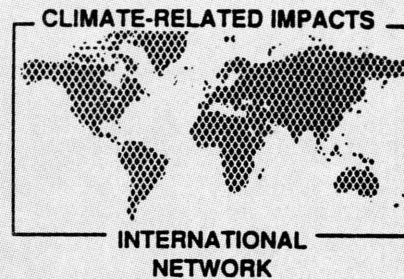


# NETWORK NEWSLETTER

APR 23 1998



Volume 13, Number 3

April-June 1998

## Editorial

### The Seasons: Where Weather Meets Climate

Most people throughout history have not lived from day to day, except under extraordinarily stressful conditions. They have lived from season to season.

Seasons are traditionally defined by astronomical factors. The natural yearly progression of the Earth's position relative to the sun has guided human activities in food production, water resources, and energy needs. In the middle and higher latitudes, the seasons are determined by hot and cold temperatures, whereas in the tropical regions that straddle the equator, the seasons are determined by the timing and amount of precipitation. But this is only a simple view of how the natural flow of the seasons — seasonality — affects societies, ecosystems, and the environment.

The works of many writers and poets have focused on the seasons. In agriculture, we have the growing season, the planting season, the harvest season, the rainy season, the frost-free season, the season for various bugs and other pests, the mosquito season, and so on. In many parts of the world, there is the "hunger season," or that part of the year just before the harvest when people have consumed much of the food grown the year before, and they are working hard and expending energy because of the harvest.

The seasons have clearly played a dominant role in our lives throughout history. In ancient times, people stored grain from the harvest in order to get them through one annual cycle and, in some cases, two or more such cycles. Humans are always coming up with ways to neutralize the vagaries of climate by overriding the natural rhythm of the seasons. They have built dams and irrigation systems to ensure a flow of water out of season. They developed air conditioning, which has been used to create pockets of (cool) temperate zone climate in the tropics. In the early 1940s, many thought the "air conditioning revolution" would create a more vigorous and productive work environment in warm climates, like the one that exists in the Northern Hemisphere. At that time, differences in climate were presumed to be THE key determining factor in the large differences in productivity between cultures of the North and cultures of the South. Clearly, the dominance of

the concept of seasons shows up in literature, in our psychological makeup, and in just about everything that we do (or don't do). It is clearly evident in the natural world of flora and fauna in different regions around the globe (e.g., the pollination season, the mating season, the spawning season, the migration season).

There is another key aspect of the seasons that has been overlooked, even by most scientists. **The seasons are where weather meets climate.** Weather is defined as occurring on relatively short time scales: a few hours to several days. There is a research community that focuses on understanding the weather — studying severe storms such as tornadoes, blizzards and hurricanes, as well as their effects, such as brush fires, flash floods, freezes, and so forth. That community, with only a few exceptions, does not deal explicitly with climate.

Climate has been defined as "average weather." It is a statistical notion based on taking a period of time (at the least, several weeks) and averaging the meteorological variables of that period (such as wind, rain, temperature, cloudiness) to determine a region's climatic characteristics. The climate research community seldom delves explicitly into the world of weather (that is, the shorter time scales). So even the scientific community has, for the most part, failed to see the important role of the seasons as integrators of weather information that people need in order to live.

El Niño, a recurring warming of the ocean's surface around the equator in the Pacific, is a climate phenomenon. With the return of El Niño, as is happening now, there are accompanying changes in regional weather patterns in many parts of the globe. Why is it that many of the people who are interested in understanding the weather are only now, in the 1990s, starting to take notice of climate factors such as El Niño?

Societal and individual activities are physically, socially, culturally, and psychologically tied to the seasons. Seasonal changes are much more important to us and our future than just the changing color of the leaves in the fall. In sum, "the seasons are us."

--Michael H. Glantz



United Nations  
Environment Programme



Environmental and Societal  
Impacts Group

National Center for Atmospheric Research (NCAR) P.O. Box 3000, Boulder, CO 80307-3000

The National Center for Atmospheric Research is sponsored by the National Science Foundation

Let's hear from you! This newsletter depends on YOUR input. Please send relevant information that comes across your desk, whether it is a news item, meeting, job opening, or publication, to the address on the back cover. Information to be included in the next newsletter must be received before 1 July 1998.

### EXPO '98: THE LAST WORLD'S FAIR OF THE 20TH CENTURY

EXPO '98, a world's fair with the theme of "The Oceans, a Heritage for the Future," is being held in Lisbon, Portugal throughout 1998. The exposition will run from 22 May 1998 through 30 September 1998. The event will foster a greater understanding of the world's oceans and our need to preserve this precious natural resource. EXPO '98, focusing on ocean ecology, will encompass 150 acres of exposition grounds and almost three miles of riverfront. The event will gather together representatives from 138 participating countries, companies, and national and international organizations for a world forum of cultures and languages. Commemorating the role of oceans in our planet's development, EXPO '98 will also serve an educational purpose. An extensive array of pavilions will explore ways to develop the marine environment and its resources while conserving the Earth's delicate ecological balance. For more information, contact EXPO '98; Parque EXPO '98, S.A., Avenida Marechal Gomes da Costa, 37, 1800 Lisbon, Portugal; tel: 11-351-1-831-9898; fax: 11-351-1-837-3133; e-mail: [turismoexpo98@expo.pt](mailto:turismoexpo98@expo.pt) or <http://www.expo98.pt>

### IPCC DATA DISTRIBUTION CENTER

The IPCC Data Distribution Center (DDC) has been established to facilitate the timely distribution of a consistent set of up-to-date scenarios of changes in climate and related environmental and socio-economic factors for use in climate impacts assessments. The intention is for these new assessments to feed into the review processes of the IPCC. The DDC is a shared operation between the Climatic Research Unit (CRU) in the United Kingdom and the Deutsches Klimarechenzentrum (DKRZ) in Germany. Technical inputs from other experienced organizations will also be solicited. It is anticipated that the DDC will be fully operational by July 1998 and that regional centers, which will provide additional support, may be added

later. The funding for the DDC has been provided by the German government and by the United Kingdom Department of Environment, Transport and the Regions. For more information and for contact details, visit the Website at <http://ipcc-ddc.cru.uea.ac.uk/> (from *Climate Impacts Link*).

