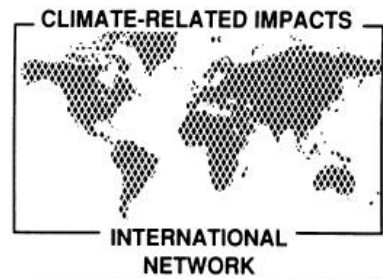


NETWORK NEWSLETTER



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EDITORIAL

What You Don't Know CAN Hurt You

I have always been attracted to adages – statements by which we as members of society are expected to live: “look before you leap,” “he who hesitates is lost,” “what you don’t know can’t hurt you.”

The one that captured my interest most recently is the last one – it is a statement you might make to keep other people in the dark about some issue so they don’t get into trouble for having known about it. If they don’t know about it, they can with honesty say they have no knowledge about it. Perhaps in the realm of law this is a useful adage. However, when it comes to the environment, it is a dangerous credo to follow.

I say this because time and again researchers have shown that what you don’t know *can* hurt you. People in many places are asking such questions as “where did this water come from?” or “where did this fish or meat come from?” In reality, many people around the globe struggle from season to season (some from day to day) to feed, water, shelter, and clothe their families. They don’t have the luxury to worry about the pollutants they might be putting into their bodies or into the bodies of their loved ones. Polluted water is a case in point.

A large portion of the world’s population does not have access to clean drinking water, nor does it have the tools available to clean it. In rich countries, the luxury of alternative water sources does exist. For example, people in many of the heavily populated urban areas know or at least believe that their water is polluted to some extent, so they drink home-delivered bottled purified water. On this issue, some well-to-do people are aware of environmental problems and take action. However, what do they do about other environmental problems? Do they drive less? Recycle more? Stop littering? Do they know what happens to their garbage and other effluents and, worse yet, do they care?

Recall several years ago the plight of the barge carrying garbage from New York to anywhere else. No one wanted it.

Linked to all this is my gut feeling that, at some level, we are all “frogs.” By this I am referring to the frog-like responses to creeping environmental degradation (slow-onset, low-grade, but cumulative). There is a story that US Vice President Gore likes to tell: A frog will sit in a pot of water as the water is heated. It will stay there until the water boils and it has died. The reason is that there is no discernible change from the successive small increases in temperature of the water. In the absence of some sort of shock-like or step-like change, the frog does not receive a cue to leave the pot.

This response is similar to the way most people deal with creeping environmental change. They know about the potential problems that lie ahead and result from their actions and inactions today. But, in the absence of a catalyst or shock of some sort, they learn to live with the problem, accepting poorer and poorer quality of the environment (water, food, soil, etc.). By the time it dawns on them that they have crossed a threshold of change, it is either too late or too costly to do something about it.

First of all, it is better to know about the risks and threats we face from our changing environment. Being forewarned provides us with opportunities to reduce those risks if we choose to do so. And we have a responsibility to make others aware of those threats. We can hide behind scientific uncertainty about the links between certain changes in the environment and our well-being, or we can choose to use that uncertainty as a reason to reduce the threat.

This discussion brings to mind yet another adage: “is it better to be safe now than sorry later???”

–Michael H. Glantz

Environmental and Societal Impacts Grc

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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, a meeting, job opening, or publication, to the address on the back cover. Information to be included in the next newsletter must be received by **1 April 2000**.

CLIMATE INFORMATION PROJECT

NOAA's Office of Global Programs has prepared a Climate Information Project (CIP) Web site with near-daily and weekly summaries of reported climatological impacts (losses and gains) from around the globe. A "Climatologies" link illustrates the expected climate in a given area (from historical perspectives taken from several years of data). To be placed on the electronic mailing list, make requests or comments, or for further information about the CIP, contact Kelly Sponberg at the Office of Global Programs, NOAA, 1100 Wayne Ave., Suite 1210, Silver Spring, MD 20910; tel: 301-427-2089, Ext. 194; fax: 301-427-2073; Web www.cip.ogp.noaa.gov; email sponberg@ogp.noaa.gov

VIRTUAL DISASTER LIBRARY

The Virtual Disaster Library (VDL) is a collection of material published by the Emergency Preparedness and Disaster Relief Coordination Program of the Pan American Health Organization (PAHO) during the past twenty years. It includes the complete collection (in English and Spanish) of the newsletter *Disasters*, all the manuals and scientific and technical publications on disaster preparedness, mitigation, and response in the health sector. All of the documents are available in HTML (Hypertext Markup Language), and most are also in PDF (Portable Document Format). The VDL's partner is the Virtual Health Library (VHL), created by PAHO's Latin American and Caribbean Center on Health Sciences Information. Visit the web site at www.bireme.br or send an email to bvs@bireme.br. For more information on these resources, contact Emergency Preparedness and Disaster Relief Coordination Program, PAHO/WHO, 525 23rd St. NW, Washington, DC 20037; fax: 202-775-4578. Web: www.paho.org/

NEW SOLAR LIGHT PRODUCT

The Solar Light Company announced a new product, the Microtops II. This device allows anyone interested in ozone or general sun photometry to make portable real-time measurements with a battery-power hand-held instrument. Researchers on moving ships and aircraft are now able to undertake measurements with the same level of accuracy as the more expensive larger stationary instruments. The Microtops II offers an onboard data buffer and an external PC software program to download and review the data. For more information, please contact Saul Berger, Solar Light Company, 721 Oak Lane, Philadelphia, PA 19126; tel: 215-927-4206; fax: 215-927-6347; email saul.berger@solar.com

MORE COUNTRIES PHASING OUT "ODS"

Sixty-five developing countries are phasing out their use of ozone-depleting substances (ODS) with help from the UN Development Programme (UNDP) as of the end of 1998. UNDP, UNEP, the World Bank and the UN Industrial Development Organization are jointly helping to implement ODS-eliminating projects worldwide. UNEP's OzonAction Programme has also released two publications in January 2000: a booklet describing India's commitment to the Montreal Protocol and its successes in achieving ODS reductions (*The Montreal Protocol, India's Success Story*), and a case study prepared by the Singapore Ministry of Environment documenting the country's success in phasing out CFCs and halons well ahead of the time frame set under the Montreal Protocol (*Singapore Case Study*). Both of these publications are available on line at UNEP/IE <http://194.51.235.137/ozat/pub/whatsnew.html> or contact UNEP/IE at Tour Mirabeau, 39-43 quai André Citroën, 75739 Paris Cedex 15, France; tel: 331-4437-1450; fax: 331-4437-1474; email ozonaction@unep.fr

