



Network Newsletter

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International Network

Climate-Related Impacts

Editorial

“Lessons, Lessons Everywhere, But Very Few Applied”

Following the 1997–98 El Niño, government agencies and academic researchers, among others, investigated that event – from the science to the impacts, from the costs and benefits to the ethics involved in El Niño-related decision-making. Each report, from peer-reviewed to the “gray” (unpublished) literature, provided lessons on how better to deal with future El Niño events. Without question, impact assessments about weather- and climate-related problems in the future will be undertaken and they too will identify lessons learned from those problems.

The recent El Niño lessons were made available for decision makers to consider and hopefully act upon. Interestingly, many of these “newly identified” lessons can be found in climate- and disaster-related studies undertaken in the past several decades. The question then is “why are so many solutions known to a variety of climate-related issues, but have not yet been put into practice?” Is there a way to assure that societies can build on the lessons already learned at a different time or in a different place?

There appears to be a cycle of concern for disasters and their victims: (1) forecast of a hazard, (2) impacts of that hazard, (3) responses to the impacts as well as the forecast, and, finally, (4) identification of lessons learned from that hazard. Unfortunately, concern for the hazard’s victims and interest in implementing relevant lessons dissipates over time. For example, pledges from governments to assist victims, made in good faith in the heat of the disaster, often go unfulfilled as new disasters occur in other parts of the globe. The original disaster victims are soon forgotten. Plans for mitigating the impacts of future events are left unfinished or, if finished, are only partially implemented or just shelved. As a result, the impacted country and its inhabitants are left to

do the best they can with their limited resources to cope with the aftermath.

During a UN-supported study of the impacts and response strategies for reducing the impact of environmental emergencies through early warning and preparedness in 16 countries, I became aware of several natural hazard and disaster reports unrelated to El Niño, the findings of which also included lessons for coping with future disasters of various kinds. As the UN study’s PI, in the introduction to the final report’s summary, I wrote that I had found good as well as bad news. The good news was that our findings were similar in substance and spirit to the findings of previous studies for other hazards; we were on the right track, because we had identified similar lessons learned. The bad news: we had found similar lessons! Were we making any progress toward coping with the forecasts and likely impacts of El Niño events as a result of lessons from previous experiences?

As with most crises, regardless of cause, societies (policy makers and citizens) tend to discount the past; that is, as problems appear to be resolved or terminated, attention shifts to other more pressing issues that demand immediate consideration.

Do decision-makers actually learn from history? If so, what do they learn? There appears to be a belief among a growing number of researchers and policy analysts that policymakers do not, cannot, and even should not learn from the lessons of past experiences. They argue that this is the case because (1) situations change over time; (2) identifying the true cause of the event is difficult; (3) governments change, (4) demographic factors change; and so forth. While the odds for a hazard’s return may remain uncertain, that the hazard and its impacts could recur is foreseeable. A challenging task for researchers is to determine how best to get decision makers today and in the future to take into account existing, previously identified lessons.

–Michael H. Glantz

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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 by **1 January 2003**. If you prefer to receive the newsletter on line, please let us know at www.esig.ucar.edu/newshp and you will be reminded when a new issue is released. Thanks for your input!



CEOP

CEOP (Coordinated Enhanced Observing Period) is a time period designed to bring together satellite and model data (with global coverage over the same time period) to support key science objectives in climate prediction and monsoon system studies. Initiated in mid-2001, CEOP will focus on two annual cycles (2003 and 2004) to take advantage of the new earth observing satellites. It is also timed to coincide with other international activities such as those planned for the CLIVAR (Climate Variability and Predictability) Program, among others. The overall objective of CEOP is to achieve a more accurate determination of the water cycle in association with climate variability. CEOP underpins the World Climate Research Program (WCRP), in cooperation with the World Meteorological Organization (WMO) to establish an integrated global observing system for the water cycle that responds to both scientific and societal needs. For more information, see the website at monsoon.t.u-tokyo.ac.jp/ceop/ or contact the International Coordinating Office, Dept. of Civil Engineering, University of Tokyo, 7-3-1 Hongo, Bunkyo-ku, Tokyo 113-8656, Japan; tel: 81-3-5841-6132; email ceop@monsoon.t.u-tokyo.ac.jp

ENVISAT AND OZONE

Launched in March 2002 by the European Space Agency (ESA), the Envisat satellite carries several instruments to assist climate researchers in monitoring ozone levels and other atmospheric conditions. Because of data from the satellite, The Royal Netherlands Meteorological Institute (KNMI) has predicted that the Antarctic ozone hole may break up months earlier than usual, and that the depth of the ozone hole this year is also unusually small. KNMI warns, however, that the possibility remains that it will strengthen and form a new ozone hole. Although worldwide treaties have phased out ozone-depleting chemicals, this early breakup is probably the result of year-to-year variability of atmospheric circulation. To see more information about Envisat, or to view its spectacular images of the Earth, see www.esa.int and search on Antarctica.

