

CLIMATE ALERT

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Institute Program Enlists North American Cities in Reducing CO₂ Emissions

In the fall of 1992, the Institute inaugurated a program designed to bring North America's cities in line with international efforts to curb CO₂ emissions. Through a series of local and regional conferences, the program will bring city leaders together to share research, legislation and findings of attempts to implement new strategies. Cities, particularly North American cities, are by far the major producers of greenhouse and ozone-depleting gases. Their active cooperation will be necessary as steps taken to implement the provisions of the Framework Convention on Climate Change, signed at the Rio Summit last June.

At the first briefing, held in Nashville, Tennessee, participants met in the office of Mayor Phil Bredesen to discuss policy aspects of human-induced global environmen-

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Dr. Barbara Miller, Dr. Laurance Hill, Mayor Victor Ashe, Dan Power, and Dr. Tilden Meyers at Knoxville briefing

U.S. Energy and Climate Policy Likely to Change In Wake Of Elections

Commentary by John C. Topping, Jr., President, Climate Institute

The Clinton-Gore election victory portends a decisive shift in U.S. policy on global environmental issues. A commitment to stabilization of emissions of greenhouse gases and signing of the treaty on biological diversity, shunned by President Bush at the U.S. Conference on Environment and Development in Rio de Janeiro, Brazil are likely U.S. shifts.

Confronted by a weekly burgeoning deficit, the new administration is giving serious consideration over the near or medium term to some significant increases in gasoline or energy taxes, phased in over a number of years. The forces inclining President Clinton in this direction vary from political groups that are outside his administration to many of his most important political and economic advisors.

The unexpectedly strong showing of independent candidate Ross Perot, who drew 19 percent of the presidential vote on a strong deficit reduction platform, may have given strong impetus to the effort to increase

taxes on energy use or emissions. Perot's championship of a fifty cent increase in U.S. gasoline taxes phased in over five years to reduce the U.S. deficit was woven into 30-minute campaign commercials, hammering at the need to contain the ballooning U.S. public debt.

Two early Clinton selections for top posts — California Congressman Leon Panetta for Director of the Office of Management and Budget

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Dowdeswell Named To Head UNEP

UN Secretary-General Boutros Boutros-Ghali has submitted to the General Assembly the name of Elizabeth Dowdeswell of Canada to

become Executive Director of the United Nations Environment Program, succeeding Mostafa Tolba who is retiring.

Ms. Dowdeswell is at present Assistant Deputy Minister, Environment Canada, and head of Canada's Atmospheric Environment Service, the primary weather and atmo-



Elizabeth Dowdeswell at INC Meeting in Geneva 1991

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Climate Warming's Effect on Mid-East Scarce Water Supply Could Undermine Security

Water, a festering source of conflict in the Middle East in the past, will continue to breed trouble as demand nears available supply and population soars, according to a recent study sponsored by Canada's Department of National Defence. Climate warming is one of several interrelated factors that will have an impact on security in the region, undermining the natural support systems on which society depends. While it will be an "associative" rather than a major factor, it will have a direct effect on water supplies and, along with economic and demographic changes, will create further stress in an already badly strained region.

The research, conducted by Dr Stephen Lonergan, using General Circulation Models, estimates a temperature rise of 5 to 8 degrees C for the region and a slight decline in precipitation which is already sparse and highly irregular. In the dry climate of the region, evapotranspiration will potentially exceed rainfall.

Entitled *Climate Warming, Water Resources and Geopolitical Conflict: A Study of Nations Dependent on the Nile, Litani and Jordan River Systems*, the study covers seven riparian states in the region: Israel, Jordan, Lebanon, Syria, Egypt, Sudan and Ethiopia, all of them suffering water shortages.

Population Growth

Attempting to cope with population growth which averages 2.5 percent for the area — and reaches 4.0 percent in Jordan and 3.7 percent in Syria, among the highest rates in the world — the seven countries are trying to become self-sufficient in agriculture. Feeding the population of 60 million by the year 2000 is a formidable prospect.

Promoting growth in agricultural output is very water intensive, requiring more irrigation, more use

of marginal land. Irrigation is highly water consumptive, expensive and entails heavy capital investment. The escalating costs of irrigation construction and maintenance cannot necessarily be offset by rising agricultural prices. There are other environmental costs as soil tends to deteriorate structurally when irrigated and the leaking of irrigation water into ground water creates waterlogging and salinization.