### 1997 BLUE PLANET PRIZE

The Blue Planet Prize is an international award presented to individuals or organizations by the Asahi Glass Foundation of Tokyo, Japan in recognition of major contributions to solving global environmental problems. The sixth annual Blue Planet Awards went to Dr. James E. Lovelock of the United Kingdom and Conservation International of the United States. Dr. Lovelock pioneered the detection and measurement of trace substances such as CFCs in the atmosphere and also formulated the Gaia Hypothesis of earth science. Conservation International is dedicated to protecting the Earth's biological diversity while improving the lives of local peoples. The selection committee is now deliberating on the seventh set of Blue Planet nominations, and those winners will be announced in June 1998. For more information about the Prize, the Foundation or its newsletter, *af News*, contact The Asahi Glass Foundation, 2<sup>nd</sup> Floor, Science Plaza, 5-3 Yonbancho, Chiyoda-du, Tokyo 102-0081, Japan; tel: 81-3-5275-0620; fax 81-3-5275-0871; e-mail [post@af-info.or.jp](mailto:post@af-info.or.jp) or <http://www.af-info.or.jp>

### WORLD SCIENCE CONFERENCE

The 29th General Conference of UNESCO endorsed a resolution to hold a World Science Conference in 1999 at its Paris meeting in October/November 1997. The International Council of Scientific Unions (ICSU), at the request of the Director General, will cosponsor this Conference in cooperation with the UN Agencies, the International Social Science Council (ISSC) and the Third World Academy of Sciences (TWAS). The Conference will focus on the natural sciences and their impact on society. Representatives from the social and human sciences will be closely involved in addressing the social implications of overall scientific and technological progress, its breakthroughs, the relationship between science and development, as well as the ethical issues raised by the implementation of scientific research in specific areas. A particular emphasis will be placed on the increasing need for close interaction and collaboration among the various realms of science throughout the three major themes to be discussed at the Conference: *Science, Science Interface*, and *New Commitment to Science*. The

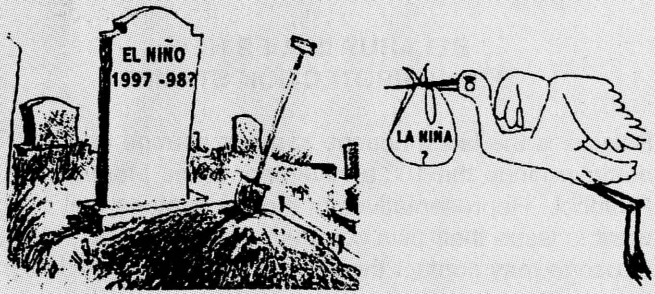
conference will also be directed toward promoting cooperation and the coordination of the research efforts of governments, intergovernmental and non-governmental organizations, the industrial sector and the scientific community. For more information, contact the ICSU Secretariat, 51 Blvd de Montmorency, Paris 75016, France; tel: 33-1-4525-0329; fax: 33-1-4288-9431; E-mail: icsu@lmcp.jussieu.fr; <http://www.lmcp.jussieu.fr/icsu/>

**A United Nations University/NCAR Activity  
Review of the Causes and Consequences  
of Cold Events:  
A La Niña Summit**

15-17 July 1998  
Boulder, Colorado, USA

It is the objective of the La Niña Summit to identify what is known, with some degree of reliability, about the cold event (La Niña) and about its societal and environmental impacts. La Niña has been less well studied than the warm event (El Niño), yet it too is associated with climate anomalies around the globe. We hope to identify the current state of understanding of La Niña and its impacts, as well as to spark more attention to this aspect of the El Niño-Southern Oscillation (ENSO) cycle.

This "Usable Science" activity is the first of several activities currently being developed for the new UNU program, "El Niño Impacts and Response Strategies for Pacific Rim Countries." (See article on page 6 of this newsletter.) For more information about the workshop or the report that will follow, please contact Michael Glantz, Convenor, or D. Jan Stewart, Workshop Coordinator, at ESIG/NCAR, PO Box 3000, Boulder, CO 80307 USA; tel: 303-497-8117; fax 303-497-8125; e-mail [jan@ucar.edu](mailto:jan@ucar.edu)



## COASTAL ZONE '97

From 19-25 July 1997 in Boston, Massachusetts, more than 1,000 international coastal management practitioners; local, regional and federal government officials attended *Coastal Zone '97*; members of the academic community; representatives from industry and non-governmental organizations and interested members of the public. The forum provided an opportunity for attendees to exchange ideas and experiences and meet fellow professionals under the banner theme of "The Next 25 Years: Charting the Future of Coastal Zone Management." The winter 1998 edition of *Intercoast* contains many highlights from the conference. For a copy of the newsletter or for more information, contact Intercoast Network, Coastal Resources Center, University of Rhode Island, Narragansett Bay Campus, Narragansett, RI 02882, USA; tel: 401-874-6224; fax: 401-789-4670; e-mail: [cyoung@gsosun1.gso.uri.edu](mailto:cyoung@gsosun1.gso.uri.edu); <http://brooktrout.gso.uri.edu>

## TOWARD A GREENER UN IN THE 21ST CENTURY

The UNU's third annual symposium on the United Nations System in the 21st Century (UN21 Project) was held in New York in November 1997. This Symposium gave researchers working on the project a chance to publicly present their 1997 results. Researchers from academic institutions and research agencies worldwide presented their findings to the 200 participants attending the symposium's five sessions. Researchers studying international organizations determined that the UN Environmental Programme would have to be overhauled if it is to meet future environmental challenges. The overall objective of the UNU's five-year UN21 Project is to analyze the role of international organizations and search for the next century's best UN model. For more information on this Project, contact The United Nations University, 53-70, Jingumae 5-chome, Shibuya-ku, Tokyo 150-8925, Japan; tel: 81-3-3499-2811; fax: 81-3-3499-2828; e-mail: [mbox@hq.unu.edu](mailto:mbox@hq.unu.edu)

## AC 2000

Africa Community 2000 (AC 2000) is a voluntary non-governmental organization dedicated to the realization of a better future for the next generation of young Africans. Based on a philosophy of integrated community development, AC 2000 now administers programs on primary health care, including AIDS education and prevention, environmental conservation, ecology, rural development, library services, agriculture, and income generation, among others. Its main

agenda for the next century is to lay the foundation for a peaceful and prosperous society and guarantee that future generations will continue to create just and healthy societies. To achieve these goals, AC 2000 is looking for summer interns, volunteers, and project directors to offer their services to this organization. For more information, contact Prince Kijana Maloba, Executive Director, AC 2000, PO Box 70, Buhuyi-Butula, Kenya.

### **UK CLIMATE IMPACTS PROGRAM (UKCIP)**

In April 1997, the UK Government launched a new program to coordinate an integrated assessment of climate change impacts in the UK. The UK Climate Impacts Programme aims to bring together those from the public and private sectors with responsibilities for accommodating the effects of climate change to undertake sectoral and regional-based impact assessments within an integrated national framework. After conducting a review of how climate change might affect the UK, the group concluded that, based on one possible scenario of climate change, that the impacts will be mixed, but that adverse effects will outweigh positive effects. Modular regional and sector-based impact studies are conducted within a national, integrated framework, guided by two advisory panels, and common datasets and scenarios will be used to facilitate integration both within and across modular studies. The UKCIP also recently launched a newsletter to distribute information regularly between stakeholders, researchers and the Program Office. Copies of the newsletter are freely available from the Program Office. For further information, contact Program Coordinator, UK Climate Impacts Programme, Environmental Change Unit, 1a Mansfield Road, Oxford, OX1 3TB, UK. Tel: 44-1865-281-192; Fax: 44-1865-281-188; E-mail: ukcip@ecu.ox.ac.uk; <http://www.ecu.ox.ac.uk/ukcip.html> (from *The Globe*).

