



Network Newsletter

and

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Editorial

If You Don't Pay, You Don't Get to Play: The US and the Kyoto Process

There's a new club in town: the "Kyoto Club." It was formed in mid-December 2004 in Argentina at a conference of governments meeting to discuss ways to reduce greenhouse gas emissions (GHGs) to the atmosphere. The club's "membership" is comprised of countries whose governments have signed on to the Kyoto Protocol, a legal international accord to cope with the adverse causes and consequences of GHGs to the atmosphere. That's the price you have to pay to be a "member." Policymakers have been working on this Protocol since 1997. To get going, the club needed a quorum, a minimum number of members. It got that when Russia's President Putin decided to sign on. The Protocol goes into force 90 days after ratification by Russia (16 February 2005).

Two major greenhouse gas emitters, the USA and Australia, have not signed on to the Kyoto Protocol. In other words, the US government has chosen not to join this particular club that now boasts a membership of 130 countries. Australia has followed the US lead. It is necessary to keep in mind that not all of those governments that ratified the Protocol did so because they believe the scientific reports that blame human activities for recent warming trends. Some have likely signed on to be a part of the Kyoto process with the purpose of acting as a "fifth column" (that is, to act as potential obstructionists if deliberations threaten their national interests) to slow down progress toward mandatory regulations that call for large cuts in a nation's CO₂ emissions.

It seems to me that we are entering a new stage in the global warming problem. I believe that the formation of the Kyoto Club has created a "glass wall," a barrier of sorts, between members of the club who profess that their countries will abide by the rules and regulations, mission, and goals of the Protocol and those who have chosen to pay no attention to it. The difference between these two groups: while Kyoto Club members may not reach their stated goals to reduce CO₂ emissions, they have pledged to at least try. To the public at large, these countries are trying to deal with a potentially dangerous environmental problem of global proportions.

The US government (along with Australia's) has been against placing any mandatory limits to their GHG emissions. Opposition to limits has been its guiding theme in how the US

has treated the Kyoto Protocol process, as well as to the scientific findings that are driving (actually, accelerating) the Kyoto process. Those findings come not only from modeling efforts but from observations of changes everywhere as well, such as glaciers melting just about everywhere on the globe. However, there are direct and indirect, obvious and not-so-obvious, consequences for **not joining** the Kyoto Club. The club's members have taken over the global leadership position on climate and global change issues. How effective will US participation be in future deliberations on global warming? Will the US be able to influence the process as a powerless onlooker – an outsider?

Many scientific studies based on a variety of research methods suggest there will be an increase in frequency, as well as intensity, of extreme events (droughts, floods, tropical storms, disease outbreaks) as the atmosphere warms. I am concerned that with the creation of the Kyoto Club, there will be a subtle, creeping but steady, shift of blame for the occurrence, as well as the damage, of weather and climate-related disasters. Instead of blaming industrialized nations **in general** for the adverse impacts of GHG emissions, people will increasingly blame the US for specific environmental changes and disasters as they occur around the globe.

Those who care about the fate of the planet and the well-being of present and future generations should worry about the mounting criticism of the US as being **the** major obstacle to resolving the global warming problem. Tuvalu and other Pacific Island nations, among others, are planning to sue the industrialized countries for global warming-related sea level rise that will eventually submerge their territory. It is conceivable that, eventually, several of those damage claims may morph into legal cases with the USA as the defendant.

Nevertheless, it is increasingly clear that many Americans, companies, and city governments want to take effective concrete steps toward arresting the country's GHG emissions. Steps to limit GHG emissions by, say, the State of California can have a greater impact than actions taken by many national governments with smaller economies. In a way, it is like going to a casino to gamble: in order to play you have to pay. The US has chosen at this point in time not to relinquish any control over its greenhouse gas emissions to the Kyoto Club. As a result, it will have considerably less influence on the decisions made by the club, decisions that may become binding for many countries around the globe.

–Michael H. Glantz



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LET'S HEAR FROM YOU!!

Budget constraints may not allow us to continue this newsletter in hard copy for much longer. However, we will have at least one more issue in hard copy. Information for this next issue must be received by **31 March 2005**. We will continue to seek funds for the newsletter. If you prefer to receive the newsletter on line, please let us know at www.isse.ucar.edu/newshp and you will be reminded when a new issue is released. Thanks again for your contributions!

WATER CONFLICT CHRONOLOGY

Peter Gleick, Pacific Institute for Studies in Development, Environment, and Security, has announced an updated version of the Water Conflict Chronology website. The Chronology was initiated by the Pacific Institute in the late 1980s to track and categorize events related to water and conflict. It has evolved into a website that can be modified and changed as new information and comments are contributed by users. Water needs and demands will always involve political pressures, and as the world's population increases and precipitation patterns change worldwide, control of water resources becomes an even more volatile issue. Please email contributions, with full citations and supporting information, to pgleick@pipeline.com or visit the website at www.worldwater.org/conflictIntro.htm

DECISION MAKING UNDER UNCERTAINTY

Five interdisciplinary research teams will share around \$25 million from the National Science Foundation (NSF) over the next five years to study problems related to understanding climate-related decisions under uncertainty. Research centers will be located at Arizona State, Carnegie-Mellon, and Columbia universities, with other interdisciplinary teams at the University of Colorado and the Rand Corporation in California. The increased knowledge generated by recent scientific research on the causes and consequences of climate change and variability has led to a growing need to better understand how decision makers make choices among different courses of action. The NSF is providing the funding as part of its priority area in Human and Social Dynamics. Results will contribute to the Climate

Change Research Initiative. For more information on NSF's Human and Social Dynamics priority area, see www.nsf.gov/home/crssprgm/hsd/start.htm or for more information on the Climate Change Research Initiative, see www.climate-science.gov/about/ccri.htm

ISLAND AFFAIRS: INSULA

The International Scientific Council for Island Development (INSULA) aims to contribute to the economic, social, and cultural progress of islands throughout the world, as well as to help with the protection of the island environment and sustainable development of resources. INSULA membership includes researchers from a wide range of disciplines, specialists, and administrators involved in sustainable development of islands and small island states. INSULA is supported by UNESCO (UN Educational, Scientific, and Cultural Organization). INSULA also publishes the *International Journal of Island Affairs*. For more information or to learn about INSULA's many initiatives, visit the website at www.insula.org/ or write to INSULA, c/o UNESCO, 1 rue de Miollis, 75015 Paris, France; tel: 33-1-4568-4056; email insula@insula.org.

