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Edited by Kimo Goree

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1) POSTCARDS TELL TALE OF ICY RETREAT

The Scotsman

August 3, 2002

Internet <http://www.thescotsman.co.uk/international.cfm?id=838342002>

GERMAN geologists have the most up-to-date equipment to measure global warming. But their most dramatic tool is old picture postcards, which bear stark witness to the retreat of Alpine glaciers over the past 100 years. Three years ago a Munich-based team of geological climatologists embarked upon a rummage through antiques shops, markets, state archives and university libraries for old photos and postcards of the type our great-grandfathers sent home from the Grand Tour. They collected 2,500 examples, each depicting the same thing: Alpine glaciers in all their shimmering, icy glory.

The researchers then went back to the exact spot from which the postcard pictures were taken and took a fresh picture of the glacier. They collated a photo essay of extreme climate change. In all cases, the glaciers have diminished considerably, dramatically altering the landscape they once dominated. The scientists,

working in conjunction with Greenpeace, are using the pictures as proof of climate warming in Europe. By comparing the old photos with modern ones, the Munich Society for Environmental Research believes laymen will be able to see with their own eyes how rapidly the glaciers have melted.

According to the World Glacier Monitoring organisation, glaciers are a "global thermometer" and reflect the world's rising temperature. "They are the most visible sign of climate change," said a spokesman for the Munich team. The great glaciers of Switzerland, Austria, Italy and parts of Germany are all in retreat. From the middle of the 19th century to about 1975, the giant ice fields shrank about a third in area and lost about half of their volume. In the last 25 years, they have melted even more quickly, losing an additional 20 to 30 per cent of their water content. The shrinkage of the Alpine glaciers affects more than just the mountain ecosystems.

Europe's biggest rivers, including Germany's Rhine, the Rhone in France and Italy's Po, spring from the glaciers. If the glaciers dry up, reservoirs will be endangered, the Munich researchers warn. In addition the retreating ice fields loosen boulders, leading to erosion and avalanches. For the experts meeting in Johannesburg at the end of August for the UN Climate Summit, the shrinking glaciers are a key indicator of global warming and a cause for worldwide concern, the Society for Environmental Research says.

Documenting the glacial melt is not an easy task. The scientists have to find the exact location depicted in the historical photos and the position from which the picture was taken. To do so, the geologists spent months hiking through the Alps, liaising with local climbers. They studied elevation maps, examined satellite images and measured paths and meadows. Equipped with the most modern surveying technology such as UV-gauges on the one hand and historic hiking maps on the other, the scientists were able to photograph the 60 largest Alpine glaciers pictured on the postcards. "We had to do a lot of climbing and clambering," said the team's project leader, Wolfgang Zaengl. "The postcards were our most invaluable tool."

Many of the old landscape markers, such as rock formations, are covered in grass and trees, said a team member, Sylvia Hamberger. "The old hiking paths and glacier terraces have disappeared, making orientation difficult." The team was able to photograph each of the glaciers and compare their size and shape to those in the historical photos. The results of their research and the glacial photo documentation have been published on the internet at www.gletscherarchiv.de

Looking at the pictures, the differences between then and now are obvious. The pictures tell the tragic story: the glaciers are rapidly vanishing. "We are witnesses to the fastest glacial melting in a thousand years," Mr Zaengl said. "But today we are lucky that we can still see the glaciers. Future generations probably will not."

2) RISING SEA LEVEL POSES PROBLEMS

Gulf News

August 2, 2002

Internet: <http://www.gulf-news.com/Articles/news.asp?ArticleID=59518>

Many low-lying countries in the Middle East, including the UAE, face a threat from rising sea levels and desertification caused by global warming. Writing in a special issue of the United Nations Environment Programme's (UNEP) bulletin *Our Planet on energy and the environment*, Sheikh Hamdan bin Zayed Al Nahyan, Minister of State for Foreign Affairs and Deputy Chairman of Environmental Research and Wildlife Development Agency (ERWDA), warned: "In the Middle East, we have a special need to pay attention to these warnings. "As many of the countries in the region are low-lying and short of water, we are under threat from rising sea levels and desertification." The minister also referred to the Intergovernmental Panel on Climate Change, which, earlier this year, concluded that by the end of this century sea levels could rise by as much as 88 centimetres. He said: "This can flood not only coastal areas of the United Arab Emirates, but also much of the heavily populated Nile Delta in Egypt and the lower reaches of the Tigris and Euphrates river system in Iraq."

Sheikh Hamdan further advised that oil producing countries in the Middle East have an obligation to future generations to tackle the causes of global warming. The compromise agreement on climate change reached in Marrakesh, Morocco, last November was a welcome news, but it needs to be translated into tangible and speedy action to address the causes of global warming. The minister, in his article carried by the UNEP bulletin, regretted: "We have seen too many deadlocked conferences where reluctance to give anything up has caused the threat to human livelihoods from rising temperatures to go on steadily increasing."

Referring to national efforts in containing global warming and controlling desertification, Sheikh Hamdan said: "In the UAE we are still a developing country even though we are blessed with the wealth bestowed upon us by our oil and gas reserves. "We are conscious that, in the process of funding ambitious development programmes, we have a responsibility not only towards our own environment, but also towards the planet." He said environmental threats have traditionally accompanied the production of oil. "We have made considerable strides in recent years to mitigate these dangers, and one major achievement has been a dramatic reduction in the flaring of gases from onshore and offshore oil fields." In 1995, some seven million cubic meters of gas was flared in Abu Dhabi everyday. "Today, we are down to 1.5 million, which is a 78 per cent reduction in just five years. Our objective is zero."

The UAE is also anxious to capitalise on the potential for renewable sources of energy like solar power. The results of the research into capturing clean energy from the sun through a new generation of solar panels are encouraging, he said, adding: "Before long it will be possible for us to construct buildings with photovoltaic panels that will generate most of their own energy requirements." The minister said there is a legal requirement for environmental baseline studies, impact assessments and to establish effective continuous monitoring programmes in the UAE's major onshore and offshore oil fields. All projects proposed by the Abu Dhabi oil sector, as well as those put up by the government departments, must be approved by the ERWDA. He said: "In fulfilling this requirement, we examine the results of the baseline studies and environmental impact assessments, and also take into account, where appropriate, both archaeological and paleontological issues."

As a result, the minister added, a number of major oil sector projects have had their original engineering designs changed in order to limit environmental impacts, for example through the drilling of clustered wells from a single hole and the increased use of directional and horizontal drilling. This leads to a winning situation as it puts the UAE oil sector at the cutting edge of new drilling technology. Sheikh Hamdan said: "Our heritage is one of a people who can survive in our fragile desert environment by learning to co-exist with nature and by developing a sustainable use of the resources. Otherwise our ancestors would have starved. "We recognise that today we have a global obligation to future generations and we are determined to play our part in securing the sustainable development they require."

3) CHANGES IN CLIMATE 'MAY CUT HOSPITAL ADMISSIONS'

Independent

August 2, 2002

Internet: <http://news.independent.co.uk/uk/health/story.jsp?story=320708>

Global climate change could cut hospital admissions by up to two million days by 2050 and cut winter deaths by 20,000, according to a Department of Health study published today. The report into the impact of warmer temperatures, drawn up to assess the NHS's ability to cope with the changes, also found that they could lead to thinner blood that would bring health benefits.

However, the global warming would bring with it a rise in skin cancers, heat stroke and food-poisoning. Heat-related deaths could rise by 2,000 a year and skin cancer could hit up to 30,000 more people a year.

Other downsides to hotter climes in the UK would be malaria-carrying mosquitoes and 2,000 more cases of cataracts. Several thousand extra deaths would occur in the summer as a result of air pollutants. The study, which is the final version of a draft published last year, will state that the unprecedented rate of climate change "may bring significant risks for human health".

The report comes as the Met Office announced yesterday that 2002 could be the hottest year on record.

4) EARTH GETTING FATTER AROUND THE MIDDLE

New Scientist

August 2, 2002

Internet: <http://www.newscientist.com/news/news.jsp?id=ns99992628>

Our planet has been getting a little fatter around the tropics since 1998, satellite data show - but geophysicists are baffled as to why. The prime suspect is changes in ocean circulation, which geophysicists plan to investigate. "If this really is ocean circulation, as we suspect, a better understanding of it could feed back into improved forecasts of weather and climate," says Christopher Cox, a geophysicist contracted by NASA's Goddard Space Flight Center in Greenbelt, Maryland. The Earth is wider at the equator than from pole to pole, mainly because the centrifugal forces of its rotation make it bulge outwards. Satellites can measure its average shape using gravity and altitude data. Over most of the past 20 years, these observations showed that overall the Earth is becoming more round. This is because the polar regions flattened under great ice sheets during the last ice age have been gradually being springing back up. But in 1998, that trend suddenly and unexpectedly reversed. Cox and his colleague Benjamin Chao studied observations from nine satellites and found that gravity at the equator has become stronger. This implies the circumference had expanded - by something like a millimeter.

Mass transfer

It was a complete surprise that the bulge at the Earth's equator is now getting bigger. "It has taken a few years for us to convince ourselves that what we're seeing is real," says Cox. The new trend implies that there has been a transfer of mass from high to low latitudes. But melting of polar ice and a resulting sea level rise all over the world does not explain it. A block of ice 10 kilometres wide and 5 km high would have to melt every year to explain the change - and this is not seen. A shift in matter at the boundary between the Earth's core and mantle might be one factor. But most likely, says Cox, some kind of unexpected ocean circulation has moved more water to low latitudes. He hopes to find out more by using satellite observations of sea surface height round the globe. "That measures which areas have gone up and which areas have gone down," he says.

5) WORLD HEADING FOR WARMEST YEAR YET - UK MET OFFICE

Planet Ark

August 2, 2002

Internet: <http://www.planetark.org/dailynewsstory.cfm/newsid/17146/story.htm>

LONDON - The first six months of the year have been the second warmest ever and average global temperatures in 2002 could be the highest ever recorded, British weather experts said yesterday. "Globally 2002 is likely to be warmer than 2001, and may even break the record set in 1998," said Briony Horton, the Meteorological Office's climate research scientist.

The Intergovernmental Panel on Climate Change, the body that advises governments on long-term climatic variations, blames global warming, caused by rising emissions of greenhouse gases which trap heat in the atmosphere, for the rise in temperatures, a Met Office spokesman said. "We agree with them," he told Reuters. "Since 1970 there has been a marked trend in the rise of global temperatures. "The actual rise prior to 1970 was partly man-made and partly due to natural effects. But since 1970 scientists are in fairly general agreement that warming can be attributed to man's polluting activities." The Met Office said global temperatures were 0.57 degrees Celsius (1.03 Fahrenheit) higher than the long term average of about 15 degrees (59F) in the period from January to June.

In the nearly 150 years since recording began, only in 1998 has the difference been higher, 0.6 degrees (1.08F), and that was caused by the influence of the El Nino weather phenomenon. The figures also showed that the northern hemisphere had enjoyed its warmest ever half year, with temperatures 0.73 degrees (1.31F) above the long term average. The Met Office spokesman said scientists predicted that, depending on the level of pollution, global temperatures would rise between 1.4 (2.52F) and as much as 5.9 degrees (10.62F) in the next 100 years. "That's the worst case scenario and it would cause major problems of melting icecaps and tremendous flooding," he said. The Met Office compiles its figures from data collected from observatories round the world, as well as from ships at sea.

See Also -

WORLD HEADS FOR WARMEST YEAR YET- 2002 GLOBAL TEMPS MAY BE RECORD HIGH (CNN August 1, 2002)

<http://www.cnn.com/2002/TECH/science/08/01/weather.warming.reut/index.html>

6) CANADA'S PREMIERS AGREE TO DISAGREE ON KYOTO

Reuters

August 2, 2002

Internet: <http://www.miami.com/mld/miami/news/world/3788835.htm>

HALIFAX, Nova Scotia - Canada's premiers agreed to disagree on Friday on whether the federal government should ratify the Kyoto accord on climate change. One thing the 10 premiers and three territorial leaders did agree on as they wrapped up their three-day meeting was the need for a meeting with Prime Minister Jean Chretien before Ottawa decides whether it will ratify the Kyoto Protocol, which calls for Canada to cut greenhouse gas emissions by 6 percent from 1990 levels by 2012. "At that time, premiers will share their differing views with the prime minister," host Premier John Hamm of Nova Scotia told reporters.

Manitoba Premier Gary Doer noted that while leaders did not agree on Kyoto, they did believe that climate change was a serious problem and that action must be taken. Manitoba, Quebec, Nunavut and the Northwest Territories support Canada's ratification of the Kyoto accord. Eight other provinces and the Yukon territory have strong reservations.

Oil-rich Alberta -- which has been the strongest voice opposing ratification of Kyoto -- warned that signing the agreement to curb greenhouse emissions, which are blamed for global warming, could cost jobs and billion of dollars. Alberta Premier Ralph Klein noted there was tremendous disagreement on the economic impact of the accord, with studies varying from a negative effect of up to C\$27 billion (\$17 billion) annually to a C\$4 billion benefit. "We have to get a handle on that," said Klein. The premiers also agreed that they needed more information before Ottawa makes its ratification decision. Hamm said he took comfort from letters in national newspapers on Friday from the federal ministers of natural resources and environment saying that public hearings will be held in the fall. Doer said one significant point that all premiers agreed on is that Canada needs an implementation strategy, and that it should not purchase gas emissions credits from other countries such as the neighboring United States.

Perhaps the most dramatic statement on climate change came from Paul Okalik, the premier of the northern territory of Nunavut, who said his people were already living with the day-to-day effects of global warming. Arctic fishermen who rely on ice to get out and make their catch now find their seasons shortened considerably, Okalik said. He noted that he and his children could not cross a river where he used to because there had been no rain for a month. He added in a soft voice: "Our custom is to pass on our traditional knowledge. We can't put a price tag on that. So you can keep your money if you want, thank you."

TRADE A KEY ISSUE

The premiers also called on Ottawa to work with the U.S. government to settle a variety of trade conflicts, particularly softwood lumber, which is used in housing construction. The premiers urged Ottawa to ensure Canada and the United States have secure, fair, and open access to each other's markets. They also urged the federal government to appeal trade issues to the World Trade Organization and the North American Free Trade Agreement accord, and to compensate Canadians for the damages caused by U.S. trade sanctions.

Quebec and British Columbia issued a joint statement calling on Ottawa to provide immediate financial assistance to the forest industry, which has been hit by U.S. countervailing duties of nearly 29 percent in a long-standing dispute over softwood lumber shipments. "The federal government should pay for the damages now," Quebec Premier Bernard Landry said. He added that Ottawa should also ask Washington to resume negotiations to settle the conflict over the C\$9.5 billion in softwood exports. (\$1-\$1.59 Canadian dollar)

See also-

CANADIAN PROVINCIAL LEADERS SPLIT ON KYOTO ACCORD (Xinhua News Agency August 3, 2002)

<http://library.northernlight.com/FA20020803030000012.html?cb=0&dx=1006&sc=0#doc>

PREMIERS GET CONFERENCE TO AIR KYOTO ALTERNATIVES HALIFAX (Halifax Daily News August 3, 2002)

<http://www.canada.com/halifax/news/story.asp?id={745C244E-596F-4590-BC0F-A9B703C70A75}>

PREMIERS WANT PM TO CALL MEETING ON KYOTO (CBC August 2, 2002)

http://cbc.ca/stories/2002/08/02/premiers_020802

7) SENATORS PRESS BUSH ON CLEAN AIR LETTER URGES DELAY IN CHANGING RULES

Washington Post

August 2, 2002

Internet: <http://www.washingtonpost.com/wp-dyn/articles/A33910-2002Aug1.html>

Nearly half the Senate, including two Democratic presidential aspirants and three Republicans, urged the administration yesterday to postpone plans to ease enforcement of industrial air pollution regulations -- a sign that environmental issues may be gaining prominence in the November elections. Sens. Joseph I. Lieberman (Conn.) and John Edwards (N.C.), potential rivals for the 2004 Democratic presidential nomination, released a letter signed by 44 senators seeking a delay in the proposed Clean Air Act rules changes. They want the administration first to complete a detailed analysis of the potential impact on air quality and public health.

"Because the specific changes proposed have not been subject to careful study and full public comment, we have serious concerns that the changes could allow more air pollution -- causing more asthma, more heart and lung problems, and more premature deaths," the senators said in a letter to Environmental Protection Agency Administrator Christine Todd Whitman. Underscoring the letter's political significance, at least six of those who signed it -- Sens. Tim Johnson (D-S.D.), Paul Wellstone (D-Minn.), Jean Carnahan (D-Mo.), Tom Harkin (D-Iowa), Robert G. Torricelli (D-N.J.) and Max Cleland (D-Ga.) -- are locked in tough reelection campaigns. Moderate Republican Sens. Lincoln Chafee (R.I.), Susan Collins (Maine) and Olympia J. Snowe (Maine), who frequently side with the Democrats on environmental issues, also signed the letter.

Polls generally show that voters trust Democrats more than Republicans to protect the environment, and that environmental concerns cross party and ideological lines. A survey released this week by National Public Radio found that voters believe Democrats would do a better job with the environment than Republicans, 55 percent to 26 percent. Democratic and environmental group strategists contend that President Bush and other Republicans are vulnerable on issues ranging from clean air and clean water to global warming and Superfund toxic waste cleanup. They are raising such issues in the larger context of "government and corporate accountability."

"Over and over again, in the last year and a half of this administration, given a choice, the administration -- the regulators -- have sided with those they are supposed to regulate instead of protecting the the public's health and safety," Lieberman said during a news conference at the Capitol. Bush continues to enjoy strong overall approval ratings. But some analysts say his handling of energy and environmental issues -- particularly his repudiation of an international global warming treaty last year and his efforts to relieve heavily polluting utilities and refineries of regulatory restrictions -- has caused political problems for him and his GOP allies.

The administration in June announced a major relaxation of clean-air enforcement rules governing older, coal-fired power plants and refineries that would effectively preclude government legal action in all but the most flagrant cases of pollution. The proposed change in the "New Source Review" enforcement policy would give industry more leeway in modernizing plants without being required to improve pollution-control equipment. Environmental groups and many lawmakers denounced the decision, which triggered congressional hearings and reviews. Sen. Larry E. Craig (Idaho), a Republican leader, said the controversy

over the administration's air-quality policies may prove to be a factor in some congressional races, but he disagreed that it will become a "defining issue."

Republicans and administration officials say the president is carefully balancing concerns about the environment with the imperative to speed the economic recovery and increase energy production. They say voters will embrace many of his actions -- such as cracking down on diesel engine pollution and promoting "Clear Skies" legislation to reduce most power plant emissions by 70 percent. Officials and industry advocates dismissed yesterday's letter as little more than political posturing, noting that all but one of the proposed rules were thoroughly vetted during the Clinton administration. They said the most controversial rule change -- giving aging coal-fired power plants more latitude to modernize their facilities without installing new anti-pollution equipment -- will undergo 18 months of review and public hearings before it can take effect.

8) JAPAN DISAPPOINTED BY AUSTRALIA'S STANCE ON GLOBAL WARMING

Japan Today

August 2, 2002

Internet: <http://japantoday.com/e/?content=news&cat=1&id=225142>

BANDAR SERI BEGAWAN - Japanese Foreign Minister Yoriko Kawaguchi on Thursday expressed disappointment at Australia's refusal to ratify the 1997 Kyoto Protocol on curbing global warming, Japanese officials said. She signaled the stance during her 30-minute talks with Australian Foreign Minister Alexander Downer on the sidelines of meetings here this week hosted by the Association of Southeast Asian Nations, the officials said. The 1997 Kyoto Protocol requires industrialized countries to reduce their greenhouse-gas emissions from 1990 levels by an average of 5.2% between 2008 and 2012. Australia has been reluctant to ratify the protocol, saying a comprehensive global agreement to reduce greenhouse-gas emissions must include the United States, which ditched the treaty last year. (Kyodo News)

9) RESEARCHERS MEASURE ANTARCTIC ICE SHELF TIDES FROM SPACE FOR THE FIRST TIME

Science Daily

August 2, 2002

Internet: <http://www.sciencedaily.com/releases/2002/08/020801075003.htm>

In efforts to determine how Antarctica is changing--whether due to natural or human-produced climate change--scientists use satellite and radar technologies to monitor the height and thickness of the continent's ice shelves. How are global warming and sea temperature changes affecting the thickness of these massive floating ice blocks?

The height changes due to climate can be very small, perhaps only an inch or so per year. In contrast, the ocean tides that flow underneath ice shelves can push them up and down by several feet over the course of a day, and this large effect can make it difficult to measure the small climate-related changes with satellites. Now, researchers at Scripps Institution of Oceanography at the University of California, San Diego, and Earth and Space Research of Seattle have measured Antarctic ice shelf tides from space for the first time. Through their research, the effect of tides can be removed more accurately and thus climate-related changes can be tracked more closely.

Helen Amanda Fricker of Scripps tapped information from the European Space Agency's European Remote Sensing (ERS) Satellite, which beamed radar signals to the Antarctic surface. Every 35 days, as the satellite orbited over Antarctica, the radar signals would hit the ice shelves and bounce back to the satellite, allowing scientists to calculate how the height of the ice shelves was changing. On floating ice, surface height can be used to estimate the ice thickness. Fricker's information was combined with calculations for Antarctic tides developed by Laurie Padman of Earth and Space Research, together setting the groundwork for a clear measurement of how the ice shelves change.

"Ice shelves are floating ice blocks, so if the ocean underneath them is warming, it will increase the melting under the ice shelves and the ice is going to get thinner," said Fricker, of the Cecil H. and Ida M. Green

Institute of Geophysics and Planetary Physics at Scripps. "Antarctic ice shelves can be sensitive areas in terms of climate change. We want to monitor their thickness and see if they're in steady-state or whether they are changing with time because of changes in climate." Fricker said the ice shelves can play a critical role in buttressing, or holding back, ice from detaching from the Antarctic continent. Removing them, she said, may increase the flow of ice off the continent. "As that ice melts, it will increase sea level around the world. It's important to monitor not only the grounded ice on the continent and how that's changing, but the floating ice as well," said Fricker. "To do this, we need accurate repeat measurements of ice shelf height and we have to remove the tidal signal because that will mask the true ice shelf elevation."

Fricker and Padman's analysis served as a successful "proof of concept" for upcoming studies investigating Antarctic ice shelves and climate change. The collaborative study, published in a recent issue of Geophysical Research Letters (GRL), details their analysis of eight years' worth of ERS information using synthetic aperture radar (SAR) signals concentrated on the 500-mile-wide Filchner-Ronne Ice Shelf in Antarctica's Weddell Sea. "This was a first attempt," said Padman. "Now that we have these results we are encouraged to improve our model of tides by using more sophisticated analysis techniques and combining the new data with numerical models based on the physics of ocean tides."

The next step will take the form of a new satellite called ICESat being prepared by NASA for launch later this year. A new instrument on ICESat, the Geoscience Laser Altimeter System (GLAS), will be the first to measure ice shelves using a sophisticated space-based laser instrument. GLAS will beam laser pulses 40 times per second, from approximately 400 miles above the Earth's surface, and time each pulse to determine the surface height with an accuracy of better than six inches. Over time this will result in a determination of the surface height change with an accuracy of better than half an inch per year. "GLAS will be the first spaceborne laser altimeter to cover Antarctica. It will have a much smaller footprint on the ground than the radar altimeter and be able to give us much more accurate measurements than ERS," said Fricker.

Fricker and Padman's research for the GRL study was supported by NASA and the National Science Foundation Office of Polar Programs.