Food Deficit

Most states place a higher priority on the development of industry and manufacturing than producing food, keeping agricultural wages so low that only the very young and very old and unemployed are involved in food production. The food deficit is increasing, but the prospect of higher food production and progress in agricultural development is limited. The decline in agricultural labor raises the threat of food riots, not unknown in the past.

Rural to urban migration has converted prime agricultural land on the urban fringe to nonagricultural uses. Water to serve the new migrants must be transported longer distances. As the population grows, soil erosion and nutrient depletion degrade the land and the amount of available arable land declines. The rising cattle population also ravages the land, and, along with the human population pressure, stresses the fragile ecology.

Rise in Refugees

Increased desertification and degradation of food resources in the Sahel will contribute significantly to the refugee problem. Flight from civil wars in Sudan and from other conflicts all over the Middle East has brought the total number of traditionally-defined refugees in the region to two million with another 500,000 internally displaced.

Environmental refugees, escaping drought and damage to the land, fleeing within and across borders, are a new category of migrant not officially recognized by the UN, and no tally has been taken of them. Many have been put in refugee camps and need major organized assistance. Conflicts between indigenous peoples and forced migrants leads to major security problems.

It is of primary importance that the refugee issue begin to appear on the international agenda, Lonergan argues, because "the existence of refugees exerts tremendous pressure on host countries and can influence foreign policy as well as exacerbate inter and intra-state conflicts. An increased understanding of the destabilizing potential of refugee movements is necessary for a comprehensive study of security."

Climate Change Effects

The growth of population, rising agricultural and industrial output, and strains on the water supply are likely to overwhelm the abilities of the resources in the region to accommodate to change. In this welter of pressures, the effects of climate

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change may proceed almost unnoticed, Lonergan observes. But that does not mean their gradual evolution will be unimportant, and they have "the potential for making an already difficult situation even more dire."

"It has been in vogue to comment that the next war in the Middle East will be over water," says Lonergan, and "there is much substance behind this comment." Although the costs of a war could be much higher than even very expensive reclamation and desalinization projects, some nations under certain circumstances may view militarization of the water conflict as the most viable option.

Cities

(Continued from page 1)

tal change. Visiting experts — Dr. Barbara Miller of TVA, Dr. Doug Bauer of the Department of Energy and Oak Ridge National Laboratories, Dr. Gene Birkau of Vanderbilt University and Dr. Wei Chung of SUNY-Albany — presented information about potential climate change and discussed strategies Nashville could use to reduce its output of greenhouse and ozone-depleting gases.

In the evening a public forum was held at Vanderbilt University with invited guests including leaders of Nashville's corporate/industrial community, civic groups, community organizations and environmental groups. The briefing team members gave presentations similar to those in the Mayor's office in the morning and answered questions from the audience. Discussion focused especially on what local corporations could do to reduce harmful emissions, and how Nashville could develop a strong, effective policy without disrupting its economic vitality.

In the morning, at noon and midafternoon, Dr. Wang appeared on radio and TV shows to discuss the state of climate science and its ability

to predict changes that may occur when CO₂ levels rise. He also took calls from local listeners.

Knoxville Briefing

The second briefing was held in Knoxville, Tennessee on October 20 and included a meeting with Mayor Victor Ashe and leaders of the local Chamber of Commerce plus Dr. Laurance Hill of Oak Ridge National Laboratories, Dr. Tilden Meyers of NOAA and again Dr. Miller.

A final Tennessee briefing will be held in Chattanooga in early March and dates are currently being set for programs in Chicago, Cleveland Indianapolis and Baltimore.

Institute Co-sponsors ICLEI Meeting

The Institute is co-sponsoring, along with other organizations around the world, a gathering of mayors and other elected officials from North America, Europe, the Middle East and the Pacific regions to share their strategies to prevent global climate change. The meeting, "Municipal Leaders' Summit on Climate Change and the Urban Environment," will be held at the United Nations Headquarters in New York on January 25 and 26. Many of the participating urban areas would face enormous problems as a result of sea-level rise, reduced or contaminated water supplies, and increased air pollution.