### **CONFERENCE OF THE PARTIES OF THE UN CONVENTION TO COMBAT DESERTIFICATION**

The first session of the Conference of the Parties (COP) of the UN Convention to Combat Desertification was held in Rome from 29 September-10 October 1997 at the invitation of the Government of Italy. Over 1,100 participants attended the meeting. The Parties reached agreements on the major outstanding issues and acted on a number of recommendations forwarded to the COP by the Intergovernmental Negotiating Committee on Desertification. One key agreement was on the exact functions of the global mechanism for mobilizing financial resources in support of the Convention. Other decisions dealt with interim arrangements for the COP and for the Convention secretariat; the supplementary

fund and special fund established under the COP's financial rules, and procedures for the communication of information and the review of implementation, among others. The second session of the Conference of the Parties will be held in Dakar, Senegal, 30 November to 11 December 1998. It is expected that around 150 ratifications will have been registered by that date. The Secretariat of the National Organizing Committee is located at the Ecological Monitoring Centre, rue Leon-Gontrand Damas, BP 15-532, Dakar-Fann, Senegal; tel: 221-825-8066/67; fax 221-825-8168; e-mail [cdp@cse.cse.sn](mailto:cdp@cse.cse.sn). To find the text of the Convention, the final reports of each negotiating session, as well as public information materials, visit the Web site at <http://www.unccd.ch> (From *Down to Earth: The Newsletter of the Convention to Combat Desertification*).

### **COSTS AND BENEFITS OF THE MONTREAL PROTOCOL**

*OzonAction News* of the UN Environment Programme Industry and Environment (UNEP IE) unit recently published its 25<sup>th</sup> issue, which summarizes the most recent analysis of the costs and benefits of the Montreal Protocol. The analysis was carried out by Applied Research Consultants (ARC) for Environment Canada and published for the 9<sup>th</sup> Meeting of the Parties in Montreal. This publication (*The Right Choice at the Right Time: Highlights of the Global Benefits and Costs of the Montreal Protocol*, Environment Canada 1997) shows global benefits between 1987-2060 will include (1) 19.1 million cases of non-melanoma skin cancer avoided; (2) 1.5 million cases of melanoma skin cancer avoided; (3) 120 million cases of cataracts avoided; (4) US\$238,000 million worth of damage to the world's fisheries avoided; and (5) US\$191,000 million worth of damage to agricultural production avoided. For more information, contact Environment Canada at the Regional Director General's Office, 1141 route de l'Eglise, PO Box 10,000, St-Foy, Quebec G1V 4H5 or fax 819-953-7253. Or visit Environment Canada's web site at <http://www.ec.gc.ca>

### **BELARUS ISSUES NEW OZONE PROTECTION STAMPS**

Belarus is the latest country to issue stamps to commemorate the 10<sup>th</sup> anniversary of the Montreal Protocol. Representatives of those countries that might want to issue their own commemorative stamps related to ozone may contact the Ozone Secretariat for design ideas. The new stamps result from cooperation between the Ozone Secretariat and the International Postal Union. Contact UNEP Ozone Secretariat, PO Box 30552, Nairobi, Kenya; fax 254-2-623913 or e-mail [madhava.sarma@unep.org](mailto:madhava.sarma@unep.org)

## INTERNATIONAL SOCIETY FOR ECOLOGICAL ECONOMICS

Advocates of the integration of ecology and economics, members of either field interested in how they can work together, and persons who see value in merging economics and ecology should consider membership in the International Society for Ecological Economics (ISEE). The ISEE provides members a chance to work with other like-minded people to make ecological economics the standard, provides a forum for discussion of important issues, and links members to papers and research that demonstrate how inextricably linked economics and ecology are. Members receive special rates for the *Journal of Ecological Economics* (published monthly), the *Ecological Economics Bulletin* (ISEE's quarterly magazine that provides publication reviews, job postings, and reports on worldwide issues) a 20% discount on ISEE publications and videos, and discounted registration fees for ISEE's Biennial Conference. This year's will be held 15-19 November 1998 in Santiago, Chile. For more information, contact ISEE, PO Box 1589, Solomons, MD 20688, USA; tel: 410-326-0794; fax: 410-326-7354.

## INTERNATIONAL COUNCIL OF SCIENTIFIC UNIONS (ICSU)

ICSU is a non-governmental organization founded in 1931 to bring together natural scientists in the pursuit of international scientific endeavors. Its national membership comprises 95 multidisciplinary bodies and 25 international, single-discipline Scientific Unions in order to provide a wide spectrum of scientific expertise, thus enabling members to address major international, interdisciplinary issues which would be more difficult to handle alone. The Council seeks to break through the barriers of specialization by initiating and coordinating major international, interdisciplinary programs and by creating interdisciplinary bodies which undertake activities and research programs of interest to several members. The Council also acts as a focus for the exchange of ideas and information and the development of standards. One of ICSU's greatest strengths is the time contributed freely by the thousands of scientists committed to the objectives of the Council. For more information or to receive a copy of its newsletter *Science International*, contact ICSU Secretariat, 51 Blvd de Montmorency, Paris 75016, France; tel: 33-1-4525-0329; fax: 33-1-4288-9431; e-mail: [icsu@lmcp.jussieu.fr](mailto:icsu@lmcp.jussieu.fr)  
<http://www.lmcp.jussieu.fr/icsu/>

## GEF FUNDING AND DESERTIFICATION

The Global Environment Facility (GEF) was founded in 1991 as the interim financial mechanism of the Climate Change and Biodiversity Conventions. It was mandated to finance projects which have global environmental benefits in four primary areas: protection of biodiversity, climate change, international waters and ozone layer depletion. Negotiations took place among developing and developed countries at the Rio Conference in 1992 questioning whether or not a fifth focus area, that of desertification, should be included in GEF funding. No agreement was reached. However, developing countries started showing reluctance to sign the Climate Change Convention, which was of more interest to the developed countries, and compromises were traded. Developed countries finally agreed that desertification, specifically land degradation projects, would be financed by GEF on the condition that they were to be linked to one of the four focus areas previously mentioned. For more information contact Climate Network Africa, PO Box 76479, Nairobi, Kenya; e-mail: [cna@elci.gn.apc.org](mailto:cna@elci.gn.apc.org) (from *Impact*).