MONTREAL PROTOCOL AFTER 15 YEARS

The Environmental Protection Agency (EPA) of the United States recently marked the 15th anniversary of the signing of the Montreal Protocol, an international agreement designed to help the ozone layer recover by phasing out ozone-depleting substances such as CFCs and replacing them with environmentally friendly alternatives. In the United States, the phaseout of high-priority "Class I" substances has been accomplished faster and at less cost than originally anticipated. Continued international compliance of the Montreal Protocol will ensure that the ozone layer should fully recover by the middle of this century. For more information about EPA's Stratospheric Ozone Protection Programs, see www.epa.gov/ozone or email green.vanessa@epa.gov

OUTCOME OF WSSD 2002

The World Summit on Sustainable Development (WSSD) was held 26 August–4 September 2002 in Johannesburg, South Africa. UN officials are now preparing the groundwork for the targets, timetables, and commitments agreed upon during the Summit. A key outcome of the Summit was the reaffirmation of sustainable development as a central element of the international agenda. Commitments were launched by governments, NGOs (non-governmental organizations), and businesses to expand access to safe water, proper sanitation, clean energy, reverse the decline of ecosystems by restoring fisheries, and limit harmful toxic chemicals. The understanding of sustainable development was broadened and strengthened, especially the linkages between poverty, the environment, and use of natural resources. The full Implementation Plan, plus highlights, is on the website in six languages at www.johannesburgsummit.org or write to the Johannesburg Summit Secretariat, Division for Sustainable Development, UN Dept. of Economic and Social Affairs, 2 UN Plaza, DC2-2220, New York, NY 10017; email dsd@un.org

UPDATE ON NDMC

The National Drought Mitigation Center (NDMC) has updated and moved its website to drought.unl.edu. The continuing drought in the United States reached exceptional levels during summer 2002, creating numerous forest and rangeland fires, grain shortages, and deteriorating soil conditions. The drought also threatens municipal water supplies and caused many communities to develop new water management plans, including water restrictions and water conservation. The NDMC considers the current US approach to drought as the "hydro-illogical cycle." This cycle is characterized by ignoring water shortages until the situation becomes dire, then requesting emergency funding from Congress. However, as soon as the rains come back and the situation returns to normal, the cycle of neglect begins again with the next drought. The Western Governors' Association at its Annual Meeting in Phoenix, Arizona, drafted Policy Resolution 02-02, available in PDF format at www.westgov.org/ – click on *Policy Resolutions* to read "Future Management of Drought in the West," or write to the NDMC at University of Nebraska-Lincoln, 239 L.W. Chase Hall, PO Box 830749, Lincoln, NE 68583-6707; tel: 1-472-6707; fax: 1-402-472-6614; email ndmc@drought.unl.edu

WHAT IS SOLAS?

SOLAS (Surface Ocean–Lower Atmosphere Study) is a new multi-disciplinary and global-scale research initiative designed "to achieve quantitative understanding of the biogeochemical-physical interactions and feedbacks between the ocean and the atmosphere, and how this coupled system affects and is affected by climate and environmental change." At its first meeting in June 2002, the SOLAS Executive Group decided that a new approach toward dealing with implementation is needed and is therefore writing a shorter, more flexible Implementation Strategy, which should be approved in 2003. At present, the Science Plan is available on the website while the Implementation Strategy is being written. Once approved, the combined Science Plan and Implementation Strategy document will be posted on the SOLAS website. The First SOLAS Science Conference is being planned for 2004 in Canada and will be organized by Daniela Turk, Canadian SOLAS Secretariat (solas@dal.ca).

For more information on SOLAS, contact the School of Environmental Sciences, University of East Anglia, Norwich NR4 7TJ, United Kingdom; email solas@uea.ac.uk; website: www.solas-int.org

IMPUMELELO

"Impumelelo" is an isiXosa (a South African language) word that means "success by working together." Impumelelo Innovations is a South African award program that rewards innovations in government and public/private partnerships that reduce poverty and address key developmental issues of national concern. The Impumelelo Trust gives 15 to 20 awards annually totaling more than US\$70,000 to improve the quality of life of the poor and disadvantaged in South Africa. It awards exceptional projects, which involve partnerships with the public sector to enhance the quality of life in poor communities in innovative ways. For more information, or to see the list of finalists for 2002, see the website at www.impumelelo.org.za or write to Impumelelo, PO Box 1739, Cape Town, 8000, South Africa; tel: 27-21-461-3783; fax 27-21-461-1340; email info@impumelelo.org.za



CLIMATE CHANGE SCIENCE PROGRAM

The US Climate Change Science Program (CCSP) integrates federal research on climate and global change and is sponsored by 13 federal agencies. The US Global Change Research Program (USGCRP) and the President's Climate Change Research Initiative (CCRI), which directed the reestablishment of priorities for climate change research, are now under the auspices of the Interagency CCSP. A Planning Workshop for Scientists and Stakeholders will be held 3–5 December 2002 in Washington, DC, to receive comments on a discussion draft version of the CCSP Strategic Plan. The emphasis of the Strategic Plan will be on short-term products (2–5 years) that support climate change policy and resource management decision-making. The draft plan will be posted on the website in November 2002 for public review. For more information, see the website at www.climatescience.gov or write to CCSP, 1717 Pennsylvania Ave. NW, Suite 250, Washington, DC 20006; tel: 1-202-223-6262; fax: 1-202-223-3065; email information@usgcrp.gov

OGMIUS

Ogmios, the Gallic god of eloquence, is also the name of the newsletter of the Center for Science and Technology Policy Research at the University of Colorado. Each issue includes an exchange among leading voices in

science and technology policy, news about Center projects and publications, web and media resources, job and educational opportunities in science and technology policy, and other items of interest to the climate impacts community. It is available free of charge in both HTML and PDF versions. To subscribe, go to the website at sciencepolicy.colorado.edu/ogmius/ or write to the Center for Science and Technology Policy Research, University of Colorado/CIRES, 1333 Grandview Ave., Campus Box 488, Boulder, CO 80309-0488.