CASPINFO 1999

In April 1999, following a conference in Baku, Azerbaijan on "Strengthening Partnerships among NGOs Working on Environmental Programs of the Caspian Basin," an email service was launched: CaspInfo. The conference was organized by ISAR (A Clearinghouse on Grassroots Cooperation in Eurasia) which manages the service. In 1999, 16 bulletins were published, containing annotations from 460 documents stored on CaspInfo's Internet database. Currently the CaspInfo Bulletin is distributed in Russian and English by ISAR-Moscow. Information is collected by ISAR-Central Asia, ISAR-Azerbaijan, and ISAR-DC. ISAR-DC translates the bulletin from Russian to English. Please contact the database on line at www.ecoline.ru/caspinfo or write to ISAR-Moscow at 121019 Moscow, G-19, p.b.

210; tel: 7-095-251-7617; email clearh@glas.apc.org or isarmos@glas.apc.org

NEW WWF POLICY COORDINATOR

Tibor Farago, the former Chair of the Scientific and Technological Advisory Board of the UN Framework Convention on Climate Change and national negotiator for Hungary, has joined the Hungarian Programme Office of the World Wildlife Fund (WWF). As Environmental Policy Coordinator, he will dedicate his efforts toward the improvement of policy responses to key national and global environment-related issues. For more information, please contact Tibor Farago at 504 utca 2, H-1173, Budapest, Hungary; email tibor_farago@mail.matav.hu

EL NIÑO AND HUMAN HEALTH

Public health researchers have become interested in possible links between El Niño and cyclic epidemics in areas where there are possible climate teleconnections. The current state of knowledge concerning the relationship between El Niño and disease has been reviewed in a report published by the World Health Organization (WHO). This area of research is growing rapidly, as climate forecasts at seasonal and interannual lead times may be of great importance in mitigating future epidemics in regions where a relationship between disease and ENSO extremes have been established. The WHO report (WHO/SDE/PHE/99.4), "El Niño and Human Health," by S. Kovats, M. Bouma and A. Haines, is available from the WHO, Avenue Appia 20, CH-1211, Geneva 27, Switzerland; fax: 41-22-791-0746; email info@who.int. Web: www.who.int/

GLOBAL CHANGE AND HUMAN HEALTH

The first issue of a new journal, *Global Change and Human Health*, will be published in spring 2000. This journal, in addition to the invited articles, will contain announcements of new science or policy developments that the editorial staff has found to be of interest. Also, reports of international meetings of significance will be presented. For more information, contact Pim Martens, International Centre for Integrative Studies (ICIS), Maastricht University, PO Box 616, 6200 MD Maastricht, The Netherlands; tel: 31-43-388-3555; fax: 31-43-388-4916; email p.martens@icis.unimaas.nl; Web site: www.icis.inimaas.nl/

WHAT IS THE MAP?

The Mediterranean Action Plan (MAP) strives to protect the environment and to foster development of the

Mediterranean Basin. It was adopted under the auspices of the UN Environment Programme. Its legal framework is made up of the Barcelona Convention (written in 1975 and revised in 1995) and six Protocols covering certain specific aspects of environmental protection. The MAP national focal points met in Athens, Greece, in September 1999 to review the Action Plan which went to the meeting of the Contracting Parties (October 1999 in Malta) for adoption. A concerted effort is being made by the MAP Secretariat to inform the public about the considerable amount of work that MAP has been able to accomplish during the past two decades. *MedWaves*, the MAP newsletter, is published in Arabic, English, and French by the Coordinating Unit and is distributed free of charge. Please contact *MedWaves* at Coordinating Unit of the MAP, 48 Vas. Konstantinou Ave., 11635 Athens, Greece; tel: 30-1-727-3100; fax: 30-1-725-3197, or Web site at www.unepmap.org – email: adavaki@unepmap.gr

LOWEST OZONE LEVELS ON RECORD

A NASA (National Aeronautics and Space Administration) Goddard Space Flight Center spacecraft observed in the fall of 1999 the lowest value of ozone ever seen in the Northern Hemisphere since ozone measurements began in 1978. Whether chemical processes were responsible for any part of the ozone reductions seen over the Arctic this past has not yet been determined. Measurements that may help resolve this question are being made by the SAGE III Ozone Loss and Validation Experiment (SOLVE). SOLVE is being conducted jointly with the European Commission-sponsored Third European Stratospheric Experiment on Ozone. Data and pictures are available on the Web: toms.gsfc.nasa.gov/ More information about these programs can be found at cloud1.arc.nasa.gov/solve/ and www.ozone-sec.ch.cam.ac.uk (from *NASA News*).

ENVIRONMENTAL AWARENESS IN NEPAL

The Nepal Forum of Environmental Journalists (NEFEJ) was formed a decade ago by journalists attempting to promote the participation of mass media in raising public awareness in Nepal. Recently the NEFEJ has begun a new undertaking, to seek to affect positive changes in the environment and social areas. The Forum now enjoys the status of an NGO (non-governmental organization) dedicated to increasing environmental awareness in the public sector and thereby improving the state of the country's environment. The NEFEJ is a membership organization of Nepali journalists. Others involved in environmental conservation may become associate members of the Forum. For more information, contact NEFEJ, PO Box 5143, Thapathali, Kathmandu, Nepal; tel: 977-1-261991;

fax: 977-1-261191; email nefej@mos.com.np or Web:
www.nefej.org.np

INTERNATIONAL STRATEGY FOR DISASTER REDUCTION (ISDR)

In January 2000, the Secretariat of the International Strategy for Disaster Reduction (ISDR) became the successor arrangement to the IDNDR (International Decade for Natural Disaster Reduction). The activities of the ISDR Secretariat will emphasize the multi-sectoral, interdisciplinary, and cross-cutting nature of natural disaster reduction and will foster cooperation among the partners in each field, so that the disaster reduction strategy adopted at the IDNDR Program Forum in July 1999. The main objectives of the strategy are (1) to enable communities to become resilient to the effects of natural, technological, and environmental hazards, and (2) to proceed from protection against hazards to the management of risk, by integrating risk prevention strategies into sustainable development activities. For more information, please contact Annalisa Montecalvo at ISDR, Palais des Nations, CH-1211 Geneva 10, Switzerland; tel: 41-22-917-9720; fax: 41-22-917-9099.