The original news release can be found at http://scrippsnews.ucsd.edu/pressreleases/fricker_iceshelves.html

10) SCIENTISTS LINK POLLUTION TO DECADES OF DROUGHT

Associated Press via Canberra Sunday Times

August 2, 2002

Internet:

http://canberra.yourguide.com.au/detail.asp?class=news&subclass=national&category=general%20news&story_id=169287&y=2002&m=8

NEARLY two decades after one of the world's most devastating famines in Africa, scientists are pointing a finger at pollution from industrial nations as one of the possible causes. The starvation brought on by the 1970-85 drought that stretched from Senegal to Ethiopia captured the world's attention with searing images: skeletal mothers staring vacantly, children with bloated bellies lying in the sand, vultures lurking nearby. Before rains finally returned, 1.2 million people had died.

Now, a group of scientists in Australia and Canada say drought may have been triggered by tiny particles of sulphur dioxide spewed by factories and power plants thousands of kilometres away in North America, Europe and Asia. The shortlived pollution particles, known as aerosols, didn't have to travel to Africa to do their dirty work. Instead, they were able to alter the physics of cloud formation kilometres away and reduce rainfall in Africa as much as 50 per cent, say the researchers, who used a computer to simulate the atmospheric conditions.

The process, known as teleconnection, continues in the atmosphere today. Some scientists suspect it might help explain the drought gripping parts of the United States, although that question has not been specifically examined. And while pollution may affect the behaviour of rain clouds, scientists stopped short of solely blaming industry's effluent for the famine and starvation that wracked the region of Africa called the Sahel.

Atmospheric scientist Leon Rotstajn, lead author of the study on the subject, said, "It's more subtle than that. "The Sahelian drought may be due to a combination of natural variability and atmospheric aerosols," Rotstajn, of CSIRO, said. The study will be published in the August Journal of Climate. Over the years, the disastrous lack of rainfall over the Sahel has been blamed on everything from overgrazing to El Nino. Many scientists still argue those are chief culprits.

One interesting clue: In the 1990s, rain returned to the Sahel. During the same period, emissions laws in the industrialised West reduced aerosol pollution. A coincidence? Scientists don't think so. "Cleaner air in the future will mean greater rainfall in the region," Rotstajn said. Some researchers say the CSIRO study is intriguing, but that the computer simulation is too simple to solve the mystery by itself.

Atmospheric scientist V. Ramanathan of Scripps Institute of Oceanography in La Jolla, California, said, "It is quite a plausible argument." Last year, Ramanathan co-authored a global pollution study examining an industrial haze that covered nearly 10 million square km and upset the water cycle over the Asian subcontinent. He said similar processes appeared to be at work over the Sahel, but the CSIRO model must be sharpened to prove it. Until then, "I would be cautious about overextending these conclusions," he said.

Other scientists were even more guarded. Teleconnection is a reasonable, but complicated, explanation, they said. A senior scientist at the National Centre for Atmospheric Research in Boulder, Colorado, Philip Rasch, said, "Rotstajn focuses on an indirect effect of aerosols that is really hard to quantify." Some scientists complained that the global rainfall pattern simulated by the computer model does not match up with actual rainfall observed at weather stations around the world during the drought. This lack of a neat correlation made the study's Sahel conclusions "highly speculative," they said.

A senior research meteorologist at NASA's Goddard Space Flight Centre in Greenbelt, Maryland, Yogesh Sud, said, for example, the real weather observations and those generated by the computer model corresponded for the Sahel, Senegal and parts of Brazil. "But in India and Australia, there is absolutely no match" between recorded rainfall and the simulated conditions.

Nations share the same atmosphere and, increasingly, the same pollution. Pollution is known to alter temperature and precipitation patterns near its source. Recent studies suggest that one country's pollution can become a problem for other countries, too. Over the desolate North African Sahel, the influence of global pollution is less direct. Normally, this harsh land receives patchy summer rainfall.

Soil studies show that milder droughts came in the 1680s, the 1750s, the mid-1800s and the early 20th century. Rotstajn believes industrial smokestacks are the smoking guns for the more recent, more intense drought. The sulphur dioxide pollution particles, which can remain in the air five to 20 days, probably drifted over the North Atlantic where they created more condensation nuclei for cloud formation, the scientists theorise.

The additional nuclei remained suspended in clouds rather than growing into fewer, larger droplets and falling as rain. In addition, these clouds were brighter than normal, in part because of the added nuclei, and they reflected more of the sun's energy into space. This cooled the surface of the North Atlantic, which reduced the normal evaporation rate from the ocean and further hampered the moisture cycle. Rotstajn said south of the Sahel, the sea surface remained warm and evaporation increased so more rain fell to the south.

11) CLEAN AIR PROJECTS SEEN AS GROWTH MARKET IN BRAZIL

Planet Ark

August 1, 2002

Internet: <http://www.planetark.org/dailynewsstory.cfm/newsid/17110/story.htm>

RIO DE JANEIRO, Brazil - Brazil, Latin America's largest country, may generate clean air energy projects worth hundreds of millions of dollars in the fight to reduce global warming, Brazilian and international energy experts say. The Kyoto pact, inspired by the 1992 Earth Summit in Rio de Janeiro and signed in Kyoto, Japan in 1997, aims to cut emissions of greenhouse gases, such as carbon dioxide and methane, that raise temperatures. Industrialized country members must cut their emissions by an average 5 percent

between 2008-2112. Those unable to do so can buy carbon credits - giving the right to pollute - from countries, such as Brazil, that have pollution space.

The 15-nation European Union and Japan have ratified the Kyoto pact but the U.S., the world's biggest polluter hasn't. "Carbon credit trading is 4 to 5 times greater this year than expected," Nuno Cunha e Silva, Director of EcoSecurities told Brazil's 2nd Clean Energy Forum in Rio de Janeiro, adding that he expected global turnover to reach \$10 billion by 2005. Silva said there were small scale biomass, wind and solar energy projects, as well as reforestation and urban waste energy schemes being prepared in Brazil. Biomass is plant and animal matter used to produce power.

PIG IRON POWER PROJECT

The first Brazilian project financed by the World Bank's Prototype Carbon Fund was signed this month, said Werner Kornexl, the Bank's Brasilia-based private sector development expert. The Plantar pig iron project in Minas Gerais state involves the substitution of local charcoal for imported coke as an energy source in the steel production process. "It's small but profitable and brings in foreign capital, social and environmental benefits," Kornexl told Reuters after the two-day conference closing this week.

By using charcoal produced from nearby eucalyptus plantations, the project avoids air pollution caused by burning coke and also generates 4,000 jobs. Kornexl added that a couple more renewable energy projects in Brazil's two largest cities, Sao Paulo and Rio de Janeiro, were likely to be finalized later this year. Power is generated by burning methane gas seeping from urban waste landfills. "Things are happening very quickly here in renewable energy," Kornexl said, noting that new projects brought in new technology.

Brazil's Koblitz company started up a 10 MW wood-waste fired electricity power station at Piratini in Rio Grande do Sul late last year. "We're selling carbon credits in a very small way to a Canadian company," Koblitz's commercial manager Marcilio Reinaux Jr. told Reuters. The 10 million reais (\$2.9 million) power plant is supplied with wood-waste by local saw mills logging industrial pine plantations. "About 40 percent of the trees are waste," Reinaux said.

12) COUNTRYWATCH CEO ROBERT KELLY ENTERS GLOBAL WARMING DEBATE CALLS FOR AN INTERNATIONAL CARBON FUND AS AN ALTERNATIVE TO EMISSIONS LIMITS PROPOSED IN THE KYOTO PROTOCOL

CountryWatch.com

August 1, 2002

Internet: http://biz.yahoo.com/prnews/020801/dath005_1.html

HOUSTON, Aug. 1 /PRNewswire/ -- In his new book, *The Carbon Conundrum: Global Warming and Energy Policy in the Third Millennium*, CountryWatch CEO and former Enron executive Robert C. Kelly presents an extensive analysis and, in carbon speak, a gigaton of information on the climate change issue. He takes readers through a primer on global warming, ranging from an examination of paleoclimatological data (including the level of CO₂ that existed when dinosaurs roamed the earth over 100 million years ago) to an optimal solution to the problem itself.

Kelly, the former president of Enron Cogeneration Company and the executive responsible for forming and building Enron Renewable Energy Company, has extensive experience in dealing with the issue of climate change in the commercial arena. "I've been in both the fossil fuel and renewable energy markets for 20 years, and this issue has been a vigorously contested aspect of energy policy throughout that time," Kelly said. "Given the current stalemate between the United States and the rest of the world on the greenhouse gas issue, I decided it was time to conduct a rigorous review, offer a solution and enter the debate."

Analyzing Three Scenarios to Confront Global Warming

Moving from prehistoric times to current and future periods, Kelly, who holds a Ph.D. in economics from Harvard University, analyzes three scenarios to deal with global warming: the Kyoto Protocol scenario (KPS), the business as usual scenario (BAU), and the Optimal Carbon Path scenario (OPT). The Kyoto Protocol to the United Nations Framework Convention on Climate Change in 1997 calls for significant reductions in the emissions of carbon from the burning of fossil fuels in developing countries over the next

several decades. The United States has refused to ratify the Protocol. Kelly notes that the Bush Administration has good reason for its exceptions to the Kyoto Protocol.

"The Kyoto Protocol strives to provide a solution to the global warming problem by limiting the emissions of fossil fuels in developed countries at or below the levels that existed in 1990," Kelly said. "But, there are no limits set on developing countries, and these countries will be the world's largest emitters of CO₂ in less than 20 years. If the 1990 emissions limit is imposed globally, however, as in the KPS scenario, the reduction in the use of fossil fuels will impose costs on the world economic system, especially on the United States, that far outweigh the benefits," Kelly said. "It would attempt to fix the emissions problem at a significant cost relative to the BAU case."

The BAU scenario outlines a baseline climate trajectory, which is projected to occur in the absence of implementing the Kyoto Protocol or any other incremental policy designed to mitigate the growth in greenhouse gases. "In the BAU scenario, market forces will ultimately drive the economic system to a new, less threatening energy regime at a cost significantly less than that which would be imposed under the KPS scenario," Kelly said. "The BAU scenario, however, is not economically efficient and is fraught with future political risk. Because the polluter emitting carbon does not bear the associated climate change costs, too much carbon tends to be emitted. This will result in more damage to the global economic and environmental systems from increasing temperatures and rising sea levels, than would occur with the proper pricing of CO₂."

The OPT scenario uses an integrated assessment model to select a carbon emissions trajectory that balances the costs of imposing a price on CO₂ through a carbon tax, with the benefits of reducing climate change damage. In the OPT scenario, a carbon tax of \$26 per ton (in U.S. 2000) is instituted beginning in 2015 and increases to \$89 per ton by 2055. The carbon tax would ultimately be phased out as carbon-based fuels are displaced. Under the OPT scenario, consumers would see a net economic benefit of \$13 trillion from reduced climate change costs, including reduced insurance and medical costs.

Attaining Global Participation and Resolution Through an International Carbon Fund

Kelly contends that one of the key requirements of dealing with global warming is to have a mechanism, which is both cost effective and provides all nations an incentive to join. To be effective, the mechanism should achieve, through either a carbon tax or a permit trading mechanism, an effective price for carbon emissions. To provide all members an incentive to join requires designing a policy that results in an equitable sharing of the burden both for developed and developing countries.

Kelly proposes that these results can be achieved by instituting a comprehensive International Carbon Fund (ICF). The ICF would be an organization similar to the International Monetary Fund and the World Trade Organization. It would initially include all developed countries, and all developing countries would be given an invitation to join. Each country that becomes a member would agree to adhere to six principles: 1) To price carbon, via the institution of a carbon tax surcharge, at a level determined by the fund based on the principles outlined in the OPT scenario; 2) To impose the optimal carbon tax using the taxation systems of their central governments; 3) 50 percent of the revenues would be kept by the member governments and used for income tax relief or other equivalent purposes as determined by each central government; 4) 50 percent of the revenues would be contributed to the fund, which would use the proceeds to finance clean development projects in the developing countries; 5) The carbon tax surcharge would be re-evaluated by the fund based on new information with a new carbon tax being set every 10 years; 6) The fund would institute methods to insure compliance by member countries.

Under the ICF proposal, the initial value of the carbon tax surcharge in 2015 would be approximately \$2.58 per barrel of oil or 6.1 cents per gallon at the pump. The end result of imposing this type of taxation would be to reduce the consumption of carbon based energy to a point where the long-run net benefits to consumers would be maximized.

Acknowledging the Unappealing Aspects of a Tax Increase

"It could be tempting to skirt around the issue by simply appealing to a permit trading system," Kelly said. "However, in either case, carbon-based energy prices will increase. Implementation of a tax would be

easier than that of a trading system, where the initial allocation of permits would need to be determined and a trading framework would need to be instituted, not just for industrial energy users but also for retail consumers."

Kelly admits that there are a number of thorny issues to resolve when imposing a carbon tax. These include what type of tax to utilize, such as specific or ad-valorem, and at what level in the value chain to place the tax -- at the production or the consumption end. Kelly suggests that the most direct way to levy the tax would be as a specific per ton surcharge on the cost of purchasing the quantities of carbon by end users. This could generally be implemented through existing sales tax structures on the purchase of energy in most countries with little or no change in the administrative procedures that are in place to collect such taxes. This type of tax would also directly change the cost of carbon-based energy to final users and most effectively allow the price effect to operate on demand. If the tax is imposed as a distinct surcharge attributable to the ICF, then the political impact can be somewhat deflected from the national to the international community.

The present value of the revenue, which could be collected under the ICF proposal, would be \$27.5 trillion in year 2000 U.S. dollars. Under the proposal, 50 percent of this amount would be redistributed to countries from which it was collected to reduce income taxes. The other one-half would be redistributed to developing countries to fund clean development projects. "An offsetting income tax reduction should soften the blow and lessen the political opposition to the carbon tax," Kelly said. "The fact that this measure was also taken by an international group of nations as part of a worldwide effort to combat the effects of global warming would help with the political fallout from the tax."

Moving the Global Warming Issue From Impasse to Resolution

The most controversial aspect of the International Carbon Fund is the provision that allocates 50 percent of the revenues collected from each member to developing countries to finance clean development activities. Kelly admits there are several associated issues, including whether the proposal is politically sellable, how much money goes to which developing countries and thirdly, what projects are funded.

"From a sellable standpoint, the carbon tax under the Kyoto Protocol scenario is more than three times the present value of the carbon tax envisioned under the OPT scenario," Kelly said. "The net economic benefit of the OPT Scenario is more than \$39 trillion greater than that of the Kyoto Protocol Scenario." Kelly proposes that the revenue be distributed to developing countries in the proportion to which they pay the carbon tax compared to their peers. To further mitigate the burden faced by developed countries, Kelly suggests that some of the funds they had contributed could be recycled to their private sector entities for construction of projects in developing countries.

"Current efforts to resolve global warming are at an impasse," Kelly said. "If no action is taken to reduce carbon emissions, mankind will most likely survive, but the economic, political and environmental effects will be significant. I believe it is time to bring the debate back to the forefront, and I think The Carbon Conundrum offers that opportunity."

13) 87% OF POLLEES WORRIED ABOUT ENVIRONMENT

Yomiuri Shimbun

August 1, 2002

Internet: <http://www.yomiuri.co.jp/newse/20020801wo31.htm>

Eighty-seven percent of pollees expressed concern over the future of the global environment, according to a Yomiuri Shimbun nationwide survey conducted on July 20 and 21. The figure combined those who said they were "very worried" about the threat of environmental destruction and those who were "fairly worried." Asked what they believed was the most pressing environmental problem, the majority, or 57 percent, of the respondents said global warming, followed by those who cited problems caused by chemical contamination, such as destruction of the ozone layer and environmental damage caused by the spread of dioxins, at 53 percent each.

Seventy percent of the respondents knew about the 1997 Kyoto Protocol on curbing greenhouse gases, which requires industrialized countries to cut greenhouse gas emissions, while 46 percent expressed interest in the World Summit on Sustainable Development scheduled to start late August in Johannesburg. Asked what they did to reduce carbon dioxide emissions on a daily basis, 47 percent said they refrained from overusing air conditioners, while 33 percent said they turned off the main power switch of electrical appliances when not using the appliances. Twenty-eight percent said they purchased energy-efficient electrical appliances. Eighty percent of the respondents said they had reviewed their lifestyle in an effort to protect the environment.

14) YOUTH WIN POLLUTION BET WITH BUSH, BARELY

Reuters Health via Yahoo

July 31, 2002

Internet:

http://story.news.yahoo.com/news?tmpl=story2&cid=571&ncid=751&e=7&u=/nm/20020731/hl_nm/pollution_environment_dc_1

WASHINGTON (Reuters Health) - A group of college and high-school aged youth announced Wednesday that they narrowly won a self-imposed bet with President Bush on cutting carbon dioxide emissions. Members of SustainUS, a group promoting sustainable development and environmental issues, said that they had collected pledges from American youth to reduce CO2 emissions by 21,800 lbs. through increased energy conservation. CO2 is a leading greenhouse gas thought to contribute to global warming. About 2,300 youth will meet their pledges by cutting back on driving, taking shorter showers, and cutting consumption of energy-intensive meat products, said Dan Jones, member of the group who is also a senior at Hunter College in Manhattan.

The group made a public bet with Bush on April 1 that it could secure enough pledges to cut emissions by 20,000 lbs. Reports early Wednesday indicated that the group had fallen several hundred pounds short of their goal, but late-arriving pledges put them over their goal at the last moment, officials said. The bet was an effort by SustainUS to promote the World Summit on Sustainable Development scheduled to take place in Johannesburg, South Africa later this month. Activists said that their win required Bush to attend the summit along with five US youth activists. President Bush, well known for his fondness of competition and friendly wagers, has been widely criticized for rollbacks in environmental standards, including a recent decision to relax some rules on industrial pollutant emissions from US factories.

One problem with the bet, though, is that the president never agreed to it. Activists said they do not expect Bush to attend the summit, and the White House announced no plans for the president to travel to South Africa. Instead, Bush plans to leave Washington this week to spend most of August on a working vacation. "He plans to be at his ranch in Crawford, Texas," said Scott Paul, a junior at Columbia University and a member of SustainUS's steering committee.

15) REPORT: COSMIC RAYS INFLUENCE CLIMATE CHANGE

CNN

July 31, 2002

Internet: <http://europe.cnn.com/2002/TECH/space/07/31/earth.rays/index.html>

CNN -- The Earth has experienced higher surface but not atmospheric temperatures in recent decades. Now a climate scientist thinks he knows why: highly charged particles originating beyond the solar system. The inconsistencies in ground and air temperature patterns have led some scientists to dismiss the idea that global warming is taking place. But one New York researcher suggests the discrepancy takes place because of the effect of interstellar cosmic rays on cloud coverage. Other climate scientists have proposed a link between cosmic rays and clouds.

Research professor Fangqun Yu of the State University of New York-Albany goes further, proposing that low and high altitude clouds react differently to the rays, contributing to greater thermostat gaps near the surface and higher in the atmosphere.

The number of cosmic rays that strike Earth depends to some degree on the sun. Solar winds, which can protect the Earth from the interstellar rays, vary in intensity as the sun waxes and wanes in intensity, according to Yu. "A systematic change in global cloud cover will change the atmospheric heating profile," he said in a statement this week. "In other words, the cosmic ray-induced global cloud changes could be the long-sought mechanism connecting solar and climate variability." Yu said that observations of global warming this century have corresponded with lowered cosmic ray intensities.

The hypothesis does not disregard man-made contributions to climate change. Greenhouse gases introduced by humans could affect the cosmic ray-cloud interactions, he said. In any case, Yu proposes that cosmic rays help stoke the formation of dense clouds in the lower atmosphere while having a little or negative affect on cloud cover in the upper atmosphere.

The low clouds retain more surface energy, keeping the surrounding air hot, while thin high clouds reflect more sunlight into space, keeping the upper atmosphere cooler. Satellite data offer evidence consistent with the hypothesis, which Yu presents in the July issue of the Journal of Geophysical Research-Space Physics.

See Also-

COSMIC RAYS HELP RESOLVE GLOBAL WARMING PUZZLE ENS July 31, 2002

<http://ens-news.com/ens/jul2002/2002-07-31-01.asp>

16) GIANT SQUID 'TAKING OVER WORLD'

News.Com.Au

July 31, 2002

Internet: http://www.news.com.au/common/story_page/0,4057,4811363%255E13762,00.html

GIANT squid are taking over the world, well at least the oceans, and they are getting bigger. According to scientists, squid have overtaken humans in terms of total bio-mass. That means they take up more space on the planet than us. The reason has been put down to overfishing of other species and climate change. A report in the Australian science journal, Australasian Science, said marine researchers are now in universal agreement that cephalopods have been given an advantage not available to any other sea creature. And as a result they have been allowed to flourish. Their growth rates also seem to be increasing as is their body size.

The findings may offer an answer to the mysterious appearance of a giant squid on the coast of Tasmania last week and hundreds of squid washed ashore on the coast of California this week, although El Nino is also being partly blamed.

Squid are now regarded as the "major player" in the world oceans by sheer volume alone. Overfishing of some fish species has taken away competition for the squid in finding food resources. The warming of waters due to climate change have also allowed squid to expand their populations. Dr George Jackson from the Institute of Antarctic and Southern Ocean studies in Tasmania said squid thrived during environmental disasters such as global warming. The animal ate anything in that came their way, bred whenever possible and kept growing. "This trend has been suggested to be due both to the removal of cephalopod predators such as toothed whales and tuna and an increase of cephalopods due to removal of finfish competitors," said Dr Jackson.

"The fascinating thing about squid is that they're short-lived. "I haven't found any tropical squid in Australia older than

200 days. "Many of the species have exponential growth, particularly during the juvenile stage so if you increase the water temperature by even a degree it has a tremendous snowballing effect of rapidly increasing their growth rate and their ultimate body size. "They get much bigger and they can mature earlier and it just accelerates everything." The Food and Agricultural Organisation of the UN supports the theory claiming squid landings have been increasing over the past 25 years at greater rates than fish.

See Also –

GLOBAL WARMING CREATES MONSTER SQUID (Discovery Channel July 29, 2002)

<http://dsc.discovery.com/news/afp/20020729/0801squid.html>

GLOBAL WARMING CREATING MONSTER SQUID SAY AUSTRALIAN SCIENTISTS (Space Daily August 1, 2002)
<http://spacedaily.com/news/020801084534.utnxcdey.html>

17) FIRST MINISTERS' MEETING ON KYOTO WINNING SUPPORT FROM PREMIERS

Yahoo Headlines

July 31, 2002

Internet: <http://ca.news.yahoo.com/020731/6/nyr1.html>

HALIFAX (CP) - Alberta Premier Ralph Klein appeared to win support Wednesday for his goal of holding a first ministers' meeting on the Kyoto Accord, but couldn't resolve the growing division between his and Quebec's position on the climate-change pact. Several premiers from across the country said they would favour a consultation with the prime minister on the federal government's disputed blueprint on climate change. But many, including Quebec Premier Bernard Landry, said they applauded the principles of the pact, despite Alberta's strong opposition to it. "I'm not here to fight with Mr. Landry," Klein said in Halifax at the opening of the premiers' two-day annual meeting. "I'm in here to seek a common-sense approach to a made-in-Canada solution to address the issue of climate change."