DIALOGUE ON WATER AND CLIMATE

The Dialogue on Water and Climate (DWC) aims to build capacity in water resources management, in order to cope with the impacts of increasing variability of the world's climate, by establishing a platform for water resource managers to make better use of information generated by climatologists and meteorologists. There are more than 20 regions from the world's 7 continents represented in the DWC, and the results of the dialogues will be presented at the March 2003 Third World Water Forum in Kyoto, Japan. The DWC is headquartered in Delft and Wageningen, The Netherlands, and is supported by the Dutch government and a number of international agencies. To learn more about the DWC, see the website at www.wac.ihe.nl/home.html or write to International Secretariat, DWC, PO Box 3015, 2601 DA Delft, The Netherlands, tel: 31-15-215-1882; fax: 31-15-212-1676; email hvs@ihe.nl or rc@ihe.nl



2003: INTERNATIONAL YEAR OF FRESHWATER

The UN General Assembly proclaimed 2003 as the International Year of Freshwater. The resolution was initiated by Tajikistan and supported by 148 other countries. It encourages governments, the UN system, and all other actors to take advantage of the Year to increase awareness of the importance of sustainable freshwater use, management, and protection. The Year will be used as a platform to promote existing activities and spearhead new initiatives in water resources at regional, national, and international levels. The media strategy will include information materials, brochures, and media kits. Educational materials for schools, videotapes and documentaries, and an official website for the Year are also being developed, with assistance

from the private sector, NGOs, and bilateral donors. For more information, contact Manuel Dengo or Marcia Brewster, Water, Natural Resources & SIDS Branch, Division for Sustainable Development, Dept. of Economic and Social Affairs, 2 UN Plaza, DC2-2020, New York, NY 10017; email wateryear2003@un.org

TRANSBOUNDARY HAZE IN SOUTHEAST ASIA

The Association of Southeast Asian Nations (ASEAN) signed an agreement this year that binds a group of contiguous states to tackle transboundary haze pollution resulting from land and forest fires. The Haze Agreement provides the Regional Haze Action Plan a means to enforce existing laws and enact new laws to regulate open burning, development of preventive tools, information management, and enhance mitigation efforts in member countries. The Haze Agreement provides for the establishment of an ASEAN Coordinating Center for transboundary haze pollution control to facilitate cooperation and coordination in managing the impact of land and forest fires, particularly the haze pollution that arises from them. Smoke and haze across most of Indonesia, Malaysia, Singapore, and parts of southern Thailand in 1997–98 cost the agriculture, transport, and tourism industries more than US\$9 billion. For more information, see the website at www.aseansec.org or write to Public Information Unit, ASEAN Secretariat, 70A Jalan Sisingamangaraja, Jarkarta 12110, Indonesia; email public@aseansec.org

WANTED: HAZARDS RESEARCHERS

If you are a researcher interested in studying a disaster within hours or days of the event, here is an opportunity to do so. The Natural Hazards Center (University of Colorado, Boulder) is soliciting proposals for its FY2003 Quick Response Research Program, which enables social scientists from the United States to conduct short-term studies immediately after a disaster in order to collect data that would otherwise be lost. Applicants with approved proposals are eligible to receive funding to carry out their investigation, should a relevant disaster occur in the coming year. In return, grantees must submit a report of their findings for publication on the website and in hard copy. Details about proposal submission can be obtained from the website at www.colorado.edu/hazards/qr2003.html or write to Dennis Mileti, Director, Natural Hazards Center, Campus Box 482, University of Colorado, Boulder, CO 80309-0482; email dennis.mileti@colorado.edu (from *Natural Hazards Observer*).

IN MEMORIAM

Jeanne X. Kasperson passed away on 27 August 2002. Prof. Kasperson was the former director of the Marsh Library at Clark University in Worcester, Massachusetts, and a well-known scholar in the fields of global environmental change, hazards, and risk assessment. She had recently been on leave from Clark University to work at the Stockholm Environment Institute in Sweden, where her husband, Roger Kasperson, serves as Director. Jeanne helped innumerable researchers over the years find research data and information, refine research ideas, and edit drafts of publications. She published many articles, books, and reports on a variety of topics and has served as editor of several prominent journals. Clark University has announced that the university will dedicate its library to Jeanne and is establishing a fund for this purpose. See the website at www.clarku.edu/departments/marsh/news.shtml for more information (from *SEDAC News*).

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Harold E. Dregne, Professor Emeritus of Soil Science, Office of International Affairs at Texas Tech University, passed away 21 May 2002. He was an international authority on arid lands, and known for his work with desertification and land degradation. As co-chairman of the International Desert Development Commission (IDDC), Dregne also organized the IDDC's series of International Desert Development Conferences. He was a member of numerous professional and honorary societies. Dregne came to Texas Tech University in 1969 as a professor and chairman of the Department of Agronomy. In 1972, he was named a Paul Whitfield Horn Distinguished Professor, the highest honor conferred on Texas Tech faculty members. Letters have been received at the Office of International Affairs from arid lands specialists from around the world, commenting on Dregne's unique contributions to the field.

ENVIRONMENTORS

A project of the US National Environmental Education & Training Foundation (NEETF), the EnvironMentors Project just completed ten years of service in mentoring teens from under-resourced areas in Washington, DC, and in New Jersey. The National Science Foundation reports that although more than a quarter of the US population is African-American or Latino, less than 10% of them earn bachelor's degrees. The EnvironMentors program couples training and supplemental coaching. Since 1999, 25% of EnvironMentors college attendees have selected majors in science, technology, and the

environment. Mentors typically meet with students one hour/week, providing guidance in research, scientific methodology, and critical thinking. For more information about how the program works, contact Whitney Montague, National Executive Director, 1701 H St. NW, Suite 900, Washington, DC 20006; tel: 1-202-261-6484; web: www.environmentors.org

ISAR'S CASPIAN PROGRAM

The ISAR (Initiative for Social Action and Renewal in Eurasia) Caspian Program has been working with NGOs in the Caspian region since late 1998 to protect the unique ecosystem of the Caspian Sea. The program is administered jointly by staff in Azerbaijan, Central Asia, Russia, Washington, DC, and ISAR's Georgian partner, the Horizonti Foundation. Program priorities include creating and developing systems of independent environmental monitoring in the Caspian basin; seeking and advancing alternative paths of economic development for the region; supporting open information exchange and environmental education; and strengthening the public environmental movement to protect the Caspian. ISAR is a nonprofit organization whose mission is to strengthen the ability of citizens and social change organizations to influence decision-making, advance social justice, and promote environmentally sound stewardship of the Earth's resources. A panel discussion organized by ISAR held in July 2002 is available in PDF at www.isar.org/isar/caspian/ISARCaspForum02.pdf entitled, "Caspian Natural Resources: Sustainability and Accountability." See the website at www.isar.org for more information or to donate to the project.