COP 10 NEWS

The Tenth Conference of Parties (COP 10) was held in Buenos Aires, Argentina, in December 2004. It marked the tenth anniversary of the entry into force of the UN Framework Convention on Climate Change (UNFCCC), which served as a central theme for the meeting. To mark the anniversary, the UNFCCC has published a book, *The First Ten Years*, which is available free of charge on the website below (click on "Press"). The meeting also highlighted the entry into force of the Kyoto Protocol, which will take place in February 2005, following the ratification of the Protocol by Russia. The COP 10 also adopted a package of measures aimed at helping countries to prepare for climate change, including adaptation measures, mitigation policies and their impacts, and technology. These decisions adopted by COP 10 are available for download at the website at www.unfccc.int or email press@unfccc.int for more information.

YALE ENVIRONMENTAL JOURNAL TRANSLATED INTO CHINESE

As China's role in the global environment grows, so does the importance of high-quality scientific research and communication between China's researchers with colleagues in other countries. To help foster increased dialog, the *Journal of Industrial Ecology* has translated abstracts of all its articles into Chinese. These

translations are available at the journal's website. Funds for this endeavor were provided by the Henry Luce Foundation as part of a larger project aimed at increasing educational and scientific exchange in industrial ecology between Asia, especially China, and Yale University. The project, Collaborative Industrial Ecology in Asia, supports scientific exchange, student scholarships, and translations into Chinese. The website for the journal translations is available at mitpress.mit.edu/jie/translations. The journal is owned by Yale University, published by the MIT Press, and headquartered at the Yale School of Forestry and Environmental Studies.

WORLD WATER DAY 2005

The United Nations General Assembly at its 58th session in December 2003 agreed to proclaim the years 2005–2015 as the International Decade for Action, "Water for Life," beginning with World Water Day, 22 March 2005. Safe water supply and adequate sanitation to protect health are among the most basic of human needs. Today, there are almost 1.1 billion people who have inadequate access to water, and 2.4 billion without appropriate sanitation. The Water for Life decade aims to bring a greater focus on water-related issues, while striving to ensure the participation of women in water-related development efforts, and to further cooperation at all levels to achieve the water-related goals of the Millennium Declaration and the World Summit for Sustainable Development. For more information, please visit the UN website at www.un.org/News/Press/docs/2003/gaef3068.doc.htm

CLEAN DEVELOPMENT MECHANISM

The Kyoto Protocol of the UNFCCC (UN Framework Convention on Climate Change) defined 3 innovative "flexibility mechanisms" to lower the overall cost of achieving its emissions targets. All 3 mechanisms are based on the Protocol's system for the account of targets. Each of the Parties must reduce its emissions over the 5-year commitment period by assigned amount units (AAUs) to gain credit from action taken. The CDM (Clean Development Mechanism) provides for the Parties to implement projects that reduce emissions, or absorb carbon through afforestation or reforestation activities, in return for certified emission reductions. In November 2004, the first CDM project was registered with the UNFCCC. This project was developed by EcoSecurities, a dedicated carbon trading advisory firm, in partnership with a local landfill operating company in Brazil. The project consists of the use of landfill gas to generate electricity. The project is entitled "Brazil NovaGerar Landfill Gas to Energy Project." For more information on the project, see the website at

cdm.unfccc.int/Projects/registered.html or read more about EcoSecurities at www.ecosecurities.com

SCIENCE IN AFRICA

Science in Africa is the first popular science magazine specifically for Africa. Scientists in a broad range of fields report on their research, give expert views on topical issues in science, and provide information to an African public seeking a deeper understanding of science and the role it plays in their lives. Their mission is to promote local and international awareness of science conducted in Africa; give young scientists an opportunity to showcase their research; give information on scientific and health issues relating to society; give teachers of science in Africa access to resources and information of local relevance; encourage debate on scientific issues; and further science communication among African countries. Based in Grahamstown, South Africa, the newsletter is free upon registration. See the website at www.scienceinafrica.co.za for more information.

NEW CORAL REEF LIBRARY

A NASA-funded project has created an archive of approximately 1,500 images of worldwide coral reefs. The collection of coral reef images is the basis for a new Internet-based library for the Millennium Coral Reef Project. NASA contributed funding and satellite data to the project to develop global reef maps as a base for future research. A distribution network has been developed to make the data available to organizations around the world, as current knowledge of the total area and locations of coral reefs is not adequate to see changes as they are occurring. The final map products are due for release in early 2005. To access the raw archive on the newly designed website, see seawifs.gsfc.nasa.gov/cgi/landsat/pl or for more information and images about the press release, see www.nasa.gov/vision/earth/lookingatearth/coralreef_image.html (from *NASA News Archive*)

MILLENNIUM ASSESSMENT OUTREACH KIT

The Millennium Ecosystem Assessment (MA) is a complex project with complex findings, difficult to communicate even to those working in the field of sustainable development. It is an international work program designed to meet the needs of decision makers and the public for scientific information concerning the

consequences of ecosystem change for human well-being and options for responding to those changes. To facilitate understanding of the MA, a CD has been developed with a number of resources to communicate the MA's work and the issues it addresses. The Kit seeks to establish a bridge between the MA and those who want to disseminate information and ideas to decisionmakers. A limited number of copies of the first version are now available upon request. A second version of the substantive findings of the MA will be made available in March 2005, together with a final release of the reports. To request a copy, send a note to jalleh@millenniumassessment.org with an indication of how you plan to use the kit. The MA was launched in June 2001 to help meet assessment needs of the Convention on Biological Diversity, Convention to Combat Desertification, the Ramsar Convention on Wetlands, and the Convention on Migratory Species. If successful, it is hoped that the assessment process modeled on the MA will be repeated every 5–10 years. See the website at www.millenniumassessment.org for more information.