1999 BLUE PLANET PRIZE RECIPIENTS

The winners of the 8th Blue Planet Prize were announced in Tokyo as Paul R. Ehrlich (USA) and Qu Geping (China). Ehrlich is Director of the Center for Conservation Biology, Stanford University, and developed measures to prevent negative human impacts on ecosystems and the extinction of species. Professor Qu is Chairman of the Environmental Protection and Resource Conservation Committee of the National People's Congress of China. He established a legal framework for environmental protection suited to China and supervised scientific surveys of local and urban environments, which were used to formulate China's environmental conservation policies. The Blue Planet Prize is given by the Asahi Glass Foundation, 2nd Floor, Science Plaza, 5-3, Yonbancho, Chiyoda-ku, Tokyo 102-0081, Japan; tel: 813-5275-0620; fax: 813-5275-0871; email post@af-info.or.jp; Web www.af-info.or.jp

KISTLER PRIZE NOMINATIONS INVITED

The Foundation for the Future has launched the Kistler Prize, a new award program to recognize original contributions in the scientific study of the connections between human genetics and the long-term future of humanity. It is named for Walter P. Kistler, originator of the award program and benefactor of the Foundation for the Future. It will be awarded periodically to an individual or research institution whose work significantly

increases our knowledge and understanding of the relationship between genetics and human behavior, intelligence, and health. Deadline for receipt of nominations is 15 February 2000. Genetics is defined as the study of the physical and functional unit of heredity (DNA) that carries information from one generation to another. The awardee may live and work in any country in the world. To obtain an award package, or for more information, contact Foundation for the Future, 123-105th Ave. SE, Bellevue, Washington, 98004; tel: 425-451-1333; email info@futurefoundation.org; Web www.futurefoundation.org

IGOS BULLETIN

The *IGOS* (Integrated Global Observing Strategy) *Bulletin* was launched after the Third IGOS Partners Meeting held in June 1999 at the FAO (Food and Agriculture Organization) Headquarters in Rome. Since the UNCED (UN Conference on Environment and Development) held in Rio de Janeiro in 1992, an active process of structured coordination of global, regional, and national efforts in environmental data collection, analysis, and synthesis has gathered increasing momentum. IGOS intends to unite the major satellite and surface-based systems for global environmental observations of the atmosphere, land, and oceans. The *IGOS Bulletin* will be published biannually to keep the international community informed about the IGOS concept, process, policies, programs, and implementation mechanisms. To subscribe, or for more information, contact CNES, 2, place Maurice Quentin, 75001 Paris, France; tel: 331-4476-7571; fax: 331-4476-7867; email dominique.fournydelloye@cnes.fr or for information on the IGOS concept, go to the Web site at: www.igospartners.org

SUMMER INSTITUTE IN INDIANA

The IAI (Inter-American Institute) and the Anthropological Center for Training and Research on Global Environmental Change (ACT) of Indiana University will jointly support the participation of two Latin American scientists at the ACT/Indiana University Summer Institute on Environmental Monitoring and Assessment Applications in the Americas, to be held at Indiana University 5-23 July 2000. The purpose of the Summer Institute is to share knowledge about the human dimensions of global change research and how such interdisciplinary research programs are conducted within the research community. The IAI will pay for the travel costs (airfare) for two participants from IAI-ratified member countries, as well as a stipend to cover housing and meal expenses. Applicants should send a letter of interest explaining how this training will contribute to their future work. Also include a Curriculum Vita, two letters of reference, and examples of relevant work. Faculty, graduate students, and mid-career

professionals may apply. Deadline for receipt of applications is 15 February. Please mail all applications to Emilio Moran and Elinor Ostrom, Co-Directors, CIPEC, 408 N. Indiana Ave., Indiana University, Bloomington, IN 47408; tel: 812-855-2230; fax: 812-855-26344; email cipec@indiana.edu or Web site: www.cipec.org

ENERGY POLICY AND CO2

Ruud Lubbers, Prime Minister of The Netherlands from 1982 to 1994, recently wrote an essay discussing cross-border environmental policy entitled "CO₂: External Effect of the Globalizing Economy, A Worldwide, Differentiated Problem," Lubbers presents a workable system of governance. The essay, summarized in *Change: Research and Policy Newsletter on Global Change*, discusses the strategies and the principles underlying good environmental policy. Lubbers was recently appointed as Chairman of World Wildlife Fund (WWF) International. For more information, please contact Professor R.F.M. Lubbers, KUB Globus, PO Box 90153, 5000 LE Tilburg, The Netherlands. Web site: www.globalize.org or contact *Change* (the newsletter is free of charge) at RIVM/NRP, PO Box 1, 3720 BA Bilthoven, The Netherlands; tel: 31-30-274-3211; fax: 31-30-274-4436; email nopsec@rivm.nl or visit the web site where the entire issue is on line at www.nop.nl

CLOSING OF RADIUS INITIATIVE

In November 1999, the IDNDR Secretariat held a reporting meeting on RADIUS (Risk Assessment Tools for Diagnosis of Urban Areas against Seismic Disasters) with three international institutes: GeoHazards International, OYO Corporation, and Bureau de Recherches Geologiques et Minieres. The tools that have been developed from RADIUS were presented: guidelines for risk management projects, a simplified program for earthquake damage estimation, and the result of the comparative study on "Understanding Urban Seismic Risk Around the World." The RADIUS Initiative achieved its four main objectives: (1) development of earthquake damage scenarios for 9 case study cities; (2) production of practical tools for estimation and management of urban seismic risk; (3) raising public awareness about seismic risk, and (4) promotion of information exchange for seismic risk mitigation at the city level. Over 100 cities around the globe participated in the Initiative. For more information, consult the RADIUS Web site at www.geohaz.org/radius or contact the ISDR Secretariat (formerly IDNDR) at Palais des Nations, 1211 Geneva 10, Switzerland; tel: 41-22-917-9711; fax: 41-22-917-9099.

