

Climate Alert

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Costly Clouds Over Your State?

The average annual cost in the US from tornadoes, hurricanes, floods, lightning, and hail is over \$11.4 billion, according to a new web site created at NCAR, which shows state-by-state economic losses from weather disasters. The 2001 edition of the "Extreme Weather Sourcebook" provides quick access to data on cost of damages from major weather events in the United States. The web site reports decades of information in constant 1999 dollars, and is a good starting point for understanding how weather affects people's lives. It reveals that Florida has the highest annual average total damage costs from hurricane, floods and tornadoes, with Louisiana and Texas ranking second and third. Wyoming and Delaware suffer the least amount of damage, ranking last in economic losses.

The report can be found at: www.esig.ucar.edu/sourcebook

COMMENTARY: GETTING IT RIGHT THIS TIME

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

The failure of the two weeks of intense negotiations this November at COP 6 in The Hague to result in agreement on procedures to implement the Kyoto Protocol has to many cast a pall over the future of climate protection efforts. Yet a more thoughtful analysis may augur a more promising outlook for climate protection, even should the Kyoto process founder.

Although the Kyoto negotiations helped induce more significant clean energy investments by international energy and auto companies, the Protocol could still be viewed as a fig leaf to give politicians an ability to tell their constituencies they had acted to address climate change. An increasingly compelling body of scientific evidence has indicated that real climate protection may require a very different approach. Stabilization of global greenhouse emissions will ultimately require a reduction in annual global emissions of the principal greenhouse gases about 60% below 1990 levels.

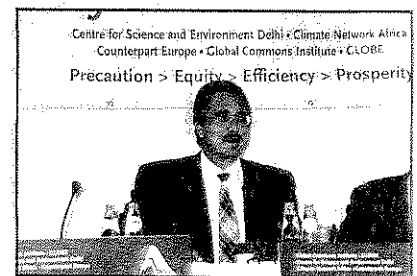
Yet Kyoto, even if fully implemented and adhered to by all industrial countries, will result instead in an increase by 2012 of about 30% in annual global emissions, a slight improvement over no actions where a 40% emissions increase would be expected, but the functional equivalent of reducing the gash in the side of the Titanic but still permitting the ship to sink with almost the same loss of life. Even before the impasse at COP 6 Kyoto's prospects were dim. Had Vice President Gore, a Kyoto architect, prevailed in Florida, it is doubtful the Protocol as written could have commanded more than two dozen votes in a 100 member US Senate. President Bush, although endorsing in the presidential campaign US domestic carbon caps, has also made clear his concerns that the Kyoto Protocol's lack of universality makes it an ineffective vehicle for climate protection. Meanwhile, most other industrial countries seem unlikely to ratify until the US moves in the same direction.

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St. Lucian Prime Minister Challenges World Community to Join His Nation in Slashing Carbon Emissions

The small island nation of St. Lucia sent a strong message to the bigger nations of the world to take action and do something about the rising temperature of the planet's atmosphere. At the Sixth Session of the UNFCCC Conference of the Parties in the Hague in November, 2000, Dr. Kenny D. Anthony, Prime Minister of St. Lucia made a historic speech at a side event organized by the Global Commons Institute, Counterpart International, Climate Institute and other partner organizations.

St. Lucia, a Caribbean nation with a population of just over 150,000, is undertaking a series of renewable energy and energy efficiency projects as the implementation of a comprehensive sustainable energy plan, developed with the assistance of the Climate Institute. It hopes to create a nation dependent largely on its naturally available renewable energy base and set an example for the rest of the world. The Prime



Prime Minister Dr. Kenny D. Anthony

Minister emphasized the need for action to stop global warming and listed a number of activities and measures that the St. Lucian Government is planning, to become a demonstration country for the rest of the world.

St. Lucia's sustainable energy plan emerged from last year's climate change meeting in Bonn, Anthony said. "Having suffered from new trade rules that have severely hindered our banana industry," he said, "we have learned the

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St. Lucian Prime Minister's Challenge (cont'd from page 1)

importance of taking matters into our own hands. In the same way that we are restructuring the banana industry and diversifying the agricultural sector in response to the realities of trade liberalization, we have also made big strides in reducing our reliance on the consumption of fossil fuel by taking the lead in the renewable energy sector." He referred to the Sustainable Energy Plan being developed by the St. Lucian Government, which calls for action and sets targets in a number of areas. These include greater exploitation of renewable sources of energy, demand side management, energy efficiency and conservation, a framework for facilitating the involvement of independent power producers, the rationalization of road transport as well as the use of fiscal incentives to support various elements of the plan.