Klein will likely have trouble convincing Quebec that Kyoto should not be approved as is and took a swipe at the province, alleging it's doing more damage to the environment through its massive hydroelectric projects than harm done by the Alberta oil industry. Klein challenged Quebec, which along with Manitoba supports ratifying the accord, to undergo its own environmental reviews if it sanctions the accord. "If he's convinced Kyoto should be ratified, then there should be a full and absolute assessment of the impact of creating 21,000 megawatts of power using water," he said.

Landry defended Quebec's position on Kyoto, but conceded that there should be a first ministers' conference before it is ratified.

However, he said the protection of the environment must not be compromised by the interests of one province. "It's an international problem related to the future of mankind, so we must not link that to self-serving interests," Landry told reporters.

The two leaders have sparred in the media recently, accusing one another of political manoeuvring in their approach to the accord. Other premiers said they would welcome the chance to discuss it, especially since many believe there are too many unanswered questions surrounding a plan that could have the country's biggest polluters paying millions to meet Kyoto's requirements.

New Brunswick Premier Bernard Lord said he would agree to a first ministers' conference on both Kyoto and health care, the top issue at the 43rd premiers' meeting. Ernie Eves of Ontario also said he would approve such a meeting, but warned he isn't willing to rush into signing the accord without further consultation from Ottawa. "The ultimate goal is to have those emission reductions, but we have to do so in a thoughtful manner that is not going to unduly penalize different sectors of the Canadian economy and cost hundreds of thousands of jobs," he said. Nova Scotia's John Hamm, the host of the conference, and Newfoundland Premier Roger Grimes both held out on agreeing to a meeting on the accord, saying they would rather discuss the issue over the next two days.

Officials at the Prime Minister's Office said Jean Chretien hasn't yet decided on a possible meeting on both topics.

"It's a bit too early to say, but certainly I don't think the PM would be averse to it," spokesman Frederique Tsai said in Ottawa.

The accord calls for Canada to commit to reducing greenhouse gas emissions six per cent below 1990 levels by 2010. The federal government is looking at four options to meet that target. Alberta is proposing a more drawn-out alternative to give the energy industry time to develop improved pollution-control technology and increase conservation. But under the proposal, as long as more energy is produced, there would be no guarantee of overall net emissions reductions.

All the premiers urged the federal government to step forward with more money for health care, repeatedly claiming that Ottawa pays far less than it should in supporting the ailing system. Eves said Ontario has

increased health-care funding by \$1.7 billion this year, raising the amount of provincial spending on health to 47 per cent. "(Ottawa) is nowhere near close to being where they should be," Eves said, adding that Chretien told him days ago he would consider a meeting on health care after the Romanow Commission releases its report on the state of health care in the country this fall. "The federal government is not paying its share." The premiers dismissed as mere "trial balloons" reports that Ottawa is considering extending maternity leave to two years from the current allowance of one year. Media reports Wednesday speculated on the extension, which has been denied by Ottawa.

18) HUNDREDS DIE IN ASIA FLOODS, MILLIONS HOMELESS

Environment News Service (ENS)

July 31, 2002

Internet: <http://ens-news.com/ens/jul2002/2002-07-31-05.asp>

BEIJING, China, July 31, 2002 (ENS) - Unusually early floods across 25 Chinese provinces claimed 793 lives and left more than 20,000 of the nation's poorest people homeless. The Red Cross Society of China has activated emergency crews to move water, blankets and food to the affected areas. Floods from northern China, the Himalayan region and south to India and Bangladesh have been caused by an unseasonably early, continuous, and heavy monsoon season.

Floods occur every year during the monsoon and typhoon season, but flash floods accompanied by landslides and hailstorms such as those sweeping the region in June and July, are unusual. The China Ministry of Civil Affairs reports that the numbers of people affected and crops destroyed during the flash floods in June are higher than losses during the same period during the 1990s. The floods have hit provinces throughout China, from the far northern mountainous areas, which are traditionally arid, to communities along the Yellow and Yangtze rivers, both of which are now cresting at record levels. Last week, in anticipation of heavy rains, the Chinese Prime Minister Zhu Rongji, an engineer by profession, inspected the flood prevention and early warning systems along the two rivers.

The early floods took their victims by surprise, causing enormous destruction in many remote villages inhabited by subsistence farmers. Rice paddies farmed for generations, as well as other crops, have been completely or partly destroyed. Many destitute farmers are expected to seek temporary jobs in cities to support their families. This is expected to increase the number of urban poor, which now stands officially at 19.3 million people. People across China have been warned by officials from the State Flood and Drought Relief control headquarters that more rainfall is forecast for the end of July and early August. Chinese officials expressed fears that another wave of deluges may engulf wider parts of the country as the rainy season develops. According to official sources, fighting floods and preventing further soil erosion has been set as a priority task for the Chinese government.

Chinese health authorities put provincial health branches on alert following a World Health Organization report earlier this month on the outbreak of cholera in neighboring Afghanistan. Extensive special protection and epidemic prevention measures are being implemented in flooded areas at high risk of epidemics such as cholera, typhoid and dysentery.

Nepal

Incessant monsoon rains across Nepal during the past four days have triggered flash floods and landslides in 20 out of a total of 75 districts. Since the landslides in eastern Nepal, which killed 44 people, on July 14, a total of 198 people have been killed, 115 others have been injured, and 30 people went missing, according to the latest information provided by the Ministry of Home Affairs. The official national news agency has reported that about 100,000 people in 50 villages have been directly affected by water-logging in the eastern and southern parts of the country. The road links to the south and north of the capital, Kathmandu, remain obstructed due to landslides, according to the UN Office for the Coordination of Humanitarian Affairs. The floods and landslides have also created disruptions in power and drinking water supplies.

India

Some parts of India are experiencing drought conditions, but floods in the northern and eastern states have affected 10 million people. An estimated 300 people have been killed due to floods, torrential rains and landslides, UN officials report.

The northern and eastern states - Assam, Bihar, Meghalaya, Tripura, and Arunachal Pradesh - have been the hardest hit by flood waters. These states face spreading epidemics of encephalitis, jaundice, dysentery and gastroenteritis after the monsoon rains and swollen rivers wreaked havoc on the area today. Forecasters predict more heavy rains throughout India in the next few days. State government authorities are deploying almost 4,000 motorboats for rescue activities and distribution of food in the affected areas. Evacuation of people from the worst affected areas is ongoing. The Assam and Bihar state governments have set up more than 400 relief camps for homeless people.

Official sources in the Assam capital of Guwahati say 56 people have died due to encephalitis in flood relief camps, while another 25 were killed in floods that have affected some 2.5 million people in Assam province. More than half of Assam state has been flooded as heavy rains burst dams and caused rivers to overflow, inundating more than 5,000 villages and destroying hundreds of thousands of houses. About 2.5 million people have fled to shelter on higher ground. "Thousands of homeless people in flood affected areas are still vulnerable to diseases like jaundice, dysentery, viral fever, encephalitis and gastroenteritis. We are very worried about them," said Assam Health Minister Bhumidhar Burman.

Floodwaters continue to rise rapidly in Bihar, where more than 10 million people have fled their homes and 91 have died, mostly by drowning, during the past week. Bihar Relief and Rehabilitation Commissioner Girish Shankar said, "The condition is quite alarming in six districts. Soldiers have used helicopters and boats to distribute food and relief materials to stranded people but the water is stagnated and shows no signs of receding."

Bangladesh

Bangladesh now has more than 3.5 million victims of flooding, with half of the country underwater. India's Flood Forecasting and Warning Centre says the situation in central Bangladesh has deteriorated as the rivers Ganges, Jamuna, Brahmaputra, Turag and their tributaries have risen higher and crossed their danger levels. Continuous heavy rainfall and water from the hills of India have caused flash floods in lowland Bangladesh. The rivers are flowing above the danger level in all of the main rivers in the country. Thousands of people have taken shelter on high embankments, which surround low lying areas. Those points of high ground have shown evidence of cracking at several locations threatening to plunge many more people into the floodwaters.

Relief agencies are working at capacity to complete arrangements to distribute food and relief materials and are conducting a general survey by boats. Deaths in Bangladesh and the eastern Indian state of Bihar have raised the toll to almost 550 this month from floods that have affected 17 million people and triggered fears of an epidemic outbreak.

19) USA: REPORT CITES SURGE IN CO2 EMISSIONS AUTOMAKERS BLAMED FOR CATERING TO DEMAND FOR FUEL-INEFFICIENT VEHICLES

Washington Post

July 31, 2002

Internet: <http://www.corpwatch.org/news/PND.jsp?articleid=3293>

U.S. cars and light trucks produce a fifth of all carbon dioxide in this country associated with problems of global warming, and those emissions have begun to surge after decades of steady decline, a new study says. The report by Environmental Defense, a New York-based advocacy group, blames the problem on an auto industry that has catered to mounting consumer demand for light trucks, sport-utility vehicles and minivans that provide more room and power but less fuel efficiency.

New vehicles built in 2000 by General Motors Corp., Ford Motor Co. and DaimlerChrysler AG, for example, emitted a disproportionately large amount of carbon dioxide for their share of the overall market, according to the study.

General Motors, the largest U.S. automaker, claimed 28.3 percent of the sales but almost 30 percent of the carbon dioxide emissions, the study said. Ford, the No. 2 company, accounted for 25 percent of the emissions and just under 24 percent of the market. And DaimlerChrysler got 16.6 percent of U.S. sales while accounting for 18 percent of the emissions.

Emissions of carbon dioxide from American cars and light trucks nearly match those of all sources in Japan, and exceed those of India and Germany, which rank fifth and sixth among the world's countries in terms of global warming emissions, the study found.

"Each year automakers roll out fleets of cars and trucks that add increasing amounts of carbon dioxide to the atmosphere," said John DeCicco, senior fellow at Environmental Defense and the study's chief author. "Over the past decade, they have put their design and marketing talents into anything but addressing their products' harm to the planet and liability for oil dependence."

The report comes just weeks after California enacted legislation mandating a reduction in greenhouse gases coming from the tailpipes of all passenger vehicles sold in the state, a move that could change the kinds of cars Americans drive in coming years.

The California law addresses not the gases that cause smog but the invisible, odorless emissions that some scientists say appear to be contributing to slow but risky heating of the planet. Although the new regulations will grant engineers wide latitude for design solutions, the new greenhouse gas emission standards for California will affect drivers nationwide, because California, with its 35 million residents, represents 10 percent of the national car market. Until recently, concerns over global warming have been largely focused on emissions from U.S. power plants, which are responsible for more than a third of greenhouse gases emitted in this country.

Automakers complain that California is taking a unilateral step to increase the fuel efficiency of vehicles, something the U.S. Senate refused to do this year. Because carbon dioxide is given off whenever gasoline is burned, the only way to reduce it in vehicles is to sell models that consume less gasoline or are fueled by electricity or other means. Industry officials say that automakers are working on advanced technology to move from carbon-based fuels to hydrogen fuel cells within the next decade or two that would eventually eliminate new cars as sources of heat-trapping greenhouse gases. For now, they say, carmakers are merely responding to consumer demand for bigger vehicles that are safer in crashes, operate off-road on rough terrain, and have room for tools and materials. Many of those vehicles, such as DaimlerChrysler's popular Jeep Grand Cherokee, have an average fuel economy of 22 miles per gallon, while the smaller and less popular Chevrolet Cavalier, Ford Escort and Chrysler Neon can get 30 miles a gallon or more.

"We have produced 50 different models that get 30 miles to a gallon or better, but very few people buy them and they just sit on the lot," said Eron Shosteck, a spokesman for the Alliance of Automobile Manufacturers. The Environmental Defense report, "Automakers' Corporate Carbon Burdens," examines the decline of fuel efficiency and what it says is a corresponding rise in carbon dioxide emissions from 1990 to 2000. The study assigns a "carbon burden" to each of the six major U.S. automakers based on market share and average fuel efficiency. U.S. drivers burn 126 billion gallons of gasoline a year, a 56 percent increase from 1970, the report notes.

See Also-

AUTOMAKERS BLAMED FOR GLOBAL WARMING EMISSIONS (AmeriScan August 1, 2002)

<http://ens-news.com/ens/aug2002/2002-08-01-09.asp#anchor2>

TOYOTA VEHICLES POST HIGHEST EMISSIONS INCREASE (The Mercury News July 31, 2002)

<http://www.bayarea.com/mld/mercurynews/business/3770334.htm>

20) JOHANNESBURG SUMMIT: GM GOES GREEN: WORLD'S LARGEST CAR MANUFACTURER SHOWCASES ECOFRIENDLY CARS, LOOKS TO PUSH NEW IDEAS AT WORLD GATHERING

The Earth Times

July 31, 2002

Internet: http://www.earthtimes.org/jul/johannesburgsummitgmgoesjul31_02.htm

Imagine this: you're driving down from New York to Florida and never once do you have to stop for gas. In fact, you don't need any gas at all. All such hassles are taken care of because you are in a hydrogen fuel cell-powered car. General Motors (GM) had just such a scenario in mind when designing the AUTOmomy, a fuel cell vehicle with a striking resemblance to the futuristic Batmobile of comic strip fame. The AUTOmomy was only one of several new designs for advanced automotive technology showcased at their GM Technology Tour today in Central Park. "The AUTOmomy is a concept vehicle designed around fuel

cells and biwired technology, or electrical wiring," said Neil Schilke, GM's General Director of Engineering. "Fuel cell vehicles run purely on hydrogen, which means that further on down the road, it can help reduce our reliance on foreign oil and decrease the level of harmful emissions."

On Monday, GM unveiled a new research facility in Honeoye Falls, New York, to expand its ability to develop fuel cell technology. The new Fuel Cell Development Center--an 80,000 square-foot facility--will develop fuel cells for commercial use, creating up to 100 new research and engineering jobs. GM hopes to use this launch to promote a revolutionary change in automotive technology and usage. Through hybrid cars, fuel cells, and reliance on diesel fuels, GM looks to create a wave of environmental awareness among its consumers. "This is going to revolutionize the way we look at cars and trucks," said Dave Barthmuss, GM manager of Energy/Environment and Sustainability Communications. "Imagine the leap we took from riding horse and buggy to using cars. That's the type of radical shift in lifestyle and mindset we envision with hybrids and fuel cells. Our concept cars make the Jetsons look prehistoric."

GM is also sending representatives to the upcoming UN World Summit on Sustainable Development in Johannesburg, set to take place at the end of August. While at the summit, GM hopes to present plans for alternative transportation within the framework of sustainable development. "We want to go to Johannesburg to educate leaders about fuel efficiency leading to global sustainable mobility," said Beth Lowery, GM Vice President of Environment and Energy. "Working with groups like the World Business Council for Sustainable Development [WBCSD], we want to generate consumer incentives for using such vehicles, to quell any fears regarding safety, cost or efficiency."

The Geneva-based WBCSD is a coalition of more than 160 international companies committed to furthering the goal of sustainable development. Lowery--who will attend the Johannesburg Summit--also realizes the challenges she and others at GM are up against when pushing for such new automotive technology, one of them being the price of the vehicles. "We aren't even touching the cost issue right now. For the time being, people need to be convinced that they are going to have a safe ride in our cars and that they are bettering the environment each time they ride in them before they worry about money." Since the showcase primarily exhibited prototype vehicles, one of the fuel-celled cars was quoted as having a price tag of \$1 million. Once on the market, the price would naturally fall to meet consumer needs.

A spokesperson from the Environmental Protection Agency (EPA) present at Tuesday's showcase expressed concern about the relative absence of infrastructural change in some of the fuel-efficient cars. "Sure some of these cars may be able to run on cleaner oil. But until car companies are willing to re-design their models so that consumers are no longer influenced by the 'bigger is better' mantra that has been splashed all over their ads for years, then America's roads will continue to have accidents resulting from these large-vehicle collisions." Responding to the challenges facing GM's new drive for ecofriendly cars, Schilke said, "We all agree that the road ahead is long and difficult. Obviously, GM can't solve everything. But one way we can help is to remove cars from the environmental debate altogether."

By introducing new measures to reduce harmful emissions and improve fuel efficiency, we will help create a healthier environment for automotive mobility, a necessary function that we can't and don't want to do without." GM is the world's largest manufacturer of cars and trucks with more than 355,000 employees worldwide. GM intends to be the first automaker to sell 1 million fuel cell vehicles and expects to begin seeing them on the road by 2010.

21) MARINE MAMMALS UNITE IN BEACHING AGAINST BUSH

Greenpeace International

July 31, 2002

Internet: http://www.greenpeace.org/news/details?news_id=20541

Marine mammals are fed up with Bush's inaction on climate change, and his latest announcement that he will not attend the Earth Summit in Johannesburg has prompted protest on both coasts. Whale and manatee populations on the US east coast have beached themselves in protest as ocean temperatures rise and Bush opts out of global treaties to stop climate change.

Off the coast of Cape Cod, 55 pilot whales have stranded themselves on a mud flat and are suffering from sunburn and sunstroke. Some of them were in shock, probably because when they are out of the water, their own weight can crush internal organs.

Twenty of the whales have already died and rescue workers expected they would have euthanized another 28 Tuesday evening because they were too exhausted to swim back to open sea. One rescue worker overcome with emotion at the sight of the dying whales said it was desperation that drove the whales to beach themselves. "When will Bush see that he is responsible for destroying not just life ON Earth, but under the seas as well?" said the heartbroken rescue worker. Six endangered manatees beached themselves in Florida on Tuesday in an attempt to appeal to Florida Governor Jeb Bush to talk some sense into his brother President Bush and tell him to attend the Earth Summit meeting which will take place in less than a month in South Africa.

Jim Huffstodt, an officer with the Florida Fish and Wildlife Conservation Commission says the manatees are exhausted from mating. "These poor girls, the only way they can escape the attention of the males, who are very persistent, is to ground themselves or go up on the beach." But several spectators swear they heard the manatees moaning "Baaaad Bush" in unison.

These protests on the east coast follow a massive squid protest on the coast of California last week. Hundreds of jumbo flying squid washed up along the San Diego coast which are normally found in the eastern Pacific ocean. Some believe the arrival of the squid is related to the El Nino climate phenomenon which sends warm tropical waters farther north than usual. Although it was climate that brought them to the shore of California, their mission was sending a powerful message to the US government to adopt clean renewable energy and stop the assault on the planet.

A local fisherman who ensnared one of the squid close to shore said "With its dying breath the squid said: 'People think I'm just a dumb squid, but I'm smarter than George Bush when it comes to climate change'." Yet Bush is not alone in the dirty energy camp. Australia also announced that they would not ratify the Kyoto Protocol on climate change and aquatic life in the Pacific have not taken the news well. Southern Right whales have maintained a high-spirited protest in Sydney harbour for the past two days. The three adult whales are maintaining a vigil in sight of the Sydney opera house and are attempting to restrict boat traffic in the harbour. They want the Australia government to take a new route at the Earth Summit and support plans to bring clean, green energy to developing nations - a solution to climate change that all mammals can appreciate.

Just last week there was another massive protest on a beach near Albany, Australia where 58 false killer whales beached themselves in protest to Prime Minister John Howard's statement in Parliament that it would not be in Australia's interest to ratify the Kyoto Protocol. Although the marine mammals have caught on to the protest tactics quickly, the squid are leading the way. A giant squid, 18 metres long and weighing as much as 250 kilograms, washed up on a Tasmanian beach last week protesting Australia hiding behind the US policy on energy and climate change. Reports are also coming in from Canada, another Bush backing country at international negotiations on climate and environment. Although a small group of politicians in the Canadian parliament are pushing their leader to adopt the Kyoto Protocol, the Prime Minister is stalling and slow to take up any action to prevent climate change.

The news is out and we have received some reports of a pod of humpbacks heading straight for the Canadian coastline. These bold and brave moves by the oceans great creatures is a last warning to take up action at the Earth Summit that will stop climate change and provide the world with clean, renewable energy. They seem to care more about the fate of the planet than our own governments. Support their heroic action and keep an eye out for beaching protests in your country.

22) BUSH PRESSES PLAN TO CUT POLLUTION

Associated Press

July 30, 2002

Internet: <http://www.washingtonpost.com/wp-dyn/articles/A20456-2002Jul30.html>

WASHINGTON -- President Bush says his legislative proposal to cut power plant pollution, submitted five months after he first outlined it, is a market-based system that guarantees cleaner air while keeping electricity affordable. Democrats in Congress and environmentalists have been portraying the plan, unveiled in February, as a major threat to clean air.

"In the next decade alone, 'Clear Skies' will eliminate 35 million more tons of pollution than the current Clean Air Act, bringing cleaner air to millions of Americans," Bush said in a statement Monday. "And 'Clear Skies' will do this through the use of a market-based system that guarantees results while keeping electricity prices affordable for the American people." His proposal uses a cap-and-trade system. It would establish a ceiling, or cap, on the amount of emissions from power plants that are major sources of two kinds of dirty air: nitrogen oxide, which causes smog, and sulfur dioxide, which causes acid rain. It also would create the first controls on their releases of mercury.

Utilities that exceeded the limits could purchase credits from other energy producers whose emissions are lower and who choose to sell their ability to pollute - the unused pollution allowances - within the cap. The Clean Air Act requires EPA to set national standards and states to implement clean-up plans. Critics say the plan ignores the ability of some of the dirtiest power plants to avoid emission reductions by buying credits. "This would be an attempt to undermine enforcement and substitute an industry-friendly emission trading scheme, which we think would actually encourage corporate irresponsibility and be a giant step backward in air pollution control," said Frank O'Donnell, executive director of the Clean Air Trust, an environmental group.

Christie Whitman, administrator of the Environmental Protection Agency, submitted Bush's plan for sponsorship in the Senate by Sen. Bob Smith, R-N.H., and in the House by Reps. Billy Tauzin, R-La., and Joe Barton, R-Texas. EPA claims the plan can prevent 12,000 premature deaths and tens of thousands of respiratory illnesses a year by 2020, while cutting pollution from power plants by 70 percent. The Senate Environment and Public Works Committee, on which Smith is the senior Republican member, approved a more expensive rival approach to dealing with air pollution that would regulate heat-trapping carbon dioxide. Smith opposed that. Sen. James Jeffords, I-Vt., who chairs the committee, said Monday the administration is "ignoring its own warnings on the devastating effects of global warming" by not addressing carbon dioxide in its plan. Neither approach is likely to win sufficient support to clear Congress this year, however.

See Also-

"CLEAR SKIES" INITIATIVE: <http://www.epa.gov/clearskies>

CLEAN AIR TRUST: <http://www.cleanairtrust.org>

BUSH PRESSES PLAN TO CUT POLLUTION (The Guardian July 30, 2002)

<http://www.guardian.co.uk/uslatest/story/0,1282,-1915061,00.html>

U.S. PROPOSES POLLUTION CUTS FOR MOTORCYCLES, BOATS (ENN July 30, 2002)

http://www.enn.com/news/wire-stories/2002/07/07302002/reu_47969.asp

23) EL NINO STIMULATES WEST COAST BIRD REPRODUCTION

Associated Press

July 30, 2002

Internet:

http://story.news.yahoo.com/news?tmpl=story&u=/ap/20020730/ap_wo_en_po/us_el_nino_birds_1

SEATTLE - El Nino produces more than a climate change. It also brings a baby boom among migratory songbirds in the Pacific Northwest, scientists have found. Wrens, western tanagers and warblers that fly north from Mexico each spring produce two to three times as many young during an El Nino weather pattern, according to a study by the Institute for Bird Populations in Point Reyes Station, California. If the pattern holds and the warming of equatorial Pacific Ocean currents that marks El Nino occurs as expected this winter, there will be a lot more tweeting and chirping next spring. The reason is unclear, but scientists noted two potential factors - bugs and winds.