CLIMATE CHANGE IMPACT EXPERIMENT

The Throughfall Displacement Experiment (TDE), being conducted by Oak Ridge National Laboratories (ORNL) scientists with funding from the US Department of Energy, provides experimental information about regional climate change. These changes have been hypothesized to occur in response to an increase in greenhouse gases in the atmosphere. TDE is studying throughfall in the Walker Branch Watershed to an upland oak forest over multiple growing seasons and has yielded results which indicate that differences in seasonal timing of rainfall have a greater impact on plant productivity than changes in rainfall applied equally throughout a year. For more information, contact Paul Hanson (pjxj@ornl.gov) (from *CDIAC Communications*).

Web: www.esd.ornl.gov/programs/WBW

CENTRE FOR DEVELOPMENT AND INTERNATIONAL COOPERATION

CDI is a new research center that is focusing research on four key areas of earth system science of scientific importance: (1) Seasonal-to-interannual climate variability; (2) Climate change over decades to centuries; (3) Changes in ozone, UV radiation, and atmospheric chemistry, and (4) Changes in land cover and in terrestrial and aquatic ecosystems. In order to provide a basis for continuing advancement in scientific understanding and leadership in global change research, the Centre supports integrative and cooperative efforts, which contribute to all of the priority environmental science issues. For more information about the Centre, please contact Hani A. Asfour, Director, Centre for Development and International Cooperation, PO Box 131, Post Code 11553, Cairo, Egypt; tel 20-2-336-2630; fax 20-2-335-7759.

NCAR SCIENTISTS WIN AWARDS

The American Meteorological Society (AMS) has selected Kevin Trenberth as the recipient of the Jule G. Charney Award for his analyses of the earth's climate system. Trenberth has been a key player in the Intergovernmental Panel on Climate Change and has acted as lead author for chapters of the 1995 and 2000 IPCC scientific assessments. Warren Washington was the recipient of the Charles Anderson Award. Washington is the first recipient of the award, which recognizes individuals for outstanding contributions to the promotion of educational outreach, educational service, and diversity in the atmospheric science community. The AMS presented these awards at its 80th Annual Meeting held in January 2000 in Long Beach, California, USA.

ADDRESS CHANGES

The Canadian Global Change Program has moved from the Royal Society of Canada building to the University of Victoria campus in Victoria, BC, Canada. New address and contact information: Canadian Global Change Program, University of Victoria, PO Box 1700 STN CSC, Victoria, BC V8W 2Y2, Canada; tel: 250-472-4850; fax: 250-472-4830; email cgcp@uvic.ca

The Jackson Environment Institute, formerly based at the University of London, has moved to the University of East Anglia. New address and contact information: Jackson Environment Institute, University of East Anglia, Norwich NR4 7TJ, UK; tel: 44-1603-593-895; fax: 44-1603-593-896; email jei@uea.ac.uk; Web site: www.uea.ac.uk/env/jei

The NESDIS International and Interagency Affairs Office has moved to NOAA/NESDIS (National Environmental Satellite, Data, and Information Service), International and Interagency Affairs Office, 1335 East-West Highway, SSMC 1, Room 7311, Silver Spring, MD 20910; tel: 301-713-2024; fax: 301-713-2032.

Employment Opportunities

Biodiversity, Global Change, and Ecosystem Functioning. The Global Change and Terrestrial Ecosystems (GCTE) Core Project of the International Geosphere-Biosphere Program (IGBP) and Diversitas, the international program of biodiversity science, are seeking to appoint a highly motivated and independent person to fill the position of Scientific Officer for their joint program on Biodiversity, Global Change, and Ecosystem Functioning. This research program will combine GCTE Focus 4 (Global Change and Ecological Complexity) and Diversitas Core Program Element 1 (Effect of Biodiversity of Ecosystem Functioning) and will be based in Paris, France. The successful applicant will have broad interest in the scientific fields related to biodiversity, global change, and ecosystem functioning; a Ph.D. in ecology or a related discipline, sound working knowledge of English, willingness to travel. For more information on the sponsor programs, see GCTE.org and www.lmcp.jussieu.fr.icsu.DIVERSITAS. An application letter together with a Curriculum Vitae, and names, addresses and contact information for 3 referees, should be sent to Prof. Michel Lureau, Laboratoire de-Ecologie, UMR 7625, Ecole Normale Supérieure, 46 rue d'Ulm, F-75230 Paris Cedex 05, France; Tel 33-1-4432-3709; fax: 33-1- 4432-3885; email lureau@ens.fr

Postdoctoral Position in Seasonal-to-Interannual Climate Forecasts. UCAR announces the continuation of a postdoctoral program in the application of seasonal to interannual climate forecasts. Fellows will be located at the International Research Institute for climate prediction (IRI), on the campus of the Lamont-Doherty Earth Observatory in Palisades, New York. The objective is the development of an integrated forecast decision support system. Applicants to the two-year appointments should propose a project, and develop a project description, including a statement of project relevance to the IRI, as an integral part of their application. Advancement of the IRI Application System is a priority. For more information, contact UCAR/ Visiting Scientist Programs, PO Box 3000, FL4 Suite 2200; Boulder, CO 80307-3000, USA; tel: 303-497-8649; e-mail: vsp@ucar.edu; Web: www.vsp.ucar.edu. The deadline for applications is 15 March 2000.