"I must point out that the development of this plan is not a theoretical exercise," he said. He mentioned the steps already taken by the Government including removal of all taxes on renewable energy technologies, an agreement with Toronto-based Probyn & Company to develop a wind farm on the island, wind resource assessment and geothermal exploration. "We are seeking partners for implementing a wind-based irrigation demonstration project," he added.

There are strong economic reasons for pursuing this path, the Prime Minister said. "We see opportunities for new investments, technological advancement, the creation of quality employment opportunities as well as some measures of isolation from the steadily increasing price of fossil fuels." However, he said, the size of his island and technological base would not allow for experimental technologies." He repeated the oft-stated small island state position that although the contribution to global warming by these nations is minuscule, they are being asked to "environmentally subsidize our more powerful friends." It worried him, he said, to be denied industrial strategies for development that were used by "our more fortunate fellow travelers."

He thanked the Climate Institute, Counterpart International, and all the other organizers of the event. He said, "We entered into a partnership with the Climate Institute, and through this organization, have received assistance from the Organization of American States, United Nations Development Programme, the United States Department of Energy, and a number of other organizations that are assisting St. Lucia." He said, "this is not an exclusive club. There are opportunities for others to demonstrate their vision for a safer world by participating in this initiative. I challenge them to do so." The Prime Minister received a standing ovation for his speech and the leadership shown by his nation.

Lelei Lelaulu, Vice President of Counterpart International thanked

the Prime Minister for his remarkable speech and announced the launch of a new international initiative in the spirit of the St. Lucian Sustainable Energy Demonstration Country Project. Following the example being set by St. Lucia and to replicate this example among other small island states, at the COP6 event, a Global Sustainable Energy Islands Initiative was launched. To organize and implement this initiative a consortium of five international non-profit organizations was formed—these include the Climate Institute, Counterpart International, Forum for Energy and Development (FED), Organization of American States (OAS) and Winrock International.

Hon. Tom Roper, Board Member of the Climate Institute, gave the details of the initiative. The Global Sustainable Energy Islands Initiative over the next three years will identify and work with 6 to 10 small island states from the Caribbean, the Pacific and the Indian Ocean regions, and develop and assist in implementation of national sustainable energy plans to take these nations on a path of energy self-sufficiency and independence from fossil fuel. The initiative will build upon work already on-going in St. Lucia by the Climate Institute in partnership with the OAS; in the Dominican Republic and the broader Caribbean island nations by Winrock; and in the South Pacific by Counterpart International and FED.

In launching as many as a half dozen nations on a path to wholesale energy transformation, this initiative could inject new momentum in a badly stalled climate negotiation process. Although the small island states share of global emissions is tiny, the willingness of several such nations to move as close as technically feasible toward zero carbon emissions could stimulate more populous countries to greater action.

For more information check: www.climate.org/st_lucia.html



Science and the Environment

The Calm Before the Storm: Preparing for the Next El Niño

Vulnerable countries around the globe need to begin preparing for the next El Niño now, according to a recent United Nations report prepared by the US National Center for Atmospheric Research's Mickey Glantz and funded by the UN Foundation. "Lessons Learned from the 1997-98 El Niño: Once Burned Twice Shy?" presents the results of a 19-month study of 16 countries that examined what worked and what didn't in national responses to the forecast and impacts of the 1997-98 El Niño.

Dubbed the "El Niño of the Century," the 1997-98 event spawned devastating droughts, floods, fires and frost around the world, resulting in loss of life, destruction of infrastructure, depletion of food and water reserves, displacement of communities, and outbreaks of disease. It is believed to have caused at least \$32 billion in damages. The comprehensive report suggests ways to improve societal responses to extreme climate events. The assessment reviews the forecasts and impacts of the event, as well as the early warning and natural disaster preparedness systems in order to improve coping mechanisms.

The project identified research and policy needs and developed suggestions for regional and national disaster preparedness plans for future climatic events. Calls for action in the report are tailored to each country's needs. Recommendations include involving the heads of states early in climate disaster policy and action; creating regional organizations focused strictly on El Niño impacts; educating local educators and decision-makers on how best to use El Niño forecasts; and developing a scientific establishment within each country to use research results from around the world.

