



Biodiversity and Fisheries

**USEFUL WEBSITES AND
SUPPLEMENTARY REFERENCES**

Excerpted from:

*Blue Millennium: Managing Global
Fisheries for Biodiversity*

An international workshop funded by UNEP and IDRC
Victoria, BC, June 2001



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Useful Websites

The Center for International Earth Science Information Network, Columbia University

<http://www.ciesin.org>

CIESIN is a non-profit, non-governmental organization specializing in global and regional network development, science data management, decision support, and training, education and technical consultation services. CIESIN is the [World Data Center A](#) (WDC-A) for Human Interactions in the Environment.

<http://www.ciesin.org/TG/PI/TREATY/bio.html>

Contains links to the [full text of the Biodiversity Treaty](#), the CIESIN Thematic Guide section on [Biological Diversity](#) which discusses the scientific and ecological concerns addressed by the Treaty, an essay on [The Preservation and Management of Biodiversity](#), the state of relevant intellectual property law and its application to biodiversity prior to the Biodiversity Treaty (in an excerpt from [Global Biodiversity](#)); [Access to Genetic Resources](#), [Access to and Transfer of Technology](#), and [Handling of Biotechnology and Distribution of its Benefits](#). Another article carries a summary of the science of biodiversity and of trends that are diminishing biodiversity globally.

Other links include Roberts' (1992) '[International Funding for Conservation of Biodiversity](#)', a '[Brief History of the Convention on Biological Diversity](#)', Halpern's (1993) '[Guide to UNCED and its Documentation](#)', the IUCN paper '[The Biodiversity Convention Since UNCED](#)' and the '[Biodiversity Information Network](#)', a group of nongovernmental organizations cooperating to share data on global biodiversity.

Another link is to Merck Pharmaceutical's agreement with the Costa Rican Instituto Nacional de Biodiversidad (INBio). The agreement states that Merck will pay INBio royalties from drugs based on materials found in Costa Rican ecosystems. Coughlin (1993) discusses the implications of the agreement for the Biodiversity Treaty in '[Using the Merck-INBio Agreement to Clarify the Convention on Biological Diversity](#).' The article outlines treaty provisions considered controversial, especially to developed countries, and examines how Merck's agreement may remove perceived ambiguities in these provisions.

The Food and Agriculture Organization of the United Nations

<http://www.fao.org/>

The FAO was created to improve nutrition and standards of living, agricultural productivity, and to better the condition of rural populations. Today, FAO is one of the largest specialized agencies in the United Nations system and the lead agency for [agriculture](#), [forestry](#), [fisheries](#) and [rural development](#). An intergovernmental organization, FAO has 180 [member countries](#) plus one member organization, the European Community.

Much information on fisheries can be found at the website. Documents include ‘World review of fisheries and aquaculture 1998’ at:

<http://www.fao.org/docrep/W9900E/w9900e00.htm> - TopOfPage

A review of the production of inland fish through aquaculture and fisheries is at:

<http://www.fao.org//fi/news/sustain/sustainf.asp>

The paper ‘stresses that degradation of aquatic resources and environments are major threats to existing and future potential fish production from inland waters. Approaches to integrated resource management (IRM) are proposed, emphasizing empowerment of local interests, new partnerships and improved collaboration between interested sectors and stakeholders.’

The National Academy Press ‘Open Book’ site

<http://www.nap.edu/>

The National Academy Press (NAP) was created by the [National Academies](#) to publish the reports issued by the [National Academy of Sciences](#), the [National Academy of Engineering](#), the [Institute of Medicine](#), and the [National Research Council](#). NAP publishes over 200 books a year on a wide range of topics in science, engineering, and health.