CLIMATE CHANGE FUTURES

The UN Development Programme, Swiss Re, and the Center for Health and the Global Environment at Harvard Medical School have joined forces to engage in a multi-stakeholder scenario-building exercise: *Climate Change Futures: Health, Ecological and Economic Dimensions*. This international, multidisciplinary project is designed to formulate future scenarios and their consequences based on a set of climate projections and development trajectories. The process is seeking corporate participation and additional sponsors. A draft report is now available on line and can be reviewed for input into the Final Report, which will be released in mid-2005, and is intended as an educational tool within financial institutions. All comments are welcome regarding the content, approach, and potential uses of the report. To access more information about the report, see the website at www.med.harvard.edu/chge/ccf.html or visit the Harvard Center for Health and the Global Environment at www.med.harvard.edu/chge/

MANGROVES AND TSUNAMIS

Mangroves encourage biodiversity and are the home to the world's richest variety of salt-tolerant trees, ferns, and shrubs. Mangroves are also rich in sea life and can be populated with monkeys, wild cats, lizards, sea turtles, and more. They may also have mitigated the massive destruction that occurred in December 2004 in South Asia wrought by tsunamis. An online discussion suggests that mangrove destruction may have factored into the huge loss of human life. In the Pitchavaram and

Muthupet regions where mangrove forests are abundant, the mangroves acted like a shield and bore the brunt of the tsunami. (Join the online discussion at sea-peat@yahoogroups.com). Restoring mangroves is also a matter of economic and social justice, as the region is going to need more of both as disaster relief moves forward. There are alternatives to mangrove destruction. The Mangrove Action Project documents sustainable management alternatives already in practice in the region that can both protect mangroves and provide livelihoods for people who live near them. Silvofishery combines mangrove reforestation (or retention) with low-input aquaculture techniques. For information on either of these projects, visit the Mangrove Action Project at www.earthisland.org/map/, a project of the Earth Island Institute.



WORLD ENVIRONMENT DAY

World Environment Day, commemorated each year on 5 June, is one of the principal vehicles through which the United Nations stimulates awareness of the environment and enhances political attention and action. The theme selected for 2005 is **Green Cities**, and the slogan is "Plan for the Planet!" The main international celebrations of World Environment Day 2005 will be held in San Francisco, California, USA. The UN Environment Programme (UNEP) is honored to have San Francisco host this important event. UNEP's agenda is to give a human face to environmental issues; empower people to become active agents of sustainable and equitable development; promote an understanding that communities are pivotal to changing attitudes toward environmental issues; and advocate partnerships, which ensures that all nations and people can enjoy a safer and more prosperous future. The city of San Francisco is planning street rallies, bike parades, green concerts, essays, and poster competitions, tree planting, and recycling and cleanup campaigns. Contact Elisabeth Guilbaud-Cox, Outreach and Special Events, UNEP, PO Box 30552, United Nations Ave., Gigiri, Nairobi, Kenya, or visit the website at www.unep.org/wed

EARTH PORTAL FOR GLOBAL ENVIRONMENTAL INFORMATION

The Earth Portal's official launch coincides with the United Nations' World Environment Day on 5 June 2005. This Portal aims to be a comprehensive source of global environmental information to enhance collaboration

around the world. It displays geography with an interactive three-dimensional representation of Earth so that users can “zoom in” from space, “pan across” geographic information, and “fly through” visualizations of environmental data. The Earth Portal is being built by the Environmental Information Coalition (EIC), which was established in 2003 and comprises many organizations in the US and abroad. The National Council for Science and the Environment serves at the EIS secretariat in Washington, DC. Although much of the content will be freely accessible, the financing plan is to make a transition in support structure from philanthropic donors to subscribers paying for premium services. Visit www.earthportal.net for more information (from www.chiex.net, Climate and Health Information Exchange).

HUMANITARIAN EARLY WARNING SERVICE

UN humanitarian agencies and partners of the Inter-Agency Standing Committee (IASC), a body that fosters enhanced inter-agency collaboration on humanitarian policy and operations, has launched a new Humanitarian Early Warning Service website, HEWSweb. This site displays the latest forecasts, reports, and alerts on drought, floods, tropical storms, locust infestation, El Niño, earthquakes, and volcanic activity. Plans to offer users an opportunity to access and share information on socio-political crises are also being developed. HEWSweb has been conceived as the first global “one-stop shop” for early warning information, in order to facilitate access to the latest early warnings. The UN’s World Food Programme has provided leadership and support in the development of this initiative. Please visit HEWSweb at www.hewsweb.org for more information.