The report can be found at: <http://www.esig.ucar.edu/un/enFinal.pdf>
To order a hard copy, write to: Ms. D. Jan Stewart
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GETTING IT RIGHT THIS TIME (cont'd from page 1)

Yet two complementary developments may have opened a parallel track that could ultimately achieve the real emissions reductions so elusive in the Kyoto negotiations. These include the creation in July 2000 at the G-8 summit in Nago, Okinawa of a task force on extending renewable energy to many of the two billion in the world who today lack access to electricity and actions by a few small countries to transform their energy systems.

The initiative taken at the urging of British Prime Minister Tony Blair augurs to be one of the most significant ever put forward by the G-8 or G-7 (the group before Russia joined the sessions). A high level task force of energy experts was immediately set up under the joint Chairmanship of Sir Mark Moody-Stuart, CEO of Royal Dutch Shell, and Dr. Corrado Clini, Director-General of Italy's Environment Department. The task force, whose membership includes several highly regarded energy experts in developing countries, will report its recommendations to the G-8 at the Summit set for Genoa, Italy in the summer of 2001. Satisfaction of the pressing need of developing countries to extend access to electricity to the roughly two billion who now lack it would increase ability of rural dwellers to maintain their livelihoods, slow migration to overcrowded cities and provide the scaling up of emerging clean energy technologies to speed a global clean energy revolution akin in some ways to the ongoing revolutions sweeping the computer and telecommunication industries. In the long run this catalyzing of market demand is much more likely than a regulatory driven approach to produce the energy transformation needed to stabilize global greenhouse gas concentrations. Ironically by focusing on larger development needs it might produce much more dramatic overall emissions reductions than the current climate negotiations which are hinged on allocation of emission reduction burdens; for that reason it might appeal alike to developing countries and the US Senate which has had grave misgivings with the Kyoto process.

The G-8 renewable energy initiative advanced by Tony Blair and supported vigorously by Italy and Japan may also provide common ground for developing countries, the US Senate and George Bush. The incoming US President, while governor of Texas, signed legislation whereby Texas deregulated its electric power market, became only the third state to end exemptions from air pollution technology requirements for old coal fired power plants and set out to ensure that 2000 megawatts of new renewable energy would be in place by 2009. Active encouragement of renewables in developing countries would be a practical means of meeting legitimate US Senate concerns that spiraling emissions growth in such countries could overwhelm any benefits from US domestic reductions.

Even before the G-8 acted to place renewable energy development front and center on the international agenda, several small countries had taken pioneering leadership initiatives on these issues. Perhaps the most ambitious of these is the Caribbean island of St. Lucia whose 153,000

inhabitants could see their nation achieve its goal of becoming the world's first Sustainable Energy Demonstration Country by moving from a costly diesel powered electric sector toward a predominantly wind and geothermal base. Other small island countries considering a similar course include Vanuatu, Tuvalu and Niue in the Pacific, the Maldives in the Indian Ocean, and Grenada and Dominica in the Caribbean, each likely to employ a mix of energy efficiency and renewables suited to its resources. Although energy needs of small island states have been off the radar of most industrial country aid programs which are targeted toward large emitting countries, Denmark has been active in helping such efforts and encouraging sustainable energy on Danish islands. Like St. Lucia, which expects to slash energy costs and carbon emissions in the same effort, Denmark is an instructive example of how environmental and economic objectives can be pursued in a mutually reinforcing manner. Building a domestic wind energy industry nurtured first in its agricultural cooperatives, Denmark has moved to the forefront of wind power development with Danish firms now holding over half of the world export market for wind turbines. Iceland, already blessed with a strong base of geothermal energy, is seeking to leverage this to become the world's first hydrogen powered economy with much of this transformation in place by 2030. At the initiative of its President then, Jose Maria Figueres, Costa Rica before Kyoto committed to a sweeping energy transformation toward non-fossil energy. Although the opposition party now has Costa Rica's Presidency, this Central American nation is in the forefront of forestry planting and preservation efforts and clean energy initiatives tapping wherever possible financing from debt for nature swaps, voluntary carbon offset efforts and projects anticipating possible Clean Development Mechanism credits.