XINJIANG CENTER FOR DESERT AFFAIRS

An International Center for Desert Affairs—Research on Sustainable Development in Arid and Semiarid Lands (ICDA—RSDAL) is being established at Xinjiang University in China's Xinjiang Uygur Autonomous Region. Agencies from the central government of China, the Ministry of Education, the Ministry of Agriculture, and the National Planning Committee have demonstrated strong support for the Center. The inauguration of ICDA is scheduled to be held at Xinjiang University, Urumqi, Xinjiang University, on 18 October 2002. The Center is intended to aid in teaching and training students and scientists about sustainable development issues in arid and semiarid lands to serve the greater Central Asian region. For more information about the Center, please contact Michael Glantz (glantz@ucar.edu) or Qian Ye (ye@ucar.edu), ESIG/ NCAR, PO Box 3000, Boulder, CO 80307.

PACIFIC ISLANDER LEADS CAPPI

The Council of Asia-Pacific Press Institutes (CAPPI) unanimously elected Nina Bolaitamana Ratulele, administrator of the Pacific Islands News Association (PINA) to succeed Gokul Pikhrel, head of the Nepal Press Institute. Ratulele is the first woman and the first Pacific Islander to lead CAPPI, an organization that links major news media training institutes, as Chairperson. The selection was announced at a meeting held in July, and other decisions of note included: to further expand CAPPI-initiated journalism through greater use of the Internet; to promote and conduct computer literacy training; and to further expand CAPPI's membership to include China and Myanmar. For more information, contact Ratulele at PINA, Private Mail Bag, Suva, Fiji, email pina@is.com.fj

PACIFIC ISLANDS REPORT REORGANIZES

The East-West Center's *Pacific Island Report* (PIR) is reorganizing. The Report carries news about the entire Pacific Islands region and has been a key project of the East-West Center's Pacific Islands Development Program. The staff would like to assure its readers and contributors that it remains committed to the continued publication of Pacific Island news. During this transition period, the PIR will be continued in a modified form. PIR is supported by the Center for Pacific Island Studies and the University of Hawaii at Manoa. See the PIR website at pidp.eastwestcenter.org/pireport

GLOBAL 500 AWARD FOR 2003

The United Nations Environment Programme (UNEP) invites nominations for individuals or groups for the Global 500 Roll of Honor for Environmental Achievement. The Global 500 Award was launched in 1987 to encourage individual and community action in defense of the environment. It is granted every year to individuals and organizations for outstanding achievements in the protection and improvement of the environment. The Global 500 laureates become members of a growing global network of allies assisting UNEP in its responsibility to care for the environment. Participation at the community level is a precondition for promoting global environmental citizenship. To nominate a suitable candidate, see the website at www.global500.org for the form. Nominations must be received at UNEP no later than 31 December 2002.

JOB OPPORTUNITIES

The University Corporation for Atmospheric Research (UCAR) announces the continuation of the NOAA Postdoctoral Program in Climate and Global Change. UCAR manages this NOAA-sponsored program, which pairs recent postdoctoral graduates with host scientists at US institutions to work in an area of mutual interest. The objective is to help create the next generation of researchers needed to climate studies. It endeavors to attract recent PhDs in sciences which address studies of relevance to the NOAA Climate and Global Change Program (see the website at www.ogp.noaa.gov for more information). The program offers 2-year postdoctoral fellowships reviewed annually. Deadline for applications is 15 January 2003. Send applications to UCAR/NSP, PO Box 3000, Boulder, CO 80307-3000 USA. Also available on the Internet at www.vsp.ucar.edu or send email to vsp@ucar.edu

The School of Marine Sciences at the University of Maine announces a new **interdisciplinary program in marine science and policy**. The program leads to two master's degrees: one in marine science (specializing in oceanography, aquaculture or marine biology) and one in marine policy. It is designed for students interested in the application of science to public policy in government agencies, NGOs, or industry. Three years are required for completion. Five students will be admitted this January (2003) and up to 8 in the fall of 2003. Students admitted to the program are supported through fellowships and contract research (stipend plus tuition). Complete information about the program can be found at the website: www.ume.maine.edu/~marine/DualDegree/home.html or contact James A. Wilson, Professor of Marine Sciences and Resource Economics, School of Marine Sciences, University of Maine, Orono, ME 04469-5782; tel: 1-207-581-4368; fax: 1-207-581-4388; email: Jwilson@maine.edu

The University of Aberdeen, Scotland has an immediate opening for a **postdoctoral ecologist position in carbon and nitrogen cycling in high Arctic tundra**, which provides an opportunity to work on ecosystem processes within a large-scale collaborative field experiment on the effects of goose grazing and climatic warming on Svalbard tundra. Candidates should be experienced in field-based ecological process studies, be able to collaborate effectively within an international team, and be creative in developing their own research interests within the overall framework of the project. The successful candidate will be responsible for studies on CO₂ flux, decomposition, and mineralization. Contact Sarah Woodin; tel: 44-1224 272688; email: s.woodin@abdn.ac.uk and René van der Wal; tel: 44-1330 826337; email: rvdw@ceh.ac.uk; web: www.abdn.ac.uk/pss/vacancies.hti