GETTY WILDLIFE PRIZE WINNERS

A lobster fisherman from Marathon, Florida, and a tiger conservationist and farmer from the Indian state of Uttar Pradesh are this year’s co-winners of the J.Paul Getty Wildlife Conservation Prize. Tony Iarocci, a commercial fisherman for more than 30 years in Florida, is one of the world’s most accomplished advocates for fisheries sustainability and community-based marine protected areas. Billy Arjan Singh, who has devoted almost 60 years of his life to wildlife conservation, became a farmer as a young man. Conservation was a little-known concept in the years shortly after India’s independence in 1947. Singh established “Tiger Haven” on the outskirts of what is now the Dudhwa Tiger Reserve, so that he could farm and observe wildlife in natural surroundings. Today, Dudhwa is an area of high conservation importance that also protects rhinoceros, elephants, swamp deer, among others. Established in 1974 by the

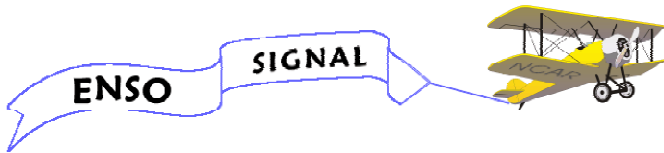
late J. Paul Getty, the prize recognizes conservation excellence and innovation by individuals and groups. For more information about this year’s prize winners or more about the prize in general, contact Kerry Green Zobor, World Wildlife Fund US; whose email is kerry.zobor@wwfus.org or visit the website at www.worldwildlife.org/about/gettyprize/index.cfm. The WWF prepares an annual slate of nominees from which the winner is selected by a jury of individuals from a wide array of conservation activities.

HARRY CHAPIN MEDIA AWARDS

The Harry Chapin Media Awards (HCMAs), formerly the World Hunger Media Awards, encourage the media to tell the stories of hunger and poverty. The HCMAs honor print and electronic media for outstanding coverage of hunger and poverty and the underlying root causes of these problems. This includes work on economic inequality and insecurity, unemployment, homelessness, domestic empowerment, sustainable development, food production, agriculture, nutrition, and the struggle for land. The awards cover five media categories: book, newspaper, periodical (magazine or e-zine), photojournalism, and broadcast (television, film, or radio). All entries for the award must have appeared between 1 January–31 December 2004 and must be mailed before 3 February 2005. International entries must be submitted in English. Unpublished manuscripts for photographs are not eligible. Please send entries with application and US\$25 to: The Harry Chapin Media Awards, c/o World Hunger Year, 505 8th Ave., Suite 2100, New York, NY 10018-9274. Available on line at www.worldhungeryear.org/media_center/hcma.asp

CLIMATE JUSTICE: ENFORCING CLIMATE CHANGE LAW

The Climate Justice Program is a collaborative endeavor of a group of lawyers in the UK, Germany, and the USA. Climate change impacts are already affecting people and the planet, and the biggest impacts will be on the lives and livelihoods of the poor and developing countries, especially small island states. Hundreds of international and regional agreements and treaties exist to protect conservation of the world’s resources, but they are not enforced. The Climate Justice Program aims to help enforce existing environmental laws by giving interested people a way to enforce climate change laws. If you are interested in funding this work, write to the Program at funding@climatelaw.org or for general inquiries, write to info@climatelaw.org or visit the website to learn about climate change litigation already under way at www.climatelaw.org



ENSO = El Niño–Southern Oscillation

(www.esig.ucar.edu/signal)

CURRENT STATE OF THE TROPICAL PACIFIC

(From the Climate Prediction Center's *ENSO Diagnostic Discussion*) www.cpc.ncep.noaa.gov (as of 6 January 2005)

The pattern of anomalous warmth in the equatorial Pacific in recent months and the most recent five-month running mean value of the Southern Oscillation Index indicate that a weak warm (mid-Pacific El Niño) episode has developed. However, through December 2004, there has been a lack of persistent enhanced convection over the anomalously warm waters of the central equatorial Pacific, which has limited El Niño-related impacts on the global pattern of precipitation. (Note: the recent pattern of heavy precipitation in California has been associated with (1) a persistent high-latitude blocking ridge near the Gulf of Alaska and an associated trough along the West Coast of the US, and (2) a weaker-than-average jet stream across the central and eastern Pacific. These features are not consistent with El Niño, which would favor a stronger-than-average jet stream over the central and eastern Pacific and a reduced tendency for blocking in the Gulf of Alaska.) Based on the recent evolution of oceanic and atmospheric conditions and on a majority of statistical and coupled model forecasts, it seems most likely that weak warm episode conditions will persist for at least the next three months. However, there is considerable uncertainty concerning future developments in the extreme eastern equatorial Pacific along the Peruvian coast (the classical El Niño region).

SATELLITE STUDY UNDER WAY

The Department of Geography at East Carolina University is conducting research on intraseasonal variations in precipitation from the Indian to the west Pacific Ocean as a forcing mechanism for ENSO. The three-year project, funded by NASA's Precipitation Measurement Mission, is headed by Principal Investigator Scott Curtis. The study will analyze Tropical Rainfall Measuring Mission (TRMM) and other current satellite-based precipitation information for evidence of climate variations within the Indo-Pacific sector that are related to the development of El Niño events. Part of the work, the climatology of precipitation over and surrounding the key islands of the Maritime Continent, is the basis of Ahmed Salahuddin's PhD thesis. For more information about the project, see

www.personal.ecu.edu/curtisw/. A NASA press release can be found at www.nasa.gov/vision/earth/lookingatearth/el_nino_ocean.html

BECOME AN ARGONAUT

Argonautics is the newsletter of the international Argo project. Argo collects salinity and temperature profiles from an array of robotic floats that populate the ice-free oceans that are deeper than about 2,000 meters. They also give information on the surface and subsurface currents. The first Argo floats were deployed in 2000, and the array is expected to be completed by 2006 or 2007 with 3,000 floats. In November 2004, Argo passed the milestone of 1,500 operating floats. The array is now global, which permits Argo to start to address important scientific issues and make the data useful and available to operational centers. Argo data are available to everyone. Researchers using Argo float data are encouraged to contact the person responsible for the floats used and to outline the type of research or analysis that is being conducted. To subscribe to *Argonautics*, or to learn more about the project, visit the website at www.argo.ucsd.edu or contact the Argo Information Center at argo.jcommops.org. The Argo Director, John Gould, is available via email at John.Gould@csiro.au for more information. Argo data may be downloaded from the Global Data Centres at www.usgodae.org/argo/argo.html. Argo is a pilot program of the Global Ocean Observing System.