Although these small country efforts in total emissions reduction potential may seem less than a single province of China, they have a significance far transcending their aggregate emissions. By demonstrating that entire nation states can transform their energy systems to a low or no carbon energy base and sometimes while also reducing costs, these initiatives will have shown that stabilization of global concentrations of greenhouse gases may be achievable. The remarkable performance of stocks of firms with emerging energy technologies when most technology stocks have taken a beating is likely to reinforce a growing willingness of individual and corporate investors to bet on clean energy. Success in some of the national energy transformation efforts now underway will likely reinforce this trend.

Ultimately with rapid development of grid based clean energy as in St. Lucia or off grid renewables in many rural areas of other nations we may see the rapid commercialization of emerging low carbon energy systems with the economies of scale and technological innovations that have driven the information revolution. In the process we may realize the emissions reductions which have proved so elusive in the formal negotiations.

Future Climate Alert Issues

- Carbon Care: An Innovative Approach to Carbon Reduction?
- An insight into the Honda Insight.
- Social Investing
- 10 Simple Things to do to create a better, more energy-efficient world
- Environmental Issues of Mega-cities
- COP VII, Morocco

Record Cold Grips much of the US in November and December: Two-Month Period is Coldest on Record in US

The National Oceanic and Atmospheric Administration (NOAA) scientists recently announced that the US national temperature during the November through December two-month period was the coldest such period on record. The scientists work with data from the world's largest statistical weather database at National Oceanic and Atmospheric Administration's National Climatic Data Center in Asheville, North Carolina.

Following the second coldest November on record in the US, below normal temperatures continue to grip much of the nation in December. With an average temperature of 28.9°F, December 2000 was the seventh coldest December since national records began in 1895. Jay Lawrimore, chief of the Climate Monitoring Branch at the National Climatic Data Center, said, "Two months in a row of much below average temperatures resulted in the coldest November-December US temperature on record, 33.8°F." This broke the old record of 34.2°F set in 1898. Near record cold temperatures for the same period occurred most recently in 1985 and 1983, when the nation's average temperature was 34.6°F and 34.8°F respectively, the third and fifth coldest such two-month periods on record.

Forty-three states within the contiguous US recorded below average temperatures during the November-December period. The only states with near-normal temperatures were Nevada, New Mexico, New Hampshire, Vermont and Maine. Severe winter conditions hit the Central and Southern Plains particularly hard. The coldest November-December on record occurred in Oklahoma, Arkansas and Missouri, while six states experienced the second coldest such two-month period (Illinois, Iowa, Kansas, Texas, Louisiana and Mississippi). For Dallas-Fort Worth, December 2000 was 7.5 degrees below normal at 39.4°F.

Heavy snow also accompanied the cold in many areas, particularly throughout the Plains and Upper-Midwest.

- In Buffalo, NY, snowfall records were set during the three-month period of October-December, where a total of 95.9 inches broke the previous record of 92.2 inches.
- At Midway Airport in Chicago, Ill. Snowfall records were set for a 24-hour period, where a total of 14.5 inches broke the previous record set in December 1960.
- December snowfall records were set in Marquette, Mich., where a total of 89.5 inches broke the previous record of 82.6 inches set in December 1981.

Cities such as Milwaukee, Wis., Waterloo, Iowa, and Amarillo, Texas, also set records for the most snowfall in the month of December. While precipitation amounts were normal to above normal throughout the central and eastern US, except for the mid-Atlantic region, the West and Northwest regions (composed of Washington, Oregon, Indiana, Nevada, California) recorded their fourth driest November-December since records began in 1895.

Retired Brig. Gen. Jack Kelly, director of NOAA's National Weather Service, said 2000 was shaped by variability and extremes, which will continue throughout the winter. Updating the winter 2000-01 outlook, Kelly said, "The eastern and western United States will experience additional cold outbreaks at least through March with periods of moderation in between."

This prolonged cold outbreak came at the end of the year that began with the warmest winter on record in the US. Above normal temperatures continued through the month of October and made the January through October 2000 period the warmest such ten-month period since national temperature records began in 1895. Preliminary data indicates that 2000 was the 13th warmest year on record in the US, 1.2°F above the long-term average of 52.8°F.