The Municipal Summit is in response to the signing of the Framework Convention on Climate Change. The 36 industrial countries that signed the international agreement committed themselves to limiting their emission of greenhouse gases not controlled by the Montreal Protocol, "... with the aim of returning individually or jointly to their 1990 levels."

The Institute is organizing a scientific panel for this conference which is sponsored by UNEP and the International Council for Local Environmental Initiatives (ICLEI).

Dowdeswell

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spheric agency of the national government. As agency head, she has integrated policy development, educational programs, economic development needs and a global vision with traditional public service and scientific research.

Dowdeswell was Canada's principal delegate to the Intergovernmental Panel on Climate Change meetings and was co-chair of the working group on mechanisms in the negotiations leading to the Framework Convention on Climate Change adopted last June at the United Nations Conference on Environment and Development. Committed to the realization of sustainable development, she has addressed major gatherings on that topic in developing and industrialized countries around the world.

She is her country's permanent representative to the World Meteorological Organization and was Canadian chairman of the Great Lakes Water Quality Board for the Canada-United States International Joint Commission.



Note to Subscribers

With this first issue of 1993, *Climate Alert* will go on a calendar year basis, starting with Volume 6, Number 1 and continuing with a new issue every two months throughout 1993. Therefore, please note in your subscription that Volume 5, Number 3 followed by Volume 6, Number 1 is the correct sequence and does not mean that you have missed any issues. For those subscribers who started in mid-year, their subscriptions will be extended an equivalent number of issues.

Climate Institute News

THREE NEW BOARD MEMBERS

The Institute Board of Directors chose three new members at a meeting in Washington on October 8: Nuzhet Dalfes of Turkey and Gordon MacDonald and Claudine Schneider of the U.S.

H. Nuzhet Dalfes

A geophysicist with degrees from two universities in Istanbul and from Rice University in the U.S., Dr. Dalfes is at present Associate Professor of Geology at Istanbul Technical University. His doctoral thesis was on modelling of the greenhouse effect and was done at the National Center for Atmospheric Research under Institute Board member Stephen Schneider. Dalfes has been a visiting scientist at a meteorology laboratory in Paris and a staff scientist at the Marmara Research Center in Gebze, Turkey.



Dr. Dalfes' current research interests include regional hydrological impacts of global change and the geopolitics of water, paleoclimatology/hydrology of the Middle East, and present and early oceanography of the Black Sea and Eastern Mediterranean.

Gordon J. MacDonald

Dr. MacDonald is Professor of International Relations and Pacific Studies and Director of the Environmental Policy Program at the University of California, San Diego. His broad-ranging professional interests cover scientific and technical research, education, environment, and national security affairs.



His research has covered such diverse fields as upper atmosphere physics, the nature of the earth's interior, weather modification, history of the moon and planets, nonlinear statistics and environmental sciences. His book, *The Rotation of the Earth*, coauthored with Walter Munk, received the American Academy of Sciences Monograph Prize and remains the premier work in this field.

He has served as editor or coeditor of eight international scientific journals and recently founded the *Journal of Environment and Development*, whose inaugural issue appeared in 1992.

Dr. MacDonald has held both full-time and part-time positions with government at the federal and state levels. While a member of the Council on Environmental Quality he led the U.S. negotiating team on the U.S.-USSR environmental agreement signed by President Nixon and Secretary Brezhnev in 1972 and represented the U.S. in dealing with environmental problems at OECD, the U.S., and other international organizations. When NASA was first formed, he aided in the formulation of the long-term program of exploration of the moon and planets. As a member of President Johnson's Science Advisory Committee, his principal work was on oceanography, naval warfare and strategic policies. He is currently serving on the Department of State's Advisory Committee on Oceans and International Environmental and Scientific Affairs. Currently, he continues to serve as senior adviser to the country's national security agencies and to private organizations concerned with the environment, education and foreign policy. In addition, he conducts research on such topics as the nature of climate change, energy policy and new methods of signal processing.

Claudine Schneider

As a U.S. Representative from Rhode Island, reelected four times, Claudine Schneider has been at the forefront of



national efforts to encourage policies which make efficient use of federal programs and spur economic growth while maintaining environmental quality.