The Cooperative Institute for Research in Environmental Sciences (CIRES) at the University of Colorado at Boulder has an immediate opening for a **Research Associate**. The National Oceanic and Atmospheric Administration (NOAA) through its Office of Global Programs (OGP) developed the Regional Integrated Sciences and Assessments (RISA) program for research and development to improve climate information and its use in the Interior West and in other US regions. The NOAA-CIRES Western Water Assessment (WWA) began in 1999 and involves a team of over 30 scientists and students at the University of Colorado and NOAA's Climate Diagnostic Center. Requirements include a PhD in a closely related field, experience with project management, sound knowledge of hydro-climatic variability and its societal impacts, and familiarity with interdisciplinary research projects. Contact Dr. Martyn Clark; email: clark@vorticity.colorado.edu. To apply, mail, fax or email resume, salary history and a list of 3 references to CIRES Human Resources, Job Code PL-2, 216 UCB, Boulder, CO 80309-0216; fax: 1-303-492-1149; email: jobs@cires.colorado.edu

PAST MEETINGS

Alliances for Sustainability Transition: The European Climate Forum was held 3–4 October 2001 in Potsdam, Germany. The workshop was organized by the European Climate Forum jointly with the Potsdam Institute for Climate Impact Research (PIK) to explore the various expectations and conflicts of interest related to climate change issues and the future of climate change research. Participants included selected representatives from insurance, coal industry, renewable energy industry as well as environmental NGOs, the European Union, and public media. Presentations and papers can be downloaded from www.european-climate-forum.net. For more information, contact Dr. Martin Welp, European Climate Forum, c/o Potsdam Institute for Climate Impact Research (PIK), PO Box 601203, 14412 Potsdam, Germany; tel: 49 331 288 2619; fax 49 331 288 2640; email: info@European-Climate-Forum.net

Continental Energy Markets and Greenhouse Gas Emissions: The Implications? was held 20–21 February 2002 in Ottawa, Canada. Over 130 participants attended, representing government agencies, academic and research institutions, business and industry, and international and non-governmental organizations. The conference presented participants with an opportunity to examine strategies and approaches to meet North America's current and future energy needs, including the option of a continental energy strategy. Participants heard speeches and engaged in discussions on the following issues: US energy policy; the roles of parties with different commitments under the Kyoto Protocol and the implications for the North

American Free Trade Agreement (NAFTA); innovative approaches to meeting energy needs; and implications of energy issues for development in the continent's northern regions. The Sustainable Developments report outlining these discussions in detail can be found at the following website: www.iisd.ca/linkages/sd/sdcem/sdvol69num1.html

Transformation of the Energy System was held 30 February 2002 in Hamburg, Germany. The meeting was organized by the Technology Assessment Group of the European Climate Forum. Research perspectives on various technological options were discussed, such as: carbon sequestration, renewable energy, and increasing energy efficiency. Topics included the relation of the European Climate Forum technology project to European Climate forum goals and a research agenda on the transformation of the energy system. Presentations and papers can be downloaded from www.european-climate-forum.net. For more information, contact Dr. Martin Welp, European Climate Forum, c/o Potsdam Institute for Climate Impact Research (PIK), PO Box 601203, 14412 Potsdam, Germany; tel: 49 331 288 2619; fax 49 331 288 2640; email: info@European-Climate-Forum.net

Roads to a Zero-Emission Society was held 4–5 April 2002 in Villigen, Switzerland. The event was organized by the Technology Assessment Group of the European Climate Forum and hosted by the Paul Scherrer Institut, Villigen. The objective was to develop a joint study project and research proposal. Topics included CO₂ mitigation options; regional economic impacts of a transition towards a less carbon intensive technology; capture, and sequestration of CO₂; CO₂ sequestration in the ocean; and sustainability issues in a zero-emission society. For more information, contact Dr. Martin Welp, European Climate Forum, c/o Potsdam Institute for Climate Impact Research, PO Box 601203, 14412 Potsdam, Germany; tel: 49 331 288 2619; fax: 49 331 288 2640; email: info@European-Climate-Forum.net; presentations and papers can be downloaded from www.european-climate-forum.net

International Conference on Sustainable Agriculture And Rural Development In Mountain Regions was held from 16–20 June 2002 in Adelboden, Switzerland. The conference was organized by the Swiss Federal Office for Agriculture, in conjunction with the UN Food and Agriculture Organization (FAO). Over 200 participants attended the meeting, in addition to representatives of different local populations, academic and research institutions, intergovernmental organizations, business and industry, non-governmental organizations, and the media. The conference aimed to promote mutual understanding, solidarity and information sharing regarding the challenges and possibilities of sustainable agriculture and rural

development (SARD) in mountain regions. The detailed Sustainable Developments report outlining these discussions can be found at: www.iisd.ca/linkages/sd/mountains/sard/

An Informal Planning Meeting on Water, Climate and Development Issues in the Amudarya Basin was held 18–19 June 2002 in Philadelphia, Pennsylvania.