Even though average long-term US and global temperatures are warmer than they were a century ago, dramatic short-term swings in temperature are to be expected due to variability in circulation patterns. This variability can lead to periods of record cold temperatures while long-term trends remain positive. Although the US has experienced periods of much below average temperatures throughout the past century, temperatures have risen approximately 1°F since 1900.

During the same period global temperatures have increased at a rate near 1.1°F/century. Global temperatures in 2000 are expected to be similar to those recorded in 1999, the fifth warmest year since records began in 1880. The only years warmer were 1998, 1997, 1995, and 1990. The ten warmest years on record have all occurred since 1983.

Maps showing preliminary data will be on-line on Jan. 5 at http://www.ncdc.noaa.gov/ol/climate/research/prelim/US/US_prelim.html.

Source: US Department of Commerce, NOAA press release.

Climate Resources on the Web

www.sima.com.mx

This site is an environmental information system, which applies the most modern available technology to spread environmental information. It provides on-line real-time daily air quality data and information. Mexico City and Los Angeles, CA were the first metropolitan areas to provide information of this kind.

www.epa.gov/empact

EMPACT (Environmental Monitoring for Public Access and Community Tracking) is a new program available to Americans in 156 of the larger Metropolitan Statistical Areas in the US which brings people up-to-date environmental information they can understand and use in their day-to-day decision-making to protect their health and the environment.

www.nationalgeographic.com

This award-winning site takes you through the pages of the venerable magazine, National Geographic. A virtual museum visit, a kids magazine, a very exhaustive search engine, and a mini-encyclopedia are a few of the things available at the site which receives more than a million visits each month, and has grown to more than 10,000 screens.

Financing Energy Efficiency Roundtable in Ghana

Energy efficiency and conservation remain one of the cheapest approaches to reducing greenhouse gas emissions while simultaneously providing economic benefits.

With most of the projected growth in energy consumption and greenhouse gas emissions expected from developing countries; the most strategic approach to helping reduce this growth is to commit resources to renewable energy and energy conservation at all levels of the economy.

The West African nation of Ghana has been raising awareness of the opportunities for achieving improvements in industrial performance and competitiveness, through energy efficiency and demand management measures for more than a decade with some success.

An institutional framework has been set up for energy conservation management, with the training and development of local expertise and the establishment of energy service companies (ESCOs). These accomplishments have been due in no small part to the Ghana Energy Foundation, which spearheads the promotion of energy conservation in Ghana.

Recent increases in power tariffs and petroleum prices in Ghana have meant increases in energy and overall operating costs for most industries. Firms are beginning to realize that improving the efficiency of their equipment and operating processes is crucial to their survival.

With several factors hindering the implementation of the Foundation's programs and almost no investment capital going to energy conservation efforts, energy efficiency programs have so far yielded only moderate gains.

With this in mind the Foundation organized a National Forum on Energy Efficiency in January 1999, which among other things recommended the establishment of a fund from which ESCOs and Small and Medium Enterprises could borrow to finance energy efficiency projects. The Danish development agency has contributed a mobile energy audit service and a grant to assist in the establishment of this Fund.

On September 19, 2000 a follow-up roundtable was organized by the Ghana Energy Foundation and the Climate Institute in Accra, Ghana with 43 participants from the financial community and representatives from the Ghana Association of Energy Service Companies, donor agencies and several industry groups. The objectives of the roundtable were to examine a financial strategy for investing in energy efficiency projects in Ghana, discussing several options for improving energy efficiency financing, and sensitizing bankers on opportunities in the efficiency market.

In his welcome address, Dr. Ofori-Ahenkorah, Executive Director of the Ghana Energy Foundation, recalled the power crisis of 1998 and the unpleasant prospects of a global energy crisis as incentives to take immediate steps to improve the energy efficiency operations of SMEs.

He identified factors that have militated against the mass adoption of energy efficient technologies as lack of information, absence of energy-efficient products on the market, the lack of capital, and low energy tariffs (as a result of a depreciating currency). He pointed out that the lack of investment capital has led many consumers to choose less energy-efficient products, in spite of their worldwide acceptance and availability.

He recognized the assistance of the Climate Institute in sponsoring the roundtable and over several years in the outreach campaign of the Foundation and the ESCO community in Ghana including the immensely popular "Energy Wise" brochure and providing international

networking opportunities for Foundation staff.