DYNAPRED

Dynamic Predictables (DynaPred) is a company based in Columbia, Missouri that provides long-range climate projections tailored for agriculture and utilities industries. Line charts are available on their website that show active predictions from 1998 and 2003 for the Nino3 anomaly forward through 2009, with monthly observed updates for the user's comparison of predictions with actual observed data. Narrative texts are included. Visit the website at www.dynapred.com or write to Greg Suhler at suhler@dynapred.com for more information.

GOSIC

The Global Observing Systems Information Center (GOSIC) provides access to data and information, and overviews of the structure and programs for the Global Climate Observing System (GCOS), the Global Ocean Observing Systems (GOOS), and the Global Terrestrial Observing System (GTOS). GOSIC provides access to data and describes the components in detail and provides links to specific projects and their data. The Global Observing Systems Program is the focus for

continuing international work to understand the terrestrial, oceanic, and atmospheric components of global change. GOSIC recently added new outreach materials on its website, including a brochure and PowerPoint presentations that explain its mission. GOSIC is the only entity that crosses observing systems and provides access to all Global Observing Systems data. For more information, see the website at <http://gosic.org> or contact Christina Lief at lief@gosic.org. GOSIC is located at the University of Delaware, College of Marine Studies, 700 Pilottown Rd., Lewes, DE 19958.

JOB OPPORTUNITIES

Environmental/Energy Information Specialist to manage the Voluntary Reporting of Greenhouse Gases Communications Center at the US Department of Energy, Energy Information Administration (www.EIA.doe.gov/oiaf/1605/frntvrgg.html), respond to requests for information, and maintain databases that track receipt and disposition of Communication Center requests and receipt and processing of reporting forms. This is a junior-level position, requiring less than 5 years of experience, with opportunity for professional growth. More information www.saic.com/shell-cgi/jobs.pl

PhD Opportunities in Climate Change Research at Purdue University: One or two graduate students are sought to study the mechanisms of Holocene climate change in North America (the past 11,000 years). The research has two primary foci: (1) the causes of mid-continent aridity during the mid-Holocene, with emphasis on investigating the role of regional-scale processes such as atmosphere-land cover feedbacks, and (2) the sensitivity of California current seasonality and inter-annual variability to Holocene changes in external climate forcing. The work will focus on configuring, running and analyzing climate model experiments. In addition, the student(s) will work with researchers at collaborating institutions integrating model output with newly generated proxy climate reconstructions. Students interested in the PhD program are preferred and should contact Prof. Noah S. Diffenbaugh in the Dept. of Earth and Atmospheric Sciences, Purdue Univ., 550 Stadium Mall Dr., West Lafayette, IN, 47907-2051, USA (diffenbaugh@purdue.edu).

IIASA (International Institute for Applied Systems Analysis) has two job openings, one for a research scholar in the Environmentally Compatible Energy Strategies Program to cover the economic part of the energy-economic-environmental system. The candidate should have an advanced degree in macroeconomics, energy economics, environmental economics, or related field. The other position at IIASA is for a research scholar in the Forestry Program to cover the economic

part of the DIMA model on integrated sink enhancement assessment (INSEA). The candidate should have an advanced degree in economics, forest or agricultural economics, environmental economics, or related fields. Preference will be given to applicants who are nationals of IIASA member countries. Applications from women are encouraged. For more information, see the website at www.IIASA.ac.at/docs/IIASA_Employment.html

PAST MEETINGS

8th International Conference on Carbonaceous Particles in the Atmosphere

When: 14–16 September 2004

Where: Vienna, Austria

Contact: Institute of Chemical Technologies and Analytics, Getreidemarkt 9/164
1060 Vienna / Austria, +43 - 1 - 58801 – 16401,
evesely@mail.tuwien.ac.at

4th Annual Meeting of the European Meteorological Society

When: 26–30 September 2004

Where: Nice

Contact: EMS Secretariat, Institute of Meteorology, Free University of Berlin
Carl-Heinrich-Becker-Weg 6-10; 12165 Berlin, Germany;
Tel: +49-30-7970 8328
Fax: +49-30-791 9002; email: ems-sec@met.fu-berlin.de; www.copernicus.org/ems/2004/

Fourth International Conference on Computer Simulation in Risk Analysis and Hazard Mitigation

27–29 September 2004

Rhodes, Greece

Contact: The proceedings of Risk Analysis IV, 832 pp (ISBN: 1-85312-728-0) are available in hard back from WIT Press priced at £172/US\$275/€258. Orders can be placed by telephone: +44 (0) 238 029 3223, fax: +44 (0) 238 029 2853, e-mail: marketing@witpress.com or via the WIT Press web site at www.witpress.com.