Biological diversity, tropical rainforests and species have also been a high priority concern. Her resolution calling for an International Convention on Biological Diversity was endorsed in 1988 by President Reagan. One scientist has said Claudine Schneider "has penetrated the Amazon more deeply than any other member of the U.S. government since Teddy Roosevelt." Today she is the Director of the Artemis Project in Washington which is working with scientists and economists to assess the economic and scientific value of biodiversity in the U.S. She is also Chairman of the Board of Renew America.

While a senior Republican on several key environmental subcommittees in the U.S. Congress, she championed a wide range of legislation to protect the environment, promote sustainable use of natural resources, and implement sound energy practices.

She led battles for a balanced national energy strategy, emphasizing greater reliance on energy efficiency technology and renewables and is the original author of the Energy Efficiency Technology Act, and Least Cost Utility Planning Act, and numerous amendments which have become law.

Rafe Pomerance

A member of the Institute Board of Directors for its first six years, Pomerance began working on the greenhouse effect in 1978, eight years before the founding of the Institute, after reading a study by Gordon MacDonald saying the use of coal and other fossil fuels could warm the planet.

Pomerance stimulated interest in key environmental committees in the Congress and was among those assisting in the 1986 hearings of Sen. John H. Chafee of Rhode Island which alerted the nation to the threat. He attended the International Negotiations to Protect the Ozone Layer in

1986-87, which led to the Montreal Protocol, and is currently an observer to the Intergovernmental Panel on Climate Change.

At present he is a Senior Associate with the Climate, Energy and Pollution Program of the World Resources Institute of Washington, D.C. Among his many previous positions he has been President and CEO of Friends of the Earth a founder and coordinator of the National Clean Air Coalition, coordinator and chairman of the Urban Environment Conference — a coalition of labor, minority and environmental groups, founder and former chairman of the Board of Directors of American Rivers, and for

the last 1 1/2 years Chairman of the Board of the League of Conservation Voters.

Because of his many outside activities, in 1992 he stepped down from membership on the Institute's Board but plans to maintain close ties with the Institute and keep up with its activities.

Edgerton Elected VP at CALSTART

Board member Lynne Edgerton has accepted a position as vice president of CALSTART, a public-private consortium of over 40 public and private entities mobilized to help establish an advanced transportation technologies industry in California. "CALSTART's mission is to simultaneously create jobs and clean our air. The recent defense budget cuts have freed California aerospace and technology companies to embark on efforts to commercialize critical environmental technologies," said Ms. Edgerton.

The California Air Resources Board will require annual sales by automakers of approximately 40,000 zero-emission vehicles in California beginning in 1998.

CALSTART's leadership contributions include:

- o The introduction, on January 2, 1993, of CALSTART's Showcase Electric Vehicle displaying 17 advanced technologies.
- o The installation of 30 of 140 electric charging stations funded for 1993.
- o Five CALSTART electric buses in operation.

CALSTART participants include Pacific Gas and Electric, Lockheed, Southern California Edison, GM, a unit of Hughes Aircraft, Lawrence Livermore National Laboratory and the National Resources Defense Council.

Eastern European Briefing

Continuing a series of climate change briefings begun in Romania and Latvia in September 1991, Scott Stefanski, Director of Eastern European Programs, arranged briefings in Poland and Bulgaria during October, the first to take place after the signing of the Climate Change Convention at the Rio Summit last June.

In Warsaw the four-member briefing team met with Environment Minister Hortmanowicz, members of the Ministry for Industry, governmental and nongovernmental representatives and scientists. Prof. M. Sadowski, Poland's senior adviser on climate change, provided scientific background on global warming.

One team member, Prof. Radwanski of the Poland Foundation for Energy Efficiency, had earlier conducted an inventory of greenhouse gas emissions for Poland, and another, Ella Lammers of the Free University of Amsterdam, will be working on a more comprehensive inventory, sponsored by UNEP.

Members of the the Ministry of Industry expressed interest in harnessing methane from coal mines

and possibilities for assistance in closing methane leaks in Poland's natural gas pipelines.

In Sofia, Stefanski was joined by Dr. Rumen Bojkov, special advisor for ozone and global change to the World Meteorological Organization and UNEP. Discussions focused on the need for 1) an intersectoral approach to monitoring, 2) a national emissions inventory and 3) development of mitigation strategies.

Last March, the Institute held briefings in Budapest, which included Hungarian ministry officials and members of the parliamentary committee for the environment, during a critical time of policy debate on the degree of stringency the Hungarian government should practice in trying to meet a timetable for reduction of greenhouse gas emissions.