## GEF LAUNCHES AWARD

Mohamed El-Ashry, Chief Executive Officer of the Global Environmental Facility (GEF), honored Costa Rica's President Jose Maria Figueres as the first recipient of the GEF's Global Environmental Leadership award. Figueres is attempting to phase out fossil fuel use in Costa Rica by the year 2010 and has instituted the pioneering concept of payment for environmental benefits like watersheds and greenhouse gas absorption. The prize was established last year in order to annually honor a head of state or government, or a leader in industry in the nongovernmental sector, who has spearheaded significant national and/or international actions to protect the global environment and promote sustainable development. An open nominations process was followed by a panel review involving seven prominent environmentalists from around the world. For more information about the award, contact the GEF Secretariat, 1818 H St. NW, Suite G6-150, Washington, DC 20433 USA, or e-mail Hutton G. Archer at [harcher@worldbank.org](mailto:harcher@worldbank.org)  
<http://www.gefweb.org/assembly/events.htm>

## HUMAN CHOICE AND CLIMATE CHANGE BOOKS

Battelle Press has recently released a four-volume book set entitled *Human Choice and Climate Change*. The books provide an assessment of social science research relevant to global climate change from a wide-ranging interdisciplinary perspective. Researchers

examine climate change issues in the context of social issues such as population and consumption; cultural, institutional, and economic arrangements for human well-being; and the social processes by which decisions are made from local to global levels. The four-volume assessment is intended to complement the work of the Intergovernmental Panel on Climate Change. Volume 1: *The Societal Framework*; Volume 2: *Resources and Technology*; Volume 3: *The Tools for Policy Analysis*; and Volume 4: *What Have We Learned?* The volumes may be purchased in hardback or soft cover as a set or individually from Battelle Press, 505 King Ave., Columbus OH 43201, USA. Tel: 800-451-3543; Fax: 614-424-3819; E-mail: [press@battelle.org](mailto:press@battelle.org); <http://www.battelle.org/bookstore>.

### NATIONAL GEOGRAPHIC KIDS NETWORK

National Geographic Society (NGS) Kids Network has been in operation since 1988 and was a pioneer in integrating technology into the classroom through the interdisciplinary study of real-world topics. Since 1988, NGS Kids Network has reached over 55,000 children in more than 50 countries. In 1997, NGS also introduced the NGS Works software, an integrated software package designed for classroom use. For more information, contact Sharon M. Cowley, Director, NGS Kids Network, National Geographic Society, 1145 17th St. NW, Washington, DC 20036-4688, USA; Tel: 202-828-5670; Fax: 202-429-5770.



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The current El Niño event has spawned many innovative bumper stickers and other advertising. If you are interested in receiving the above bumper sticker, write to Ted Robertson, 1939 S. Quebec Way #702, Denver, CO 80231 USA with \$1 and a self-addressed stamped envelope. Bulk discounts available.

### GREEN SCISSORS 98

A report released in January by a coalition of environmental, taxpayer and consumer groups uncovered \$49.5 billion in US federal programs that damage the environment. The 4th annual report, *Green Scissors '98: Cutting Wasteful and Environmentally Harmful Spending*, recommends cutting several federal programs. Since 1995, the Green Scissors Campaign has helped eliminate or reduce more than \$20 billion in environmentally harmful spending programs. The report has been released by local Green Scissors coalitions that provide grassroots support for the recommendations throughout the year. For more information or a copy of the report, contact Lynn Erskine at 202-783-7400 x255 or visit the Web site at <http://www.foe.org/eco/scissors98>

### UN UNIVERSITY STUDIES EL NIÑO IMPACTS

The United Nations University (UNU, Tokyo) is launching a multinational, multidisciplinary study of the social impacts of El Niño in the Pacific region. Although El Niño affects countries around the world, the UNU has chosen to look first at the Pacific Rim countries since the equatorial Pacific is the "field of action" for El Niño. As a first step, it is developing a plan of action for this project focusing on an assessment of the interest in and concern about the forecast, impacts, responses and policies related to the El Niño. The title of the UNU program is "El Niño Impacts and Response Strategies in Pacific Rim Countries." The development phase will involve forecasters, impact assessors and, when possible, decision makers from various sectors of society. Researchers and institutes in countries that surround the Pacific will be included in the network.

The current El Niño event has received the attention of governments around the basin. For some of them, it is the first event that clearly shows the potential vulnerability of these societies to the impacts of El Niño, a natural phenomenon that recurs on average every four and a half years. This project enables UNU's environmental program to become an important contributor to an improved understanding of a regional scale natural hazard that has spawned droughts, floods, frosts, fires, famines, and changes in typhoon tracks. UNU's contribution could help in the development of an El Niño early warning and response system. Project development is coordinated by Dr. Michael Glantz, Senior Scientist at the National Center for Atmospheric Research. For more information, contact Dr. Glantz at NCAR, PO Box 3000, Boulder, CO 80307 USA; tel: 303-497-8119; fax 303-497-8125; e-mail [glantz@ucar.edu](mailto:glantz@ucar.edu)

## HEALTH IMPACTS OF EL NIÑO

Recent reports on the links between El Niño and a range of impacts on health have underscored the sensitivity of several human diseases to climatic factors. These findings have brought increased attention to human health issues by the policy-makers who assembled in Kyoto, Japan this past December to attend the third Conference of Parties for the UN Framework Convention on Climate Change. El Niño's impacts are felt throughout the world, even though it originates in the Pacific Ocean. Recently, at the first *Inter-Agency Climate Change and Human Health Monitoring workshop*, epidemiologists confirmed that malaria epidemics in Pakistan and Colombia have occurred in response to the increased temperatures influenced by El Niño. In South Africa, with the help of early forecasts of an El Niño-related drought, the regional World Health Organization (WHO) cholera surveillance team was able to help reduce the severity of a cholera outbreak in the area. In addition, there is some evidence that malaria is increasing in incidence in a number of highland regions (e.g., Kenya). WHO is currently establishing a working group on the health implications of El Niño which will bring together experts in the areas of environmental health, emerging and infectious disease surveillance and control, tropical disease control and emergency and humanitarian action. For more information, contact Mr. R. Slooff, WHO, 20, Avenue Appia, 1211 Geneva 27, Switzerland; tel: 4122-791-2111; fax: 4122-791-0746; e-mail: slooffr@who.ch

## FLOOD DISASTER IN EAST AFRICA

Meteorologists are blaming El Niño for the record rainfall during October and November 1998 in much of East Africa, which caused severe flooding in Somalia, Ethiopia, Kenya, Sudan and Uganda. The floods have killed more than 2,000 people in the region, with hundreds of thousands having been displaced from their homes. Much farmland was submerged, destroying maturing and harvested crops, and tens of thousands of livestock were killed. Many essential roads were washed out. In late November, the regional Inter-Governmental Authority on Development declared the Horn of Africa a disaster zone. For more information on El Niño's impact on Africa, contact Africa Recovery, Room S-931, United Nations, New York 10017, USA; tel: 212-963-6857; fax: 212-963-4556; e-mail: africa\_recovery@un.org; <http://www.un.org/ecosocdev/geninfo/afrec> (Subscriptions to *Africa Recovery* are available to individuals for US\$20 and to institutions for US\$35 per year.)