National Workshop: Enhancing Policy Coordination on Trade and Environmental Issues

When: 5–6 October 2004

Where: Cambodia

Contact: Thanavat Junchaya, Regional Network Coordinator for SEAP, ROAP, Bangkok, Thailand; Tel: (662) 288 1662; Fax: (662) 280 3829; Email: junchaya@un.org

Monsoon Asia Integrated Regional Studies (MAIRS)

When: 6–8 October 2004

Where: Beijing, China

Contact: Yna Calimon-Moore, International START Secretariat, 2000 Florida Ave. NW, #200; Washington, D.C. 20009; Tel. (+202) 462-2213; Fax (+202) 457-5859

Email: ycalimon@agu.org;
www.start.org/project_pages/irs_monsoon_asia.html

International Symposium: "Key Vulnerable Regions and Climate Change: Identifying Thresholds for Impacts and Adaptation in Relation to Article 2 of the UNFCCC"

When: 27–30 October 2004

Where: Beijing, China

Contact: European Climate Forum; www.european-climate-forum.net/events/

Third International Workshop on Monsoons (IWM-III)

When: 2–6 November 2004

Where: Hangzhou, China

Contact: Mr. SUN Rui E-mail:

sunrui@cma.gov.cn; Fax: +86-10-62175931;
www.nps.edu/Academics/gseas/IWM-III/Index.html

Climate and Water

When: 8–10 November 2004

Where: Lorne, Victoria, Australia

Contact: ANZCF, National Climate Centre - Australian Bureau of Meteorology, GPO Box 1289K, Melbourne, Victoria 3001 Australia; Tel (03) 9669 4466; Fax (03) 9669 4678 or (03) 9669 4515; E-mail

anzcf2004@bom.gov.au;

www.bom.gov.au/events/anzcf2004/

Sixteenth Meeting of the Parties to the Montreal Protocol and its Associated Meetings

When: 17–26 November 2004

Where: Prague, Czech Republic

Contact: Mr. Marco Gonzalez, UNEP, Fax: (+ 254 20) 62 4691 / 4692 / 4693;

www.unep.org/ozone/Meeting_Documents/mop/16mop/16mop.asp

7th Asian Fisheries Forum

When: 30 November – 4 December 2004

Where: Penang, Malaysia

Contact: The Secretariat, 7th Asian Fisheries Forum, School of Biological Sciences, Universiti Sains Malaysia, 11800 Minden, Penang, Malaysia. Fax: +60-4-6565125.

E-mail: 7aff2004@usm.my; www.usm.my/7AFF2004/

Second International Symposium on Land Use Change and Soil and Water Processes in Tropical Mountain Environments

When: 14–17 December 2004

Where: Luang Phrabang, Lao PDR

Contact: Directeur de l'unité : Christian Valentin; Tel: 01 48 02 79 04; Fax : 01 48 47 30 88; email:

valentinird@laopdr.com; IRD, c/o Ambassade de France; BP 06; Vientiane, RPD Laos;

<http://203.209.62.250/SIS/>

4th SOFOR (Southern Forestry) GIS Conference

When: 16–17 December 2004

Where: Athens, Georgia, USA

Contact: Ben Jackson, email:

ben.jackson@gactr.uga.edu; soforgis.net/

UPCOMING MEETINGS

The **International Conference on Environmental Science and Technology** sponsored by the American Academy of Sciences will be held 23–26 *January 2005* in New Orleans, Louisiana, USA. The objective of conference is to provide a major interdisciplinary forum for presenting new approaches from relevant areas of environmental science, to foster integration of the latest developments in scientific research into engineering applications, and to facilitate technology transfer from well-tested ideas into practical products and remedial processes. Researchers, engineers, site managers, regulatory agents, policy makers, consultants, and vendors will have the opportunity to exchange information on recent research trends, to examine ongoing research programs, and to investigate worldwide public and regulatory acceptance of environmental protection and remediation technologies. For more information, contact EST Conference Secretariat, American Academy of Sciences, 6464 Ave. B, New Orleans, LA 70124, USA. Email: conference@AASci.org, www.AASci.org/conference

The **International Conference on Water for Food and Ecosystems**, organized by FAO and the Government of the Netherlands will be held 31 *January–5 February 2005* in The Hague. The conference will provide a high-level platform for 350 participants from around the globe, including a ministerial segment. The prime objective of the WFE Conference is: to help governments identify management practices, practical lessons learned and the necessary enabling environments that lead to sustainable water use at the river-basin level and the harmonization of food production and ecosystem management with a view to implementing already internationally agreed commitments. For more information contact Jeanet Smids-Goosen or Bonita Fruneaux, email: izwfe2005@minlnv.nl; www.fao.org/ag/wfe2005/

The **North Sea Today and Tomorrow: International Conference on Integrated Coastal Zone Management "Environment - Fisheries - Regional Planning and Development"** will be held 1–3 *March 2005* in Ringkøbing, Denmark. Aims of the Conference: The participants will engage in an open dialogue on the importance of Integrated Coastal Zone Management in the light of the current environmental status in the North Sea, allowing the participants to place their own fingerprint on the future agenda of ongoing work in the

North Sea Commission and its thematic groups; focus on the environmental challenges in the coastal zone (e.g. habitat destruction, waste, nutrients, hazardous substances, etc.); and provide state-of-the-art knowledge of the environmental status of the coastal areas of the North Sea. For more information contact Eva Kanstrup, Tel: +45 9675 3664 – Email: vamek@ringamt.dk; Mads Nedergaard, Phone: +45 9675 3697 – Email: tmmn@ringamt.dk; www.northsea.org

The **Workshop on Climate Variability over Africa** will be held *6–17 March 2005* in Alexandria, Egypt. The Workshop is intended to review recent progress in understanding climate variability and trends (of both natural and anthropogenic origin) over Africa, and their impact on the hydrological resources of the continent. It is open to young researchers and PhD students working in the areas of Atmospheric Physics and Dynamics, Climatology and Oceanography, from countries in Africa that are members of the United Nations, UNESCO, or IAEA. For more information contact Azhraf Zahey email: zahey@chem.gu.se; agenda.ictp.trieste.it/agenda/current/fullAgenda.php?id=a04222