Besides Stefanski, the team included Dr. Thomas Downing of the Environmental Change Unit at Oxford University, Dr. Tibor Farago, Director of the Hungarian Meteorological Institute, Harry Lehmann of the Wupperthal Institute, and Dr. Frank Rijsberman of a Netherlands-based group, Resource Analysis.

Energy

(Continued from page 1)

(OMB) and former Congressional Budget Office Director Alice Rivlin for OMB Deputy Director — suggest that Clinton may give budget deficit restraint a higher priority than he had indicated in the campaign. As House Budget Committee Chairman, Panetta has been an advocate of an aggressive strategy to reduce the deficit including potentially unpopular limitations on entitlements and increased taxes. Rivlin was a member of a blue ribbon commission headed by Russell Train which called for a twenty-cent increase in the gasoline tax each year for the next five years as a deficit reduction measure.

Clinton reportedly opened the door a little to the possibility of an energy or gasoline tax proposal following a sobering briefing December 7, 1992 at Blair House which unveiled a budget deficit forecast that was tens of billions higher annually than had been forecast in the Putting People First economic formulation of the Clinton-Gore campaign.

At the subsequent Little Rock Economic Summit, support for a gasoline tax hike came from a number of directions including industry leaders such as Ford Motor Company Chairman Harold Poling. Shortly before the summit, the Big Three automakers agreed to support a gas tax hike.

A variety of revenue-raising options are being floated including a carbon tax based on emissions of greenhouse gases, a BTU tax based on the amount of heat generated in British Thermal Units, and an increase in the federal gasoline tax. A carbon tax would tend to optimize reductions in carbon dioxide emissions and might encourage considerable fuel-switching, especially from coal. A BTU tax would tend to encourage energy conservation across the board and would have a smaller impact on coal use.

A gasoline tax increase could be a powerful revenue-raiser — about one billion dollars annually for each cent of increase (\$900 million according to the Congressional Budget Office) — and it would be expected to produce modest decreases in fuel consumption, U.S. oil imports and greenhouse emissions. Its conservation benefits would be restricted to the transportation sector, and rural dwellers would be most affected.

Any of these proposals or some combination would face formidable political hurdles, but failure to act decisively to slow the deficit spiral would risk an upsurge in interest rates that would choke off the recovery. Clinton's highest economic priority is likely to be enactment of some form of health care cost containment. Yet the deficit reduction aspects of this initiative are likely to be well in the future, particularly if it is coupled with a broadening of health insurance coverage. Increased energy taxes on the other hand may send an immediate message to skeptical U.S. and foreign investors that the Clinton-Gore administration tends to contain the deficit.



President Bill Clinton

A gasoline tax increase could be a powerful revenue-raiser

Although the incoming administration appears on the verge of endorsing some phased-in energy

taxes, President Clinton seems insistent on coupling such a tax with some variant of a middle class tax cut, perhaps a reduced payroll tax, an increased earned income credit, or a child credit.

If the President and Congress were to enact a significant tax on the scale of that advocated by either Ross Perot or the Train Commission, analysis done by the U.S. Environmental Protection Agency (EPA) indicates that the U.S. could stabilize its greenhouse emissions in the year 2000 at 1990 levels, as sought by the Framework Convention on Climate Change which was recently ratified by the U.S. Senate.

Besides the reduced energy use and emissions associated with such a tax, the U.S. is already making headway with several voluntary industry-government cooperative initiatives. The Green Lights Initiative of EPA's air office has persuaded many major firms and state governments to invest in super efficient lighting, often with very quick payback. EPA's policy office and the Department of Energy are considering proposing a voluntary program under which major industries could calculate their overall emissions and set their own targets of reductions. Moreover the recently enacted national energy legislation will provide further incentives toward conservation.

As the Clinton-Gore administration assumes power, it would be well positioned to reassert U.S. leadership on global environmental issues. The one lasting Bush administration contribution, a relatively well-funded U.S. Global Change Research Program (USGCRP), provides almost half of the world's funding on scientific research into climate change and related issues. In his outgoing FY 94 budget, Bush is expected to propose a 15-20 percent increase in funding for USGCRP, from \$1.3 billion in FY93 to about \$1.5 billion in FY94. This progress on scientific research has been offset by

internecine warfare among administration agencies on policy issues and a persistent clumsiness in presenting the U.S. case in the international arena.