The Chairman of the Governing Council of the Ghana Energy Foundation and Executive Director of the Association of Ghana Industries, Mr. Andrew Quayson, observed that in spite of the proven benefits of energy efficiency and conservation, most firms still used inefficient machinery. He acknowledged the lack of financial mechanisms to promote energy efficiency, and said the Ghana Energy Foundation was in the final stages of setting up a Trust Fund to be used for the financing of energy efficiency projects.



L-R, Christopher Dabi, Dr. Brobbey, Mr. Andrew Quayson, Dr. Ahenkorah.

Christopher Dabi, representing the Climate Institute, said the Institute shared the optimism and enthusiasm of the roundtable participants and was honored to be a part of a pioneering event in the financing of energy efficiency in Ghana. He drew attention to the growing concern about human influence on greenhouse gases and global climate. He emphasized the importance for developing countries to begin to tackle this and other development problems using

whatever means they have available—local finance to support renewable energy and energy efficiency to spur sustainable growth in their economies.

The roundtable addressed and recommended other issues including:

- developing local, regional and other international partnerships for investment opportunities.
- developing financial institution capacity for energy efficiency investments including technical verifications of savings.
- financial mechanisms to help reduce credit risk and assist in recouping financial investments.
- credit lines and other financial support for end users, equipment manufacturers and ESCOs.
- social and development importance of energy conservation; economic indicators such as high interest rates, foreign currency constraints and the high exchange rates, the relative inaccessibility of SMEs to financial institution funds for equipment import etc.; and the depreciating currency.

A full report can be accessed on-line at: www.climate.org

Climate Perks

The US Environmental Protection Agency has released a CD-ROM outreach kit containing a wealth of information about global warming impacts and solutions.

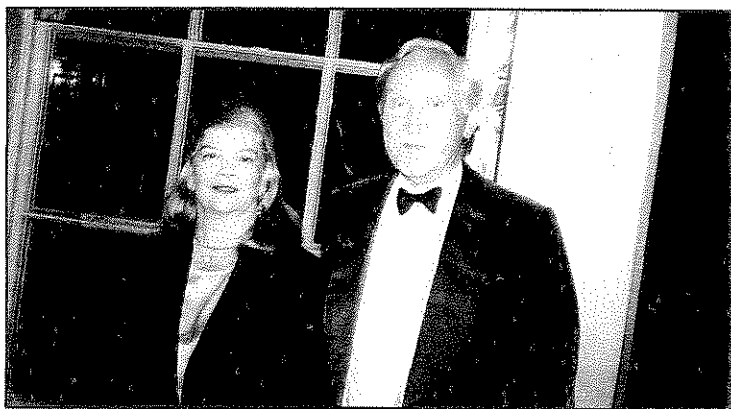
It includes:

- a slideshow and script on climate change ready for presentation;
- a glossary of climate change and a list of useful climate internet links;
- camera-ready background pictures;
- brochures and exhibits that can be ordered for use at meetings and workshops and more than 100 downloadable information sheets on topics such as technology solutions and climate impacts on the 50 US states.

For copies send a postcard with your name, title, organization, address, phone, fax, email to: Dan Moffroid, ICF Consulting, 1850 K Street, NW, Ste. 1000, WDC 20006 or 202-862-1583 or dmoffroid@icfconsulting.com.

For over a decade Sir Crispin Tickell, the Institute's Chairman since September 1990, has also served as a senior advisor on climate and other environmental matters to three British Prime Ministers, Margaret Thatcher, John Major and Tony Blair. During much of this time he has also advised top leaders in China as a member of the Council on International Cooperation on Environment and Development.

In these capacities he has been a strong proponent of clean energy technologies as a means of both addressing global environmental challenges and serving pressing social development needs. These ideas have had an especially enthusiastic champion this past year in Prime Minister Tony Blair. Following up on advice from stakeholder meetings held to



Sir Crispin & Lady Tickell

prepare for the July 2000 Okinawa Summit of the G-8 leaders (Canada, France, Germany, Italy, Japan, Russia, UK and US) Prime Minister Blair advocated that the world leaders place high on their agenda delivery of clean electricity to the roughly two billion people who now lack access to it. With strong support from the Japanese hosts Blair's proposal was unanimously adopted and incorporated as Paragraph 66 of the Summit Communique. (See Commentary in this issue)

Sir Crispin also participated in September 2000 in two meetings in China on environment and development issues. Throughout these he saw evidence of a growing awareness of the need to employ cleaner energy systems to meet development needs and also address both local pollution problems and a threat of disruptive climate change viewed with increasing seriousness by top Chinese leaders.