Participants discussed a wide range of topics, touching on climate, water, political, and development issues. A key premise of the meeting was to discuss the consequences of the likelihood of demands by Afghanistan for its fair share of Amudarya water. Equity concerns were raised about the continually deteriorating plight of the Karakalpak people who inhabit the lower reaches near the Aral Sea. The notion of transferring water from the Ob and Irtysch rivers in Siberia was presented by the participant from Uzbekistan as an urgent need. Several activities proposed related directly to water resources, climate considerations, capacity building, equity issues and regional cooperation and development. For more information, contact Michael Glantz, ESIG/NCAR, PO Box 3000, Boulder, CO 80307; tel: 1-303-497-8119; fax: 1-303-497-8125; email: glantz@ucar.edu; for the workshop report, visit www.esig.ucar.edu/centralasia

The First Meeting of the Dams and Development Forum convened 8–9 July 2002 in Nairobi, Kenya. Over 80 participants attended. The Forum plays a key role in the Dams and Development Project (DDP), which was established after the completion of the World Commission on Dams report. During this session, delegates considered the role and activities of the DDP, follow-up processes, key challenges, the DDP's work program, activities and outputs, and its role and composition. For more information, contact the DDP, UNEP Dams and Development Project, PO Box 16002 Vlaeberg, Cape Town 8018, South Africa; tel: 27-21-426-4000; Fax: 27-21-426-0036; email: info@unep-dams.org; web: www.unep.org/Documents/Default.asp?DocumentID=256&ArticleID=3093

UPCOMING MEETINGS

Climate Change and Paths to Sustainability: European Climate Forum (ECF) Autumn Conference will be held 14–15 November 2002 in Berlin, Germany. Four main issues are on the agenda of the ECF Autumn Conference 2002: what is dangerous climate change; emission targets and timing; technological transitions; and policy perspectives: Europe, US and developing countries. Participants include international business and NGO representatives, leading scientists, climate negotiators and other experts on climate change and energy technology. Participation is by invitation only, but conference documentation will be available on the web

by the end of the year. Please contact Dr. Martin Welp at martin.welp@pik-potsdam.de for more information or web: www.european-climate-forum.net/

The **Green Cities, Sustainable Cities Congress** will be held 18–21 November 2002 in Midrand, South Africa. The Congress is to be held in partnership with the Department of Water Affairs, Food & Trees for Africa, South African Local Government Association, Rand Water, and Johannesburg City Parks. The program will address the following topics: urban greening and sustainable development, social implications of urban greening, poverty alleviation and economics, and technical aspects of urban greening. Contact the Green Cities Congress Secretariat; tel: 27-11 789 1384; fax: 27-11 789 1385; email: ierm@vdw.co.za; web: www.ierm.org.za/greencities

The **5th State and Local Climate Change Partners Conference** will be held 20–22 November 2002 in Annapolis, Maryland. This conference will be hosted by the US Environmental Protection Agency and will include sessions on the following topics: Science and Policy Updates; Renewable Energy and Energy Efficiency Opportunities; Voluntary Greenhouse Gas Registries and Trading; Schools and Universities – Educating and Mitigating; New Tools for State and Local Governments; Cutting Edge Transportation Technology; Smart Growth – Smart for the Climate? Taking Advantage of Federal Programs; Cooling the Urban Heat Island; and Climate and Human Health Adaptation. For more information, contact Sandy Seymour, ICF Consulting; tel: 1-802-496-6034; email: sseymour@icfconsulting.com or Andrea Denny, USEPA; tel: 1-202-564-3467; email: denny.andrea@epa.gov; web: www.epa.gov/globalwarming/Annapolis

Sustainability in the Water Sector will be held 25–26 November 2002 in Venice, Italy. The immediate goal is to consolidate the status quo, of contemporary thinking on what constitutes sustainability in the water sector. Major themes include: facing the water scarcity dilemma via sustainable utilities management; policy and practical approaches in sustainable river basin management; building a mandate for change with stakeholders and partners; practical urban water management approaches and selecting the best pathway; sustainability theory and what does it mean in context of the water sector. For more information contact Lara Changizi, Events Coordinator, International Water Association, Alliance House, 12 Caxton St., London SW1H 0QS, UK; tel: 44 20 7654 5518; fax: 44 20 7654 5555; email: lara.changizi@iwahq.org.uk; web: www.iawq.org.uk/template.cfm?name=sustainability2002

The **2002 Berlin Conference on the Human Dimensions of Global Environmental Change** will be held 6–7 December 2002 in Berlin, Germany.

Conference discussions will address the theme "Knowledge for the Sustainability Transition: The Challenge for Social Science." Papers were invited that conceptualize the knowledge base for sustainability transition as something that is affected by political decision-making and that view knowledge as a factor that influences political decision-making. Conveners are also seeking papers from social scientists that respond to the challenges raised by recent thinkers who have argued for fundamental changes in the way science is conducted – thinkers who have put forward integrative concepts such as "earth system analysis," "syndromes of global change" or "sustainability science." For more information, contact Sabine Campe, Global Governance Project, Potsdam Institute for Climate Impact Research (PIK), PO Box 60 12 03, 14412 Potsdam, Germany; tel: 49-331-2882572; fax: 49-331-2882640; email: sabine.campe@pik-potsdam.de; web: www.fu-berlin.de/ffu/akumwelt/bc2002/index.htm

Sustainable Technologies for the 21st Century will take place 12–13 December 2002 in Oldenburg, Germany. Organized jointly by the Technology Assessment Group of the European Climate Forum and Oldenburg University, the workshop intends to identify and assess technologies that could lead to long-term sustainable development considering the goals of the UNFCCC and how to model these technologies in economic models related to climate change. It will bring together leading specialists in climate change economics, climate modeling, and technology innovation. Contact Claudia Kemfert, Universität Oldenburg Institut für VWL I, A5, Raum 0-014, 26129 Oldenburg, Germany; tel: 49 0441 798-4106; fax: 49 441 798 4101; email: kemfert@uni-oldenburg.de; web: www.uni-oldenburg.de/%7Ekemfert/Englisch/workshop_gesamt.htm