The unsurprising emergence of Vice President Al Gore as an administration point person on environment issues suggests that the Clinton-Gore administration may speak with a single voice on global environmental issues. Al Gore, who appears to have developed remarkable personal and intellectual rapport with Bill Clinton during the general election campaign, is likely to be calling the shots.

Carol Browner, Florida environment commissioner and before that legislative director for Gore, has been named to head EPA. Hazel O'Leary, a conservation-minded utility executive who has been designated to head the Department of Energy, has already indicated that one of her priorities will be to address the global warming challenge.

Named to the helm of the Department of Interior, the agency that has fought the EPA most fiercely on stratospheric ozone depletion and

climate change, is Bruce Babbitt, President of the League of Conservation Voters and former Governor of Arizona. On the key global environmental issues each of those individuals appears sympathetic with Gore.

The first major action of the Clinton-Gore Administration on climate change is expected to be a strengthening of the currently weak draft national action plan developed by the executive branch to meet the U.S. obligations under the Framework Convention on Climate Change. In mid-December the EPA dissented vehemently from an administration decision to issue this version of a draft national action plan and argued that this would fail to meet the U.S.'s treaty obligations.

Soon after taking office Gore can be expected to press to ensure that muscle is placed into the U.S. national action plan. Having written passionately in his best-selling book, *Earth in the Balance*, of the threat to biodiversity posed by untrammelled development, Gore is likely to put his prestige on the line to ensure that the U.S. does not remain the lone OECD holdout from this relatively modest treaty.

Climate Institute Issues 6-Year Report

The Climate Institute has grown in six years from a group founded by a few leaders of the U.S. air pollution effort to a bridge between scientists and policy makers around the world. Concern about global warming and stratospheric ozone depletion, at first largely ignored by the public, has now become the subject of an international conference attracting the largest gathering ever of world leaders.

The Institute's role during this period has been chronicled in a 24-page illustrated report which has just been issued. The six-year report, "Bridging the Globe," details the spread of Institute activities from a focus on North America to ministerial briefings in 20 countries and to the organizing of country studies in eight Asian Pacific nations.

If you wish to obtain a free copy of the report, please send to the Institute a request for "Bridging the Globe" along with your name and address.

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Five Nations Have Now Ratified Framework Climate Change Treaty

The United States has become the fourth nation to ratify the United Nations Framework on Climate Change, presented at the Rio Summit Conference in June, and the first nation that needed legislative approval for ratification. Earlier ratifiers were Mauritius, the Seychelles, and the Marshall Islands. Canada has now also ratified.

In a two-stage process, the Convention is first signed and then ratified. The Convention has already been signed by more than 150 nations and will remain open for signatures at United Nations Headquarters until June 19, 1993. It will enter into force after ratification by 50 State parties.

The Convention's aim is to protect the atmosphere from a build-up of anthropogenic gases that trap

heat from the sun, producing a greenhouse effect. The final document does not provide specific timetables and targets for limiting emissions. It sets as an objective the stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous interference with the climate system and would allow ecosystems to adapt naturally to climate change.

As a first step, developed-country parties recognize the importance of returning to their 1990 levels of emissions by the end of this decade. A Conference of the parties will make decisions regarding subsequent steps, as needed. There will be reviews, at least twice before the year 2000, of the implementation of the commitments as well as for amendments.

Report on ENSO and Climate Change Available

The IPCC scientific assessment of the impact of climate change paid only brief attention to the ENSO phenomenon — the term now used by scientists to describe the El Nino (ocean component) and the Southern Oscillation (atmospheric component) that includes both warming and cooling of sea surface temperatures. A working group of 21 participants from Australia, Brazil, Chile, China, Indonesia, the Philippines, Thailand, Vietnam and the USA met on November 4-7, 1991 in Bangkok to examine the relationship of ENSO and possible changes in extreme weather events, focusing especially on societal impacts. Dr. Michael Glantz of the National Center for Atmospheric Research (NCAR) coordinated and chaired the workshop. The Report on ENSO and Climate Change is now available from D. Jan Stewart, NCAR/ESIG, P.O. BOX 3000, Boulder, CO 80307

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Inside:

Climate Change and
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