The site has a large and growing selection of full-text publications (more than 2,200 as of August 2001) in many areas. ‘The Bering Sea Ecosystem (1996)’, from the Commission on Geosciences, Environment and Resources is covered at:

<http://books.nap.edu/books/0309053455/html/1.html>

A link to related National Academy Press books includes:

- [Sustaining Marine Fisheries \(1999\)](#) (ISBN 0309055261), Committee on Ecosystem Management for Sustainable Marine Fisheries, National Research Council
- [Sharing the Fish: Toward a National Policy on Individual Fishing Quotas \(1999\)](#) (ISBN 0309063302), Committee to Review Individual Fishing Quotas, National Research Council
- [Improving Fish Stock Assessments \(1998\)](#) (ISBN 0309057256), *Committee on Fish Stock Assessment Methods, National Research Council*
- [A Review of the Accomplishments and Plans of the NOAA Coastal Ocean Program \(1994\)](#) (ISBN NI000001), Panel on the NOAA Coastal Ocean Program, Ocean Studies Board, National Research Council
- [Arctic Ocean Research and Supporting Facilities: National Needs and Goals \(1995\)](#) (ISBN NI000003), Committee on the Arctic Research Vessel, Ocean Studies Board, Polar Research Board, National Research Council

- [Marine Mammals and Low-Frequency Sound: Progress Since 1994 \(2000\)](#) (ISBN 030906886X), Committee to Review Results of ATOC's Marine Mammal Research Program, Ocean Studies Board, National Research Council
- [Science and the Endangered Species Act \(1995\)](#) (ISBN 0309052912), *Committee on Scientific Issues in the Endangered Species Act, National Research Council*
- [Upstream: Salmon and Society in the Pacific Northwest \(1996\)](#) (ISBN 0309053250), *Committee on Protection and Management of Pacific Northwest Anadromous Salmonids, National Research Council*

Each of these has links to further related books, all of which can be read at no cost.

The United States Environmental Protection Agency

<http://www.epa.gov>

The EPA has as its mandate to protect human health and safeguard the natural environment.

Proceedings of the 'State Of the (Great) Lakes Ecosystem Conference' of 1998 are at:

<http://www.epa.gov/glnpo/solec/98/present/>

The Department of Fisheries and Oceans, Canada

<http://www.oceanscanada.com>

Oceans Canada provides Canadians with a broad overview of oceans issues, activities and programs of the federal government and other bodies.

An International Review Of Integrated Coastal Zone Management is found at:

<http://www.oceanscanada.com/newenglish/library/meltzer1.htm - 1>

A Literature Review to identify International Coastal Zone Management Models is at:

<http://www.oceansconservation.com/newenglish/library/bibint.htm>

Many citations have abstracts. (*Both documents contain complex nested tables.*)

International Development Research Centre, Ottawa, Canada.

<http://www.idrc.ca>

The International Development Research Centre is a public corporation created by the Canadian government to help communities in the developing world find solutions to social, economic, and environmental problems through research.

Under the Program Area ‘Environment and Natural Resource Management’, the Sustainable Use of Biodiversity program initiative ‘looks at ways to conserve biodiversity by promoting its sustainable use by indigenous and local communities. It emphasizes research approaches that are sensitive to gender issues and inclusive of indigenous knowledge and culture, and seeks ways to inform policies with these approaches.’

Under the ‘Strategy for International Fisheries Research’ at:

<http://www.idrc.ca/sifr/biodiv.htm>

the table of contents is given of a paper on ‘Aquatic biodiversity conservation: a review of current issues and efforts.’ Two other papers are also cited at the SIFR publications link: ‘Fisheries information in Asia: needs and opportunities’, and ‘A Strategy for postharvest fisheries in Asia.’

The World Wide Fund for Nature

<http://www.panda.org>

WWF’s mission is to stop the degradation of the planet’s natural environment by conserving the world’s biological diversity, ensuring sustainable use of renewable natural resources, and promoting less pollution and waste.

<http://www.panda.org/resources/publications/water/footprint/download.html>

contains ‘The Footprint of Distant Water Fleets on World Fisheries’, broken into eight PDF files for ease of downloading.

<http://www.panda.org/resources/publications/water/>

carries publications on issues affecting water.