In western Mexico, El Nino means cooler weather and more rain, resulting in much bigger hatches of insects for birds to eat before their 2,000-mile (3,218-kilometer) migration up the West Coast. "You can imagine that in a good year, when there's plenty of insects available early in the year, you're going to get in good condition," said Philip Nott, lead author of the study. "Then, when you start breeding, you've got lots of energy and lots of fat and you can run around." El Nino also produces more favorable tailwinds that may reduce the energy the birds need to migrate and leave them with more energy to reproduce when they arrive, Nott said.

The researchers also found other links between migratory bird birthrates and large-scale, cyclical weather phenomena generally.

The nine-year study began in 1992 when scientists strung hard-to-see "mist nets" to capture and tag birds sites in the Mount Baker-Snoqualmie and Wenatchee national forests in Washington state and four national forests in Oregon. In the El Nino years of 1992, 1997 and 1998, six or seven of every 10 birds caught were youngsters born that season. In drier years of La Nina, the opposite of El Nino, as in 1994 through 1996, about three of every 10 were young birds.

24) EXPERTS WARN OF DISASTERS FROM CLIMATE CHANGES

Associated Press

July 30, 2002

Internet:

http://story.news.yahoo.com/news?tmpl=story&u=/ap/20020730/ap_wo_en_po/asia_climate_change_2

BANGKOK, Thailand - Climate changes caused by global warming will inundate small island states and seriously threaten agriculture, forests, marine ecosystems and public health, a U.N. expert warned Tuesday. "The earth's atmosphere is now warming at the fastest rate in recorded history, a trend that is projected to cause extensive damage to forests, marine ecosystems and agriculture," said Ravi Sawhney of the Bangkok-based United Nations Economic and Social Commission for Asia and the Pacific, or ESCAP. Speaking at the opening of a four-day conference here on climate change, Sawhney warned that small island states, deltas and low lying coastlines will be submerged while agriculture and public health could be adversely affected in many countries. Sawhney said global warming can be controlled by more usage of renewable energy, cleaner production and consumption of power and increased reforestation.

The 12th Asia-Pacific Seminar on Climate Change, which brought together scientists and experts from the Asia-Pacific region, was organized by Japan's Ministry of the Environment, ESCAP and the Tokyo-based Institute for Global Environment Strategies.

The delegates will be brought up to date on the status of the Kyoto Protocol on global warming, the landmark 1997 international agreement that seeks to set mandatory reductions of heat-trapping greenhouse gases by industrial nations. The conference will also help contribute to the global conference on the environment to be held from Aug. 26-Sept. 4 in Johannesburg, South Africa.

In a welcoming speech, a senior Thai government official said "climate change is the most serious environmental threat facing the world today" and would have a profound impact on the Asian-Pacific region. But because of the lack the research and knowledge on how to plan for climate change, countries in the region need to increase education and transfers of technology, said Apichai Chvajarenpun, the deputy secretary general of the Office of Environmental Policy and Planning.

25) JAPAN TO TAKE OVER RUSSIAN CO2 TO MEET KYOTO PROTOCOL TARGET

Japan Today

July 30, 2002

Internet: <http://japantoday.com/e/?content=news&cat=9&id=224819>

MOSCOW - The Russian government proposed in late June that Japan should take over 1 million tons of carbon dioxide (CO2) annually from Russia so that Tokyo can achieve its CO2 emission reduction target under the Kyoto Protocol, government sources said Tuesday. The two countries have already started preliminary talks over the emissions trading, focusing mainly on the conditions of the deal, such as tax breaks. Under the proposal, Japan will fund repair work to modernize two Russian power plants in the Far East region to lower their CO2 emissions. (Kyodo News)

26) POLITICAL CLIMATE COOLS FOR FIGHT ON GLOBAL WARMING

Reuters

29 July 2002

Internet:

http://asia.reuters.com/news_article.jhtml;jsessionid=AH0NQLGF5I4G4CRBAEOCFEY?type=topnews&StoryID=1260880

BRUSSELS (Reuters) - The world woke up to global warming at the 1992 Rio Earth summit, but 10 years on, what some consider the planet's biggest environmental danger has fallen off the agenda of a major follow-up conference.

Next month's summit of world leaders in Johannesburg will focus on poverty, not pollution -- a worry for some environmentalists who say the poor will suffer first if climate change is not stopped. In Rio de Janeiro a decade ago, leaders took the landmark decision to try to stop rising emissions of the greenhouse gases which trap heat in the atmosphere, and created the United Nations Framework Convention on Climate Change.

U.N. scientists said the build-up of carbon dioxide in the atmosphere since the Industrial Revolution was trapping heat in the atmosphere. They predicted major climate disruption if emissions were not cut. Five years later, with emissions still rising, countries beefed up the convention with the Kyoto Protocol which contained binding targets on emissions reduction for industrialised countries. But the pact has yet to come into force and the United States put its future in doubt when it pulled out last year. "If you look at the record since Rio, climate change is the most glaring failure," said Rob Bradley of the campaign group Climate Action Network. "Countries took a commitment to stabilise emissions and then promptly didn't do it. That gave the lie to the idea that countries were there because they realised how serious it all was."

U.S. CLOUD OVER SUMMIT

Kyoto can still survive without the world's biggest producer of greenhouse gases, but not until Russia ratifies, supplying the required number of developed countries for it to take effect. That is not expected for another several months. While Kyoto's supporters are disappointed it will not be in force before the summit, they blame U.S. influence for the fact that climate change is barely mentioned on the agenda. "EPA (U.S. Environmental Protection Agency) officials told me the American administration preferred to have climate change not at all on the agenda at Johannesburg, to instead focus on water," said European Parliament member Alex de Roo. "What do you see? The first item on the agenda is water. The second is energy, which has some climate implications, but the word climate isn't mentioned. That's the cloud of the Bush administration hanging over the Johannesburg summit." But other Kyoto supporters are happy that the treaty will not be the centre of attention at Johannesburg. "We more or less have solved the negotiations.

To have major discussions again in Johannesburg would perhaps give the impression that something more has to be done," said Jan Pronk, the former Dutch environment minister who chaired the key climate negotiations before and after the U.S. withdrawal. Pronk, U.N. Secretary-General Kofi Annan's special envoy to help prepare the summit, wants to see Washington return to the treaty, but said any such discussions at Johannesburg "would not be very useful" because they would be unlikely to succeed.

ENVIRONMENT VS DEVELOPMENT?

The summit's focus on fighting poverty reflects the overriding concern of developing countries where scourges such as water-borne diseases, malaria and AIDS, which kill millions every year, appear far more menacing than global warming. Many scientists say climate change will exacerbate those problems. Research over the past 10 years has given scientists a better idea of what effects global warming could have on water supplies, agriculture and population migrations. While some scientists are sceptical about climate change and its effects, a broad-based U.N. scientific panel has predicted that unchecked emissions could raise global temperatures by between 1.4 and 5.8 degrees Celsius this century. Reports of coral bleaching and melting ice sheets have indicated that global warming may be well under way.

Mick Kelly, an atmospheric scientist at Britain's University of East Anglia, said policymakers would have to take on board detailed forecasts of the impact of climate change on populations to enable countries to cope. "Whatever politicians may do, some degree of climate change is inevitable and therefore we have to plan to adapt," he said. While Rio and Kyoto were about reducing the emissions blamed for causing climate change, more emphasis was now needed on ensuring countries can manage the consequences, for example, by protecting themselves from sea level rises, Kelly said. "It has to be a twin track strategy." Some analysts believe Johannesburg could deliver results for the fight against climate change, both by helping poorer states develop so they can tackle the impact of global warming, and by getting them to develop more cleanly than rich countries did.

A push for renewable energy, for example, could reduce the greenhouse gas emissions that would inevitably come from a greater use of fossil fuels in the developing world. "(Climate change) is on the agenda to the extent that they are addressing the future energy requirements of developing countries," said Jacqueline Karas, climate change research fellow at London's Royal Institute for International Affairs. "It may seem that climate change is a less immediate problem than tackling poverty, but on issues like water supply, which is susceptible to climate change, the most vulnerable countries are those in the tropics and the south." So although water, sanitation and energy for the poor will top the agenda at Johannesburg, climate change will not far from people's minds, Karas said. "It will be climate change by another name."

27) DROUGHT, FLOODS RAVAGE INDIA

Agence France-Presse

July 29, 2002

Internet: http://www.news.com.au/common/story_page/0,4057,4796480%255E1702,00.html

A SAVAGE drought is crippling large swathes of northern India while monsoon rains that have left about six million people homeless torment the east of the country. The state of Bihar is enduring both simultaneously, with monsoon floods in the impoverished north and brittle-dry conditions in the mineral-rich south. While the flood-drought phenomenon is an annual one in the sub-continent, the floods this year are the worst in four years and the drought, according to Agriculture Minister Ajit Singh, the worst yet. The government has announced that around one-eighth of the country is gripped by either severe drought or massive flooding, as famine and disease stalk the flooded north-east and crops wither under a blazing sun in the north-west.

The heavy rains since July 1 have claimed at least 60 lives and left about 6.2 million people homeless in the two most affected states, Bihar and neighbouring Assam.

At the same time, 13 of India's 29 states have been declared drought-stricken, allowing the introduction of emergency measures including monetary compensation to farmers. With the two crises on the government's hands, Junior Home Minister I D Swami told parliament last week that a "high-powered" committee had been set up under the chairmanship of Deputy Prime Minister Lal Krishna Advani to oversee relief measures. "This committee will monitor all the relief measures for both drought and flood-affected areas," Swami said. In flood-hit states, the army has been sent in to assist rescue operations, while aid organisations rush to ensure adequate food for those left homeless and cramped into relief camps.

Water-borne disease such as dysentery and gastroenteritis are spreading in the camps, which offer little clean drinking water and medicine. Food scarcity has been reported in eastern Assam where several stretches of highway have been flooded and road links severed for three weeks. Government officials maintain the drought will not cause a famine, with enough grain to feed everyone. Nonetheless, farmers in the northwest are asking for compensation for destroyed crops and dead stock animals.

The desert state of Rajasthan, for example, has called for emergency funds totalling a staggering 60 billion rupees (\$2.35 billion) to feed its drought-hit millions. The drought has left India's 70 water reservoirs at just 47 per cent of normal capacity.

Observers differ over what has caused the northern monsoon to fail. India's meteorological experts say it is due to the fact the monsoon trough has remained trapped in the Himalayan foothills.

However, R K Pachauri, chief of the UN-sponsored Inter-governmental Panel on Climate Change, believes larger variations are responsible. "What we are witnessing is a particular and sudden variation in climate as

predicted by experts studying global warming," he was quoted in the Indian media as saying. Other reports said the unrelenting heat is starting to melt Himalayan glaciers, leading to the inundation of parts of the drought-stricken northern state of Punjab.

28) JAPAN PLANNING BILL AIMED AT CUTTING CO2 EMISSION FROM TRANSPORTATION - KYODO

Kyodo News

July 28, 2002

Internet: <http://library.northernlight.com/MB20020728120000013.html?cb=0&dx=1006&sc=0#doc>

TOKYO (AFX-ASIA) - The transport ministry has started formulating a new bill aimed at cutting carbon dioxide (CO2) emission by supporting businesses that use trucks instead of trains and ships for product distribution, Kyodo News agency reported. It said the measure is part of Japan's efforts to achieve its legally binding requirement to reduce greenhouse-gas emissions by 6 pct from 1990 levels under the 1997 Kyoto Protocol on curbing greenhouse gases.

The planned bill would require shippers of goods and transport firms to compile joint plans for use of railway, marine and road transportation, including use of low-emission vehicles, Kyodo said. If the government sees that the plans are effective in cutting greenhouse gas emissions, it would give subsidies and offer other support measures, it said. The ministry is also considering introducing penalties by advising businesses to make improvements if they have environmental problems related to greenhouse gas emissions, Kyodo said.

29) JAPAN CONSIDERING LEGISLATION TO CUT CO2 FROM TRANSPORTATION

Agence France Presse

July 28, 2002

Internet:

http://huknews.hoovers.com/fp.asp?layout=displaynews&doc_id=NR20020728670.4_76e2000e0a04906c

The Japanese transport ministry has started to form a new bill aimed at cutting carbon dioxide (CO2) emission by supporting businesses that use trains and ships instead of trucks for product distribution. The measure is part of Japan's efforts to achieve its legally binding requirement to reduce greenhouse-gas emissions by six percent from 1990 levels under the 1997 Kyoto Protocol on curbing greenhouse gases, Kyodo News agency said.

The planned bill would require shippers of goods and transport firms to compile joint plans for use of railway, marine and road transportation, including use of low-emission vehicles, Kyodo said. If the government sees the plans are effective in cutting greenhouse gas emissions, it would give subsidies and offer other support measures, Kyodo said. The ministry is also considering introducing penalties by advising businesses to make improvements if they have environmental problems related to greenhouse gas emissions, Kyodo said.

Japan's CO2 emissions in the year to March 2001 edged up 0.3 percent from the preceding year to an all-time high of about 1.24 billion tonnes. CO2 accounts for more than 90 percent of Japan's emissions of greenhouse gases, which also include methane. However, many hi-tech companies already have plans to shift from use of trucks and aircraft to trains and ships for environmental reasons, the Nihon Keizai Shimbun said Sunday. "These companies are focusing on devising environmentally friendly transportation methods now that they have made progress on emissions reduction at their plants," the financial daily said. "Use of more trains and boats not only lowers emissions, it also helps slash costs," it said.

The moves represent a major change from earlier policies prioritizing speed, the newspaper added. For example, hi-tech NEC Corp. will from this year stop using aircraft and instead use ships to bring China-made desktop computers to Japan, the Nihon Keizai said, citing company sources. The company also plans to use fewer trucks and use trains for domestic product distribution, it said. Camera and office equipment maker Canon Inc. intends to replace about 20 percent of truck-based transport with trains and

ships during the current business year, the Nihon Keizai said. Computer maker Fujitsu Ltd. and consumer electronics giant Matsushita Electric Industrial Co. also plans to increase rail use to reduce emissions.

30) EXOTIC FISH CHART WARMING OCEAN

The Mercury

July 28 2002

Internet:

http://www.itechnology.co.za/index.php?click_id=31&art_id=ct20020728203320896G414994&set_id=1

London - Exotic fish are being found off Britain's shores in increasing numbers, according to the first systematic study of how marine fish have been affected by global warming. A team of marine biologists, studying records dating back to 1960, has for the first time linked the arrival of tropical and semi-tropical fish off the coast of Cornwall to rises in the temperature of the North Atlantic Ocean. The link was a "significant correlation" and could explain why Cornwall, the southern-most tip of Britain, had seen so many exotic species of marine wildlife in recent years, said Tony Stebbing, a biologist from the Plymouth Marine Laboratory. "As the world warms, the only way for wildlife species to live in the temperature they prefer is to move their ranges slowly poleward."

Oceans have warmed by 0,06°C over the past 40 years but the surface water, where many fish live, has risen faster, by up to 0,31°C. The North Atlantic is warming faster than any other ocean with an accelerating temperature increase of 0,5°C over the past 20 years. One implication was that as warm-water fish moved into British waters, its native residents were moving north. Cod was one of the most vulnerable of these natives species because it was at the southern-most extremity of its range, said Stebbing. - The Independent

31) MONSOON WARNING: DATA HINT AT WET AND BLUSTERY FUTURE

Science News

July 27, 2002

Internet: <http://www.sciencenews.org/20020727/fob8.asp>

Asian monsoons have been intensifying over the last 400 years, and they're slated to get worse, a team of earth scientists says. Stronger monsoon rains could cause severe flooding and erosion that would affect up to half the world's population. The South Asian monsoon carries much-needed rain to billions of people in India, China, Bangladesh, and other countries. The monsoon season begins in summer when northeast trade winds reverse direction and carry water-saturated air inland. "The South Asian monsoon . . . is key to agriculture and water resources," comments Gerald A. Meehl at the National Center for Atmospheric Research in Boulder, Colo. "The past and future behavior of the monsoon is therefore of critical interest." Researchers have chronicled changes in monsoon intensity over tens of thousands of years, but few have examined variations on the smaller time scales relevant to human civilization. Now, researchers in the United States and India have used the fossil record to piece together variations in monsoon strength over the past millennium.

For evidence on monsoons, David M. Anderson of the University of Colorado in Boulder and his colleagues looked to a seeming unrelated subject: the microscopic, hard-shelled foraminifer *Globigerina bulloides* in sediments of the Arabian Sea. As "a happy side effect" of the Asian monsoon, winds blow along the coasts of Saudi Arabia and Oman, says Anderson. These winds churn up deep waters and transport minerals to the otherwise nutrient-poor surface waters. In years when monsoon winds are strong, shallow-living *G. bulloides* undergoes a population boom and abundant shells end up in sediments below. The researchers took 100-millimeter-deep sediment cores and separated each into 2-mm layers that they carbon dated and examined for *G. bulloides*. The team accumulated a 1,000-year record on the fossils' abundance-and, therefore, monsoon intensity. The results show that following a low in monsoon wind intensity around the year 1600, there has been a steady increase. The abundances of *G. bulloides* remains suggest a more marked increase in monsoon winds during the past 100 years, which the researchers attribute to global warming. The findings are detailed in the July 26 Science.

In Asia, global warming may create a greater summertime disparity between land and ocean temperatures, says Anderson. This, in turn, would increase monsoon intensity, he says. Most climate-change studies measure surface temperature. "This study provides additional evidence of anthropogenic climate change," comments Meehl, who is not a member of the research team. Increased monsoon intensity might mean fewer crop failures, says Meehl, but it could create more flooding and erosion that would damage the livelihood of millions, as recent flooding in Bangladesh did.

32) GREENPEACE TO FIGHT PM ON CLEAN ENERGY CREDITS

The Star

July 26, 2002

Internet:

http://www.thestar.com/NASApp/cs/ContentServer?pagename=thestar/Layout/Article_Type1&c=Article&cid=1026143728613&call_page=TS_Canada&call_pageid=968332188774&call_pagepath=News/Canada&col=968350116467

OTTAWA (CP) - Greenpeace is launching an international offensive against Prime Minister Jean Chrétien's push for last-minute changes to the Kyoto climate-change protocol. Peter Tabuns, executive director of Greenpeace, said Chrétien's insistence that Canada get credit for clean energy exports before ratifying Kyoto is an attempt to "weasel out" of the deal.

The environmental group will oppose Chrétien's lobbying efforts at next month's Earth Summit in South Africa, he said. "I'm going to Johannesburg to tell the international community to just say no to Jean Chrétien because Kyoto is one promise he shouldn't be allowed to weasel out on." Greenpeace officials slammed the prime minister on Friday, questioning why he is going to the Aug. 26 summit in South Africa in light of his record. "Canada has broken the three main promises it made at the Rio summit 10 years ago," Tabuns said, referring to initiatives on climate change, foreign aid and biodiversity at the first Earth Summit in Brazil. "There's no point in going (to Johannesburg) unless the promises he makes are kept.

Tabuns accused Chrétien of turning Canada into an environmental "pariah," with the biggest factor being the country's record on climate change. "The Kyoto Protocol stems from the 1992 Earth Summit and 75 countries, including 23 industrialized ones, have ratified. But not Canada," he said. The Kyoto agreement requires industrialized countries to reduce greenhouse gas emissions to below 1990 levels over the next decade. The prime minister had reportedly hoped to ratify the deal by June, when he was the host at the G-8 summit in Kananaskis, Alta., but he backed off in the face of industry complaints that the accord would severely damage the economy and cost jobs.

Chrétien has reportedly said he is prepared to ratify the treaty this year provided Canada gets an "asterisk" that gives the country credits for clean energy exports, such as natural gas. Tabuns said Chrétien will use the Johannesburg summit to push for clean energy credits but is not willing to accept debits for exports of so-called dirty fuels, such as oil and coal.

"It is apparent that he will use this opportunity in Johannesburg to try and further undermine the Kyoto protocol. He is preparing to lobby to expand the loopholes available to Canada before he's willing to sign the Kyoto protocol."

A spokesman in the Prime Minister's Office said Chrétien is committed to ratifying Kyoto and defended the clean energy proposal. "We think that it makes eminent sense given the tremendous amount of clean energy which we export . . . that directly contributes to reducing greenhouse gases," Duncan Fulton said. "(Greenpeace) will have to explain their opposition to an idea that makes eminent sense." Fulton also defended Chrétien's environmental record: "It's ridiculous to suggest that we haven't taken bold steps on our commitments at Rio and in the past several years." He noted that Canada has:

- Introduced new species-at-risk legislation.
- Strengthened the National Parks Act.
- Taken steps to reduce over-fishing.
- Promised to increase foreign aid by eight per cent a year and announced major new aid for Africa.

33) CANADA GIVING TAX BREAKS TO BOOST RENEWABLE ENERGY

Reuters
July 26, 2002

Internet: <http://www.forbes.com/business/newswire/2002/07/26/rtr67767.html>

OTTAWA (Reuters) - Canada, under fire for dragging its feet on whether to ratify the Kyoto climate-change accord, said Friday it would use tax breaks to encourage investment in renewable energy and energy conservation projects. Deputy Prime Minister John Manley announced two proposed changes to income tax rules that he said would make it financially attractive to build wind turbines and ensure that renewable energy projects could raise financing in the same way as non-renewable energy projects. "I am confident that Canadians will support our efforts to encourage the production of more renewable energy in Canada," Manley said in a statement. In the last federal budget, which was presented in December 2001, the government said it would give C\$260 million (\$164 million) to the wind power industry to increase current production of 200 megawatts to 1,000 megawatts by 2016.

Signing up to Kyoto -- the 1997 treaty designed to cut emissions of the greenhouse gases blamed for global warming -- would oblige Canada to cut its emissions by 6 percent from 1990 levels, by 2010. As of 1999, Canada's emissions were already 15 percent higher than 1990 levels. Ottawa originally said it intended to ratify Kyoto this June but then called for more consultations in the face of strong resistance from businesses, energy producers and several provincial governments.

34) ASIAN MONSOON 'GAINING IN STRENGTH'

BBC

25 July, 2002

Internet: http://news.bbc.co.uk/1/hi/world/south_asia/2152511.stm

More than 200 people have died in floods in Nepal. Climate researchers are warning that the monsoons which afflict South Asia are growing in strength and are likely to continue to do so. Writing in the journal *Science*, academics in India and the United States predict that increasingly powerful monsoons will affect nearly half the world's population, sparking severe floods and devastating erosion. Their research is published after recent torrential rains in South Asia left hundreds dead.

The team studied fossils from the floor of the Arabian Sea, where populations of a microscopic sea creature increase when monsoons - which are caused by changing winds - are strong. They have blamed the trend on increasing levels of greenhouse gases, and rising temperatures in northern latitudes.

Dead and homeless

In the past three weeks, monsoon rains have killed more than 300 people and made millions homeless in parts of Southern Asia.

In eastern India, the authorities say more than five million people have now been affected by the current floods, caused by monsoon rain, while floods in Nepal have killed more than 200 people in the past week. But elsewhere in the region, like north-western India, the population is suffering from the worst drought for a decade, and fears of food shortages are widespread.

