). London:Earthscan
- Rudd, M.A. and 39 co-authors, including J.C. Rice. 2011. Generation of Priority Research Questions to Inform Conservation Policy and Management at a National Level. *Conservation Biology*. 25: 476-484
- Rice, J.C. 2011. Managing fisheries well: Delivering the promise of an Ecosystem Approach. *Fish and Fisheries*. 12: 209-231.
- Jennings, S.J. and J.C. Rice. 2011. Towards an ecosystem approach to fisheries in Europe: a perspective on current progress and future directions. *Fish and Fisheries* 12: 125-137.
- Greenstreet, S. P. R., Rogers, S. I., Rice, J. C., Piet, G. J., Guirey, E. J., Fraser, H. M., and Fryer, R. J. 2011 Development of the EcoQO for the North Sea fish community. – *ICES Journal of Marine Science*, 68:1-11
- Anderson, K.A. and J.C. Rice. 2010. Direct and indirect community effects of rebuilding plans. *ICES Journal of Marine Science*. 67:1980-1988.
- Rice, J.C. , K. Gjerd, J.A. Ardron, S.G. Arico, I. Cresswell, E.M. Escobar, S. Grant, and M.A. Vierros. 2011. Policy relevance of biogeographic classification for conservation and management of marine biodiversity beyond national jurisdiction, and the GOODS biogeographic classification. *Ocean and Coastal Management*. 54: 110-122.
- Spalding, M.D., V. Agnostini, J.C. Rice, and S. Grant. In press. Pelagic provinces of the world: a biogeographic classification of the world's surface pelagic waters. *Ocean and Coastal Management*. 20 pp.
- Rochet, M.J. and J. C. Rice .2010. Comment on "Purported flaws in management strategy evaluation: basic problems or misinterpretation?" by Butterworth *et al.* *ICES Journal of Marine Science*: 67: 575-576
- Gislason, H, J.G. Pope, J.C. Rice, and N. Daan. 2010. Coexistence and the natural mortality of North Sea teleosts. *Fish and Fisheries* 66: 13-20 .
- Rice, J.C. 2009. A generalisation of the three-stage model for advice using a Precautionary Approach in fisheries, to apply to a broadly to ecosystem properties and pressures. *ICES Journal of Marine Science* 67: 433-444.
- Rochet, M.-J. and J.C. Rice. 2009. Simulation-based Management Strategy Evaluation: Ignorance Disguised as Mathematics. *ICES Journal of Marine Science* 67:754-762.

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- Rice, J.C. and L. Ridgeway. 2009. Biodiversity and Fisheries Management. Pp. 139-149 In Q. Grafton (ed) *Handbook of Fisheries*. Oxford University Press.
- Ridgeway, L. and J.C. Rice. 2009. International Organisations and Fisheries Governance. Pp. 485-504 In Q. Grafton (ed) *Handbook of Fisheries*. Oxford University.
- Rice, J.C. 2009. Biodiversity, Spatial Management, and the Ecosystem Approach. Pp. 13-31 In: R. Beamish and B. Rothschild, eds. *The Future of Fisheries Science and Management in North America*. Fish and Fisheries Series, Springer Press.
- Watson-Wright, W., J.C. Rice, H. Lear, and B. Adams 2009. The Promise of an Ecosystem Approach: Lessons from the Past – Hopes for the Future. Pp. 255-274 In: R. Beamish and B. Rothschild, eds. *The Future of Fisheries Science and Management in North America*. Fish and Fisheries Series, Springer Press.
- Rice, J.C. 2008. Speaking Points on Assessments Panel of Governance and Biodiversity, *Oceanis* 34: 89-91.
- Rice, J. 2008. Can We Manage Marine Ecosystems in a Sustainable Way? *Journal of Sea Research* 59:8-20.
- Pedersen, S. A., H. Fock, J. Krause, C. Pusch, A.L. Sell, U. Bottcher, S.I. Rogers, M. Skold, H. Skov, M. Podolska, G.J. Piet, and J.C. Rice, 2009. Natura 2000 sites and fisheries in German offshore waters. *ICES Journal of Marine Science*, 66.
- Rice, J.C. and È. Legacè. 2007. When control rules collide – a comparison of fisheries management reference points and IUCN criteria for assessing risk of extinction. *ICES Journal of Marine Science* 64: 718-722.
- Rice, J.C. and D.S. Rivard. 2007. The dual role of indicators in optimal fisheries management strategies. *ICES Journal of Marine Science* 64: 775-778.
- Rice, J.C. and P. Connelly. 2007. International Symposium on Fisheries Management Strategies: Overview. *ICES Journal of Marine Science*. 64: 577-579
- Rice, J.C. 2007. An ecologist's view of economic instruments for fisheries management. *International Journal of Global Environmental Issues*. 7: 191-204
- Pope, J., J.C. Rice, N. Daan, H. Gislason, and S.L. Jennings. 2006. Modelling an exploited marine fish community with 15 parameters – results from a charmingly simple size-based model. *ICES Journal of Marine Science*. 63: 1029-1044.