<http://www.panda.org/resources/publications/water/fishfile2/>

‘Marine Fishes in the Wild.’ A WWF species status report from 1996. Sections include ‘The Large Pelagic Fishes’, ‘The Rise and Fall of Modern Fisheries’, and ‘What Needs to be Done.’ (*May carry nested tables too complex to open in Word.*)

<http://www.panda.org/resources/publications/water/overfishing/index.html>

contains the publication ‘Underwriting Overfishing’, a look at the impact of fishing subsidies on economies and societies worldwide.

Environmental Treaties and Resource Indicators (ENTRI)

<http://sedac.ciesin.org/entri>

An online search service provided by CIESIN in partnership with various data providers (IUCN, UNEP, World Resources Institute and others) for finding information about environmental treaties and national resource indicators.

The Regional Environmental Center for Central and Eastern Europe

<http://www.rec.org>

The Regional Environmental Center for Central and Eastern Europe (REC) is a non-advocacy, not-for-profit organisation created to help solve environmental problems in Central and Eastern Europe (CEE). The Center encourages cooperation among non-governmental organisations, governments and businesses, supports the free exchange of information and promotes public participation in environmental decision-making.

The Government and Environment Directory at:

<http://www.rec.org/REC/Databases/GovDir/Default.html>

is designed to help anyone seeking information about ministries and governmental organizations with significant environmental responsibilities in Central and Eastern Europe. The database contains contact information for over 500 institutions from 15 CEE countries.

Indigenous Peoples Aquatic Biodiversity Information Network (IABIN)

<http://www.ibin.org/iabin/>

‘An open forum of native groups working on indigenous self-management of marine and freshwater resources and the integration of traditional tenure and management systems and indigenous science with Western scientific methods.’

The University of Cambridge Committee for Interdisciplinary Environmental Studies (CIES)

<http://www-cies.geog.cam.ac.uk/>

‘The University of Cambridge Committee for Interdisciplinary Environmental Studies (CIES) was established to promote better links across disciplinary boundaries within the University's environmental research community, and to encourage a better understanding of environmental issues.’

Transcripts of public lectures are available at:

<http://www-cies.geog.cam.ac.uk/www-cies/PubLect.html>

On 13th May 1999 a lecture in the Exploring Sustainability Expectations series was on ‘Business and Biodiversity: A Balance Sheet.’ Speakers were Baroness Young of Old Scone, Chairman, English Nature; Tom Burke, Environmental Policy Advisor, Rio Tinto plc.

The Norwegian Institute for Water Research (NIVA)

<http://www.niva.no/engelsk/welcome.htm>

NIVA is Norway's leading multidisciplinary research institute in the use and protection of water bodies and water quality.

'Conservation of biological diversity' is covered at:

http://www.niva.no/engelsk/yearbooks/95aarbok/e_diverse.htm

This page has links to: [TBT in antifouling preparations](#), [Severe flooding in Eastern Norway June 1995](#), [Export of freshwater from Norway](#), [Mercury in Norwegian freshwater fish](#), [Metal pollution of lake sediments](#), [Critical loads of acid rain](#), [Environmental oestrogens in Norwegian coastal waters](#), [Chemical analysis of organometallic compounds](#), [Coastal monitoring](#), [Impacts of hydropower schemes in Laos](#), [Shrimpfarming in Bangladesh](#), and [BEKKIS - water education programme](#).

The Secretariat of the Pacific Community

<http://www.spc.org.nc>

'An international organisation serving the Pacific region, the Secretariat of the Pacific Community is the premier technical and development organisation of the Pacific. It is the only bilingual (English/French) regional organisation covering all 22 countries and territories of the Pacific.'

The SPC was known up to February 1998 as the South Pacific Commission. Their Coastal Fisheries Programme is at

<http://www.spc.org.nc/coastfish/>

'Institutions and governance of aquatic biodiversity in the Pacific Community region', the transcript of an 8-minute talk given at the ACP-EU Fisheries Research Initiative conference on 'Sustainable Use of Aquatic Biodiversity: Data, Tools and Cooperation', Lisbon, Portugal, 3-5 September 1998, is at:

<http://www.spc.org.nc/coastfish/Reports/icfmap/lisbon.htm>

Conservation International (CI)

<http://www.conservation.org/>

'Conservation International's mission is to conserve the earth's living natural heritage, our global biodiversity, and to demonstrate that human societies are able to live harmoniously with nature.'