The **Second Latin-American and Caribbean Congress of Environmental and Resource Economists** will be held *18–20 March 2005* in Oaxaca, Mexico. Papers on research or applied environmental and resource economics, with emphasis on environmental problems in development countries are encouraged to participate. Papers will be placed in parallel sessions based on specific topics. The program is currently developed, check the website for details. For more information contact Zulma Guzman Castro of ALEAR, Tel: 57(1) 6406964, www.alear.org/english/products/congress/default.asp

The **5th International Conference on Coastal Dynamics** will be held *4–8 April 2005* in Barcelona, Spain. Coastal Dynamics 2005 will be the fifth in a sequence of technical specialty conferences bringing together field and laboratory experimentalists, theoreticians and modelers conducting research on the dynamics of the coastal systems. The multidisciplinary Coastal Dynamics'05 will be of interest to coastal engineers, coastal geologists, oceanographers, and related sciences. It should also be of relevance for coastal specialists and managers and all those interested in preserving coastal zones. For more information contact CD'05, Coastal Dynamics 2005, Prof. Agustín Sánchez-Arcilla, Laboratori d'Enginyeria Marítima (LIM/UPC), Universitat Politècnica de Catalunya, Jordi Girona, 1-3, building D-1, 08034 Barcelona (Spain), Fax: +34 93 401 1861, E-mail: coastaldynamics.2005@upc.es, www.coastaldynamics.org

The **Second Annual Water Law, Policy and Science Conference** will be held *7–8 April 2005* in Lincoln, Nebraska, USA. The conference is entitled: Water management and Policy in the Great Plains: Implications of Drought and Climate Change. For more information contact Steve Ress Water Center/School of Natural Resources, 103 Natural Resources Hall, University of Nebraska-Lincoln, Lincoln, Nebraska 68583-0844 Tel: 402-472-9549, Fax 402-472-3574, Email: sress1@unl.edu, snr.unl.edu/waterconference/

The **Workshop on Implications of Climate Change In BC's Southern Interior Forests** will be held *26–27 April 2005* in Revelstoke, BC, Canada. The composition, health, and vitality of British Columbia's southern interior forests are strongly linked to climate and climate variability. As the global climate warms, climate-associated effects such as drought, wildfire, and outbreaks of insects and diseases, which are already of concern in southern BC, will become more frequent and severe. In turn, forest productivity, ecosystem functioning, and habitat values will be affected, in many cases adversely. This workshop is directed at forestry professionals and technicians, biologists, ecologists, protected-area managers, and other managers and planners with an interest in how climate change may affect forest ecosystems. For more information contact Columbia Mountains Institute of Applied Ecology, Box 2568 Revelstoke, B.C. V0E 2S0 Canada. Tel: 250-837-9311 Fax: 250-837-9311, E-mail: office@cmiae.org, www.cmiae.org/

Adapting to Climate Change in Canada 2005: Understanding Risks and Building Capacity will be held *4–7 May 2005* in Montréal, Québec. Since 1998, there has been a rapidly growing body of research on climate change impacts and adaptation in Canada. This conference will provide the first opportunity for researchers and decision-makers from a wide range of disciplines to share results and information on pan-Canadian events. The conference will be structured to address regional and sectoral themes as well as approaches, techniques, and integrated studies. Representatives from the research community (including graduate students), governmental and non-governmental organizations, communities, and business are welcome to submit abstracts for oral presentations and poster sessions. For more information contact the Natural Resources Canada's Climate Change Impacts and Adaptation Program, Earth Sciences Sector, Natural Resources Canada, 601 Booth Street, Ottawa, Ontario K1A 0E8, Tel: (613) 943-0650, Fax: (613) 992-0190, Email: adaptation@NRCan.gc.ca, <http://www.adaptation2005.ca/>

The **2005 JOINT ASSEMBLY**, a partnership between AGU, the Society of Exploration Geophysicists (SEG), the North American Benthological Society (NABS) and

the **Solar Physics Division** of the AAS, is being held 23–27 May 2005 in New Orleans, Louisiana. The Program Committee is developing a Union-wide science program that will cover topics in all areas of geophysical sciences. For more information on the Web: www.agu.org/meetings/sm05/

Seasonal to Interannual Climate Variability: Its Prediction and Impact on Society will be held 23 May–3 June 2005 in Gallipoli, Italy. This is a NATO Advanced Study Institute (ASI) that will cover the main aspects of seasonal to interannual forecasting systems. Topics include (1) initial conditions preparation via data assimilation; (2) dynamical models and their coupling; (3) statistical modeling, calibration, and model output assessment; and (4) applications of forecast products to specific users. The teaching in ASIs is aimed at scientists at the postdoctoral level or those with suitable experience in meteorology and climatology. Contact Alberto Troccoli, ECMWF, Shinfield Park, Reading, RG2 9AX, UK; email a.troccoli@ecmwf.int or see the website at www.ecmwf.int/staff/alberto_troccoli/nato_asi/

The American Geophysical Union (AGU) will hold its spring meeting in New Orleans, Louisiana USA 23–27 May 2005. Several sessions proposed for the Atmospheric Science Section will be of interest to readers of this newsletter, among others, Attribution of climate variability during the last 100 years; the human ecological footprint and Earth's climate; outstanding issues in seasonal-to-interannual climate prediction; and anthropogenic influence on tropospheric and surface temperature trends: Intercomparison between models and observations. AGU meeting information and abstract submission information is available at www.agu.org/meetings/sm05/ or contact Arun Kumar at the Climate Prediction Center, arun.kumar@noaa.gov