## UN INTER-AGENCY TASK FORCE ON EL NIÑO

A task force has been established by Mr. Yasushi Akashi, Emergency Relief Coordinator and Under-Secretary-General for Humanitarian Affairs, for cooperative work on the prevention and mitigation of and preparedness for natural disasters related to the El Niño phenomenon. The task force meetings are being convened by the Secretariat of the International Decade for Natural Disaster Reduction. At the first meeting, held in Geneva on 18 November 1997, scientific aspects of El Niño were discussed, along with political, economic, and social issues. There was general agreement on the present difficulty in translating scientific knowledge into prevention-oriented economic and social activities at the local level and into capacity-building. Participants also agreed that the gathering of historical data would be important in order to attempt to map the possible effects of El Niño in various regions. The task force will act as a forum for information exchange and coordination of follow-up action through both its meetings and an Internet discussion forum. It will also produce joint press kits and joint publication series as well as explore options for longer-term research. Finally, the task force is designed to identify joint actions, including national and regional workshops. For more information, contact Natalie Domeisen at 41-22-798-6894 or by e-mail: [natalie.domeisen@dha.unicc.org](mailto:natalie.domeisen@dha.unicc.org)

## EL NIÑO: ACTIVITIES OF THE UN DEPARTMENT OF HUMANITARIAN AFFAIRS

There are many activities related to El Niño under way at the United Nations Department of Humanitarian Affairs (DHA). First, the DHA has launched an Inter-Agency Task Force on El Niño, as mentioned in the previous article. In addition to that, the DHA has established its own internal Task Force on El Niño in order to identify prevention and mitigation measures, respond to its effects, and explore the relationship among El Niño, complex emergencies, and environmental degradation. DHA also has an Internet-based information system for the international humanitarian community called ReliefWeb, which has a new section with documents pertaining to El Niño. The site can be found at [www.relief.web](http://www.relief.web). DHA has issued situation reports on El Niño's impact on Peru, Ecuador, Nicaragua, Brazil, Indonesia, and Papua New Guinea and is closely monitoring developments in Honduras, Paraguay, Bolivia, Somalia, Kenya, Ethiopia, and Southern Africa. For more information, contact Dusan Zupka, Humanitarian Affairs Officer, Dept. of Humanitarian Affairs, Palais des Nations, CH 1211 Geneva 10 Switzerland; Tel: 41-22-788-3482; Fax: 41-22-917-0023; E-mail: [dusan.zupka@dha.unicc.org](mailto:dusan.zupka@dha.unicc.org)

## A PACIFIC ENSO BULLETIN

The *Pacific ENSO Update* is a bulletin of the Pacific El Niño-Southern Oscillation (ENSO) Applications Center, a pilot project established to conduct research and produce information products on climate variability related to the ENSO climate cycle in the US-Affiliated Pacific Islands (USAPI). The bulletin is intended to supply information for the benefit of those involved in such climate-sensitive sectors as civil defense, resource management, and developmental planning in the various jurisdiction of the USAPI. The bulletin is produced quarterly, with additional special reports as needed on important changes in ENSO conditions. For more information, contact Alan C. Hilton, LT/NOAA, Editor, Pacific ENSO Update, Pacific ENSO Applications Center, c/o Dept. of Meteorology, HIG Room 331, University of Hawaii, Manoa Campus, 2525 Correa Rd., Honolulu, HI 96822; tel: 808-956-2324; fax: 808-956-2877; e-mail: [hilton@soest.hawaii.edu](mailto:hilton@soest.hawaii.edu) or <http://naulu.soest.hawaii.edu>

## JOBS AND INTERNSHIPS

**GTOS:** The Global Terrestrial Observing System (GTOS) seeks a Senior Scientific Officer for the Development of a Core Set of Global Terrestrial Measurements. The responsibilities of the position include working under the direction of the GTOS Program Director, to assist in identifying and verifying sets of terrestrial variables for regular monitoring. This will involve developing terms of reference for a GTOS Terrestrial Observation Panel and identifying potential members, reviewing and identifying key variables in areas relating to land quality, freshwater resources and biodiversity, and developing a mechanism for documenting the various methods used for measuring or calculating terrestrial variables and making the information available on the internet. An advanced degree in natural sciences and at least 10 years of relevant working experience are required, as is the ability to establish and maintain effective working relationships with people of different cultural backgrounds. The duration of the position is 1-2 years and the location is Rome, Italy. Further details are available upon request from the GTOS Secretariat, c/o SDRN, FAO, viale delle Terme di Caracalla, Rome 00100, Italy; Tel: 39-6-5705-3450; Fax: 39-6-5705-3369; E-mail: [gotos@fao.org](mailto:gotos@fao.org).

**Loka Institute:** The Loka Institute seeks an executive director with experience and innovative capabilities, mainly in fund-raising and administrative management, but also in strategic planning, organizational development, writing, and project development. Loka is a small, nonprofit organization dedicated to making science and technology more responsive to

democratically decided social and environmental concerns (see Website at <http://www.amherst.edu/~loka>). Collaborative skills are essential; state or national organizing experience is preferred. Their methods include research and public education, and providing technical assistance to social change efforts, and testing and creating new institutions. Salary is negotiable starting at \$30,000. Send a cover letter and CV to The Loka Institute, PO Box 355, Amherst, MA 01004, USA. Application deadline is 15 May 1998. Loka is an Equal Opportunity Employer.

**University of Nebraska:** The School of Natural Resource Sciences is seeking candidates for a tenure-track, Assistant/Associate Professor position with 55% research, 35% extension, and 10% teaching responsibilities. The selectee will establish a research program to evaluate the effects of climate variability and climate change on the productivity and sustainability of managed and natural ecosystems. He/she will train and advise graduate students as well as develop and teach a climatology course integrating topics of global climate change and impact assessment. Requirements include a Ph.D. in climatology, meteorology, geography, or related field; expertise and at least 2 years experience in global climate change and impact assessment; and excellent communication and interpersonal relationship skills. An understanding of the human dimensions of climate change and/or a background in ecology/plant sciences would be beneficial. Submit a letter of application; complete resume; statements of research, extension and teaching interests; and the names and telephone numbers of three references by 1 June 1998 (or until a suitable candidate is found) to: Dr. Donald A. Wilhite, Chair, Search Committee, School of Natural Resource Sciences, University of Nebraska-Lincoln, PO Box 830728, 241 L.W. Chase Hall, Lincoln, NE 68583-0728 USA. Contact Dr. Wilhite for more information; tel: 402-472-4270; e-mail: [dwilhite@enso.unl.edu](mailto:dwilhite@enso.unl.edu)

## CALLS FOR PROPOSALS/FELLOWSHIPS

With support from the National Science Foundation, the University of Cincinnati Interdisciplinary Earth System Science Program announces the availability of several graduate student fellowships, beginning in Fall 1998 in *Models of Socioeconomic Response to Environmental Change*. Each fellow will receive a full tuition scholarship and a monthly stipend, plus funds for research supplies, travel to meetings, and support of a summer sabbatical at an off-campus location. All fellows must be either U.S. citizens or permanent residents. While the scope of research topics is broad and flexible, individuals with an interest in studying societies as a complex adaptive system — with emphasis on understanding the relationships between



production and consumption in a free-market economy, demographic shifts in population, and environmental change — are being sought. Applications are encouraged from individuals in the physical and natural sciences, economics, and engineering; applicants should demonstrate a high degree of creativity along with strong quantitative skills. For more information please see: [http://www.cee.uc.edu/~juber/research/gra\\_ads/ad\\_pce.html](http://www.cee.uc.edu/~juber/research/gra_ads/ad_pce.html) or contact Prof. Jim Uber at 513-556-3643 or E-mail: [Jim.Uber@uc.edu](mailto:Jim.Uber@uc.edu) or Prof. Ali Minai at 513-556-4783, [Ali.Minai@uc.edu](mailto:Ali.Minai@uc.edu)

## COMPUTING/INTERNET RESOURCES

For those of you who have found exactly the information you are looking for on the Internet, but it is in a language you don't speak, Alta Vista (the search engine company) now provides a translation engine at <http://babelfish.altavista.digital.com>. This engine will translate documents in English to French, Spanish, German, Italian, or Portuguese and back again. You can submit text or refer the translator to a Web site, which it will then translate. The translations are often crude, but they can help make sense of an article that would otherwise be virtually useless. This is also a great resource to use when you want to provide information to a colleague in his or her native language.