‘Marine ecosystems’ can be found under the ‘Conservation Strategies’ pull-down menu on the Home Page.

The American Fisheries Society

<http://www.fisheries.org/>

The mission of the AFS is ‘to improve the conservation and sustainability of fishery resources and aquatic ecosystems by advancing fisheries and aquatic science and promoting the development of fisheries professionals.’

The North American Benthological Society (NABS)

<http://www.benthos.org>

An international scientific organization whose purpose is ‘to promote better understanding of the biotic communities of lake and stream bottoms and their role in aquatic ecosystems, by providing media and disseminating new investigation results, new interpretations, and other benthological information to aquatic biologists and to the scientific community at large.’

The National Water Research Institute (NWRI)

<http://www.cciw.ca/nwri/nwri.html>

Canada’s largest freshwater research establishment. ‘NWRI conducts a comprehensive program of research and development in the aquatic sciences, in partnership with the Canadian and international science communities. NWRI research provides a sound basis for actions to sustain our natural resources and freshwater ecosystems.’

The American Water Resources Association

<http://www.awra.org>

The aim of the AWRA is to be ‘the pre-eminent multidisciplinary association for information exchange, professional development and education about water resources and related issues.’ Its mission is to ‘advance multidisciplinary water resources management and research.’

The Inter-American Development Bank

<http://www.iadb.org>

The Inter-American Development Bank (headquartered in Washington D.C.) is the oldest and largest regional multilateral development institution in the world. It was established in December of 1959 to aid in economic and social development in Latin America and the Caribbean.

The site offers a PDF file on ‘Coastal and Marine Resources Management in Latin America and the Caribbean’ at:

http://www.iadb.org/sds/publication/publication_575_e.htm

The Scout Report

<http://scout.cs.wisc.edu>

The Scout Report is the flagship publication of the Internet Scout Project. A team of professional librarians and experts select, research, and annotate Internet resources. The Internet Scout Project is in the Department of Computer Sciences at the University of Wisconsin-Madison. The page has links to sites covering overfishing, habitat destruction, strategic management plans, a summary of major laws implemented by NOAA-CRS, and the need for marine protected areas.

<http://scout.cs.wisc.edu/report/sci-eng/1998/se-980218.html>

The JLB Smith Institute of Ichthyology

<http://www.jlbsmith.ru.ac.za/>

The vision of the JLB is: 'Serving Africa's needs in understanding fishes and aquatic environments.' Its Mission: 'To be an interactive hub focussed on serving the nation through generating, disseminating and applying knowledge to understanding and solving problems on the conservation and wise use of African fishes and aquatic biodiversity.'

The Global Coral Reef Alliance

<http://www.people.fas.harvard.edu/~goreau/>

A nonprofit organization for the protection and sustainable management of coral reefs. GCRA is not a membership organization, but rather a coalition of action-oriented scientists, divers, environmentalists and other individuals and organizations who are concerned about coral reefs. The Alliance focuses on global climate change, diseases, pollution, integrated coastal zone and watershed management, rapid assessment of reef health, and restoration of coral reefs.

Ocean Voice International

<http://www.ovi.ca/>

Ocean Voice International is a non-profit membership-based marine environmental organization.

World Resources Institute

<http://www.wri.org/>

World Resources Institute' mission is to move human society to live in ways that protect Earth's environment for current and future generations. The Institute aims to use knowledge

to catalyze public and private action. Goals include protecting ecosystems, reducing generation of wastes, and guaranteeing all people's access to [environmental information](#) and [decisions](#) regarding natural resources and the environment.