The Workshop on the Economic Effects of Climate Change on Fisheries will be held 20–21 June 2005 in Bergen, Norway. Those who wish to attend, and to submit abstracts of papers, should contact Rognvaldur Hannesson, rognvaldur.hannesson@nhh.no, before 1 May 2005. SNF, Breiviksveien 40, N-5045 Bergen. Tel: +47 55 95 95 00, Fax: +47 55 95 94 39, www.snf.no

The 5th International Scientific Conference on the Global Energy and Water Cycle will be held 20–24 June 2005 in Orange County, CA. The overall theme of the 5th International Scientific Conference on the Global Energy and Water Cycle is observing and predicting the Earth's water and energy cycle: current state of knowledge and future research requirements. For more information contact 5th International Conference Secretariat, International GEWEX Project Office, 1010 Wayne Avenue, Suite 450; Silver Spring, MD 20910 USA; Tel: 1-301-565-8345; Fax: 1-301-565-8279; E-mail: gewex@gewex.org; www.gewex.org/5thconf.htm

The Chapman Conference on the Role of Marine Organic Carbon and Calcite Fluxes in Driving Global Climate Change, Past and Future will be held 24–27 July 2005 in Woods Hole, MA, USA. Since the early 1980s biogenic fluxes of organic matter and calcite from the surface ocean to the deep sea have been implicated in regulation of atmospheric carbon dioxide content (and Greenhouse warming). General consensus exists that one of the key marine biotic climate variables is the ratio of organic carbon to calcite fluxes from the surface to the deep ocean, which can alter the pH and alkalinity of seawater and thus the pCO₂ of the atmosphere. However, there is disagreement on the potential magnitude of effect that changing this ratio would have on atmospheric CO₂, and there is disagreement on the degree to which the ratio can change. A synthesis of theory, modern observation, and paleo-reconstruction of the organic carbon to calcium carbonate rain ratio from the euphotic zone, through the water column, and to the sea floor is planned. The conference will organize not only what we understand about the subject, but also what more we need to know. For more information tel: 1-202-777-7333, email: meetinginfo@agu.org; www.agu.org/meetings/cc05fcall.html

The SOLAR WORLD CONGRESS 2005 will be held 6–12 August 2005 in Orlando, Florida, USA. This event is expected to bring together researchers, scientists, engineers, architects, designers and other renewable energy professionals to discuss solar energy issues. In particular, the Congress will consider linkages between solar and water issues under the theme, "Bringing Water to the World." The 2005 Congress also marks the 50th anniversary of the first major solar conference held in Arizona in 1955. To mark the occasion, the 2005 Congress will include a special session on the History of Solar Energy and the International Solar Energy Society. For more information contact: Becky Campbell-Howe, American Solar Energy Society; tel: +1-303-443-3130 ext.103; fax: +1-303-443-3212; e-mail: bchow@ases.org; www.swc2005.org

The Dynamic Planet 2005 will be held 22–26 August 2005 in Cairns, Australia. The conference is a joint assembly of the International Association of Geodesy (IAG), International Association for Physical Sciences of the Oceans (IAPSO), and the International Association for Biological Oceanography (IABO), and will offer opportunities to present and discuss cross-disciplinary research on the solid earth and oceans. In fact the scientific program, under the theme "Monitoring and Understanding a Dynamic Planet with Geodetic and Oceanographic Tools", will emphasize the interaction of the earth and oceanographic sciences. The program will be enriched by a focus on the geodetic and oceanographic challenges in the tropics, the Asian region, the Pacific Ocean and its environs, and

Antarctica, all regions where Australian and New Zealand scientists, and their international collaborators, play a significant role. For more information contact DynamicPlanet2005 Secretariat, C/- Event Planners Australia; GPO Box 2609; Sydney NSW 2001; Australia; Tel: +61 2 9241 1478, fax: +61 2 9241 1478, email info@dynamicplanet2005.com; <http://www.dynamicplanet2005.com/Default.htm>

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WEBSITES OF INTEREST

Because of the recent tsunami event in Asia, we would like to give our readers an opportunity to choose from several different possible organizations to donate to the survivors, or to learn more about tsunamis in general.

www.networkforgood.org/

The Network for Good is an excellent starting point if you wish to donate, as it has links to numerous websites of relief organizations. Additionally it informs on crisis relief and volunteer opportunities.

www.sarvodaya.org

Sarvodaya has published their medium term plans for relief efforts in Sri Lanka, detailing an assessment of the calamity, current responses from government and non-government agencies, and specific projects to achieve the objective of Deshodaya (National Re-awakening).

www.nonviolenceinternational.net

The Aceh Relief Fund has established an advisory board of prominent Acehnese leaders who will oversee the disbursement of the funds. Funds can be sent via the website. Nonviolence International has been working in Aceh for 5 years and has launched a website www.balaaceh.org/ for missing persons in Aceh. The website has a database to search for missing friends and loved ones. It is in English and Indonesian.

<https://www.redcross.org/donate/donation-form.asp>

International Response Fund: You can help those affected by the Southeast Asia tsunamis and the humanitarian crisis it has created, by making a financial gift.

www.oxfamamerica.org

Oxfam is sending food and water to help thousands of people affected by the devastating tsunamis that struck coastal areas of several Asian countries.

www.worldvision.org

World Vision is a relief and development organization dedicated to helping children and their communities worldwide reach their full potential by tackling the causes of poverty.

Information

www.pmel.noaa.gov/tsunami-hazard/

The National Tsunami Hazard Mitigation Program, A program designed to reduce the impact of tsunamis through warning guidance, mitigation and hazards assessment has a website with current events and links to tsunami related sites.

walrus.wr.usgs.gov/tsunami/

On this website you will find general information on how local tsunamis are generated by earthquakes as well as animations, virtual reality models of tsunamis, and summaries of past research studies.

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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