This too is due to the monsoon. Low-lying countries like Bangladesh, already threatened by sea-level rise due to climate change and by flooding and erosion, are likely to suffer even more as the monsoons become stronger, the scientists claim

35) CALIFORNIAN LAW MAY INDIRECTLY BENEFIT ALUMINUM MAKERS

Planet Ark

July 25, 2002

Internet: <http://www.planetark.org/dailynewsstory.cfm/newsid/17007/story.htm>

NEW YORK - Aluminum producers may benefit from a new California auto emissions law, but industry experts said rewards would not come for several years and not directly from California's move but from indirect pressure on automakers to lighten vehicle weight by using light-weight metals. "The whole purpose of this (law), I believe, is to put pressure on both the car companies and the federal government to pass a higher fuel economy standard. That will mean a lot more aluminum in vehicles, I think," said

Richard Klimisch, vice president of the Aluminum Association's auto/light truck group in Detroit, Michigan.

California Governor Gray Davis signed a law on Monday regulating vehicle gas emissions to help curb global warming. It is the first state law requiring auto makers to limit carbon dioxide emissions and other pollutants that scientists have said blanket the atmosphere and lead to warmer temperatures and other harmful effects on humans and other living creatures.

The legislation would not take effect until 2006, but gives auto companies until 2009 to make technological changes that conform to the new California standards. U.S. automakers intend to legally challenge California's new emissions law, arguing that it is superceded by federal legislation already in place. "We've already said we intend to pursue legal action, because this is pre-empted federally by the energy policy and conservation act, which sets fuel economy standards," said Greg Dana, vice president of environmental affairs for the Alliance of Automobile Manufacturers in Washington. "We don't think they can do it. We intend to challenge it because it is a federally pre-empted issue," Dana added.

Experts said federal law grants authority to the federal government to set fuel standards above individual states. "This has come up many times over the past 10 years, and the federal pre-emption has always stopped the states," said Klimisch. The National Highway Traffic Safety Administration, which is part of the Department of Transportation, is currently preparing new carbon-dioxide emission standards for the 2005 model year for light trucks, which are the same emissions outlined in California's law, industry experts said. The deadline for NHTSA regulations is April 2003, and will come well before the California law is due to take effect. "In spite of what you're hearing in the press about this (California law) being about emissions, it's not really emissions in the traditional sense. It's really to control CO2 emissions, which is nothing more than fuel economy. For that reason, aluminum is something people consider," said Dana.

By trimming an automobile's weight, the amount of fuel needed to run the car, and in turn emissions, are lessened. Light-weight aluminum has been used by car companies, along with light-weight steel, plastics and other materials to reduce the overall weight of a vehicle to comply with tighter fuel standards already in place. And, car manufacturers are continuing to explore new ways to safely design vehicles that are lower in weight. While the big auto companies do not yet know exactly how stringent the NHTSA standards will be next year, they are already anticipating lighter truck designs, more efficient engines, and other technology to reduce emissions. "We're doing everything we can to try to help the automakers reach higher fuel economy standards. That's one of the things aluminum can do, without compromising safety," said Klimisch. Dana said there is no gadget you can put on a car to lower carbon-dioxide emissions, which instead must be achieved by improved engine technology, lower weight or other technological advances to a car's systems.

"There is no filter or catalyst you can put on a car to reduce CO2 emissions. Catalysts are very good at reducing hydro-carbons and carbon-monoxide emissions, but not carbon-dioxide," said Dana. "Our concern is that NHTSA will set standards that would go far beyond what the technology alone can do," said Dana. According to Klimisch, NHTSA's record in both safety and fuel economy has rendered them one of the most highly respected agencies in the government. Just the same, Dana said, NHTSA is designing regulations that will tighten fuel economy standards for light trucks. "So, there will be an effort to improve efficiency. That will be done by a number of ways. One of them is less weight, which would certainly impact metal choices be it aluminum, high-tech light-weight steel, or other things," Dana said.

36) RECORD SEA TEMPERATURES THREATEN GREAT BARRIER REEF

Reuters

July 25, 2002

Internet:

http://reuters.com/news_article.jhtml;jsessionid=PTF100MZMUR5ACRBAEZSFY?type=sciencenews&StoryID=1247580

SYDNEY (Reuters) - Sea temperatures at Australia's Great Barrier Reef last summer were the warmest on record and this year's El Nino event means the risk of mass coral bleaching has increased considerably, scientists reported on Thursday.

The Australian Institute of Marine Science (AIMS) has just completed an atlas of sea temperatures over the past decade and amalgamated it with historical data to show 2002 was the warmest year for water temperatures off northeast Australia since 1870. The rise in temperatures around the world's largest living organism coincided with mass bleaching earlier this year that affected around 60 percent of the Great Barrier Reef's 345,400 square km (133,300 square miles) of coral.

"Unless the corals can adapt and become acclimatized then obviously the long-term future for the coral is at risk," said AIMS oceanographer Craig Steinberg. "The outlook isn't good. If coral can't adapt then they're going to bleach and you get mass mortality." The sea temperature over the last century has risen by just half a degree Celsius. But corals tend to live within one to two degrees of their maximum temperature threshold and a tiny increase is therefore enough to ensure a major impact.

Bleaching occurs when coral becomes stressed. It involves a breakdown in the symbiotic relationship between the coral and algae and in severe cases the coral will die. The last time the reef's coral bleached because of higher than normal temperatures was in 1998, when the El Nino weather phenomenon warmed the waters of the Pacific, bringing drought to eastern Australia and floods to parts of Latin America.

GLOBAL WARMING

Last year was not an El Nino year, making the high temperatures even more unusual and meaning they were almost certainly a by-product of pollution-induced global warming, said AIMS climate expert Janice Lough. The onset of another El Nino this year, albeit one that U.S. experts say is likely to be mild, has increased the chances of another southern hemisphere summer of high sea water temperatures at the start of 2003. "We've changed the baseline. It is a worry," Lough told Reuters from Townsville in the far north of Queensland state.

Coral can recover after mild bleaching. But researchers fear that its ability to overcome heat stress may be weakened as high temperatures become more common. AIMS researchers are trying to establish whether coral has the ability to adapt quickly to changing temperatures. There is evidence that they can over long periods of time, but so far no indication of any short-term ability to acclimatize. In the meantime, there is not a lot that can be done to protect the Great Barrier Reef -- one of Australia's main tourist attractions and a World Heritage site. "Reef managers can do all they can to reduce all the other threats to coral reefs but they can't solve individually the global problem (of climate change)," said Lough. "It's not so much that the reef will die, it's that the reef will change," she said. "If you sort of knock out certain of the corals then other organisms might take their place."

See Also-

GLOBAL WARMING THREAT TO BARRIER REEF (CNN July 25, 2002)

<http://www.cnn.com/2002/WORLD/asiapcf/auspac/07/25/australia.reef/index.html>

37) ANTARCTIC GLACIER MAY YIELD CLUES TO GLOBAL CLIMATE CHANGE

Science Daily

July 25, 2002

Internet: <http://www.sciencedaily.com/releases/2002/07/020726080742.htm>

COLLEGE STATION, July 25, 2002 - Antarctica's Lambert glacier, which is so cold and remote that it will not even support a scientific outpost, will provide researchers with data -- garnered by remote sensing satellites -- to search for clues to predict global climate change. Hongxing Liu, a geography professor in the College of Geosciences at Texas A&M University, along with Kenneth Jezek of Ohio State University, has been awarded nearly a quarter of a million dollars from the National Science Foundation (NSF) to analyze remotely sensed data from the glacier. The two researchers will be spending the next three years trying to figure out, via computer programs, the thickness of the Lambert ice sheet and its mass balance as it edges toward the sea. Then they will look for answers as to how such glaciers might respond to world climate.

"The Lambert glacier is the largest such ice mass in the world," Liu said. "We believe that studying its movement and mass balance will yield clues that can help us understand the role of glaciers in global climate change." Their work won't require Liu or Jezek to leave their offices, since they'll be analyzing

computer data generated by sensors aboard satellites. They will use data provided by two missions of the Canadian Radarsat satellite, which provided complete coverage of the entire Antarctic continent over a 30 day period in 1997 and over three months in 2000, both at 25m resolution. The researchers will also be dealing with optical stereo data collected by the Aster sensor onboard the recently-launched NASA Terra satellite, which yields good topographic resolution at the 15m level. Resolution refers to the area represented by each pixel on the satellite image. High-resolution satellite data, showing less area and more detail, is manipulated with sophisticated software to form maps composing a geographical information system (GIS).

"Satellites provide the comprehensive observations needed for modern scientific investigations of ice flow dynamics and mass balance in the Lambert glacier basin," Liu observed. "Optical sensors are affected by clouds and often saturated due to the high albedo of snow for visible wavelengths. This limits their use in Polar regions. "With the ability to fly unimpeded by the harsh climate, to peer through clouds and to observe day and night, satellite-borne microwave instruments can provide large-scale coverage of the Antarctic ice sheet at very high resolution." Mass balance measurements tell researchers just how much ice is being formed from compression of snow. Ice thickness is in turn constrained by the surface topography of an area, which, for the Lambert glacier, is still largely unmapped. Liu and Jezek will be using paired radar imaging (interferometric SAR and SAR stereo techniques) to extract a digital elevation model (DEM) and ice velocity maps for the area.

Ice flow velocity is also controlled by an area's surface topography. The researchers will be using radar interferometry data providing full coverage of the glacier on the centimeter level of motion to determine the speed and direction of the Lambert glacier's movement. Data on ice motion and land surface topography, combined with readings from radar echo soundings of the bedrock underlying the glacier, will be used to help estimate the thickness of the ice at any point on the Lambert glacier.

Finally, Liu and Jezek will integrate their research to address the role of glaciers in the dynamics of climate change.

"The theory is that the stability of glaciers is related to sea level change," Liu said. "Any significant change in a glacier's ice thickness or rate of movement could lead to changes in sea level. A catastrophic interpretation of the theory speculates that collapse of the Antarctic ice sheet could raise sea level as much as 60 meters worldwide."

Liu observed that only long-term monitoring of the glacier will help scientists judge whether it is stable or not. He noted that global warming could affect the glacier's stability. "It is expected that any changes in regional and global climate will result in mass changes in ice streams and glaciers," Liu said. "However, this mechanism is far from being understood. "In principle, warming leads to reduction of ice. Another possible scenario is that, in a slightly warmer climate, precipitation increases, and high precipitation of snow over Antarctica adds mass to the ice. So, until we've done more analysis, we can't predict what will most likely happen."

38) GLOBAL WARMING IS BEHIND RAIN FAILURE: UN CLIMATE PANEL HEAD

The Indian Express

July 25, 2002

Internet: http://www.indian-express.com/full_story.php?content_id=6620

New Delhi, July 25: The current Indian drought may be directly linked to the larger climate change that is affecting the globe, feels R K Pachauri, chief of the UN-sponsored Inter-governmental Panel on Climate Change (IPCC), Geneva. It's a position directly at odds with that taken by the Indian Meteorological Department, which says there's no question of climate change. Pachauri, who's also director-general of the Tata Energy Research Institute (TERI), New Delhi, says "it's been a very peculiar summer this year and some perceptible climate change is taking place in India".

"There is a very strong reason to connect the current drought to larger climate change since what we are witnessing is a peculiar and sudden variation in climate as predicted by experts studying global warming", he says. The third assessment report put out by the IPCC in 2001 talked in great detail about the impacts of

climate change on South Asia. In fact, it predicted the emergence of drought and floods on this region, stating "there are possibilities of unforeseen surprises in the future".

The way this year's monsoon has behaved - starting off normally, then suddenly petering out - has no doubt surprised many climatologists. The IPCC is a scientific expert body having 192 countries as its members and is mandated by the UN to assess the scientific, social, and economic issues related to human-induced climate change. Pachauri feels once the delicate balance in the global circulation patterns is disturbed due to man-made circumstances, "non-linear and sudden changes are bound to be the outcome" and emphasises that this current erratic behaviour of the monsoon is probably the first strong signal of climate change having had a direct impact on India.

The IPCC report had also predicted a rapid glacial melt not just of the polar ice caps but also of the Himalayan regions. Evidence to that effect is found in the Bhakra reservoir, which is essentially fed by glacial melt and is more than full while other rain-fed reservoirs are less than half full today. This, too, hints at changing climate, Pachauri says. Interestingly, the India Meteorological Department (IMD) has never acknowledged that global warming and climate change are taking place and could seriously affect the pattern of precipitation for India. In fact, the IMD goes to great lengths to condemn any notions of climate change despite the growing body of evidence from across the globe.

S R Kalsi, IMD deputy director-general, feels it is "incorrect to say that there is a change in climate", adding that this is merely a part of the "natural behavior of the monsoon" borne out by the over 125 years of data with the IMD. Pachauri reacts to this by saying the IMD is "entitled to have their opinions but the indications of climate change are very strong since the curves from the world over suggest a gradually warming Earth". The TERI chief, who took over as chairman of the IPCC this April, says India needs to step up its primary research on climate change to fully understand the implications of changing climate and to build suitable mitigation measures. He calls for at least a 20-fold increase in the spending on climate related research since the impact of global warming will be felt by all sectors of the Indian economy.

39) GREEN ISSUES COULD HURT ENERGY FIRM STOCKS - REPORT

Planet Ark

July 25, 2002

Internet: <http://www.planetark.org/dailynewsstory.cfm/newsid/17005/story.htm>

WASHINGTON - If the stock slump wasn't bad enough, shareholder value at some top oil and natural gas companies could fall by another 6 percent because of environmental costs and risks in the coming decade, according to yesterday's report by an environmental think tank. The World Resources Institute (WRI) warned that future actions to curb global warming and limit drilling for oil and gas in environmentally sensitive areas could cause investments in energy companies to drop.

"Investors ignore environmental issues at their own peril," said Duncan Austin, WRI economist and co-author of the report. "Environmental issues can have a significant impact on a company's bottom line and stock price." The report looked at 16 leading oil and gas companies. Unocal, Occidental Petroleum and Repsol YPF all stand to lose more than 6 percent of shareholder value as global warming and drilling access issues unfold over the next decade, the report said. For example, the international Kyoto treaty that seeks to reduce greenhouse gas emissions could eventually dampen sales of oil, which is a major cause of the heat-trapping gases.

KYOTO SAID A FACTOR

The Bush administration has rejected the treaty but Japan, Europe and Russia have embraced it.

Meanwhile, nearly a dozen U.S. state attorneys general have called for a national program to set specific targets to reduce greenhouse gas emissions.

"Even without U.S. participation in the (Kyoto) protocol, U.S.-based companies could be affected by it," the study said. "Changes in the global oil market, transmitted by price, will be felt throughout the industry." In contrast, Burlington Resources, Sunoco and Valero Energy are relatively insulated against these environmental issues and should see little or no change to their shareholder value, the report said.

Another risk to balance sheets is growing opposition to drilling in environmentally sensitive areas such as the Arctic National Wildlife Refuge, the think tank said. ChevronTexaco, Conoco, Phillips Petroleum, TotalFinaElf, Apache Corp, Repsol, Occidental and Unocal have a larger share of their oil and natural gas reserve in environmentally important areas, and are more at risk, according to the report. "Past troubles encountered by Texaco in Ecuador, Shell in Nigeria and other companies may be a precursor to future, more systematic difficulties," it said. Exxon Mobil, Royal Dutch/Shell Group, Burlington and Eni Spa have few of their energy reserves on environmentally sensitive lands and offshore waters.

DISCLOSURE LIMITED

The report found that energy companies have made limited disclosure on the relevance of environmental issues on their future financial performance. "At a time when investors have significant doubts about the quality of information put out by companies, this type of objective information and analysis is exactly what investors need to make accurate judgments about the value of their investments," said WRI President Jonathan Lash. BP, Conoco and Phillips were the only companies reviewed that indicated in their annual reports to shareholders that climate change policies may have an impact on future business operations, according to the study. "However, no company attempts to quantify in financial terms the potential environmental risks that it faces," the report said.

Energy companies are not the only ones to face financial risks linked to the environment. On Monday California's governor signed a landmark law requiring automakers to limit carbon dioxide emissions and other pollutants. Gasoline fumes from cars and trucks are a major cause of greenhouse gas emissions. The auto industry has vowed to dismantle the California measure in federal court by invoking federal laws that reserve for Congress the power to set fuel economy standards.

See Also-

WRI REPORT WARNS ENVIRONMENTAL RISKS COULD REDUCE SHAREHOLDER VALUE OF LEADING OIL AND GAS COMPANIES (Business Wire July 24, 2002)

<http://library.northernlight.com/FC20020724670000041.html?cb=0&dx=1006&sc=0#doc>

SHAREHOLDERS WARNED ON OIL COMPANY ENVIRONMENTAL RISKS (One World US July 24, 2002)

Internet:

http://story.news.yahoo.com/news?tmpl=story&u=/oneworld/20020724/wl_oneworld/1032_1027504292

40) BRAZIL RATIFIES KYOTO PROTOCOL

Agencia EFE S.A

July 23, 2002

Internet: <http://library.northernlight.com/FE20020723140000084.html?cb=0&dx=1006&sc=0#doc>

Brasilia, Jul 23, 2002 (EFE via COMTEX) -- President Fernando Henrique Cardoso on Tuesday signed into law the Kyoto Protocol on climate change, which seeks to reduce emissions of greenhouse gases by developed nations. "We have just approved an important initiative that will benefit the (entire) world," Cardoso said at the signing ceremony.

The Kyoto Protocol on climate change remains one of the primary sources of tension in the international debate on global warming. The terms of the treaty, which was the product of the 1997 U.N. Framework Convention on Climate Change in Kyoto, Japan, have been rejected by the United States, the world's largest industrial economy. The nations that have ratified the protocol agreed to reduce total emissions of greenhouse gases by at least 5 percent below the 1990 level to avoid destroying the ozone layer and prevent global warming.

41) CO-GENERATION DIRECTIVE' TO SAVE ENERGY AND COMBAT CLIMATE CHANGE

EUBusiness

July 23, 2002

Internet: [http://www.eubusiness.com/cgi-](http://www.eubusiness.com/cgi-bin/item.cgi?id=86873&d=101&h=240&f=56&dateformat=%o%20%B%20%Y)

[bin/item.cgi?id=86873&d=101&h=240&f=56&dateformat=%o%20%B%20%Y](http://www.eubusiness.com/cgi-bin/item.cgi?id=86873&d=101&h=240&f=56&dateformat=%o%20%B%20%Y)

The European Commission is bidding to promote the co-generation of heat and power, an energy-saving technique where heat and electricity are produced in one single process. New co-generation plants save over 10 per cent of fuel which would otherwise be used for separate production of heat and electricity. The production of electricity through co-generation represented 11 per cent of the EU's total electricity production in 1998, leading to energy savings comparable to the annual gross energy consumption of Austria or Greece.

"This new proposal would help limit the growing external dependence for energy and harmful greenhouse gases emissions," said Loyola de Palacio, Commissioner for Energy and Transport. The co-generation Directive would encourage Member States to promote co-generation and they would have to report on progress achieved towards meeting the potential of co-generation and on measures taken to do so. Member States would also be required to guarantee that electricity from co-generation would be transmitted and distributed by objective, transparent and non-discriminatory criteria; facilitate access to the grid for electricity produced from co-generation units; ensure that guarantees of origin of electricity from co-generation could be issued on request by one or more competent body.

The draft proposal establishes a common definition of co-generation and a flexible methodology to identify high efficient co-generation. It will now be forwarded to the member states and the European Parliament for adoption under the 'co-decision procedure'.

42) UK FACES BATTLE TO MEET 2010 CO2 EMISSIONS CUT

Planet Ark

July 23, 2002

Internet: <http://www.planetark.org/dailynewsstory.cfm/newsid/16966/story.htm>

LONDON - Britain will struggle to meet its target of a big cut in carbon dioxide emissions by 2010 as generators burn more coal to fill the gap left by the closure of nuclear power plants, a report published yesterday said.

The report from Cambridge Econometrics predicts a rise in carbon dioxide (CO₂) emissions from 2005 as a result of energy demand growth and an increase in coal-fired generation as many of Britain's ageing nuclear power stations shut. "Our forecasts of energy demand and carbon emissions are an important reality check," said Paul Ekins, co-editor of the study "UK Energy and the Environment" in a statement. "They show the magnitude of the task facing the government as it seeks to make significant headway towards its domestic policy goal of cutting carbon dioxide emissions by 20 percent by 2010."

All but one of Britain's nuclear power stations are due to shut by 2025. The newest plant, Sizewell B, built in 1995, will operate until 2035. Britain's CO₂ reduction target is voluntary but much deeper than its legally binding commitment under the Kyoto climate change protocol to cut emissions of greenhouse gases, widely blamed for causing global warming. Cambridge Econometrics said the UK is on course to meet its Kyoto goal of a 12.5 percent cut in greenhouse gas emissions on 1990 levels by 2008-2012.

Britain's CO₂ emissions fell sharply in the 1990s as power producers switched to cleaner natural gas from coal but they have risen over the last two years as high gas prices prompted a switch back to coal generation. Coal is expected to be much cheaper than gas after 2010 when gas prices are forecast to rise as Britain becomes more dependent on imported gas. While emissions rose again in 2001, Cambridge Econometrics revised down the level of pollution in 2000 by 2.7 million tonnes of carbon (mtc) to 146 mtc. As a result, it forecast emissions in 2010 at 147.7 mtc, 7.2 percent below the 1990 level, compared to 149.5 mtc Cambridge Econometrics estimated in January 2002.

The challenge for the government in its white paper on energy, due to be published in the autumn, will be to combine measures to encourage a low-carbon economy with tax measures which boost energy conservation, said the report. "The government is clearly finding environmental taxes in general...politically challenging," said Ekins. The government has faced opposition from companies to its recently introduced climate change levy on energy used by businesses. It also faces a struggle to reach its

target of providing 10 percent of Britain's electricity from green sources by 2010, up from around three percent at present.

COMMENTRY AND ANALYSIS

43) KEEP POLITICKING OUT OF GLOBAL WARMING DEBATE by Masaharu Asaba

Daily Yomiuri

August 4, 2002

Internet: <http://www.yomiuri.co.jp/newse/20020804wo73.htm>

Masaharu Asaba is a senior editor of The Yomiuri Shimbun.

Rising sea levels caused by global warming threatens to engulf small islands in the Pacific. But the world remains divided over how to deal with the situation. While some island nations warn their territories are submerging and their populations must be relocated, some advanced countries insist the rise of sea levels is not yet serious. As an island nation, Japan is not immune from the effect of rising sea levels. Now is the time for the country to launch an initiative to conduct surveys on rising sea levels and take precautionary measures.

The South Pacific island republic of Tuvalu, with a population of only about 10,000 spread out over nine coral atolls, used to be a peaceful self-supporting tropical paradise. It now faces the prospect of sinking into the ocean, and is drawing global attention as a test case of an island threatened by rising sea levels. According to meteorologists, global sea levels are rising as polar ice caps melt. Meteorologists on the International Panel of Climate Changes (IPCC), a body affiliated with the United Nations, last year published a report warning that sea levels could rise by up to 88 centimeters by 2100. The Tuvalu government is increasingly concerned about the prospect of the island nation disappearing if sea levels continue to rise.

Issues related to rising sea levels will be high on the agenda of the World Summit for Sustainable Development to be held in South Africa from mid-August to early September. The current situation, though, is that few countries are really serious about tackling the problem. A survey mission recently sent to Tuvalu by Friends of the Earth (FoE) Japan, a nongovernmental organization that studies environmental problems, reported that rising sea levels have already begun to affect the lives of Tuvaluans. The NGO found that:

- Coconut trees on the seashore have begun falling down and beaches are being eroded.
- At high tide, seawater spills over embankments, inundating houses.
- Wells that supply drinking water are tainted with seawater, posing not only a health hazard but also affecting cultivation of the islanders' staple crop, taro.
- In one recent incident, seawater suddenly gushed out of the center of the island.
- Cyclones have occurred more frequently.