The International Center for Integrated Mountain Development (ICIMOD), whose primary mandate is documentation and information exchange, has recently produced the first ICIMOD CD-ROM with substantial information in a multimedia package using a single digital medium. It introduces ICIMOD and its activities throughout the Hindu Kush-Himalayan region. The CD-ROM contains about 30,000 pages of text/tables, 1,600 figures, 400 photographs, 500 GIS-generated maps, about 30 minutes of video clips, and 45 minutes of audio. The entire CD-ROM is based on a user-friendly Windows environment. The CD is available from the ICIMOD Distribution Unit for US\$50. Contact the International Center for Integrated Mountain Development, 4/80 Jawalakhel, GPO Box 3226, Kathmandu, Nepal; Tel: 977-1-525-313; Fax: 977-1-524-509; E-mail: [dits@icimod.org.np](mailto:dits@icimod.org.np) or web site at <http://www.south-asia.com/icimod.htm>

Global Ecosystems Database: Disk B, the second CD from a NOAA-EPA collaboration, continues the Global Ecosystems Database (GED) publication series of public-domain research data sets related to global climate change and landscape ecology. The 14 data sets contained on the CD were processed and documented to assure spatial and temporal comparability, and for use in geographic information systems (GIS). Included on GED-B are global vegetation index and land cover classifications, snow

cover and depth, sea surface temperatures, carbon dioxide doubling predictions, world population distributions, ecoregion characterizations, primary productivity, and photosynthetically active radiation. The cost of the CD is US\$100 (standard price) and US\$75 (US nonprofit price). Data Disk A is also available. To order a copy of the CD, contact the National Geophysical Data Center, 325 Broadway, E/GC1, Dept. 996, Boulder CO 80303-3328, USA; tel: 303-497-6277; fax: 303-497-6513; e-mail: [seginfo@ngdc.noaa.gov](mailto:seginfo@ngdc.noaa.gov)

ScienceNet is a Web site and bulletin board targeted toward professionals in the ocean and atmospheric sciences. Not only does ScienceNet contain general postings for the science communities, it also has a job postings board and many links to other related organizations. For a free ScienceNet account, write to [Omnet.Service@omnet.com](mailto:Omnet.Service@omnet.com) or visit their Website at <http://www.sciencenet.com>

## NEWSLETTERS AND JOURNALS

*Civil Society*, a new newsletter published by the Citizens' Coalition for Economic Justice, was launched in November 1997. The newsletter is published bimonthly for US\$30 per year. The Citizens' Coalition for Economic Justice is a grass-roots citizens' organization working for democracy, justice and improvements in Korea. The newsletter is devoted to a wide range of topics affecting Korea. For more information, contact the Citizens' Coalition for Economic Justice at 25-1 Chongro-5 Ga Chongro-Gu, Seoul, Korea 110-125; tel: 822-741-7961; fax: 822-745-8006.

*Down to Earth* is the newsletter for the UN Convention to Combat Desertification. It aims to provide general information to explain what desertification is, why it is necessary to understand it, and what can be done about it. It is published quarterly in English and French by the Interim Secretariat of the UN Convention to Combat Desertification. Write to the Geneva Executive Center, 11/13 Chemin des Anemones, 1219 Chatelaine, Geneva, Switzerland; fax 41-22-979-9030/1 or e-mail [secretariat@unccd.ch](mailto:secretariat@unccd.ch)

Now available to those concerned about sustainable development is the first issue of *Journal of Sustainable Use*, published by IWMC-World Conservation Trust. Copies of the journal are US\$25 each, plus shipping. To order, contact Mr. Scott Hartman, Secretary-Treasurer, IWMC-World Conservation Trust, RR1, Box 43, New Martinsville, WV 26155, USA; tel: 304-455-4865; fax: 304-455-5735; e-mail: [trappers@ovnet.com](mailto:trappers@ovnet.com)

## SUMMARIES OF PAST MEETINGS

An international *Workshop on Business Responsibility for Environmental Protection in Developing Countries* was held 22-24 September 1997 in Heredia, Costa Rica. Speakers from business schools in Denmark, Sweden, the UK, and the US presented perspectives on progress made in the greening of business in developing countries, as well as on policy instruments and political contexts conducive to corporate environmental and social responsibility. Additionally, researchers, NGO activists, and environmental journalists from developing countries assessed the reality of corporate environmental responsibility. A workshop report is being prepared by the Universidad Nacional, Costa Rica, and workshop papers will be published in an edited volume. For more information, contact Peter Utting, UNRISD, Palais des Nations, 1211 Geneva 10, Switzerland; Fax: 41-22-740-0791; E-mail: info@unrisd.org

The *Third Conference of the Parties (COP3)* was held in Kyoto, Japan from 1-10 December 1997. This meeting was a scheduled review of the Framework Convention on Climate Change, adopted and signed by 154 states at the 1992 Rio Earth Summit. The convention targeted the establishment of a process for responding to climate change over the decades to follow and set up a system for governments to report information on their national greenhouse gas emissions and climate change strategies. The challenge of COP3 was to get countries to agree upon a protocol in Kyoto that could be ratified by the countries, each of which has its own priorities, to set specific, legally binding targets and timetables for reducing developed country emissions of greenhouse gases. In addition to an agreement on CO<sub>2</sub> reduction among the parties, the meeting also provided an opportunity to release the first *Science Report: the Executive Summary Report of the GCTE Synthesis*. For more information contact the IGBP Secretariat, Royal Swedish Academy of Sciences, Box 50005, S-10405 Stockholm, Sweden; tel 46-8-166448; fax 46-8-166405; e-mail sec@igbp.kva.se or web site at <http://www.igbp.kva.se/> (from *Global Change Newsletter*).