During this same time period he was feted by Penelope Lady Tickell at a 70th birthday party at Green College at Oxford which drew many friends, including leaders in science and environmental protection.

The Institute's Co-Chairman, Dr. Stephen Leatherman, Director of the International Hurricane Center at Florida International University, is co-editor of a widely acclaimed book, *Sea Level Rise: History and Consequences*. Edited by Bruce Douglas, Michael Kearney and Stephen Leatherman, this book is being viewed by many specialists as the best compilation of materials on the topic. This volume surveys the history of sea level rise since the last deglaciation began approximately 20,000 years ago; it also addresses impacts of sea level rise on human society over the past century. This book which is likely to be adopted as a text in many environmental science courses is published by Academic Press and costs \$59.95. Information and review comments are on line at: www.apnet.com/geoscience/ocean.html

Martin Parry, who has been a member of the Institute's Board since 1988, is now serving as Director of the Jackson Environment Institute which moved with Dr. Parry from University College London to the University of East Anglia in Norwich. Martin has for nearly two decades been a leader in analyses of implications of climate variability and change. His activities have included service as Editor of *Global Environmental Change*, Chair of the UK Climate Change Impacts Review Group and editor of its two reports and Chair of the IPCC Task Group on Scenarios for Climate Impact Assessment. He has recently been the driving force behind the ACACIA project, (A Concerted Action Towards a Comprehensive Climate Impacts and Adaptations Assessment for the European Union). This report whose findings were released in early November 2000 in Lisbon, Portugal where Martin was speaking at an international conference on climate change showed widely varying effects on various regions of Europe. Key conclusions of this study were that climate change will increase forest productivity in northern Europe and decrease it in southern Europe, increase potentially costly climate related claims in the insurance sector, increase overall agricultural productivity, modify patterns of tourism and outdoor recreational activities, increase vulnerability of coastal areas to flooding, erosion and wetland loss and increase adverse risks to human health. Generally countries in southern Europe are expected to bear the brunt of these adverse changes; the study does not project the implications of a shift in ocean circulation patterns, an event which would prove quite disruptive in northern Europe. Climate Institute President John Topping also spoke at the same conference in Lisbon addressed by Prof. Parry. His speech concerned energy policies needed to stabilize global greenhouse concentrations.

Hon. Tom Roper, a member of the Climate Institute Board since his retirement in 1994 from the Victorian Parliament, has for the past two and a half years been a leader in efforts to extend clean energy to developing countries. Roper, who in 1989 while Minister for Planning and Environment persuaded the Cabinet of Australia's second most populous state to become the first state or province in the world to adopt explicit CO₂ emission targets, has led a Small Island Sustainable Energy Initiative in which the Climate Institute and several partner groups have helped small island states, mostly dependent on expensive diesel-based electricity, to transform their economies toward a much greater renewable energy component. While leading this initiative he also served as Chair of the April 3-5, 2000 Seattle Summit on Protecting the World's Climate. He has spoken widely on this initiative and appeared on a panel at COP 6 in The Hague, Netherlands with The Rt. Hon. Dr. Kenny Anthony, Prime Minister of St. Lucia, and Lelei Lelaulu of Counterpart International to discuss St. Lucia's initiative to become the world's first Sustainable Energy Demonstration Country.

Dr. Devra Davis, who served for several years as Director of the Health Environment and Development Program at World Resources Institute (WRI), recently left WRI to join the faculty of Carnegie Mellon University. She is writing a book which will examine such problems as risks from air pollution, exposure to chemical compounds which may disrupt the human reproductive system or enhance risk of breast cancer, and also risks of such intergenerational challenges as global climate change. For over a year she has been serving as Lead Author of portions of the Intergovernmental Panel on Climate Change (IPCC) Third Assessment Report dealing with ancillary benefits and costs of carbon reductions.