Despite this, the National Tidal Facility, an Australian government-affiliated research body, turns a blind eye to what is happening in Tuvalu and contends that its own surveys show sea levels around the island rising less than 0.9 millimeters a year. However, scientists say such data are not reliable unless they are measured over a period of 30 years. The Australian survey, conducted over only nine years, thus cannot be considered scientific. It does, however, reflect the stance of the Australian government, which has refused to ratify the Kyoto Protocol on climate change, mirroring the United States' position, and is keen to emphasize that there is no sign of global warming.

Meanwhile, the Tuvalu government has initiated a program, Pacific Access Category, aimed at resettling its people in New Zealand. The initiative is drawing global attention as the first case in the world in which environmental refugees are being relocated. Furthermore, the island republic reportedly is moving to appeal to the International Court of Justice in The Hague against U.S. companies that emit massive amounts of carbon dioxide. However, one should not jump to conclusions and take these moves at face value. Governments on either side of the Kyoto Protocol debate interpret the pact according to what is important to them. If they go too far in their propaganda campaigns, they may find themselves hard-pressed to reach an international accord on addressing global environmental problems

With speculation growing over the motivation behind the Tuvalu government's moves, Seluka Seluka, a climate change coordinator for the Tuvalu government, was invited to Japan recently by FoE Japan to give his personal account of the issue. He explained that the planned emigration to New Zealand is aimed at expanding job opportunities for the islanders--only those aged below 45 with English proficiency are eligible. He denied that the emigration was a relief measure for environmental refugees. He also doubted the wisdom of appealing to the International Court of Justice. It may simply cost his government too much in legal fees and losing the court battle would incur penalties it could not afford to pay, Seluka said. "The policy was adopted by the previous administration and could change if the government changes after the next election," he said. He argued it was inadvisable to make too much fuss about what the Tuvalu government was doing.

The main body of existing scientific data points to actual rises in sea levels around the world. But even if measures to prevent global warming were taken fully and immediately, sea levels would continue to rise because heat energy--in other words, temperature--stored in the oceans will keep altering the climate and current patterns. Advanced and developing countries must work together to steadily and systematically prevent global catastrophes. Disguising politics as science or playing to the gallery as environmental victims only adds to the confusion. Japan, with its advanced meteorological capability, engineering skills and scientific know-how, is perfectly placed to lead world opinion and take the initiative in addressing environmental issues.

44) COMMUNICATING CLIMATE CHANGE by Crispin Tickell

Science via Scidev.net

Volume 297, Number 5582, Issue of 2 Aug 2002, p. 737.

Internet: <http://www.scidev.net/#>

<http://www.sciencemag.org/cgi/content/summary/297/5582/737?ijkey=4BwspNQwbde7E&keytype=ref&siteid=sci>

Crispin Tickell is a senior visiting fellow at the Harvard University Center for the Environment and chairman of the Climate Institute of Washington, DC.

The science of climate change is one thing, but communicating the results of that science to the public is very much another. Climate change is one of the issues that will come up at the World Conference on Sustainable Development in Johannesburg, South Africa, in August 2002. But apart from when there is suffering from unexpected heat or cold, flood or drought, it is always hard to give climate change the appropriate urgency.

The science itself is not in doubt. Of course there are continuing uncertainties about the proportion of natural to human-driven change, but the existence of human-driven change is clear. The conclusions of the Intergovernmental Panel on Climate Change and the main national academies of science (including that of the United States) represent a broad international consensus with little serious dissent.

There the problems of communication begin. I remember the editor of a leading British broadsheet dismissing climate change as yesterday's story. News has to have a beginning and an end, and often has to be artificially polarized. A process that occurs over years or centuries is hard to report on very often. Moreover, the story carries uncomfortable implications. Making unwelcome changes now to avoid possible consequences in an uncertain future is a difficult proposition to sell to anyone. With a few honorable exceptions, politicians and economists do not calculate more than a few years ahead. There are also none so deaf as those who don't want to hear.

Yet the message of climate change is being increasingly, if incrementally, registered. At the beginning of the 19th century, everyone knew that slavery was wrong. But there was a tacit conspiracy to do little or nothing about it; too many interests were at stake. Leadership, public agitation, and a few visible disasters were needed to bring slavery to an end. It also needed a new morality and sense of public and private responsibility.

The Framework Convention on Climate Change of 1992 and subsequent agreements fixed large obligations on governments. None was under the illusion that the modest reduction of carbon emissions by industrial countries envisaged under the Kyoto Protocol would solve the problem, and all agreed that the arrangements for doing so were imperfect and incomplete. But at least it was a start. Public opinion in Europe, Japan, and elsewhere broadly if reluctantly accepted the idea that a change of direction was necessary, at least in the way in which energy was generated and used. The industrial countries could scarcely preach change to the rest of the world if they did not give the example.

Hence the dismay when the Bush administration pulled out of the Kyoto Protocol, pleading national self-interest, and later produced a climate strategy that included substantial increases in carbon emissions. How could the most powerful country in the world, with the strongest scientific base (and yet the world's largest polluter), behave with such apparent irresponsibility? Lack of public awareness in the United States may be part of the answer. The American way of life is built on the car economy, cheap energy, and faith in market forces. Vested interests are strong in Congress and the media, and the rest of the world seems far away.

Yet change is on the way. Already business is reading the signs. The notorious Global Climate Coalition, dedicated to discrediting the science that demonstrates global warming, has fallen apart. Such major companies as DuPont in the United States, BP Amoco and Shell in Europe, and Toyota in Japan aim to do better than anything in the Kyoto Protocol to curb emissions. Even the U.S. administration shows signs of unease. There is talk of greater energy efficiency and application of new technologies. The impacts of the greenhouse effect have become common parlance. And already the Chinese claim to have reduced their carbon emissions in absolute terms. They see where their real national interest lies.

What, if anything, will be the message from Johannesburg? We shall see. Communicating the fact of climate change is a complex process involving political leadership, science, public pressure, and even perhaps a useful catastrophe or two to illuminate the issues. We should not forget the moral dimension: a sense of responsibility to future human generations and a respect for the totality of ecosystems.

45) FOR CLIMATE JUSTICE by C.E. Karunakaran

Frontline Volume 19 - Issue 15

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C.E. Karunakaran is an engineer who has studied and worked on issues relating to carbon credit trading.

If the world is to be saved from an environmental catastrophe, it is essential for the civil society in Third World countries to take an active role in pressuring their governments and in moulding opinion to move in the direction of a solution based on the principle of equal atmospheric rights for all.

The atmosphere, like the air we breathe, belongs to everyone. It has now become obvious that the extent to which it can be polluted by carbon dioxide (CO₂) and other greenhouse gases (GHG) in the course of our normal living has a ceiling; that is, the pollution space that we collectively possess is finite and limited. The only enduring basis by which this space can be shared is to divide it equally among all human beings. Any method that is established on the strength of the present power relations, and is thus iniquitous, cannot be sustained for long.

It is this realisation that has made far-sighted persons such as French Environment Minister Dominique Voynet support the strategy of contraction and convergence. According to this strategy, all countries will be allotted entitlements to pollute on the basis of a single per capita allowance. While the rich countries will have to contract their emission levels to reach this target, the poor countries will be allowed to develop their economies by increasing their emission to that level. This convergence target will have to be reached in a given time-period and, thereafter, will decline uniformly for all countries.

The per capita emission and the time for convergence will have to be negotiated internationally, taking into account the safe levels of CO₂ concentration that can be allowed in the atmosphere. If these entitlements are permitted to be traded, developing countries can get substantial resources as a matter of right and not as

handouts. These resources would help them leapfrog into clean technologies for power and transport and for overall development as well, without having to worry about losing their bargaining positions.

A sub-text to this argument is that within countries, depressed sections of people have an ecological debt that the affluent sections owe them and they have a right to claim it. A study by the Indira Gandhi Institute for Development Research found that in 1989-90 the per capita carbon emission of the top 10 per cent of the urban population in India was 13 times that of the bottom half of the rural population. It is the poverty-stricken Dalit woman who fetches headloads of shrub from long distances for the day's kitchen fire and her children who pore over their books in the glow of the kerosene lamp who have saved this planet from a worse disaster than it faces now. If the excluded and oppressed sections in the Third World countries demand their rightful share of equitably distributed CDM (Clean Development Mechanism) funds for their own development, it could lead to social dynamics that are different from what these societies are used to at present.

But, for now, the dominant discourse in the dominant country is focussed on the 'non-responsible' emissions by the populous developing nations. Green movements in that country are quick to point out to their government that it is the countries that are non-accountable to Kyoto that are behaving more responsibly than those that are accountable to it. For instance, according to researchers at the Lawrence Berkeley National Laboratory in California, China has reduced its emission by 17 per cent since the mid-1990s, a period when its gross domestic product increased by 36 per cent. Said Zhou Dadi, Director of the Energy Research Institute, China: "Strategically, we have adopted climate change as an important concern in our energy planning. Before 1980, China's energy use increased 1.6 times as fast as the economy. But in the last 20 years, energy use has grown at less than half the rate of the economy... Our per capita energy use is just one-tenth of that in the United States and one-seventh of that in Europe. Americans drive cars while we ride bicycles; you live in houses while we live in dormitories."

India has also done much to conserve, though its record is not as spectacular as that of China. India is now the world's fifth largest fossil-fuel CO₂-emitting country; the emissions having grown at 6 per cent a year since 1950. It is the world's third largest coal-producing country and coal accounts for 70 per cent of fossil emissions. However, at less than 0.3 metric tonnes of carbon emission per head, it is the lowest for any large country, far lower than the global average of 1.13 tonnes and one-twentieth of the U.S. per capita emission.

There have been several studies of the impact of global warming on India, especially on food production and on coastal areas. The United Nations Environment Programme (UNEP) lists India among the 27 countries that are most vulnerable to a rise in sea level. A study by the Jawaharlal Nehru University in 1993 found that a one-metre rise in sea level would inundate approximately 5,800 square kilometres of coastal area and directly affect 70 lakh people; the economic loss would range from Rs.2,30,300 crores for Mumbai to Rs.400 crores for Balasore, at current prices. India is already reeling under weather disasters of unprecedentedly large scales. Most environmentalists link this to global warming. A heat wave in Orissa in 1998, the hottest year of the millennium, claimed 650 lives; the next year, 10,000 people perished in Orissa's worst-ever floods.

This year's heat wave was worse than that of 1998 and claimed more than 600 lives in Andhra Pradesh alone, despite prior warning to the people and some preparations. A UNEP team that went to the Himalayas recently found that a glacier near the first camp that Edmund Hillary and Tenzing Norgay set up during their conquest of the Everest in 1953 had receded by 5 km and that a series of small ponds had now formed a big lake.

The lack of sufficient data and research on the impacts of climate change has prevented India, and other developing countries, from playing an assertive role in global negotiations. India cannot hope to make the kind of investment that the U.S. has made. (Two national laboratories in the U.S. have launched a \$20 million project, with 1.5 teraflops of computing power, to evaluate scientifically the policy options on climate change.) Also, the 'expert' advice India gets on policy matters is less than neutral. In a briefing paper sent by the Centre for Science and Environment to the Members of Parliament in India before The Hague conference, the late Anil Agarwal pointed out that Bill Clinton's principal environmental adviser

Kathleen McGinty stationed herself at the Tata Energy Research Institute in Delhi for a year and went round the country to paint an alluring picture of the CDM, without pointing out its inequity in the absence of established entitlements. According to him, the Confederation of Indian Industry (CII) was among those who fell for her argument. It is only to be expected that private industry everywhere will be short-term-oriented.

The government and the politicians too have little incentive to take a long-term view. In fact, the subject gets very low priority and the public awareness of the issues involved is also abysmally low as compared to the awareness levels in the industrialised countries. Besides, when push comes to shove, the only superpower of the world will not hesitate to apply open pressure on national governments, using its leverage. In fact, some non-governmental organisations (NGOs) in the North, such as the World Resources Institute in Washington D.C., want international financial institutions to use aid, loan and trade to pressure developing countries to adopt climate-friendly, and obviously costly, technologies. Thus one cannot assume that the Indian government will automatically act in such a way as to protect the long-term interests of the people.

So, if the world is to be saved from a looming catastrophe and international and inter-generational justice is to be maintained, it is essential for civil society in Third World countries to take an active role in pressuring their own governments and in moulding world opinion to move in the direction of a swift 'equal rights for all' solution. In this effort, they need to contend with, and engage in dialogue, even well-meaning NGOs in the North, which, in their anxiety to get some action off the ground, are prone to seek accommodation from the nations in the South. Attending a conference of northern NGOs on climate change, an activist from the South found to her dismay that the question equity ranked lowest in the delegates' priorities.

The forces ranged against a credible and just solution are many and mighty. One silver lining is that the extremism of the Bush variety is creating a backlash of public opinion and pulling together environmentalists for vigorous joint actions. An example is the largest ever paid media campaign by any environmental group during August and September 2001 in the United States. Americans in 23 States were educated by a clutch of environment groups on how their Congressmen listened when (oil) money talked, how they voted for \$30 billion in taxpayer handouts to oil, coal and nuclear power companies, how they "voted time and time again for more pollution, and more global warming" instead of for lower energy bills and a healthier environment, how they should not now allow their Senator to do the same when the bills come up for approval.

There is a need for similar concerted action by the NGOs of the South. This need not be, and probably ought not to be, limited to advocacy of the equal-rights-to-the-air-above principle; it can extend to the issue of reparations for the damage caused to the environment in the past. Even as voices are raised now for reparations for slavery and colonialism, just recompense for environmental imperialism is bound to become a major issue several years hence. But raising it now has the advantage of driving home the equal rights message with greater force. In fact, the current environmental intransigence of the U.S. President can be countered by taking him to court for the economic costs of the disasters faced by the poorer countries because of climate change - up to \$9.5 trillion over the next two decades, according to one estimate by development groups. The Red Cross suggests in a report that poor countries could seek legal compensation to pay for reconstruction through an "international tort climate court". It says: "Increasingly sophisticated analysis of climate change means that ignorance of the consequences of industrial consumption and pollution can be no defence for inaction."

In a recent article in The Guardian, Stephen Timms of the Global Economy Programme at the New Economics Foundation points to the establishment of a principle in a U.S. court that no State had the right to cause injury to another by emitting "fumes". This was in a case relating to a Canadian smelter plant damaging crops and livestock in Washington State in the U.S. Timms says: "The next message G-7 heads of state receive from their poorer cousins may not be an invitation to a reception, or a plea for more aid. It may be much more abrupt: 'We'll see you in court for global warming.' A concrete step towards this was taken recently when two dozen lawyers representing environmental groups met in Washington to explore the possibility of class-action lawsuits against the U.S. government and corporations on behalf of Tuvalu - whose 10,000 residents are emigrating to New Zealand as the island nation faces total submergence by

2050 - or the Maldives or Jamaica, like those filed by the Holocaust victims or those filed against the tobacco companies. Tuvalu's new Prime Minister has signalled his intention to sue.

The principle of contraction and convergence is gaining ground, albeit very slowly. The Environment Ministers of Denmark, the Netherlands and the United Kingdom have voiced their personal support to it; Britain's Royal Commission on Environmental Pollution, in a report on climate change published recently, has endorsed it. However, it is nowhere near claiming serious attention at Kyoto discussions. A large part of the responsibility to see that this happens rests on the NGOs in India and in the other countries of the South.

46) GLOBAL WAR ON GLOBAL WARMING HEATS UP

World Watch Institute

August 1, 2002

Internet: <http://www.worldwatch.org/alerts/020801.html>

Washington, DC - Thursday, August 1, 2002 — The world is on the brink of bringing into force one of the most far-reaching environmental treaties of all time, the Kyoto Protocol. And even without the world's largest emitter of greenhouse gases, the United States, on board, signatories of the Protocol are setting the stage for a new generation of policymaking worldwide, reports a new study—the first ten-year review of global climate policy since the Rio Earth Summit—by the Worldwatch Institute, a Washington, D.C.-based research organization.

“The next critical step in controlling global warming is to bring the Protocol, and its legally-binding emissions limits, into force as soon as possible and leave the era of voluntary commitments behind,” says Seth Dunn, author of *Reading the Weathervane: Climate Policy from Rio to Johannesburg*. “The first President Bush argued for soft, voluntary commitments in 1992. It was a questionable claim back then, and one that—with a decade of hindsight—we can discard. For the current President Bush to continue recycling his father's failed policy betrays either ‘policy amnesia’ or willful neglect of the record of the past decade.”

Momentum for bringing the Kyoto Protocol into force has been building, following the ratifications by the European Union and Japan earlier this summer. With ratification by either Russia and Poland, or Russia and Canada, the conditions for bringing the treaty into force would be satisfied. Climate change will loom in the background at the upcoming World Summit on Sustainable Development in Johannesburg in August/September and will be front and center at the next round of negotiations, which will take place in New Delhi from October 23 to November 1. In this review of global climate change policy since the 1992 Earth Summit in Rio de Janeiro, Dunn reviews global and national carbon emission trends between 1990 and 2001, and details the climate policies developed over the past decade in 11 industrial and developing nations and the European Union. Among the findings:

The European Union, the climate policy pioneer, saw emissions drop by 0.2 percent between 1990 and 2001. But E.U. emissions rose in 2000 and 2001, auguring future rises if new and stronger policies are not adopted.

Emissions in Germany and the United Kingdom fell by 17.1 percent and 4.1 percent, respectively, due to the shutdown of inefficient industries and a switch from coal to natural gas for electricity.

Japan saw emissions balloon by 10.8 percent between 1990 and 2001, though it still boasts the world's best ratio of carbon emissions per unit of economic output.

The United States, Australia, and Canada saw emissions explode by 15.7, 32.3, and 11.5 percent, respectively, between 1990 and 2001.

Russia, the most carbon-intensive country, experienced a 30.5 percent drop in emissions between 1990 and 2001, largely due to its economic collapse during the 1990s.

Climate change rose to the top of the global agenda at the 1992 Rio Earth Summit, where the original U.N. Framework Convention on Climate Change was adopted. Under this agreement, industrial and former Eastern bloc nations agreed to aim to voluntarily return their emissions to 1990 levels by the year 2000. However, nearly all the countries fell short of their initial Rio goals. Globally, carbon emissions grew by 10.2 percent between 1990 and 2001. Meanwhile, the scientific case for action continued to strengthen, due

to further observed evidence of climate change and a string of new highs in global carbon dioxide concentrations and global average surface temperatures.

“The records in global CO₂ concentrations and global temperatures, and the upward trends in global and most national emissions, indicate that the gap between climate science and policy has widened, rather than narrowed, since Rio,” says Dunn, who identified several key shortcomings in the policy responses to date: Most of the climate policies that were adopted have been too weak, only partially implemented, or discontinued.

Governments have failed to develop “diversified portfolios” of policies, with many relying on one type of measure—such as weak voluntary agreements. While “good practices” were identified in areas such as tax policy and energy efficiency standards, the existence of “perverse practices”—including subsidies for fossil fuel production and consumption (estimated globally at \$200 billion per year)—has been a major impediment to climate policymaking, particularly in the United States, Canada, and Australia.

The transport sector emerges as a major blind spot in climate policy since Rio, receiving very little attention while becoming the fastest-growing source of emissions. Transportation, especially road transport, is projected to remain the fastest-growing source of emissions through 2020, with the most explosive growth occurring in the developing world. But governments have been loathe to touch the massive direct and indirect subsidies for road building, suburban development, and car travel that have fueled the surge in transport emissions. Dunn defuses several common myths in the climate policy debate, such as the claim that Brazil, India, and China are “rogue emitters.” “We found these nations taking numerous steps to slow emissions growth, primarily for economic reasons,” says Dunn. “For example, the U.S. government projects that China will surpass the United States as the world’s biggest carbon emitter by 2020. But recent trends suggest that the gap between the two countries’ emissions may instead widen, as Chinese emissions rise less rapidly than projected, due to significant reductions in coal use and widespread energy efficiency improvements.” Dunn also challenges the claim, often made by opponents of the Kyoto Protocol, that the costs of implementing the treaty will outweigh the benefits.

The Protocol would require industrial and Former Eastern bloc nations to collectively reduce their greenhouse gas emissions by 5.2 percent between 1990 and 2008-12. But there is significant uncertainty about the economic consequences of meeting this commitment, as conventional economic models have historically overstated the costs and understated the benefits of environmental policies. “Keep in mind that the economists who predict that the Protocol will be too expensive are the same nay-sayers who predicted that no agreement would be reached in Kyoto,” Dunn points out. “The real-world evidence to date, and new studies showing significant potential for low- or no-cost emissions cuts, suggest that they will be proven wrong once again.”

See Also-

WORLDWATCH PAPER 160 - READING THE WEATHERVANE: CLIMATE POLICY FROM RIO TO JOHANNESBURG PLEASE VISIT <http://secure.worldwatch.org/cgi-bin/wwinst/BWP160>

47) HAS POLITICAL WILL RUN DRY? By Lloyd Axworthy

Globe and Mail

July 31, 2002

Internet:

http://www.globeandmail.com/servlet/GIS.Servlets.HTMLTemplate?current_row=2&tf=tgam/common/FullStory.html&cf=tgam/common/FullStory.cfg&configFileLoc=tgam/config&vg=BigAdVariableGenerator&date=20020731&dateOffset=&hub=headdex&title=Headlines&cache_key=headdexComment&start_row=2&num_rows=1

Lloyd Axworthy, foreign affairs minister from 1996 to 2000, is director and CEO of the University of British Columbia's Liu Centre for the Study of Global Issues.

The time has come for Canada to be counted among nations willing to take on one of the biggest challenges the world has faced, says Lloyd Axworthy

The dog days of summer are not a good time for weighty political decisions in Canada. The traditional rule of thumb is that parliamentarians and cabinet ministers should occupy themselves with nothing more intrusive than a stroll through the local street festival or country fair. Leave us to our barbecues, canoe trips and lawn chairs, is the prevailing national sentiment about politics during August. This summer is different. Very soon, the last week of August to be exact, a decision must be made that, to put it bluntly, will be a defining moment for this country for many years to come. That moment of truth is when we will decide whether or not to finally and fully announce our commitment to ratify the Kyoto Protocol on climate change at the United Nations summit meeting on sustainable development in Johannesburg.

It may be a hard sell to convince a slumbering, sun-seeking populace that signifying our intent to join in an environmental treaty at a UN meeting in far off South Africa constitutes the stuff of historic decision-making. Yet, that is exactly what is at stake. The decision to fulfill our commitment and become a signature member of one of the most significant international undertakings of this new century can only be described as momentous. It means that we must be prepared to override provincial objections led by the government of Alberta, resist the economic alarms raised by many in the energy industry and their legion of consultants, discount the hidebound reservations of the majority of mandarins in Ottawa, ignore the tepid tip-toeing of most of the federal cabinet, plot a course distinct from our southern neighbour and fire up the political system for a major mobilization -- all in aid of tackling one of the most serious risks faced by humankind, the convulsion of our climate because of too much human-produced carbon going into the air.

This is not one of those abstract issues that disciples of globalization like to lecture on. This is a real, visceral happening that one can see in every corner of the globe, carrying with it real threats to people's security and well-being. A few weeks ago when visiting Mongolia, I was shown the stark evidence of how the Gobi desert is chewing up a large acreage of grassland both there and in China because of global warming. The consequence is massive dust storms that sweep across East Asia and are now reaching the shores of North America, leaving severe respiratory illnesses in their wake. Last year at this time, I chaired a task force on climate change for the government of Manitoba and saw directly the impact global warming is having in our own country -- diminished water supplies in the Prairies, the slow disappearance of our Boreal forest, increased outbreaks of fire, disease and insects and a melting of Arctic ice drastically affecting the lives of our northern inhabitants.