A seminar on the outcome of the Kyoto Climate Summit was held in London, UK on 24 February 1998. The meeting, organized by the Climate Action Network UK, focused on the key outcomes of Kyoto with presentations by environmental groups who took part in the negotiations. It also covered implications for carbon sinks on biodiversity and UK opportunities for CO<sub>2</sub> reductions. For more information, contact Chris Gore, Climate Action Network UK, 49 Wellington Street, London WC2E 7BN; tel: 44-171-836-1110; fax: 44-171-497-0447; e-mail: canuk@gn.apc.org

The GCTE-LUCC (Global Change in Terrestrial Ecosystems - Land Use/Cover Change) *Science Conference on Global Change: Earth's Changing Land* was held from 14-18 February 1998 in Barcelona, Spain. The conference topics included impacts of climate and atmospheric composition change on ecosystem functioning and its implications for the earth system; driving forces of land use change and its ecological consequences; vegetation/land cover changes at local, landscape and global scales; and global change impacts on agricultural production, forestry, and biodiversity. For more information, contact Will Steffen, GCTE Core Project Office, CSIRO, Division of Wildlife & Ecology, PO Box 84, Lyneham, ACT 2602, Australia; fax: 61-1-241-2362; e-mail: Rowena.Foster@dwe.csiro.au

## UPCOMING MEETINGS

**Past Global Changes and Their Significance for the Future**, an International Geosphere-Biosphere Programme (IGBP) PAGES open science meeting, will be held from 19-23 April 1998 at the University of London. The meeting will be organized around invited plenary presentations and high-profile poster sessions. The poster sessions will be focused on the recent scientific results of PAGES activities, and the plenary presentations will focus on the following: The full range of climate system variability, climate forcing, climate system processes, modelling the climate system, biotic responses to climate change, and human consequences of climate change. Although the deadline for poster abstracts has passed, scientists wishing to attend without poster presentations are welcome. For further information, contact PAGES International Project Office in Bern, Switzerland; tel: 41-31-312-3133; fax: 41-31-312-3168; e-mail: pages@pages.unibe.ch or the Web site at <http://www.pages.unibe.ch>

**Planning for the Next Drought: A National Drought Mitigation Center Workshop**, sponsored by the U.S. Bureau of Reclamation and the National Governors' Association will hold two more conferences (three have already been held), one on the Great Plains, 6-8 May 1998 in Rapid City, SD and a second one on the Midwest and Northeast, 12-14 May 1998 in Ft. Mitchell, KY. Workshop participants will have the opportunity to discuss their specific planning needs with experts and learn how others coped with recent droughts. The objectives of the workshops are to help people understand drought and the need for drought planning, teach natural resource managers, water utility managers, emergency managers, planners and others how to develop drought contingency plans and help different levels and agencies of government coordinate drought related programs. Local, state or federal

officials, tribal representatives, people responsible for managing water and other natural resources, emergency managers, and people in industries affected by drought should attend. Programs covered are early warning systems, vulnerability assessment, drought mitigation and planning and preparedness. For more information on either of the regional conferences, contact the National Drought Mitigation Center, University of Nebraska-Lincoln, PO Box 830749, Lincoln, NE 68583-0749, USA; tel: 402-472-6707; fax: 402-472-6614; e-mail: ndmc@enso.unl.edu or Web site at <http://enso.unl.edu/ndmc/>

The **Third Annual House Renewable Energy Expo** will be held *21 May 1998* in the U.S. Congress' Cannon House Office Building, Washington DC. The event is being sponsored by the Sustainable Energy Coalition in cooperation with the U.S. House (of Representatives) Renewable Energy Caucus. More than 50 businesses, government agencies, and trade associations will exhibit technologies featuring the latest advances in solar, wind, geothermal, biomass, hydroelectric, fuel cells, and energy, as well as efficiency improvements in construction, industrial and transportation sectors. Last year, more than 1,400 attendees including members of Congress and their staff, media, and members of the public. For more information, call 301-270-2258 or e-mail: [kbossong@cais.com](mailto:kbossong@cais.com)

The **Seventh International Symposium on Society and Resource Management: Culture, Environment, Society** is being held *27-31 May 1998* at the University of Missouri, Columbia, Missouri. The symposium welcomes everyone concerned with the social, economic and cultural dimensions of natural resource issues and their importance to natural resource users and managers. The theme, "Culture, Environment and Society," reflects the belief that natural resource issues are embedded in social and cultural contexts. An exploration of the links between society and the environment will guide many of the conference activities. The symposium is for natural resource managers, social science researchers, scholars and students, as well as representatives from non-profit, non-governmental, tribal and community agencies involved in natural resource issues. For information on the ISSRM program and presentations, contact Robert Gronski, Symposium Coordinator, Dept. of Rural Sociology, Room 204 Sociology Building, University of Missouri, Columbia, MO 65211; tel: 573-882-5752; fax: 573-882-1473; e-mail: [issrm@showme.missouri.edu](mailto:issrm@showme.missouri.edu) or Web site at <http://www.ssu.missouri.edu/ssu/issrm>

The **9th Global Warming International Conference, Expo and Executive Workshop** will be held *8-11 June 1998* in Hong Kong. The workshop will address relationships between industrial energy users and utilities, improved technologies for industrial production,

carbon emission, energy use and costs, energy efficiency and greenhouse gas mitigation and much more. Conference topics include: Climate History and Climate Future: Anthropogenic Impacts; Air Pollution, Global Warming and Public Health; Greenhouse Gas Emissions; Regional Downscaling Methods and Applications; Impacts of Global Warming on Good Production Systems and Agriculture; Water and Hydrological Impacts; Observed and Modeled Regional Climate Variability, and Global and Regional Forest Resource Management, among others. For more information, contact the World Resource Review, 22W381 75th St., Naperville IL 60565-9245, USA; tel: 603-910-1551; fax: 603-910-1561 or Web site at <http://www.GlobalWarming.net>

The **Summer Colloquium on Hurricanes at Landfall** is being offered by the Advanced Study Program and Mesoscale, Microscale Meteorology Division of the National Center for Atmospheric Research (NCAR), and the Hurricane Research Division *13-24 July 1998*. This two-week colloquium is intended for graduate students and recent Ph.D. recipients and will examine the structure, dynamics, and predictability of hurricanes as they make landfall. The first week of the colloquium will be held in Boulder, Colorado and the second in Miami, Florida. Lectures and exercises involving the use of the extensive NCAR and NOAA data sets will cover topics including theoretical and numerical modeling, observation of hurricane structure, hurricane interaction with land and sea environments, and societal impacts of hurricanes and hurricane forecasts. For more information, contact Barbara Hansford, Advanced Study Program, NCAR, PO Box 3000, Boulder, CO 80307-3000, USA; tel: 303-497-1601; e-mail: [barbm@ucar.edu](mailto:barbm@ucar.edu)

An **International Conference on Satellites, Oceanography and Society (ICSOS)** will be held *17-21 August 1998* as a Part of EXPO'98 in Lisbon, Portugal. The EXPO '98 theme, "Oceans: A Heritage of the Future," will alert the public to the growing importance of the oceans as critical resources for sustainable development. ICSOS will celebrate the twentieth anniversary of the Nimbus-7, Seasat, and TIROS-N satellite launches and will contribute to the 1998 International Year of the Ocean. Session topics include Seasonal-to- Interannual Climate Prediction, Decadal Climate Prediction, Living Resource Assessment and Prediction, Weather and Wave Prediction, and Geophysical Exploration. For more information, contact Dr. David Halpern, MS 300-323, Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA 91109-8099. USA; fax: 818-393-6720; e-mail: [halpern@pacific.jpl.nasa.gov](mailto:halpern@pacific.jpl.nasa.gov); Web site at <http://www.unesco.org/ioc/iyo/icsos/>