- Rice, J.C. 2006. Every Which Way but Up: The Story of Cod in the North Atlantic. *Bulletin of Marine Science*. 78: 429-465.
- Rice, J.C. 2005. Challenges, Objectives, and Sustainability – Benthic Communities, Habitats and Management Decision-Making. Pp 41-58 in P. Barnes and J. Thomas (eds). *Proceedings of the Symposium on Effects of Fishing Activities on Benthic Habitats: Linking Geology, Biology, Socioeconomics, and Management*. American Fisheries Society Symposium 41.
- Rice, J.C. 2005. Implementation of the ecosystem approach to fisheries management – asynchronous co-evolution at the interface between science and policy. *Marine Ecology Progress Series*:300:25-30
- Rice, J.C. 2005. Understanding fish habitat ecology to achieve conservation. *Journal of Fish Biology*. 67 (Supplement B) 1-22.
- Rice, J.C. 2005. Bringing experiential knowledge into fisheries science advisory processes: lessons learned from the Canadian experience of participatory governance. In: T.S. Grey (ed). *Participation in Fisheries Governance*. Kluvier- Springer. Dordrecht, The Netherlands. Pp. 249-268.
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- Rice, J.C. and J.A. Cooper. 2004. Management of Flatfish Fisheries: What Factors Matter. *Journal of Sea Research*. 50: 227-243.
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Lilly, G. R., and J. C. Rice. 1983. Food of Atlantic cod (*Gadus morhua*) on the northern Grand Bank in spring. NAFO SCR Doc. 87, Ser. No. N753: 35 p.

Popular and Miscellaneous Publications:

Rice, J.C. 2007. Module 2 – The Scientific Dimension. Pp 61-104 in the United Nations Training Manual for Ecosystem Based Management. Published by UN-Oceans and UN Department of the Law of the Sea

Rice, J.C. 2007. Investigating the roots of confusion. Invited Perspectives Editorial. Marine Ecosystems and Management Newsletter.

Rice, J.C. 2005. Canadian Science Advisory Processes. ICES Newsletter 44 (September 2005).

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Anon (Rice, J.C - author). 2003. Frameworks for selecting indicators. Section 1 of IMCAM contribution to World Symposium on Sustainable Development. 3 pp

Anon (Rice, J.C. – author). 2003. Criteria for selection and development of indicators. Section 3 of IMCAM contribution to World Symposium on Sustainable Development. 5 pp

Rice, J.C. 2002. An Ecosystem Approach to Resource Management. EU Report of the Marine Strategy Stakeholder Conference: Towards a Strategy to Protect and Conserve the Marine Environment. December 4-6. Koge, Denmark

Rice, J.C. 1999. Ecosystem changes on the Newfoundland Shelf. Oceans (DFO Departmental Newsletter). October 1999 issue.

Rice, J.C. 1998. Book review of *Population Production and Regulation in the Sea: A Fishery Perspective*, D. Cushing. Fisheries Oceanography.

Rice, J.C. 1996. Review of *On the Sex of Fish and Gender of Scientists* D. Pauly. ICES Newsletter #29.

Rice, J.C. 1990. The Northern Cod Science Program – 5 Year Plan. Printed and Distributed by DFO. 135 pp.

Rice, J. C. 1987. Book review of *Statistics in Ornithology*, B. J. T. Morgan and P. M. North [eds.]. *The Auk* 104: 147-148.

Rice, J. C. 1986. Marine parks and protection: New ecosystems present new challenges, p. 45-51. *In* J. Lien and R. Graham [eds.]. *Marine Parks and Conservation: Challenge and Promise*. NPPAC, Toronto.

Recent special assignments and professional recognitions 1997-present (Headquarters):

CBD Expert Workshop on Consideration of Biodiversity in Stock Assessments and in management of fisheries on forage species – 2011 – Invited participant and preparing core background paper.

IPCC Assessment Report 5 (2014) – Member of the Lead Author team for Chapter 5 of Section III (Drivers, Trends, and Mitigation)

Group of Experts for the UN Regular Process for Global Marine Assessments – 2009-present

Global Ocean Forum 2011 – Invited Panellist and member of Canadian Delegation

ICES Training Course on Biodiversity Considerations in Fisheries Management – 2011 - Instructor

UN Ad Hoc Working Group of the Whole for the Regular Process for Global Marine Assessments– 2009. 2010. 2011– Invited presenter and member of Canadian Delegation

DFO-CSAS Advisory Meeting on Identification of Ecologically and Biologically Significant Areas in the Arctic – 2011 – Chair

DFO-CSAS Advisory Meeting on the Role of Grey Seal Predation in Cod Mortality in the Canadian Atlantic – 2010 - Chair

UN Ad Hoc Open-Ended Workshop on Biodiversity Beyond National Jurisdiction – 2009, 2010, 2011 – Member of Canadian Delegation and presenter at two Side Events.