The Ted Scripps Fellowships in Environmental Journalism. The University of Colorado at Boulder is offering Ted Scripps Fellowships in Environmental Journalism for the 2000-01 academic year. Full-time US print or broadcast journalists with a minimum of five years' professional experience are eligible. Applicants may include reporters, editors, producers and full-time freelancers. Five fellows will be chosen to spend nine months at the University in Boulder to take classes, attend special seminars, and engage in independent study. The application deadline is 1 March 2000. For more information contact the Center for Environmental Journalism, University of Colorado, Campus Box 287, Boulder, CO 80309; e-mail: cej@stripe.colorado.edu; Web: campuspress.colorado.edu/cej.html

UCAR Postdoctoral Fellowship. The University Corporation for Atmospheric Research (UCAR), in cooperation with the Air Force Weather Agency (AFWA) and the National Centers for Environmental Prediction (NCEP), is seeking a Postdoctoral Fellow to work with scientists at NCEP's Environmental Modeling Center (EMC), Mesoscale Modeling Branch, in areas of advanced techniques in mesoscale numerical weather prediction, which can be transitioned to AFWA, located at Offutt AFB, Nebraska. This position is available immediately. Screening of applications will begin on 1 March 2000. Send applications to UCAR/ Visiting Scientist Programs, PO Box 3000, FL4 Suite 2200; Boulder, CO 80307-3000, USA; tel: 303-497-8649; e-mail: vsp@ucar.edu; Web: www.vsp.ucar.edu

2000 NOAA Visiting Scientist Program at NWS Headquarters. The National Weather Service (NWS) announces a new visiting scientist program, managed by the University Corporation for Atmospheric Research (UCAR). The program will provide opportunities for scientists in the academic community and government laboratories to participate in the development of climate

service activities at the NWS Office of Meteorology, located at NWS Headquarters in Silver Spring, Maryland. Openings include positions for Postdoctoral Fellows and Senior Visiting Scientists. Applicants for these non-research positions should possess a PhD and have a strong background in climate variability and its impacts. The application deadline is 15 March 2000. Applications and questions should be directed to UCAR/ Visiting Scientist Programs, PO Box 3000, FL4 Suite 2200; Boulder, CO 80307-3000, USA; tel: 303-497-8649; e-mail: vsp@ucar.edu; Web: www.vsp.ucar.edu

2000 NOAA Office of Hydrology, Visiting Scientist Program, River Mechanics Modeling. The University Corporation for Atmospheric Research (UCAR) Visiting Scientist Programs (VSP), in cooperation with the National Oceanic and Atmospheric Administration (NOAA), National Weather Service (NWS), and the Office of Hydrology (OH), are announcing a new visiting scientist position. The OH Visiting Scientist Program provides hydrologic/ hydrometeorologic and hydraulic research opportunities at the NWS/OH/Hydrologic Research Laboratory (HRL) in Silver Spring, Maryland. Applications are being sought for a visiting scientist to participate on a team that is conducting applied research, development and implementation of dynamic streamflow routing capabilities using the NWS River Forecast System (NWSRFS) operation, FLDWAV, for NWS operations. Applicants should have an MS or PhD in hydrology, hydraulic engineering, applied mathematics, or a related field. These tasks must be performed by an individual with an excellent understanding of distributed hydraulic models (preferably NWS DAMBRK, DWOPER and FLDWAV models), and their applications on computers. Application deadline: **1 March 2000**. Send applications to: UCAR / Visiting Scientist Programs, P.O. Box 3000, Boulder, CO 80307-3000 USA. The full text announcement is available on the internet at: www.vsp.ucar.edu. For further information on the program and application requirements, contact **303-497-8649** or send e-mail to: vsp@ucar.edu. *UCAR is an Equal Opportunity/ Affirmative Action Employer. UCAR strongly encourages applications from women and minorities.*



CDIAC's (Carbon Dioxide Information Analysis Center) data holdings provide coverage in a number of areas relevant to the greenhouse effect and global climate change. Data that are thoroughly checked and documented are released by CDIAC as numeric data

packages (NDPs). The data and documentation text are available from CDIAC's Web site (cdiac.esd.ornl.gov/), from CDIAC's anonymous FTP area (cdiac.esd.ornl.gov), and on a variety of media upon request from CDIAC Communications, Carbon Dioxide Information Analysis Center, Oak Ridge National Laboratory, PO Box 2008, MS-6335, Oak Ridge, TN 37831-6335, USA.

The **School of Natural Resource Sciences Newsletter, *Naturally Resourceful***, is available on the World Wide Web. User IDs and Passwords are no longer needed. The text only version is at www.ianr.unl.edu/snrs/allnews.htm or you can go directly to the contents page at www.ianr.unl.edu/snrs/snrsnewsltr.htm. For more information, contact March Tintera, 303 Biochemistry Hall, School of Natural Resource Sciences, Institute of Agriculture and Natural Resources, University of Nebraska-Lincoln, Lincoln, NE 68583-0758; tel: 402-472-6622; fax: 402-472-4915; e-mail: mtintera1@unl.edu

The International Institute for Sustainable Development (IISD), in cooperation with the UNFCCC Secretariat, has compiled a **topic index of the statements made during the COP-5 High Level Segment** in Bonn, Germany, 2-4 November 1999. This index, which includes links to the original texts and streaming video of the statements posted by the UNFCCC Secretariat can be found at www.iisd.ca/climate/cop5/topics/index.html. Topics covered include, but are not limited to: Activities Implemented Jointly, Kyoto Mechanisms, Adaptation, Capacity Building, Clean Development Mechanism, Partnerships, Compliance, and Political Will.

OzonAction at UNEP has started a new email service for keeping subscribers updated on developments in the phaseout of methyl bromide, an ozone-depleting fumigant. This service will include the "Regular Update of Methyl Bromide Alternatives" (RUMBA) and news updates. To subscribe, contact OzonAction at methyl.bromide@unep.fr

The **IREX Internet Access and Training Program (IATP)** has created two new Central Asian listservs to allow scholars in the region to communicate with their colleagues. The two listservs are entitled research-1 and partner-1. The first will allow scholars to post their research interests to a wider audience and the second will allow people to find research partners in the region. You can subscribe to these lists by going to www.irex-scholars.uz or by sending an e-mail with the word subscribe in the body of the message to these addresses: research-1-request@irex-scholars.uz and partner-1-request@irex-scholars.uz.