**The Second European Conference on Applied Climatology, ECAC '98**, will be held *22-25 September 1998* in Vienna, Austria. The purpose of the conference is to provide an interdisciplinary exchange of information on climate and climate prediction to enable the user community to make informed decisions in support of the sustainable development and protection of the environment. Themes include: Climate Data and Information (user needs and requirements); Regional and Temporal Variability of European Climate (historical and present); Applications of Climate Modeling, Climate Prediction and Projection (emphasis on European or regional scale). For more information, contact Zentralanstalt für Meteorologie und Geodynamik, Postfach 342, A-1191 Wien, Austria; tel: 41-1-36-0-26-2201; fax: 43-1-36-0-26-2672; e-mail: ecac@zamg.ac.at; <http://www.zamg.ac.at/~ECAC98>

The **North Pacific Marine Science Organization (PICES)** is holding its **Seventh Annual Meeting** from *14-25 October 1998* in Fairbanks, Alaska, USA. Scientific sessions will include invited and contributed papers on the following topics, as well as contributed papers on other subjects of interest to scientific communities: 1) Science Board Symposium: The impacts of the 1997/98 El Niño event on the North Pacific Ocean and its marginal seas; 2) Controlling factors for lower trophic levels (especially phytoplankton stocks); 3) Decadal variability of the North Pacific climate; 4) Carbon cycle in the North Pacific Ocean; 5) Science and technology for environmentally sustainable mariculture; 6) Contaminants in high trophic level biota - linkages between individual and population responses; and 7) Climate change and carrying capacity of the North Pacific: recent findings of GLOBEC and GLOBEC-like programs in the North Pacific. All interested persons are invited to provide summaries of their presentations to the PICES Secretariat by 1 July 1998. Contributed papers will be selected for oral or poster presentation. Abstracts should not exceed 250 words. Please submit abstracts through the PICES Web site or by e-mail. For more information, contact the PICES Secretariat, c/o Institute of Ocean Sciences, PO Box 6000, Sidney, B.C. Canada, V8L 4B2; tel: 250-363-6366; fax: 250-363-6827; e-mail: pices@ios.bc.ca; Web site at <http://pices.ios.bc.ca>

The International Climate Change Partnership (ICCP) is pleased to announce it is sponsoring the **1998 Earth Technologies Forum** from *26-28 October 1998* in Washington, DC. The Forum will address climate change and ozone protection technologies and policies. It is co-sponsored by the Alliance for Responsible Atmospheric Policy and the U.S. Environmental

Protection Agency and is the successor to the internationally recognized Climate Change Conference and Ozone Protection Technologies Conference. This forum offers an opportunity to learn more about the linkage between technology issues and policy discussion prior to the next climate negotiation in Buenos Aires. The Conference will feature an exhibit with climate and ozone-friendly technologies and programs. For registration, program and exhibit information, contact Heather Tardel, tel: 703-807-4052; fax: 703-243-2874. Or check the conference's Web site at <http://www.earthforum.com>

**Greening of Industry Network: 7th International Conference on Partnership and Leadership: Building Alliances for a Sustainable Future** will be held *15-18 November 1998* in Rome, Italy. Themes for the Conference include: emerging partnerships for sustainability and leadership in a global society; building global institutions; civil society and participation; transparency and communication; environmental justice; monitoring progress towards sustainable production; transfer of technologies; the greening of small and medium-sized enterprises; the concept of sustainability in different regional settings; the north/south perspective; and a research agenda for the greening of industry. For more information on the Conference, contact Dr. Theo de Bruijn, Conference Program Committee, Center for Clean Technology and Environmental Policy CSTM, University of Twente, PO Box 217, 7500 AE Enschede, The Netherlands; tel: 31-53-489-3203; fax: 31-53-489-4850; e-mail: [Greening@cstm.utwente.nl](mailto:Greening@cstm.utwente.nl)

**The Third Inter-American Dialogue on Water Resources** will take place from *21-25 March 1999* at the Hotel El Panama, Panama City, Republic of Panama. The theme of this event will be "Facing the Emerging Water Crisis in the 21st Century." Every day that passes brings heightened concern about the availability of water. This forum will provide a venue for participating and sharing knowledge and experiences with scientists, researchers, managers, planners and decision-makers. Dialog I and II were held in Miami, USA and Buenos Aires, Argentina and created the basis for discussions; they resulted in proposals aimed at remedying the water crisis. Dialog III has the responsibility of establishing the necessary policies which will provide efficient management of one of the Earth's most important natural resources; water. For more information, contact CATHALAC (Centro del Agua del Tropico Humedo para America Latina y el Caribe) Calzada de Amador, Casa 152-A; PO Box 873372, Zona 7, Panama, Republica de Panama; tel: 507-228-7072; fax: 507-228-3311; or Web site at <http://www2.usma.ac.pa/~cathalac/>

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## WEB SITES

Brazil's National Ozone Unit - <http://www.mma.gov.br/port/SMA/ozonio/ozonio.html>

Climate Impacts LINK Projects - <http://www.cru.uea.ac.uk/link>

Costa Rica's National Ozone Unit - <http://163.178.56.21>

Earth Negotiations Bulletin (International Institute for Sustainable Development) - <http://www.iisd.ca/linkages/>

Global Environment Facility (new homepage) - <http://www.gefweb.org>

International NGO Network on Desertification and Drought (RIOD) - <http://riod.utando.com/>

Mexico's National Ozone Unit - <http://www.ine.gob.mx/uccu/upo/inicio.html>

National Climatic Data Center - <http://www.ncdc.noaa.gov>

National Environmental Education and Training Foundation - <http://www.neetf.org>

National Oceanic and Atmospheric Administration's El Nino page - <http://elnino.noaa.gov>

Relief Web, Department of Humanitarian Affairs - <http://www.reliefweb.int/>

Special Briefing on Climate Change - The Economic and Social Research Council (ESRC) - <http://www.sussex.ac.uk/Units/gec/sbriefs.htm>

Statement from the Southern Africa Regional Climate Outlook Forum - <http://www.opg.noaa.gov/enso/SAOutlook.html>

Terrestrial Initiative in Global Environmental Research (TIGER) - <http://www.nwl.ac.uk/tiger/>

UN Information Unit for Conventions - <http://www.unep.ch/iucc.html>

UNEP IE OzonAction Programme - <http://www.unepie.org/ozonaction.html>

USAID El Nino Tracking - [http://www.info.usaid.gov/fews/imageray/sat\\_nino.html](http://www.info.usaid.gov/fews/imageray/sat_nino.html)

Western Drought Coordination Council - <http://enso.unl.edu/wdcc>

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The Newsletter is compiled and published by the Environmental and Societal Impacts Group of the National Center for Atmospheric Research with support from the UN Environment Programme. Send articles or news items to editor.

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