There is no region of the Earth that is immune from the shifts in weather patterns, bringing with them conditions of rising sea levels, extremes in temperatures, volatility in normal climate trends. We are living in a carbon-induced climate maelstrom.

People understand this. In polling done in 11 countries around the world, the risks of disasters arising from climate change outweighed the concerns over terrorism. In Canada, it was by a three-to-one margin. But, while the politics of antiterrorism are in high gear and billions are spent in protection against that particular threat, there is a disconnect when it comes to climate change. The political system is simply not engaged to the extent necessary to produce effective action.

Ratifying Kyoto is important because it sets a framework of agreement on which widespread, collective, global effort can be organized. It is why Canada must be a full participant in that effort, lending our resources, our know-how, our science, and most of all, our leadership, to this timely chance to begin showing that we can master our affairs. At the centre of this summer political storm is the Prime Minister. He is going to Johannesburg to represent Canada. He will be on stage when the rest of the world asks where we stand. He is the one who must exercise the political will to make it happen. Signs are that he is ready to make a move. He is one of the few in Ottawa who seem to understand the primacy of the issue and the role Canada must play.

He has some allies. Environment Minister David Anderson has been waging the good fight. There are several stalwarts in the government caucus. Manitoba Premier Gary Doer has become the Kyoto advocate among provincial leaders and has committed his province to meeting Kyoto targets. There is a healthy, vibrant voice from many NGOs.

But, there are still too many leaders in politics, business, media and in the community hiding in the weeds, afraid to declare, showing little engagement at this crucial time. There hasn't been anywhere near the level of public attention or unifying of national purpose that we have seen when other issues of magnitude have

been encountered. The premiers' meeting just getting under way in Halifax could substantially change that if Mr. Doer is successful in extracting a firm commitment from the premiers in advance of the UN summit. Alberta's position is that the matter needs more study, but Johannesburg must be seen as a hard deadline. Environment policy should also be in the forefront of the debate generated this summer by the federal leadership review. It hasn't been.

There is still too much ambivalence and avoidance being displayed by too many people in strategic positions on this crucial issue. This weakens the case and undermines the capacity of the country to get its act together so that we can work in a highly motivated way to meet the threat that global warming presents. Time is short before the world summit. It must be put to good use in developing a strong consensus among our political leadership that ratifying Kyoto is a determining step for Canada. If we don't, the warmth we enjoy each summer might just some day be more than we can bear.

48) SEIZE THE DAY ON CLIMATE CHANGE by David Crane

The Star

July 28, 2002

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David Crane is The Star's economics editor. His column appears Tuesday to Thursday, Saturday and Sunday. He can be reached at crane@interlog.com by e-mail.

PRIME MINISTER Jean Chrétien plans to attend the U.N. Conference on Sustainable Development in Johannesburg at the end of next month. But he shouldn't go unless Canada has first ratified the Kyoto Agreement on Climate Change. There are nearly enough countries that have ratified the Kyoto agreement so that it can come into effect. Canada's ratification would almost certainly allow the Johannesburg summit to declare the agreement in effect.

This is perhaps the most important environmental agreement in history, despite the shameful fact that the world's biggest source of greenhouse gases, the United States, has refused to participate. The United States has about 5 per cent of the world's population but accounts for about 25 per cent of global greenhouse-gas emissions. However, this should not stop Canada. It's important that we ratify the agreement, which would have Canada reduce greenhouse-gas emissions to 6 per cent below their 1990 level by 2008-12, without cheating. This amounts to an actual cut of 26 per cent below 1990 levels because emissions have grown since 1990 despite earlier promises to reduce them.

Canada wants to cheat by including credits for natural gas and hydroelectricity exports to the United States in meeting its Kyoto commitments. This is the Enron version of environmental accounting. To be sure, there will be opposition to Kyoto in Canada -- even within the Chrétien government. For example, Industry Minister Allan Rock and Natural Resources Minister Herb Dhaliwal have emerged as foes, while Chrétien appears indifferent. And Big Business, represented by the Canadian Council of Chief Executives (formerly the Business Council on National Issues) recently published an anti-Kyoto polemic, which it presented, without blushing, as a "responsible" alternative. It contains no targets or deadlines for cutting greenhouse-gas emissions.

However, it contains a long list of scary assertions -- arguing that if Canada ratifies the accord without the United States also doing so there will be a further outflow of head offices from Canada, a fall in investment and loss of jobs, a downgrade in credit ratings and a fall in the Canadian dollar, while Canada would also be forced to slash immigration and do all kinds of other unpalatable things. The council even challenges the science of climate change. And it also makes the argument that climate change policy must be co-ordinated (harmonized?) with the United States. "Economic integration imposes some real constraints on Canadian policy choices," it admits now (but not during the Canada-U.S. free trade debate).

It's disappointing that the leaders of our biggest corporations are such hard-line opponents of action to deal with the world's most serious environmental challenge. They should think of their grandchildren because

this is perhaps the world's biggest intergenerational issue. While there's no doubt that the Chrétien government has mishandled the climate change file from the beginning, and that this hasn't been helped by the unwillingness of provinces like Ontario and Alberta to seriously face the challenge of climate change, it is possible to come up with a strategy that aggressively promotes energy efficiency and technological innovation, while also making use of emissions trading. Achieving the Kyoto target might reduce Canada's gross domestic product by 0.5 per cent from what it might otherwise have been. But there would also be a cost from not doing anything.

Meanwhile, there are some positive U.S. signs. For example, California has passed legislation that will allow it to set much higher fuel efficiency standards for cars, sports utility vehicles and light trucks, starting in the 2009 model year. This is important because auto industry lobbyists "persuaded" the U.S. Senate earlier this year not to raise fuel efficiency standards. This is also important for Canada because both the federal and Ontario governments are afraid of doing anything that might upset the Big Three auto producers; we have to depend on U.S. initiatives to improve automotive fuel efficiency in Canada.

At the same time, attorneys-general from 11 U.S. states, including Massachusetts, New York, California and Alaska, have written to President George W. Bush calling for much stronger measures to reduce emissions of greenhouse gases. "Far from proposing solutions to the climate change problem, the administration has been adopting energy policies that would actually increase greenhouse-gas emissions," the letter says.

Rather than accepting that we cannot act because the U.S. won't, we should act. This is likely to bring the Kyoto agreement into effect and encourage conscientious Americans to work for change in their country. And properly done, it could give us a competitive advantage as well as a higher quality of life.

49) WHAT APOCALYPSE? by Michael Hill

The Baltimore Sun

July 28, 2002

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Fears: End-of-the-world warnings have long been with us, but the dire predictions of demise also have resulted in 'good research' to help address ecological problems.

IT IS SUMMERTIME and the skies are angry, filled with smoke from forest fires, the greenhouse gases building up almost before your eyes, the fragile ozone layer barely protecting humanity from the sun's destructive rays. Soon, perhaps, a melting ice cap will put your favorite beach resort under water. Then, you will turn on your tap and no water will come out. The reservoirs will be dry.

Since the environmental movement first gained strength 30 years ago, predictions of the demise of the world as we know it have been a staple. Mankind loves an imminent apocalypse. End-of-the-world movements have probably had adherents since the beginning of the world. The top fiction hardcover book on The New York Times best-seller list is *The Remnant: Armageddon is Near*, the latest installment of the immensely popular *Left Behind* series, a dramatization of Christian end-of-the-world prophecies. The problem with such prophets is that the world, darn it, doesn't end on their schedule. Adherents lose patience and faith. And that means such apocalyptic tendencies can hurt the environmental movement. Since various predicted cataclysms have not happened, then it all must be a bunch of hogwash.

One of the most famous examples of this was a wager between Paul Ehrlich and eco-skeptic Julian Simon in 1980. Ehrlich -- whose 1968 book *The Population Bomb* used that Cold War terminology to warn of the coming crisis of world population -- accepted a challenge from Simon. Ehrlich bet that the price of five natural resources -- copper, chrome, nickel, tin, and tungsten -- would go up in the next decade because of growing scarcity. Instead their prices went down. Ehrlich paid up, and Simon became a hero to those who would debunk the environmental movement. Many of Ehrlich's dire predictions have not come true, including the size of catastrophic famines that would ravage the world. No one took up another bet Ehrlich offered in 1969 -- even money that England would cease to exist by 2000. And there were myriad

prophecies during the gas-line days of the 1970s that the world would run out of oil in a few years that also failed to come to pass.

These issues were used against the environmental movement in a recent book, *The Skeptical Environmentalist* by the Danish scientist Bjorn Lomborg. He attempts to show that despite the warnings, the environment is improving. Yet the dire predictions continue, he says, to help in fund-raising efforts. Steve Fetter, associate director of the Joint Global Change Research Institute at the University of Maryland, College Park, says that most environmental scientists are overly cautious, but that is not always how it comes out in the popular media. "Folks trying to catalyze political action need to have some visible symptom to get peoples' attention," says Fetter, who has studied global warming. "So if you have a really hot summer, forest fires, hurricanes, the temptation is to use these things to get the political support you need. It's not really scientific, but it's understandable."

Katherine McComas, who teaches at the university's journalism school, studied media coverage of the first wave of global warming warnings a decade ago. She found that early stories responded to apocalyptic visions of rising seas and other disasters, but that then the pendulum shifted to coverage of economic arguments and disputes among scientists. "Some scientists seemed to be really scaring people, so what they set up is the possibility that in the future, people would then tend to be less willing to pay attention to those issues," she says. "It's the 'boy-who-cries-wolf' scenario."

Andrew Miller, an associate professor in the department of geography and environmental systems at the University of Maryland, Baltimore County, says that environmentalists are often driven to issue dire warnings because more studied statements are dismissed by those making money off the status quo. "Personally, I don't walk around telling students to expect the apocalypse, but as a skeptic, I am also skeptical of those who say that nothing bad will happen because it hasn't happened yet," Miller says. "There is almost a total consensus among scientists that we are now experiencing a total climatic shift. How large that will be, what the consequences will be, it is hard to say. The fact is we are running a huge uncontrolled experiment in a very complex system. Arguing that we should continue to run that experiment because it has not resulted in catastrophe so far is self-serving for those who make that argument."

The apocalyptic language is understandable in the global-warming debate because, as Robert Park, head of the Washington office of the American Physical Society, says, the two sides of the global warming argument "came at this thing from two religious points of view." But he says the result was good science. "Both sides were out there working [hard] ... doing really good research. They played by the rules and gave an honest accounting of what they saw. It worked great. We learned more about the climate in a few years than we had in decades." And he says the bottom line is a consensus that man's use of fossil fuels is warming up Earth. Now the argument is if this will mean a catastrophe or just a wardrobe change?

Park says the results could be cataclysmic: "If you look far enough down the line, the apocalypse will happen, but it will happen pretty slow." Says Miller: "I think a lot of things are seriously at risk. That does not mean that human ingenuity cannot come up with a way to deal with this." Climate-shift scientists do have a couple of doomsday scenarios. In one, global warming affects the ocean in a way that messes up the long-standing flow of currents. The Gulf Stream ceases delivering warm water to Europe. Ironically, Earth's warming brings an ice age to that continent. "This has happened in the past in a matter of years, definitely less than 10 years," says Fetter. "It would be a catastrophe for European agriculture."

The other scenario is a collapse of the west Antarctic ice sheet, a huge chunk of ice that is attached to land. "If that shelf were to break off and fall into the ocean, it would be like plopping a big ice cube in a glass of ice tea," Fetter says. "That could raise sea levels by as much as 17 feet, putting a lot of the world's ports under water." Fetter says the odds are that these things won't happen, but that it would be irresponsible for scientists who see these possibilities not to point them out. The problem with these and other predictions of catastrophe is that they assume a linear progression in the future -- that we keep doing what we've been doing. But we don't. We change our behavior, in part because of what those predictions tell us.

So Ehrlich's famines did not come about because the world was able to produce more food more efficiently. But one reason people figured out how to do that was because predictions of famine gave them the

incentive. Fetter points to the atmosphere's ozone depletion problem as the system working properly. A scientist in the 1970s said that certain chemicals were damaging the ozone layer which could lead to a marked increase in skin cancers. This caused some action -- the replacement of propellants in aerosols -- and made people start paying attention. Several years later, they found a hole in ozone layer over Antarctica. It was caused by a different chemical mechanism than the one originally outlined, but because the alarm had been raised, the world was ready to take action. The damaging chemicals were banned and the ozone regenerated.

So the doomsday scenario did not materialize, lending support to those who say technology can take care of these problems. But if the doomsday scenario had not been raised, then technology might not have been ready to prevent it. "In part, you make these predictions to get people's attention," says M. Gordon "Reds" Wolman, professor of geography and environmental engineering at the Johns Hopkins University. "Lomborg's argument [in *The Skeptical Environmentalist*] is that the Cassandra style is beginning to be counterproductive, but the counterargument is that progress would not take place without the equivalent of a bunch of Cassandras." Miller says it is necessary to be dramatic. "I think that society responds stronger to something that impacts them directly. How many societies look multiple decades ahead and invest in trying to prevent problems that do not have a direct impact yet?" he says. "Politics doesn't work that way. You have to get peoples' attention."

Other than climate change, water -- Wolman's specialty -- is the main item on the agenda of serious environmentalists. Again, Lomborg and his allies point to improving water quality in a variety of once-polluted areas as proof that modern society can handle this. Wolman says that water is better in cities in North America and Europe, but the same cannot be said about Asia and those parts of Africa where water quality is measured. "It is hard to argue that we are doing immensely better everywhere," he says. "It can be demonstrated that we are doing awfully well in some places, once people put their mind to it, and their money. But that doesn't happen without a tremendous amount of push." And that push doesn't happen, quite often, until doomsayers get the attention of people and their political leaders. "Some people say just relax, but you can't relax," he says. "The world we live in doesn't get better by itself."

50) ON CLIMATE, STATES LEAD By John C. Ryan

The Christian Science Monitor

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Internet: <http://library.northernlight.com/FE20020724390000198.html?cb=0&dx=1006&sc=0#doc>

John C. Ryan is a fellow of the New America Foundation and author of 'Over Our Heads: A Local Look at Global Climate.

SEATTLE, Jul 25, 2002 (The Christian Science Monitor via COMTEX) -- California Gov. Gray Davis signed into law this week the nation's first legislation aimed at reducing the greenhouse-gas emissions of cars and trucks. Because California is America's largest car market, the law could eventually reshape automotive fleets nationwide.

California's pioneering policy stands in stark contrast to the continued foot-dragging of the Bush administration, which just this month told Congress that it needs up to five years to decide what to do about global warming. Though California's new law may be the most important political action ever taken in this nation on behalf of the world's climate, it is only one of a rapidly growing number of reforms that are leaving the US government far outside the global-warming mainstream.

In 1997, Oregon passed the US's first law limiting emissions of carbon dioxide. But today, policymakers around the country are working to cut their states' impact on the global climate. The New England states have adopted a plan to reduce their greenhouse gas emissions 10 percent below 1990 levels by 2010 - a more aggressive approach than the Kyoto climate treaty rejected by President Bush. Even gritty New Jersey has signed agreements with its biggest electric utility and all 56 of its colleges and universities to reduce emissions below 1990 levels.

A half-dozen states, including Illinois, Nevada, and Texas, have enacted laws to require increasing portions of their electricity to come from renewable sources. Texas's renewable energy standard has resulted in the

biggest windpower construction boom the nation has ever seen. To be sure, it's not just the Bush administration, or the Republican Party, that is shirking its responsibility to protect our climate. The Democratic-controlled Senate this spring voted down improved mileage standards (and reduced pollution levels) for motor vehicles, as it has done for years.

Beyond the beltway, however, politicians, and even businesses of all stripes, are taking climate change seriously. Michigan, New York, and Ohio - all under Republican governors - are pursuing economic development strategies centered on developing climate-friendly energy industries. Major multinationals like Alcoa, Nike, Shell, and Toyota have set goals of reducing their greenhouse gas emissions 10 percent or more below 1990 levels by 2010. DuPont has gone further, aiming to cut its greenhouse gas emissions by 65 percent over the same time period; it has already cut them in half.

Locally, more than 130 US cities - discharging about 15 percent of the nation's greenhouse gas emissions - have joined the Cities for Climate Protection campaign. All are putting in place plans to reduce local emissions of greenhouse gases. Denver, Minneapolis-St. Paul, and Miami-Dade County are all committed to reducing emissions 20 percent below 1988 levels by 2005. All this activity matters because the US is the world's biggest polluter. Combine world-leading emissions with world-defying policies, and the United States is the biggest threat to the planet's long-term stability - the rogue nation of climate change. More precisely, the United States is the head of a tiny clique of major polluters (along with Australia and Canada) that appear likely to reject the Kyoto treaty altogether. Call us the Axis of Emissions.

But the recent groundswell of climate-friendly reforms at home and abroad is weakening political support for the United States' business-as-usual approach to global warming. Though they are beginning to make a dent in humanity's impact on the atmosphere, local and international efforts to save the climate ultimately will fail if the US government does not get on board. The only question now is how long can the United States resist the rising tide of sane approaches to the global climate?

51) WHERE JUSTICE AND REALISM MEET: A CLIMATE CHANGE SOLUTION? Interview with Benito Müller

Open Democracy

July 24, 2002

Internet:

http://www.opendemocracy.net/forum/document_details.asp?CatID=99&DocID=1638&DebateID=177

*Benito Müller is senior research fellow at the Oxford Institute for Energy Studies. In September 2002, OIES and the Shell Foundation will publish his new study *Equity in Climate Change: The Great Divide*.*

What should be done, and what can be done, about global warming? The key to a sustainable future for the planet may lie in tying together these two questions, says the Swiss-born philosopher and mathematician Benito Müller. In an interview with Caspar Henderson, the Globalisation editor of openDemocracy, he proposes that the application of 'distributive justice' may just help to change life on Earth for the better.

Rich north, poor south, and causing the problem: the 'distributive justice' aspect of climate change
openDemocracy - The question of climate change is often discussed in terms of its more visible impacts and appearances. But you seem to approach the issue more from a philosophical and moral point of view, in terms of 'distributive justice' on a global level. Can you explain this latter idea?

Benito Müller - I'm worried about global inequalities in general; that they will bring social instability to the world on an unprecedented scale. Even without man-made climate change, the wealth gap between rich and poor is widening. Climate change will exacerbate this in a way that makes it difficult to contain the effects. Let me give an example. If you have increasingly frequent major floods in a poor country, and the floods create large numbers of permanently displaced people, this can lead to political instability. In many poor countries the infrastructure is often not very good to start with, and political stability is already a problem. Large numbers of additional displaced people are particularly hard to cope with, and political and economic uncertainty is likely to intensify.

What does this mean for a poor country in concrete terms? Well, for one, forget foreign direct investment. Any expectation that economic growth could be driven by foreign direct investment will prove completely wrong. It's not a matter of economic growth being reduced from, say, 6% to 4%; the likelihood is of collapse. The idea of distributive justice bears directly on this type of predictable outcome. Why should a poor country face these catastrophic social effects when the core responsibility for them lies elsewhere? My central point here is to argue that, in relation to climate change, countries must bear a burden in proportion to their responsibility. There is a basic principle, almost universally accepted, known as 'the polluter pays'. This means that you have to clear up the mess and repair the damage in accordance with your responsibility for having caused it.

openDemocracy - But isn't the question of human responsibility and climate change more complicated than this? As you know, there are uncertainties regarding the consequences of human emissions of greenhouse gases. The Inter-Governmental Panel on Climate Change (IPCC) has outlined some scenarios from now until the end of this century, and some analysts have tried to calculate the probabilities of these various outcomes. For example, if greenhouse gas emissions continue to grow as they have done historically, then there is roughly a five per cent chance of a rise in the average global temperature of five degrees Celsius or more - catastrophic, needless to say. But we cannot know for sure what will happen. Historically, the Western industrialised nations have been by far the biggest emitters of greenhouse gases, but during the course of the 21st century they may become the minority emitters. Moreover, it might never be possible to tell which quantum of emissions might lead to really big, adverse changes in climate, if indeed that is what happens. Given this, will it be plausible in the longer term to maintain a model of rich North versus poor South?

Benito Müller - There are three points here. Firstly, there is a difference between being causally responsible without awareness of the impact of your actions, and being wilfully responsible for a bad outcome. It is certain that, until recently, the northern industrialised countries were not aware of the fact that spewing out CO₂ could harm future generations. So we cannot hold them responsible for wilful neglect, until 1990 at least - since, by then, we had achieved a reasonable level of certainty on the science. Secondly, the attribution of responsibility in view of uncertain causal relations is a familiar problem in law and economics. Take the use of a product with components produced by different firms; if it harms your child, but you cannot identify any particular part that caused the harm, what do you do? This kind of issue has been looked at for a long time, and many types of different practical solutions have been used in courts of law to do justice to the injured parties.

The relevance for climate change is that while it is not possible to say that "the US is responsible for 20% of this hurricane, or its quantifiable impact burden", it is possible to assign the degree of responsibility for climate change as a whole. This, together with the methods just mentioned, could be used to do justice to those who carry a disproportionate impact burden, if there were a will to do so. Thirdly, climate change is thus becoming an issue where the relevance of morality and justice to international political processes is most vividly clear. It is true that there are political theorists - so-called 'neo-realists'- who think that states act only in their narrow self-interest, and that ethical concerns are not relevant to their behaviour. I think this is wrong and for simple reasons.

When, for example, diplomats go home after negotiating an international treaty, they might work along precisely these lines, driving the hardest bargain they can. But, if the treaty they bring home is perceived to be, or can be shown by others to be, unfair to their country - then the treaty is dead in that country, even if it would have been of economic benefit. The perception of being treated unfairly is a very strong opinion-forming force. So, in order to be a willing participant in international negotiations, it is important to work towards a treaty that is seen to be fair to you (and your constituency). The ethics of the real world trump 'neo-realism'.

The US and the Kyoto agreement

Benito Müller - A case study of this issue of 'fairness' is the controversy in the United States over the Kyoto Protocol. Many US voices complain that, under the first stage of the proposed regime for emission reduction, only industrialised countries are given targets. Of course, there's a good reason for this - industrialised countries have caused the problem in the first place. But, regardless of this, the complaint is

that the lack of targets for developing countries would put an unfair burden on the US and its economy. The size of the costs that the Kyoto Protocol would impose on the US would be completely disproportionate - particularly since US firms would have to unfairly bear emission reduction costs while their competitors in the developing world would not.

openDemocracy - Isn't that a perfectly logical position? If I'm a US manufacturer and it's going to cost me more to manufacture because my government has signed up to the Kyoto Protocol, I'm going to lose business or move my factory abroad.

Benito Müller - As an argument about fairness, it raises two issues. Firstly, can it be fair that the US - or firms in industrialised countries, in general - is required to reduce emissions while developing countries are excluded during this first reduction period?

This rather depends on whether, at this stage, developing countries would actually carry any responsibility. For example, it is often justifiably argued that if one were to introduce a worldwide emission cap, then the emission permits would, as a matter of fairness, have to be distributed on a per capita basis, i.e. in proportion to population size.

The way things are, most developing countries have per capita emissions far below those of industrialised ones, with the effect that, in realistic terms, their assigned fair target levels would in most cases be substantially above their near term emissions, i.e. they would - in the near term, at least - not be under any obligation to reduce. It can also be argued, as we have agreed, that the parties most responsible for a problem have the obligation to take the lead in overcoming it.