SUMMARIES OF PAST MEETINGS

The **19th Meeting of the Open-ended Working Group (OEWG) of the Parties to the Montreal Protocol** took place in Geneva, Switzerland 15-18 June 1999. At the meeting, representatives from more than 100 governments and international organizations prepared recommendations for strengthening the Montreal Protocol on Substances that Deplete the Ozone Layer and for funding of national efforts to eliminate ODS (ozone-depleting substances). Some of the main points discussed were: amendments and adjustments to the phase-out schedules proposed by the European Community (EC); amendments and adjustments relating to methyl bromide; and recommendations on uses of methyl bromide. For more information, contact the UNEP Ozone Secretariat; fax: 254-2-623-913; web site: www.unep.org/unep/secretar/ozone/home.htm

The eighth round of the **Pacific Island Countries Regional Meeting** for IDNDR took place 8-10 September 1999 in Samoa. The "Alafua Declaration on Disaster Management in Pacific Island Countries: 2000 and Beyond" was adopted. The declaration is a set of programmatic principles based on the common agreement that sustainable development in the Pacific Island countries is being hampered by natural disasters in an increasing manner and that a preventive approach is needed to plan long-term development policies in the region. For more information, contact IDNDR (now ISDR); fax: 41-22-917-9098; Web site: www.idnдр.org/

The **International Conference on Integrated Drought Management** was held 20-22 September 1999 in Pretoria, South Africa. The main objective of the conference was to better understand the factors predisposing people and landscapes to heightened drought vulnerability and to work toward strategies and actions that can reduce drought vulnerability and move society toward sustainable development. Sessions included: understanding, measuring, and forecasting drought; comparative drought management policies; strategies to reduce drought vulnerability; and integrated drought management toward sustainable development. For more information, contact Cilla Taylor or Alyson Lea-Cox; fax: 27-12-667-3680; email: confplan@iafrica.com

Joint Implementation (JI) and International Emissions Trading (IET) was the subject of a workshop organized by the OECD and IEA for the Annex I Expert Group held in Paris 13-14 September 1999. Participants discussed technical options for international rules and guidelines for each type of

mechanism, as they might evolve under the Kyoto Protocol. Four groups of issues were addressed:

1. Participation of countries with economies in transition in JI and IET
2. Market power, trade and competitiveness
3. Monitoring, reporting and verification
4. Eligibility, liability and responses to non-compliance

The workshop report is available at the OECD Web site (www.oecd.org/env/cc/mechanisms.htm).

A United States - Canada symposium on **North American Climate Change and Weather Extremes** was held in Atlanta, Georgia from 6-8 October 1999. The symposium was designed to foster dialogue between the impacts modeling and the climate modeling communities and between the climate modeling and the computer hardware communities. The goal was to identify existing capabilities and additional needs in the modeling of weather extremes. The symposium reviewed current capacities for identifying weather extremes in the climate system; assessed current understanding of the relationship between weather extremes, climate variability and climate change; examined the vulnerabilities of American and Canadian societies to weather extremes; and determined what steps are required to advance modeling and assessment of weather extremes. For more information, contact The Climate Institute, 333 1/2 Pennsylvania Ave, S.E., Washington, DC 20003-1148; tel: 202-547-0104; fax: 202-547-0111; Web: www.climate.org

The **Third Caribbean Conference on Natural Hazards** was convened in Barbados from 13-15 October 1999. The conference brought together all of IDNDR's main partners operating at various levels in the Caribbean, as well as representatives of national governments. The IDNDR Secretariat delivered the keynote address in which the future of disaster reduction was presented with regard to the conclusions of the IDNDR Programme Forum and the ECOSOC Resolution. The participants expressed particular satisfaction at the strengthened regional focus of the Inter-Agency Task Force for disaster reduction to succeed the IDNDR Framework. In his inaugural statement, the Parliamentary Secretary of the Ministry of Home Affairs of Barbados stressed the importance of pursuing the goals of the decade within regional and national development programs. For more information, contact the Caribbean Disaster Emergency Response Agency (CDERA) in Barbados; fax: 246-437-7649; web site: www.cdera.org/

The **First NRP-II Symposium on Climate Change Research** was held in Garderen, The Netherlands from 29-30 October 1998. Proceedings from this National Research Programme Symposium are now available from The NRP Programme Office, PO Box 1 (pb59), 3720 BA Bilthoven, The Netherlands; tel: 31-30-274-3211; fax: 31-30-274-436; e-mail: nopsec@rivm.nl; Web: www.nop.nl

The Fourth Annual Conference on Crises and Disasters Management was held 30-31 October 1999 in Cairo, Egypt. Major topics addressed at the conference include: case studies from the industrial, agricultural, tourism, public utilities, energy, transportation, and communication sectors; natural and environmental disasters and their social, psychological, economic, and legal impacts; production, financial, and technical crises faced by business and government organizations; communications and media in crisis and disaster management; and the effects of global and regional crises on local organizations. For more information, contact Mohammed Rashad El-Hamalawy; tel: 20-2-261-9509; fax: 20-2-402-5905.

The International Symposium on Hydrological and Geochemical Processes in Large-Scale River Basins was held 16-19 November 1999 in Manaus, Brazil. Special emphasis was on the Amazon and other tropical basins, and main topics included: erosion, transport and sedimentation in large-scale river basins; hydrology, geochemistry and ecohydrology of large-scale river basins; and toward hydrological and biogeochemical models of large-scale basins. For more details, contact Manaus '99; fax: 55-61-248-5378; web site: www.unb.br/ig/hibam/hibam.htm

Integrating Social Science into the Long-Term Ecological Research (LTER) Program workshop was held 19-21 January 2000 at Arizona State University (ASU) in Tempe, Arizona. The goal of the 3-day program was to explore ways of integrating social science into the LTER program. Anticipated outcomes were: to improve social science core area concepts; specific project ideas for cross-site research; suggestions for how to further fund such integrated research. For more information, contact the LTER Project at ASU; fax: 480-965-8087; web site: caplter.asu.edu

address these and other issues and explore how CHP can cut energy bills and improve the environment over the next 20 years. For more information, visit the web site: www.oit.doe.gov/chpchallenge/international.html or contact Jan Brinch; tel: 410-953-6215.