The International Conference on Promoting Best Practices for Conservation and Sustainable Use of Biodiversity of Global Significance in Arid and Semiarid Zones will be held 13–17 December 2002 in Cairo, Egypt. The focus of this conference will be on best practices in developing countries for science, public policy and management, increasing the participation of local people in decision making, and improving partnerships and capacity building. The conference is part of a project funded by UNEP/GEF and is implemented by the Third World Network of Scientific Organizations. Contact Helen Martin, Third World Network of Scientific Organizations (TWNso), c/o The Abdus Salam International Centre for Theoretical Physics (ICTP), Strada Costiera 11, I-34014 Trieste, Italy; tel: 39 040 2240683; fax: 39 040 2240689; email: info@twonso.org; web: www.twonso.org

A Regional Media and Policy Workshop: Fencing Floods in South Asia: Disaster Preparedness

through Risk Communication will be held 16–19 December 2002 in Islamabad, Pakistan. The workshop is designed to share perspectives and experiences on flood preparedness in South Asia. It aims at discussing and debating issues and exploring options for planning effective flood management through a process of risk communication in the region. Participants will include representatives of the media, governments of South Asian countries, international donors, universities and research institutes, and organizations working on disasters across the region. The themes of the workshop are: geophysical profile of South Asia: connections and contradictions; floods in South Asia: country profiles; and common threat, common response. Contact Iftikhar Haider, Conference Coordinator, Rural Development Policy Institute, #270, St #37, G-9/1, Islamabad, Pakistan; tel: 92-51-2853616; fax: 92-51-2854576; email: eeftiqar@hotmail.com

Global Change: Toward a Systemic View will take place 23–25 January 2003 in Punta Arenas, Chile. This symposium will focus on physical and socio-economic issues in different ecosystems, with emphasis on findings of scientific research involving Latin America, in the context of Global Change. **Topics include** observations and evolution of the climatic system, biogeochemical cycles, climate change processes and impacts modeling, ocean-atmosphere-cryosphere-biosphere-lithosphere interactions; gas and aerosols inventory and projections, climate and society, and policies for environmental and global change research. Contact Ms. Sandra Covarrubias, Centro de Modelamiento Matemático, Universidad de Chile, PO Box 170, Correo 3, Santiago, Chile; email: scovarru@dim.uchile.cl; web: www.cmm.uchile.cl/scc2003/

The 83rd Annual Meeting of the American Meteorological Society will be held 9–13 February 2003 in Long Beach, California. The meeting is being organized around the broad theme of water cycle variability and impacts. Two special interdisciplinary symposia are being organized to support the theme: "Observing and Understanding the Variability of Water in Weather and Climate," and "Impacts of Water Variability: Benefits and Challenges." The first symposium will explore our present ability to observe water in all its phases and reservoirs, and use these observations to improve our understanding of the variability of water as it relates to weather and climate on time scales ranging from a few hours to centuries. The second symposium will focus on all aspects of the impacts of water cycle variability on ecosystems and human society, including analysis of factors contributing to differences or changes in vulnerability, adaptive capacity and effective management of multiple objectives and competing demands. Contact the American Meteorological Society, 45 Beacon St., Boston, MA 02108-3693; tel: 1-617-227-

2425; fax: 617-742-8718; email: amsinfo@ametsoc.org;
web: www.ametsoc.org/AMS/meet/83rdannual/

The **2003 International Symposium on Environmental Change in Central Asia: Climate – Geodynamics – Evolution – Human Impact** will be held *10–15 March 2003* in Berlin, Germany. The symposium will focus on ecosystem research in desert areas, high mountains, basins and lowlands of Central Asia comprising the Late Quaternary to present time. The main research topics will be related to natural processes and influences on the landscape; climate and environmental changes during the Quaternary with respect to high resolution records; evolution of ecosystems with special focus on biogenic processes; the human impact, which has a growing and sustainable influence on ecosystems even in remote areas of Central Asia; and modeling and GIS. Contact Bernd Wünnemann, Ecosystem Dynamics in Central Asia (EDCA), Freie Universität Berlin, Malteserstr. 74-100, 12249 Berlin, Germany; tel: 49 30 838 70 631; fax: 49 30 838 70 438; email: wuenne@zedat.fu-berlin.de; web: www.pages.unibe.ch/calendar/2003/First%20Circular.doc

The **International Symposium on Climate Change (ISCC)** will be held *31 March–3 April 2003* in Beijing, China, in order to present and exchange state of the art advances in the studies on climate change and to facilitate the worldwide cooperation within the community of climate change studies. Topics include: observed climate variability and change, including paleo- and instrumental record analyses; detection and attribution of climate change; extreme climate events and their association with global climate change; processes and interactions within the climate system, including cryosphere, lithosphere, hydrosphere, biosphere, atmosphere and human activities; global and regional modeling of climate change; impacts of and adaptation to climate change; and uncertainties in climate change science and the depicting methods. Contact Mr. Wang Bangzhong or Ms. Zhang Yan or Ms. Chao Qingchen, ISCC Office, National Meteorological Center, 46 Zhongguancun Nandajie, Haidian District, Beijing 100081, China; tel: +86-10-68406424; fax: +86-10-62175928; email: ISCC@cma.gov.cn; web: www.pages.unibe.ch/calendar/2003/climate.html

The **Earth Technologies Forum: Conference on Climate Change and Ozone Protection** will be held *22–24 April 2003* in Washington, DC. The 2002 Earth Technologies Forum provides information on two of the biggest environmental issues affecting industry today – climate change and stratospheric ozone protection. Technology development and dissemination are critical for industry's response to these environmental problems. Three days of conference sessions will provide a forum for discussion of current technologies and efforts to bring them into the marketplace. Contact Earth Technologies

Forum, 2111 Wilson Blvd., 8th Floor, Arlington, VA 22201; tel: 1-703-807-4052; fax: 1-703-528-1734; email: earthforum@alcalde-fay.com; web: www.earthforum.com