FAO Technical Consultation on Guidelines for Bycatch Management and Discard Reduction 2010

ICES-PICES Symposium on Climate Change and Marine Fish Populations - 2010 – Steering Committee, Session Chair, and presenter

CBD Conference of Parties– 2006, 2008, 2010 – Member of Canadian Delegation & invited presenter at side events each session

CBD SBSTTA meeting – 2007, 2009, 2011 – Member of Canadian Delegation

FAO Expert Consultation on Implementation of the Deep Sea Fisheries Guidelines – 2010 – Invited Expert and coordinator of review of progress by States and RFMOs.

UN Ad Hoc Working Group of the Whole to review the Report of the Assessment of Assessments – 2009 – Invited presenter and member of Canadian Delegation

ICES Outstanding Achievement Award – 2009 – received at ICES Annual Science Conference 2009.

CBD Expert Workshop to Review Progress on Use of Criteria for Identifying Biologically and Ecologically Significant Areas in the High Seas – 2009 – Chair

CBD Expert Workshop on Environmental Impact Assessment and Integrated Assessments – 2009
Invited expert

FAO-CBD Expert Consultation on Destructive Fishing Practices – 2009 – Invited expert

FAO Expert Consultation on Bycatch Management and Reduction of Discards – 2009 – Invited expert

NOAA Ecosystem Science and Management Advisory Committee 2009+ - Member
NOAA Climate Working Group of Science Advisory Board 2009+ - Member
Expert Workshop on Ecosystem Approaches to Management – From Theory to Practice – U Washington
2009. Keynote Speaker
DFO-CSAS Peer Review and Advisory Meeting on Biogeographic Classification Systems in Canadian
Waters – 2009 – Chair
DFO-CSAS Peer Review and Advisory Meeting on Implementation Guidelines for CBD COP Resolution
IX/20 Annexes (Criteria for Ecologically and Biologically Significant Areas) – 2009 – Chair
DFO-CSAS Peer Review and Advisory Meeting on Mitigation Measures for Effects of Seismic Sound on
Marine Mammals – 2009 – Chair
ICES – JRC Task Group on Descriptor 6 of the Marine Strategy Framework Directive – Benthic Integrity
– 2009 - Chair
ICES Annual Science Conference 2008 – Invited to present Opening Plenary Lecture
American Fisheries Society Annual Meeting 2008 – Invited Speaker on opening Plenary Panel
International Congress on Marine Biodiversity – Valencia, Spain 2008 – Steering Committee and Session
Convenor
PICES FUTURE 10 Year Science Plan – Implementation Strategy Drafting Team – Canadian member
2008-2010
FAO Expert Consultation on Climate Change, Biodiversity, and Food Security – Invited Participant and
Fisheries expert.
ICES – EFARO – European Marine Board – Expert Group on the Science Dimensions of Ecosystem
Approach to Management of Biotic Ocean Resources in support of the EU Marine Policy 2008-
09 – Chair
UN - Group of Experts for an Assessment of Assessments 2007- 2009 - member
GOODS [Global Open-Ocean and Deep-Sea Habitats] Bioregionalisation Initiative (IOC – CBD – JM
Kaplan co-sponsors) – 2007 -2009 – Steering Committee
Marine Stewardship Council Expert Review of Certification Criteria – Invited Expert for Principles 2
(ecosystems) and 3 (Governance) 2007-8
UN Ad Hoc Open-Ended Working Group on Biodiversity Beyond National Jurisdiction – April 2008 –
Member of Canadian Delegation and Invited Presenter at side-event.
FAO Expert Consultation on Climate Change, Food Security, and Biodiversity – February 2008 – Invited
expert and Invited Presenter on Capture Fisheries
FAO Technical Consultation on Guidelines for Deep-Sea Fisheries on the High Seas – FAO – February
and August 2008 – Member of Canadian Delegation
UN Training Manual on Ecosystem Approach to Fisheries Management – Invited author of module on
ecological framework and context 2007
FAO Expert Consultations on Management and Sustainability of Deep-Sea Fisheries, November 2006
and September 2007. Invited Expert
United Nations Informal Consultative Process for Marine Issues, June 2005, 2006, 2007. Member of
Canadian Delegation – Invited Presenter in Plenary Panel on Ecosystem Approach - 2006
ICES Symposium on Fisheries Management Strategies – June 2006 – Co-convenor and Chair of
Scientific Program Committee.
Scientific Steering Committee for EU Framework 7 Project IMAGE (Indicators for Management of
Human Activities in the Sea) - Chairman
Expert Workshop on Criteria for Identifying Ecologically or Biologically Significant Areas Beyond
National Jurisdiction 2005 – Chair
EU Research Project on Intrinsic and Extrinsic Drivers of Fish Community Dynamics (INEXFISH) Chair
of Steering Committee 2005-2008)
Scientific Steering Committee for EU Framework 6 Research Project INDECO (Indications for
Ecosystem Management) 2004-2006 – Steering Committee

Fisheries Society of the British Isles – Invited Jack Jones Memorial Lecture “The Role of Habitat Science in Integrated Marine Management – July 2005.