Natural Resources and Environmental Management at the University of Rhode Island

<http://www.edc.uri.edu/>

Large Marine Ecosystems of the world are well covered at:

<http://www.edc.uri.edu/lme/default.htm>

From an interactive map of the world one clicks on any of the Large Marine Ecosystems and is taken to that area of ocean for a detailed study of its currents, productivity, fish and fisheries, pollution and ecosystem health, socio-economic conditions, and governance.

The Southern Division of the American Fisheries Society

<http://www.sdafs.org/>

‘Conservation of Aquatic Biodiversity in Georgia (USA)’ is abstracted at:

<http://www.sdafs.org/meetings/00sdafs/nongame/skelt1.htm>

The California Environmental Resources Evaluation System

<http://ceres.ca.gov/>

CERES is an information system developed by the [California Resources Agency](#) to facilitate access to electronic data describing California’s environments. Its goal is to improve environmental analysis and planning by integrating natural and cultural resource information from multiple contributors and by making it available and useful to a wide variety of users.

The H. John Heinz III Center for Science, Economics and the Environment

<http://www.heinzctr.org>

The Heinz Center's mission is to improve the scientific and economic basis for environmental policy and develop innovative solutions to environmental problems.

‘Managing U.S. Marine Fisheries’, an annotated bibliography of selected literature on U.S. Fishery Management, is at:

http://www.heinzctr.org/PROGRAMS/fisheries/annot_bibliography.htm

The Massachusetts Chapter of the Society for Conservation Biology

<http://www.massscb.org>

Good Links to Aquatic and Marine Biodiversity institutes and bodies at:

<http://www.massscb.org/links/aquabiodiversity.html>

Miscellaneous

‘What is Biological Diversity and Why Is It Critical to Human Well-Being?’

A good broad-level paper on this subject by Peter F. Brussard of the University of Nevada, Reno can be viewed at:

<http://www.brrc.unr.edu/data/docs/biodiv.html>

The paper includes two brief examples of genetic diversity within species being directly important to humans: the Pyramid Lake strains of Lahontan cutthroat trout, which had the genetic ability to grow to 20-25 pounds on average, and the Alvord trout, a strain of Lahontan cutthroat trout which grew very large in small streams and was able to survive in hot, low oxygen conditions that kill other trout.

‘Pesticides and Aquatic Animals: A Guide to Reducing Impacts on Aquatic Systems’

A full-text article (June, 1996, by Louis A. Helfrich, Diana L. Weigmann; Patricia Hipkins; and Elizabeth R. Stinson, of The Virginia Cooperative Extension, part of the Virginia Polytechnic Institute and State University) is available at:

<http://www.ext.vt.edu/pubs/waterquality/420-013/420-013.html>

‘The Report of the Director John R. Hillman: Global perspectives of factors influencing agricultural, biological and environmental sciences and their associated industries: 1999-2000’

Can be downloaded (PDF) from:

<http://www.scri.sari.ac.uk/Document/AnnReps/00Indiv/04Direct.pdf>

Although the focus is largely on biotechnology, there is some information on fisheries.

‘Cost-effective Indicators to Assess Biological Diversity in the Framework of the Convention on Biological Diversity’

(Notes from an Expert Meeting 6-7 December 1999 Stockholm, Sweden) can be read at:

<http://www.gencat.es/mediamb/bioind/seprogram.htm>

‘Aquatic Bio-Diversity of Bangladesh’

A journal article covering Fish Species Diversity, Large Fishes, Small Fishes, Prawns, Exotic Species of Fishes, the Gangetic Dolphin, and Turtles and Tortoises is at:

http://www.comnet.mt/bangladesh/aquatic_bio.htm

(The Commonwealth Network of Information Technology for Development (COMNET-IT) is an international foundation hosted by the government of Malta and co-sponsored by the Commonwealth Secretariat, London, U.K.)

<http://www.africaonline.com>

Searchable for newsworthy articles on fish and fisheries in Africa. The Gulf of Guinea Large Marine Ecosystem Project is also covered at:

<http://www.africaonline.co.ci/AfricaOnline/societes/goglme/goglme.html>

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