Surface Ocean Lower Atmosphere Study (SOLAS) Open Science Conference will take place 2-24 February 2000 in Damp, Germany. SOLAS is a potential new interdisciplinary research effort whose planning to date has been sponsored by IGBP, and SCOR with additional financial support from the EU and with considerable interest from SCRIP. The scientific focus for the proposed effort is the interaction between the atmosphere, climate, and marine biogeochemical processes. The purpose of the SOLAS Open Science Conference is to communicate and discuss these and other related ideas with as wide a group of interested scientists as possible. For more information, contact Ute Weidinger; tel/fax: 49-431-597-3811; web site: www.ifm.uni-kiel.de/ch/solas/meeting.html

Oceanology International (OI) 2000 will be held 7-10 March 2000 in Brighton, United Kingdom. The conference program deals with controversial issues such as global ocean policy as well as addressing the technological developments and advances that will move this industry forward. Recognizing the increased global demand for a highly skilled workforce and a more scientifically informed general public, OI 2000 provides the ideal opportunity to bring together all those with a shared interest in marine education. For more information, contact PGI/Spearhead Ltd.; tel: 44-20-8949-9222; web site: www.spearhead.co.uk

The Second World Water Forum and Ministerial Conference will be held 17-22 March 2000 in The Netherlands. A vision will be unveiled projecting a scenario of how the world could look 25 years from now, if we take action today. To implement this vision, the Framework for Action will be announced. Hundreds of water specialists, politicians, leading experts and top officials from around the globe will convene. Key elements of the Vision address basic issues such as the right to water and sanitation; the challenging concept of more crops and jobs per drop of water; the essential water services provided by natural ecosystems; the risk of floods and droughts; the need for international cooperation and governance to better address water issues. For more information, visit the Water Forum web site: www.worldwaterforum.org/

The Globe 2000 International Conference and Tradeshow on the Environment will be held 22-24 March 2000 in Vancouver, British Columbia. This bi-annual conference is one of the world's largest environmental conferences and tradeshow on environmental technologies and policies. GLOBE will bring companies together with key international buyers, governments and corporate executives. More than



ANNOUNCEMENTS OF UPCOMING MEETINGS

The First International Symposium on Combined Heat and Power: Energy Solutions for the 21st Century will be held 1-2 February 2000 in Washington, DC. Combined heat and power (CHP, also known as cogeneration) is recognized as one of the most cost-effective means of reducing worldwide carbon dioxide emissions. This is the first-ever international conference covering combined heat and power and will focus on the policy, environmental and energy market role of CHP in the 21st century. The wider development of CHP is constrained by a range of energy market and other barriers worldwide. The conference will specifically

2,000 corporate leaders and senior government officials from 50 countries are attending. For more information, call 604-775-7522 or visit the web site: www.globe.ca/

The U.S. Trade and Development Agency, the Federal Emergency Management Agency, and the U.S. Department of Commerce are sponsoring a conference on **Building a Disaster-Resistant Asia** with an emphasis on preparedness and mitigation, *2-4 April 2000* in Honolulu, Hawaii. The objective of the conference is to match U.S. technology and know-how with emergency management providers in Asia. U.S. businesses in preparedness and mitigation services sector will find this an exceptional networking event; particularly those companies specializing in construction and engineering, contingency planning, telecommunications, public information and risk communication, Geographic Information Systems, and remote sensing technology. For more information, please contact Gisele Lee; tel: 703-934-3255; email: asia-tda@icfconsulting.com; web: www.icfconsulting.com/asia-tda

The **Second European Forum on Integrated Environmental Assessment (EFIEA)** climate policy workshop "From Kyoto to The Hague - European perspectives on making the Kyoto Protocol Work" will be held *18-19 April 2000* in Amsterdam, The Netherlands. The main objectives of the workshop are to bring together state-of-the-art scientific information from European research that is relevant for the EU in preparing for the 6th Conference of Parties (CoP-6) and to enhance the policy relevance of the climate-related research in Europe. The workshop is directed at policy makers and stakeholders involved in the development and implementation of (inter)national and European climate policies and leading scientists in the field of integrated environmental assessment and other disciplines relevant to climate policy development. Participation is by invitation only. Participation is open for scientists making a contribution to the workshop, either as an author of one of the assessment papers or by submitting a paper considered relevant for the workshop. For more information, contact Albert Faber; fax: 31-30-274-4435; email: albert.faber@rivm.nl; web site: www.vu.nl/english/o_o/instituten/IVM/research/efiea/index.html

The European Geophysical Society will hold the XXV General Assembly and **Millennium Conference on Earth, Planetary, and Solar System Sciences** *25-29 April 2000* in Nice, France. The scientific program includes: Solid Earth Geophysics, Geodesy, Hydrological Sciences, Oceans and Atmosphere, Solar-Terrestrial Sciences, Planetary and Solar System Sciences, Nonlinear Processes in Geophysics, and Natural Hazards. For information, contact the EGS; fax: 49-5556-4709; or visit the web site: www.copernicus.org/EGS/egsga/nice00/nice00.htm

The **Third International Conference on Global Disaster Information Network (GDIN)** will be held *26-28 April 2000* in Ankara, Turkey. It is the duty of every nation to pool its resources to develop and put into action new ways of disaster mitigation, early response, and effective reaction. This goal is what has prompted GDIN's conceptualization. Following two earlier conferences in 1998 and 1999, this conference will also be devoted to discussing how an Internet-based and easily accessible information system can be created, funded and maintained globally for the benefit of all members of the family of nations. For more information, contact Ms. Lale Gürel; tel: 90-312-287-88-03; web site: <http://dad.deprem.gov.tr/gdin2k/>

The **Fifth Session of the Conference of the Parties to the Convention on Biological Diversity** will be held *15-26 May 2000* in Nairobi, Kenya. The conference will focus on the urgent need to address the conservation and sustainable use of dryland and grassland ecosystems, environmentally friendly tourism, and the consequences of using newly available technologies for controlling how plant genes are expressed. Negotiations will continue on a biosafety protocol. For more information, contact the CBD Secretariat; fax: 514-288-2220; web site: www.biodiv.org/

The **17th Annual Pacific Climate (PACLIM) Workshop** will be held *22-25 May 2000* in Santa Catalina Island, California. The workshop considers multi-disciplinary issues of climate variability from weather to geological time scales with a focus on the Pacific and the western Americas. The theme of this workshop is "Climates of the Last Century, Millennium and 10K Years." Students are encouraged to attend and present their research. For more information, contact Janice Tomson; tel: 562-938-4448 or visit the web site: meteora.ucsd.edu/paclim/