Luis Roberto Acosta, Program Director of SIMA, on September 27, 2000 was awarded the Aleman Prize, Mexico's most coveted environmental prize, for his efforts in making UV and air quality data on-line on its web site www.sima.com.mx. Besides a medal and cash award from the Aleman Foundation, Acosta received from Daimler Chrysler a Mercedes Benz painted in the blue and cloud colors of the SIMA web site. DaimlerChrysler, whose fuel cell buses have been widely used in Mexico City's air quality efforts, has been a sponsor of the SIMA site. Since receiving the Aleman award Acosta has appeared on CNN en Espanol more than 30 times. The SIMA site is rapidly becoming a premier environmental site for Latin America with MSN and AOL Latin America both giving it very prominent positioning for their visitors or subscribers. SIMA recently concluded an agreement with Mexico's environment agency, SEMARNAT, as a result of which it should have air quality and UV data for three other Mexican cities - Guadalajara, Monterrey and Toluca - on line by mid-2001. Long-time Institute Board member Luis Manuel Guerra, President of Instituto Autonomo de Investigaciones Ecologicas and a pioneer in building public support in Mexico for air quality improvement, was instrumental in obtaining SEMARNAT approval for this effort. SIMA is a partner of the Climate Institute in an effort to provide air quality, UV and climate impacts information on-line for several metropolitan areas in the Western Hemisphere in English, French, Portuguese and Spanish.

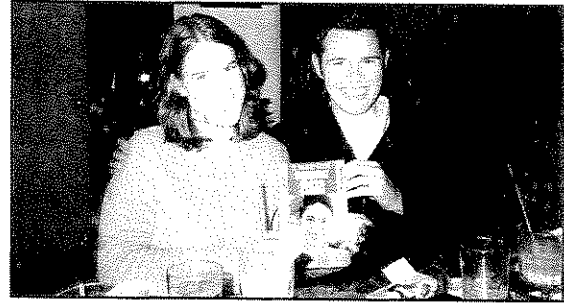
In the summer of 2000 three interns served at the Climate Institute: Frank Evans Campbell from Washington College, Katherine Hoff from Haverford College, and Michael Ring from Massachusetts Institute of Technology. All are pictured in a photo taken with Dr. Lester Brown, founder of Worldwatch Institute, a group with which the Institute works closely on its green energy programs. Evans Campbell worked on clean

energy initiatives in the Caribbean, Katherine Hoff on the Institute's initiative to make air quality information available on line, and Michael Ring on the development of a script for a video on Seattle Summit themes and enhancement of its web site. All three also worked on environmental challenges facing China.



Katherine Hoff, Michael Ring, Lester Brown, Evans Campbell

In November, Liz Ridler and Rob Morgan, both from the United Kingdom spent six weeks at the Institute. They assisted the Institute in research for a video on the on-going energy revolution.



Summer Interns Liz Ridler and Rob Morgan

AVAILABLE FROM THE CLIMATE INSTITUTE BOOKSTORE

Please send me

- copy/copies of Environmental Exodus: An Emergent Crisis in the Global Arena, by Norman Myers with Jennifer Kent, June 1995. Cost \$15 plus postage.

MEMBERSHIPS & CONTRIBUTIONS

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Seattle Summit

**ON PROTECTING
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The *Seattle Summit*, which drew together over 250 participants including some pioneers in the computer and telecommunications revolutions to discuss ways in which lessons from the information revolution might guide a rapid global clean energy transformation, attracted wide and positive media attention in the Pacific Northwest. Deliberations were carried live statewide by TVW, the Washington state public affairs channel, and many sessions ran repeatedly in the days between the Summit and Earth Day. The Conference had two major themes - that a global clean energy transformation comparable in speed and scope to the information revolution may be imminent and that the US Pacific Northwest and British Columbia long leaders in other high tech revolutions, could be in the forefront of a global clean energy transformation. In the weeks before and after the Summit this theme resonated well with the media and

political leaders in the region. The Seattle Times, the Portland Business Journal and television station KOMO stressed this theme in their coverage. The Summit's proposal of a Clean Energy Action Plan for the Cascadia region drew a positive front page story in the Daily Journal of Commerce, the morning after the Summit's close. Of perhaps greater significance, Seattle followed up on Mayor Paul Schell's call at the Summit's opening luncheon for Cascadia regional leadership on clean energy by announcing sweeping municipal commitments to speed its use of clean energy. Tuck Wilson, who was instrumental in the Summit's organization and chaired its session on regional transportation approaches, has been chosen as acting Director of the greater Seattle region effort to build a light rail system. Tuck headed the successful effort to extend Portland's light rail system 18 1/2 miles.



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