Mangrove 2003: Connecting Research and Participative Management of Estuaries and Mangroves will be held *20–24 May 2003* in Salvador, Brazil. The conference seeks to promote the necessary link between the generation of knowledge and environmental management, in order to enhance local participation in solutions for socio-environmental problems. Topics include: monitoring of estuarine and coastal areas; environmental management applied to mangrove and estuarine areas; environmental impacts of petroleum exploration in estuaries and mangroves; aquaculture; environmental conservation and damage mitigation; interdisciplinary approaches to conservation of estuaries and mangroves; social dynamics in estuarine environments; biodiversity; and mangrove structure and distribution. Contact Universidade Federal Rural de Pernambuco, Universidade Federal da Bahia, Instituto de Geociências - Instituto de Biologia Núcleo de Estudos Ambientais, Campus Universitário de Ondina, Salvador - Bahia - Brazil CEP: 40170-290; tel: 55 71 203 8561; fax: 55 71 332 4085; email: mangrove2003@ufba.br; web: www.mangrove2003.ufba.br/

The **International Conference On Energy And The Environment (ICEE)** will be held *22–24 May 2003* in Shanghai, China. Organized by the University of Shanghai for Science and Technology and George Washington University, this conference aims to provide an international forum for the discussion of clean city energy and related topics. It is ideally suited for energy and environmental professionals in government, academia, and industry as well as non-governmental organizations and consultants in the field. For a full list of topics, visit the conference website at www.gwu.edu/%7Eeem/ICEE/firstpagenew.htm or contact Dr. Daoping Liu, Executive Secretary, ICEE 2003, Univ. of Shanghai for Science and Technology, P.O. Box 224, No. 516, Jungong Road, Shanghai, 200093, China; tel: 86-21-65689564; fax: 86-21-65692958; email: dpliu@online.sh.cn

The **Fourteenth Global Warming International Conference & Expo (GWXIV)** will be held *27–30 May 2003* in Boston, Massachusetts. Called Extreme Events & Energy, Agricultural and Natural Resource Management, the Conference will be attended by government, industry, and academic participants from 120 countries, and will focus on scientific data and policy analysis. The subject categories include, among others, US role in future climate mitigation, El Nino-like climate change, floods & drought, sea level rise, coastal regions emergency preparedness, coral reefs, climate networks (ocean, polar region, forests), climate change and fire impacts on forestry, education, the role of the media,

infectious disease, and global warming and public health. Contact GWXIV International Conference Program Committee, The Global Warming International Center, International Headquarters, 22W381, 75th Street, Naperville, IL 60565-9245, USA; tel: 1-630-910-1551; fax: 1-630-910-1561; email: gw14@globalwarming.net; web: www.globalwarming.net/gw14-overview.asp

The Chapman Conference on Ecosystem Interactions with Land-Use Change will be held 14–18 June 2003 in Santa Fe, New Mexico. The conference will bring together researchers to address various aspects of ecosystem responses to land-use change and the feedbacks to sustainable land use. Sessions will address the responses and feedbacks over a range of ecosystems at multiple scales from local to regional to global. Opportunities will be provided for researchers working on different aspects of land use/land cover to share information on methodological approaches, observational strategies, and feedbacks among ecosystem processes. Topics will include biogeochemical interactions with land-use change; implications of land use change for water quality and quantity; biophysical feedbacks to climate; land-use change and human welfare; effects of land-use change on biodiversity; and observing and predicting land-use change. Contact American Geophysical Union (AGU), 2000 Florida Ave. NW, Washington, DC 20009-1277; tel: 1-202-462-6900; fax: 1-202-328-0566; email: meetinginfo@agu.org; web: www.agu.org/meetings/cc03acall.html

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WEBSITES OF INTEREST

safedrinkingwater.com

This is a free, electronic newsletter bringing subscribers links to news stories on drinking water quality such as source water quality and protection, water treatment plants and processes, and the water distribution system.

www.environmentnepal.com.np

Nepal's environmental portal. This website contains environment-related news, articles, papers, downloads, and much more.

www.ecopaperaction.org/wizard/index.cfm

The Magazine PAPER Project has launched a new Web-based calculator that offers magazine publishers and readers the opportunity to calculate the number of trees that are logged as a result of printing any particular U.S. magazine on non-recycled paper.

www.esig.ucar.edu/centralasia

This website of the Informal Planning Meeting on Water, Climate and Development Issues in the Amudarya Basin contains workshop information, as well as links to other resources and an extensive workshop report.

www.sdearthtimes.com/

Each month, San Diego Earth Times On-Line presents articles covering a wide variety of local, national and international environmental topics. The archive contains every article published since the first issue in December 1993. The search engine helps you find what you're looking for among the more than 1200 articles.

www.pewclimate.org

The Pew Center on Global Climate Change's website contains highly publicized full-text reports on environmental impacts, economics and policy issues, press releases and educational tools.

www.jhu.edu/~climate/

The Climate Change and Human Health Integrated Assessment Web provides information on research conducted between 1998-2000 about the potential impacts of climate change through integrated assessment. This website aims to appropriately characterize and communicate the scientific research to support policy development and analysis.

www.climatenetwork.org/eco/

Welcome to *ECO*, newsletter of the Climate Action Network (CAN) published at the UN Climate Talks. These pages have the most recent editions of *ECO*, let you subscribe to the email list, give you access to back issues, and provide information about the history of *ECO*.

archive.greenpeace.org/~climate/climatecountdown/

Greenpeace's Climate Countdown site contains the latest news and Greenpeace's global campaign to pressure corporate America and George W. Bush to work with the rest of the world to save the climate.

The NETWORK NEWSLETTER is intended for those interested and involved in climate-related impact assessment. It is hoped that it will serve to foster a growing network by keeping the community up to date on the many activities in this wide and varied field. Your involvement in supplying relevant information is essential to the success of this endeavor.

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