The Climate Change Research Group of the Unity of Geography of University Rovira i Virgili will hold a meeting "**Detection and Prediction of Contemporary Climate Change and their Effects in a Regional Scale**" on *29-31 May 2000* in Tarragona, Spain. This meeting will cover aspects of detection and modeling of recent man-made climate change on a regional scale, with a special emphasis in scenario construction and impact assessment on the European region. The meeting is intended primarily for scientists and graduate students working in the areas of Climatology, Geography, Physics, Mathematics, Atmospheric Physics and Dynamics, Ecology, and other related fields. Undergraduate students are also welcome and their participation is encouraged in the posters session. For more information, contact Dr. Diego Lopez or Dr. Manola Brunet; tel: 34-77-55-81-27; web site: www.urv.es/centres/Departaments/geografia/clima/congres.htm

The **WOCE (World Ocean Circulation Experiment) Young Investigator Workshop** is being held in Boulder, Colorado, *12 -30 June 2000*. The goals of the Workshop are to familiarize Young Investigators with WOCE models, datasets and estimation procedures; to offer intensive hands-on exposure to these models and methods; to build collaborations among junior scientists and more senior WOCE investigators; and finally to generate ideas and projects leading to fundable WOCE synthesis projects. Participants are mainly expected to be recent PhDs in an oceanographic subject, but students within about a year of completion of their doctorates will also be considered, as will more senior scientists with an interest in learning these techniques. The deadline for applications is 15 March 2000. For more information, contact UCAR/ Visiting Scientist Programs, PO Box 3000, FL4 Suite 2200; Boulder, CO 80307-3000, USA; tel: 303-497-8649; e-mail: vsp@ucar.edu; Web: www.vsp.ucar.edu

The **Fifth Congress on Marine Sciences, MarCuba 2000** will be held *19-23 June 2000* in Havana, Cuba. The meeting is expected to bring together scientists and managers involved in marine sciences, services and technologies as well as educators, sociologists, economists, businessmen, policy-makers and anyone interested in promoting and integrating marine scientific research to sustainable development. Topics include: Integrated Coastal Zones Management, Global Ocean Observing System (GOOS), and Ocean Processes and Global Change. For more information, contact the Organizing Committee MarCuba 2000; fax: 537-24-99-87; email: marcuba@unepnet.inf.cu – Web site: [/ioc.unesco.org/iocweb/news/external/marcuba2000_e.htm](http://ioc.unesco.org/iocweb/news/external/marcuba2000_e.htm)

The **International Glaciological Society Symposium: Sea Ice and Its Interactions with the Ocean, Atmosphere & Biosphere** will be held *18-24 June 2000* in Fairbanks, Alaska. The aim of this symposium is to promote interdisciplinary discussion of the geophysics of sea ice and its interactions with the ocean, atmosphere and biosphere. For more information, contact Martin Jeffries; fax: 907-474-7290; web site: www.gi.alaska.edu/seaicesymposium/

Meteorology at the Millennium will be held *10-14 July 2000* in Cambridge, United Kingdom. This landmark conference is intended to reflect on the way in which modern meteorology is contributing to other sciences. The meeting will also discuss how atmospheric scientists can, and are, learning from colleagues in other disciplines, and participants will consider the wider implications of these advances for society. For more information, contact the Royal Meteorological Society; fax: 44-118-956-8571; email: execsec@royal-met-soc.org.uk

The **International Association of Ecology: The Sixth Wetlands Symposium** will take place *6-12 August 2000* in Quebec City, Canada. The meeting will coincide with the 21st Annual Conference of the Society of Wetlands Scientists. The focus, Wetlands at the Millennium, will cover all aspects of wetland science, policy and management and will include discussion on new innovations, research and technology. For more information, contact Elizabeth MacKay; fax: 418-657-3853; web site: www.cqvb.qc.ca/wetland2000/

Images and Reconstructions of Weather and Climate over the Last Millennium will take place *20-22 September 2000* in Krakow, Poland. The conference is organized by the Jagiellonian University, the Institute of Meteorology and Water Management, and the Polish National Committee of the IGBP. Participants will discuss high resolution reconstructions of climate over the past millennium, including natural hazards. The second focus will be on the impacts and perceptions of climate for society and will include a "Greenhouse" debate. For more information, contact Barbara Starkel; email: bstrakel@grodzki.phils.uj.edu.pl; web site: www.geo.uj.edu.pl/klimat2000/



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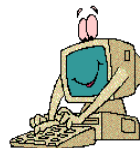
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Web sites of Interest



The International Human Dimensions Program on Global Environmental Change (IHDP): www.uni-bonn.de/ihdp
Home of IHDP whose goal is to describe, analyze and understand the human dimensions of global environmental change.

Forum for Climate and Global Change- (ProClim): **www.proclim.unibe.ch**

A project of the Swiss Academy of Sciences which works toward providing links to other climate and global change sites as well as promoting scientific collaboration and exchange of information.

Human Dimensions of Global Environmental Change: **www.psychologie.uni-freiburg.de/umwelt-spp-eng/welcome**

This German National Program is the first program in Germany to study the human dimension of global environmental change. The site provides information on the program and its findings as well as links to other global change sites.

The Asia-Pacific Network: **www.apn.gr.jp/**

The Asia-Pacific Network for Global Change Research (APN) is an inter-governmental network for the promotion of global environmental change research and links between science and policy making in the Asia-Pacific Region.

Climate Change Information Kit: **www.unep.ch/iuc/submenu/infokit/factcont.htm**

Everything you ever needed to know about climate change. Available in HTML and PDF.

Comprehensive El Nino bibliography search page: **www.coaps.fsu.edu/lib/COAPS-Bibliography/**

Includes publications, technical reports, monograph publications and proceedings 1974 to present.

United Nations Hunger Site: **www.thehungersite.com**

Click on this site once a day and somewhere in the world some hungry person gets a meal to eat. Food is paid for by corporate sponsors.

Natural Disaster Management: **www.ndm.co.uk/**

Contains a wealth of resources on disasters and related activities.

Land Use and Land Cover Change: **www.uni-bonn.de/ihdp/lucc/**

The Land Use and Land Cover Change (LUCC) Project is a program element of the International Geosphere-Biosphere Programme (IGBP) and the International Human Dimensions Programme on Global Environmental Change (IHDP).