ICES Workshops on Fisheries Management in Marine Protected Areas. Chair 2006-2008

ICES Working Group on Regional Ecosystem Descriptions – Chair 2005-2009.

International Conference on Biodiversity – Science and Governance (Jacques Chirac, President of France, and Koichiro Matsuura, Director General of UNESCO co-patrons) - Invited Keynote speaker on Biodiversity and Fisheries – Practical Tests of an Ecosystem Approach to Management. (Paris 01/2005)

EU DG-Research & Norway Meeting on the Oceans and the Future of the European Marine Research Area – Invited Keynote speaker. (Brussels – 06/2004)

ICES (International Council for Exploration of the Seas) Consultative Committee – Chair 2002-2004, and *ex officio* Chief Scientists and member of ICES Bureau and all Advisory Committees

ICES Core Group for drafting the EAM (Ecosystem Approach to Management) Guidelines document of the EU Marine Strategy 2004

ICES Advisory Committee on Ecosystems – Canadian Delegate 2000 – present.

ICES Advisory Committee on Fisheries Management – Canadian Delegate 1996-2001.

ICES Advisory Committee on Marine Environment – Invited Expert 1998-2001

ICES Planning Group on Developing Ecosystem Quality Objectives for the OSPAR Region (2000-2001)

ICES Working Group of Ecosystem Effects of Fishing - Chair 1997-2000

ICES Study Group on Interactions between Seabirds and Sandeel Fisheries - Chair - 1999.

Privy Council Office/ADM Working Group on Best Practices for Science Advice for Government Effectiveness – Work Team on Checklist and Guidelines (2001-2002)

Privy Council Office/ADM Working Group on Government-wide Implementation of the Precautionary Approach – supporting Work Teams on Openness, Transparency, and Public Accountability and on Operationalization and Science Implications (2000-2001)

Committee on the Status of Endangered Wildlife in Canada (authorized body for assessing species-at-risk in Canada) – DFO member 1998-2008

NOAA Science Advisory Board - (1998 – 2006).
Subcommittees on Science Integration, Coastal Zone Issues, and Social Sciences
Chair of Review Team for the US – National Ocean Service Charleston Laboratory 2001

FAO Expert Consultation on Guidelines for Including Ecosystem Considerations in the Code of Conduct for Responsible Fishing (Reykjavik – 2002)

FAO Symposium and Meeting on Ecosystem-Based - (Reykjavik 2001) Invited technical advisor to Drafting Team of the Reykjavik Declaration

FAO Expert Consultation on Factors of Unsustainability – I (Bangkok 2002), II (Mauritius 2003) & III (Siem Riep 2004) – Invited Participant and Contracted contributor for Preparatory Documents

FAO Expert Consultation on An Evaluation of the Suitability of the CITES Criteria for Listing Species Exploited by Fisheries (Rome 2000) – Contracted technical expert

FAO International Conference on Integrated Fisheries Monitoring - (Sydney 1999) – Invited Lecturer

SCOR Study Group on Quantitative Indicators for Fisheries Management – (2000-2004)

SCOR-IOC-ICES-PICES Symposium on Quantitative Indicators for Fisheries Management – Steering Committee -

Assignments prior to 1997 can be provided on request

Recent Formal Reviews

Editorial Board – *Marine Ecology Progress Series* (subjects – Science-Policy Interface, Ecosystem Approach to Management, Ecosystem Effects of Fishing) 2007 – on-going

Evaluation Panel – Ecocertification conditions for Bering Sea-Aleutian Islands and Gulf of Alaska
Pollock fisheries. 2005-2008, and 2010 - present
NOAA External Ecosystem Science Review Team –2005-06
CSIRO (Australia) Science Review Panel – Atmospheric and Marine Research – July 2005
CSIRO (Australia) review of Sustainable Fisheries Marine Research Programs – Review Panel – 2004
Invited Reviewer for US National Research Council Report on “Best Available Science” - 2003
Editorial Board – *Frontiers in Applied Ecology* – 2002-2006
Invited reviewer Marine Stewardship Council (MSC) Ecocertification Review of North Sea pelagic trawl
fishery, Norwegian cod and haddock fisheries, several others