In short, yes - it is fair that industrialised countries should be asked to lead the way in reducing emissions, even if it would put them at a competitive disadvantage. The issue here is not one of unfair competition, but of imposing unfair burdens in dealing with the problem of climate change. (And incidentally, it is not self-evident that a unilateral imposition of targets would lead to a competitive disadvantage. Even if some industries migrate to less-regulated countries, the incentive to develop new energy technologies can also be a huge boost to a national economy.

The second issue raised by the 'Kyoto would be unfair to the US' argument is the 'unfair' overall size of the burden that would be imposed on the US economy. Even though opponents of the Kyoto Protocol often claim that it would lead the American economy into 'deep freeze' while the developing countries would be allowed to pollute at whim, the projected welfare impact of any effects on the US economy of implementing Kyoto is actually rather less dramatic.

Even a study sponsored by the American Petroleum Institute, generally accepted as a 'worst-case scenario' could not find more than a 2% reduction in gross domestic product (GDP) by 2020 if the US were to implement the Kyoto Protocol, as against the 'business as usual' projection. According to forecasts by the US administration, US GDP per capita would rise in real terms from around \$33,000 per head today (5.3 times the world average) to \$51,000 in 2020 (6.4 times the world average in 2020) under the Kyoto Protocol - as against \$52,000 (6.5 times world average) per capita without the Kyoto Protocol.

Indeed, a model developed at the Oxford Institute for Energy Studies has shown that, if the balance of trade effects (recalling that the US is the world's largest importer of oil) and the benefits of new technology are taken into account, then the costs would barely register. Whether this sort of burden is unfair or not is one thing. What is certain is that it would not mean the end of the American way of life.

openDemocracy - This argument is accepted by many influential organisations, and even by parts of the machinery of government in the US. Isn't there another argument against Kyoto? Namely, that there is no way for the US to meet the target of cutting its emissions of greenhouse gases to 1990 levels by 2008-2012, and therefore Kyoto is the wrong mechanism. Is this the logic behind the promised alternative policy of the US administration?

Benito Müller - At the moment, US annual emissions of greenhouse gases are about 30% above 1990 levels, and their target under the Kyoto Protocol would be a reduction of 7% on 1990 levels by 2008-2012. So they are 37% too high already, and their emissions are likely to continue to rise between now and 2012.

openDemocracy - So it's clearly impossible for them to meet the target and they're quite right not to adopt Kyoto?

Benito Müller - It clearly would be if the Kyoto Protocol were asking countries to achieve their target purely by domestic action. However, due mainly to pressures by the US administration at the time, the Kyoto Protocol contains numerous 'flexibility' (i.e. trading) mechanisms which allow for making up for a domestic deficit by buying in permit from abroad. And the system, as it stands, has plenty of these cheap surplus permits, particularly from Russia, which would make US compliance perfectly feasible. However, since the US has rejected Kyoto, the important question now is what should be happening on the ground to actually change the trend line in US greenhouse gas emissions. President Bush has an alternative to the Kyoto Protocol based on the idea of reducing US emission intensity - that is, reducing the amount of greenhouse gas produced per dollar of GDP.

In theory, if the US was stringent enough, this could lead to a reduction in total emissions even as the economy continues to grow. But, at the moment, the plan calls for an 18% reduction in intensity over the next decade - roughly business as usual, thanks to normal technological progress. Predicted economic growth over the same period is much greater and, as a result, total US emissions would be around 40% above 2000 levels by 2020. In other words, Bush's plan fails to address the need to reduce total emissions.

openDemocracy - You have observed the US political scene closely. For example, you witnessed the Congressional Hearings on the Kyoto Protocol a couple of years ago. What in your view would lead to substantive change in the US?

Benito Müller - One of the concepts economists love is 'no net effect regulation'. It simply describes a situation where the losses of the losers are balanced ('netted out') by the gains of the winners. The problem is that in politics, potential losers tend to make much more noise than potential winners.

In the case of the US and Kyoto, the potential losers are the traditional energy providers, who are important and powerful players. The winners, in contrast, scarcely exist yet - there are renewables, of course, but the thought that you could actually be a big time winner by decarbonising the economy has in the past not been taken seriously enough. But things are changing in the US, especially at the State level, and in industry. For example, some of the biggest US utilities have asked the administration to introduce a carbon-dioxide 'cap and trade' regime - a regulation that would limit the output from power stations.

Why? Well, when it became clear that the Kyoto Protocol itself was not dead - that the Europeans and others would go ahead even without the US - it dawned on the US power sector that, eventually, they will be faced with some form of stringent regulation. Now the Bush administration is asking the utility sector to build around 1500 new power stations in the next decade - clearly an enormous, long-term investment. In response, the industry has said: "Look, it would be much cheaper for us to introduce these measures to limit carbon-dioxide emissions when we build these plants, as opposed to having to retrofit five or eight years down the line." Sometimes businesses are ahead of politicians.

Making fairness work for everyone: the logic of 'grandfathering'

openDemocracy - Looking to the longer term, is a fair global agreement on greenhouse gas emissions possible, and if so how?

Benito Müller - Is a fair agreement possible? Let's set this in context. Kyoto is meant to be a first step. No one in their right mind would think that the five-year targets it sets could in themselves solve the problem of greenhouse gases and global warming.

So we need to start thinking about the next period - what we do after 2012, how we handle the issue of further targets in a 'fair' way. But there is an even more important equity issue, namely the fact that the predicted impacts of climate change will fall most heavily by far on developing countries who are least responsible for them. We in the North tend to focus on allocating emissions as the big equity issue. But

people in the South are much more concerned about being faced with impacts that are wholly disproportionate to their causal responsibility, and about not having the resources to deal with the situation.

In this light, the question should not so much be "Is it possible?" but rather "Why is it necessary?" If people in developing countries see an overall agreement as blatantly unfair, they will just not join in - as we would not either. And even if their governments joined, the resulting treaty would be shot down in the various parliaments - as Kyoto was in the US. Emissions control would become even less likely. In short, in order not to be unfair - and unacceptable - an agreement will, first of all, have to take into account the concerns of developing countries about unfair impact burdens. As for the issue of an equitable distribution of emission targets, there have been, as you know, numerous proposals. One of the best known is the 'contraction and convergence' model suggested by the Global Commons Institute.

openDemocracy - This is based on the idea that, ultimately, everyone in the world has an equal right, as it were, to emit greenhouse gases; and that the expression of this right must be limited, so that the aggregate amount of emissions is safe for the global climate. The practical implication of this idea is that communities of people which emit a lot, such as the nations of Europe and North America, must sharply contract their emissions to a safe level that would ultimately converge with people in other countries - from Bangladesh 'upwards' if you like. Like a few obese people among a larger group of slimline people, the 'contraction' of the former's waistlines would bring them closer to 'convergence' with the latter - to everyone's benefit.

Benito Müller - In my view, the main drawback with 'contraction and convergence' is that it starts out with a 'grandfathering' allocation - essentially a uniform percentage target across the board - and only moves towards presumably the fair per capita solution over time. Depending on the speed of the convergence and the contraction, it is thus not only likely to impose initial reduction targets on even the least developed countries, but it deprives them of their legitimate surplus permits at the time when they need these most in their quest to reach a path of sustainable development - namely now. In contrast, I think it would be feasible, affordable, fair and sensible to give everyone in the world an equal per capita allocation now. Each person would also have the right to trade emissions so that the poor low emitters could benefit from this legitimate asset.

Let's take a simple example, and contrast the US and Sierra Leone, respectively, among the richest and poorest countries on the planet. US per capita emissions are now in the region of 5 tonnes per head per year; in Sierra Leone they are something like 120 kilograms. So, if you were to go for, say, a 1 tonne per person per year target (a 10% reduction from the current world average) the person in Sierra Leone would clearly get a substantial surplus. The basis for a trading regime has already been put in place under the Kyoto Protocol. It would be very important for countries such as Sierra Leone to use the benefits of this trade for sustainable development, including of course environmentally friendly energy systems.

openDemocracy - Would it really be feasible to do this now?

Benito Müller - As long as we have an agreed trading regime, then in my view we could go for equal per capita emissions right now. The emphasis on trade is vital - a static per capita regime would mean that we, in the rich countries, would have to reduce emissions by a wholly unrealistic 60-80% within five years. With trading, it is both feasible and not life-threatening. Nor will it freeze the advanced economies; in our model, the costs are actually less than current overseas development assistance from the North.

openDemocracy - So what is the problem with it?

Benito Müller - The problem is...our grandfathers and their right to bequeath their hard-earned assets to their descendants. It is fundamental here to recognise that the existing order, which is a distribution in proportion to current emission levels ('grandfathering'), can also be defended on moral grounds. How so? Well, people and countries in the North can say: "Look, we've worked hard to get where we are. It is not just exploitation of the South. Along with our fathers and grandfathers, we have actually earned through our work an entitlement to our proportion of the global emissions, particularly since no one knew the adverse consequences."

Unless this view is addressed, countries in the industrialised North may refuse to take part in a truly global treaty on grounds of inequity, and they can do so by referring to well-known entitlement theories of distributive justice. The key difference to the egalitarian proponents of a per capita allocation is simply whether the distribution is seen as an allocation of new entitlements (the per capita position) or as a re-affirmation of existing entitlements (the grandfathering position). Unless both these views are somehow taken into account, we could well end up in the worst of all worlds, where nobody benefits, and the urgent issue of climate change is not addressed adequately.

openDemocracy - How do we deal with this?

Benito Müller - The key, I believe (based on the experiences of my own forefathers in Switzerland, I suppose) is to try and find a fair and transparent compromise between the two positions. Instead of gradually transforming the status quo (grandfathering) proposal gradually into the per capita distribution as proposed in the 'contraction and convergence model' - thus starting out with one of the contending positions and ending up with the other- why not mix them right now, mathematically, as a weighted mean? The effect would be that each country would have both a grandfathering and a per capita component in its allocation of emission credits. Low-emitting developing countries would in particular obtain immediately at least a portion of the surplus permit which - according to the per capita position- they would have seen as their legitimate due.

The method to arrive at such a compromise is based on a voting procedure first used in elections to the French Academy of Sciences, but probably better known from the Eurovision Song Contest. There, each country's judges across the continent give nul points to the song they least prefer, then une or deux for their moderately favoured, all the way up to dix or douze for the songs they really like. At the end, all the scores are added up. Now, these total scores in a sense reflect in their proportions the social desirability of the candidates amongst the electorate, in this case the panel of judges. Multiplying the scores given by each judge by the number of people he or she represents, the scores could even be interpreted (under some simplifying assumptions) to reflect the social desirability of the candidates amongst the total represented public.

Now, the point of the 'preference score method' is simply to use these social scores, not to elect the highest scorer, but as weights for mixing up the candidates to create an acceptable compromise. Clearly, this would not work with people, nor presumably with music scores, but it works perfectly well with permit distribution proposals.

openDemocracy - Can we focus on a simple example to clarify this? Let's imagine a negotiation between just two countries - the US and India. There are roughly four times as many Indians as there are Americans - over a billion as against 270 million or so. Of their combined current emissions, about 16% originate in India and 84% in the US. India pollutes about five times less than the US. Now, if the two nations wanted to reach an agreement how would it work?

Benito Müller - In practice, people often combine moral preferences and self-interest, convincing themselves that a solution, which would benefit them, is also the fairest one. In this light, the obvious starting point of an Indo-US negotiation might be that either country would suggest the approach that seemed to suit them. Populous India would recommend per capita distribution, in order to obtain emission permits in proportion to its population (1000 for every 250 to the US). Meanwhile, the high-emitting US would argue for the 'grandfathering' approach (which would give it around five permits for every Indian permit).

Now, what would happen after these opening gambits were stated? If India ranked these two proposals, clearly it would rank its own proposal best - and a socially weighted score of one times its population equals 1bn - while ranking the US proposal as second best, giving it zero points. The US would, in turn, provide grandfathering with a score of 250m, and zero for the per capita proposal.

In other words, the proportion between the social desirabilities of the two proposals, in this simple case, would be 1bn:250m, which is of course the same as 4:1 (per capita:grandfathering). According to the

compromise method I am suggesting, the agreement would end up being a 4-1 mix of the two proposals, with India ending up with two-thirds, and the US with one-third of the permits. The 'take-home' message here is that you can mix the proposals of different countries in a transparent way so that people can see there is an element of fairness to all sides.

What would happen if this approach was applied to a real world divided between rich and poor countries as they currently stand, assuming that each would make preferences according to its own interests? In this case, the emissions trading regime would turn out to be a mixture of about 75% of the per capita model, and 25% of the grandfathering model.

This regime would entail a very strong per capita component in emissions trading from the outset. Hence, significant trade flows - not aid flows! - would help desperately poor countries in the developing world to improve their economies.

Delhi: the last chance for progress?

openDemocracy - What should be the next step in climate negotiations? You've written that an 'environmentalist agenda' has dominated discussions so far and that this needs to be complemented by a 'humanist agenda'. What does that mean?

Benito Müller - The Kyoto Protocol will come into force by the spring of 2003 at the latest, as the quorum of nations, sufficient to ratify it, is passed. The Protocol establishes emissions targets for the rich industrial countries for a five-year period after 2008. Even more important, it establishes an architecture and the basis on which rich nations can trade and so achieve reductions at the least cost. What next? Most people in the North who have been involved in the negotiations for the last decade believe that the next item on the agenda should be emissions targets beyond 2012. In my view, this is a mistake. Politically speaking, there is absolutely no way that the US will engage in discussions about a future commitment period at this stage. And it is fanciful to think that developing countries would take on commitments to reduce emissions without the US even being willing to discuss their own commitments.

So what is to be done? It became clear to me at the 2001 Conference of the Parties in Marrakech that we have to address the key concern we started with, namely the impact of climate change on poor countries. What are the best ways of trying to share the burden of these impacts fairly between North and South? Let me be clear: it was not wrong for us to begin the process by talking about emissions in the North. After all, they are the main cause of the problem. But this does not mean that we can completely ignore the effects, simply because we are too late actually to prevent them from happening altogether. If we really want to get developing countries on board, we now have to give the issue of impact management a more prominent role - not to replace the issue of emission mitigation in the North, but to balance it.

openDemocracy - And how could that happen?

Benito Müller - I believe there should be something like a 'Delhi Mandate'. In 1996, there was the famous 'Berlin Mandate', where parties to the Framework Convention on Climate Change agreed that voluntary targets for reduced greenhouse gas emissions were inadequate. At a Conference of the Parties (COP) to the Convention in Berlin, they decided that negotiations should be started to strengthen the commitments.

These negotiations, in 1997, led to the adoption of the Kyoto Protocol.

The next COP will be held in New Delhi in October 2002. New Delhi is the capital of one of the biggest and most important developing countries, and the latter's concerns should be high on the agenda. There should be a decision to at least start discussing, if not negotiating, an instrument to do for impact management what the Kyoto Protocol aims ultimately to do for limiting emissions. This would be the basis of a 'Delhi Mandate'.

openDemocracy - Would it help if this proposal was raised at the World Summit for Sustainable Development in Johannesburg starting in late August?

Benito Müller - No, and for two good reasons of 'summit politics'. The climate change regime, I believe, has been the only successful outcome of the Earth Summit in Rio in 1992, whereas other issues have stagnated.

So, firstly, there is no need to push climate change at Johannesburg, since the next conference devoted to the subject falls only a month later. Secondly, the main focus of Johannesburg should be on development issues.

It is what happens after Johannesburg that is crucial. If and when the Kyoto Protocol does indeed come into force by next spring, then the subsequent meeting of the nations will be not a COP, but the first Meeting of the Parties - that is, the first governing body meeting for the Kyoto Protocol. We will be in new decision-making territory, and a tremendous number of unresolved outstanding issues, such as compliance, which have been postponed until this first meeting, will take up all the negotiating time. So, New Delhi is likely to be the last COP, and the last chance to raise the question of impacts before most energy is eaten up by the particular details of the emissions Protocol.

Climate change and disaster relief

openDemocracy - For a conference organised by the International Federation of the Red Cross you recently presented a proposal for an Impact Response Instrument. What is that about?

Benito Müller - An urgent and neglected issue is the increasing prevalence of weather-related disasters, such as hurricanes and extreme floods. In the last 25 years, the number of disasters and the number of people affected has more than doubled - for the latter, 168% from 1975, even after allowing for population growth. Climate-related disasters are happening now. It's not a matter of 50 years time, as is the case with the rise in sea levels. One small and relatively easy thing we can do in response is to improve the international disaster relief system. At the moment, in most cases, we wait until the disaster happens; then the UN and other agencies, having been asked to assist, go out and ask for donations. That's the way in which international disaster relief funding is currently organised. Yet, why isn't there a single country in the world that uses it to finance their domestic emergency services? After all, there is no national ambulance service financed by voluntary contributions after the event!

Some countries, including the UK, have already realised that it would be better to pay annually in advance for international disaster relief. I'm suggesting that we make this a general way of doing things. It would allow for much better disaster preparedness, and consequently for a more efficient relief regime.

openDemocracy - Are we talking about extra money here?

Benito Müller - No. The point is that national budgets already include provisions for such emergency donations on an annual basis. Countries know that there will be disasters around the world every year for which they will be asked to make some donations. Two illustrations will make the point. Firstly, another flood in Mozambique is inevitable. A proportion of 'up front' money would mean that boats could be stored in the region in case of emergencies, as opposed to having to fly them in a month late, or using helicopters, which give good pictures but are close to useless.

Secondly, this reform would make the whole emergency relief system independent in a way that would benefit people's lives. For example, there is a Disaster Emergencies Committee (DEC) in Britain, which coordinates the work of the different international relief agencies here. After the terrible earthquake in Gujarat last year, the DEC commissioned a report on the effectiveness of their work. (This was not a climate-related disaster, of course, but the point is important and relevant.) One of the biggest criticisms in the report was that aid agencies had a tendency to deliver relief where the media is. The agencies know that next time they have to raise funding, they need to be able to prove their visibility. (Note that organisations comprising the DEC receive funds from the British government as well as those they raise in sponsorship from the public.)

There was a similar phenomenon during the floods in Mozambique in 2000, where nothing happened for about a month. Then the media made it a big story, and the country was overwhelmed with aid - but not necessarily of the right sort in the right places. Meanwhile, other disasters, which were not covered by the media, did not receive aid. These non-humanitarian ties need to be broken - and the 'up front' method of payment into a fund would do this. Making emergency disaster relief independent, and introducing an element of forward planning into it would help to save lives even in places not properly covered in the

media. This connects directly to the 'distributive justice' theme we started with. One of the most profound changes which climate change is forcing on us is the need to think globally.

52) BUSH, CLIMATE CHANGE AND FALSE ACCOUNTING by David Dickson

SciDev.Net 2002

July 22, 2002

[http://www.oneworld.net/cgi-](http://www.oneworld.net/cgi-bin/index.cgi?root=129&url=http%3A%2F%2Fwww%2Escidev%2Enet%2Farchives%2Feditorial%2Fcomment26%2Ehtml)

[bin/index.cgi?root=129&url=http%3A%2F%2Fwww%2Escidev%2Enet%2Farchives%2Feditorial%2Fcomment26%2Ehtml](http://www.oneworld.net/cgi-bin/index.cgi?root=129&url=http%3A%2F%2Fwww%2Escidev%2Enet%2Farchives%2Feditorial%2Fcomment26%2Ehtml)

The US administration's political woes could provide an opportunity for those seeking a more substantive response to the challenge of global warming. As the administration of US President George W Bush continues to defy international pressure on the need for urgent action to curb man-made climate change, two separate events over the past week - one on the scientific side, the second in the political area - suggest that it is becoming increasingly difficult for the administration to maintain a 'business as usual' stance.

They also indicate that a failure to act could become as heavy a political liability as the administration's sympathy for an energy industry plagued by accounting scandals. And this could itself provide a useful opportunity for those demanding the US to take a more positive attitude towards global warming. The first event was the publication in Science of evidence that the glaciers in Alaska are melting at more than double the rate previously thought (see Alaska's role in sea-level rise vastly underestimated). Scientists at the University of Fairbanks in Alaska say that this rate has accelerated in the past seven to eight years as a result of global warming, and that the state's glaciers are now contributing twice as much to the rise in sea-levels worldwide as the Greenland ice sheet, the largest ice mass in the Western hemisphere.

The second was the signing by the governor of California, in the face of opposition from the automobile industry, of regulations restricting the sale of high consumption automobiles, in particular sport utility vehicles. This is the latest - and perhaps most dramatic - of moves by several individual US states to take action to curb the emission of greenhouse gases.

Both events could, in their own ways, be seen as somewhat opportunistic. There is no firm evidence linking the Alaskan situation to human activity. The new results merely confirm other evidence, such as the melting of the permafrost and the destruction of the state's spruce forests by insects, that Alaska is particularly sensitive to the current trends of global warming.

Similarly, few would doubt that the California governor's action has a political dimension to it. Last week, when a group of 11 State governors complained to the Republican White House about a "regulatory void" that was leading to an uneven patchwork of anti-global warming regulations across the country, critics were quick to point out that the governors concerned were all members of the Democratic Party.

Nevertheless both events make it more difficult for the administration to defend its current stance, either scientifically or politically. On the scientific front, there appears to be evidence that at least some senior officials in the Bush administration accept the view of the International Panel on Climate Change that there is a strong likelihood that global warming is caused by human activity. And it follows that they respect the implication of the need to act rapidly to mitigate the situation. This, for example, was the main thrust of a US government report submitted to the United Nations in June.

At the same, the intense spotlight thrown by the Enron affair on the Bush administration's close ties to the energy industry - and the widespread public distaste generated by some of the dubious accounting practices that have been exposed by this scrutiny - has created a weak spot in the administration's political armour that offers a significant opening to its critics.

At this stage, it would be unrealistic to expect, or even demand, that the United States should rejoin the Kyoto Protocol process, from which it opted out so provocatively last year. This would require a U-turn of such massive proportions as to be inconceivable.

In contrast, however, it is realistic to demand that the US administration commits itself to a course of action that could lead to a convergence several years down the road between its domestic policies on issues such as limiting greenhouse gas emissions, and those which may be agreed by signatories to the Kyoto Protocol. This, for example, is the strategy that is being pursued by some non-governmental organisations and other US pressure groups, aware that it may be the most realistic way to achieve their long-term goal: to achieve significant reductions in greenhouse gas emissions.

One spin-off from a move in this direction is that it could help to keep the Kyoto process alive. Despite repeated statements of optimism by negotiators, this outcome is far from being guaranteed. When both the European Union and Japan agreed to ratify the protocol early last month, its full coming into force (which requires ratification by countries responsible for 55 per cent of the world's greenhouse gas emissions in 1990) seemed just around the corner.

Now with Australia blowing cold, Canada seeking to bring its energy exports into the equation (on the ground of its proximity to the United States), and Russia keen to exploit any loopholes that the Canadians can open up, the immediate prospects of achieving this are far less certain than some pretend. All the more reason to keep the United States in the negotiating loop, even if the frame of reference is slightly different. It will, however, require strong political pressure on the White House; Bush has made it clear that even if he disapproves of some of the activities of his friends in the oil industry, he is not prepared to ditch them, at least not on this issue. But with a growing number of senior politicians within the Republican Party prompting him to do just that, it could soon prove to be a politically expedient move.

ON THE WEB

53) POWER SHIFT LOOKING FOR LEADERSHIP ON CLIMATE CHANGE

Grist Magazine Special Edition

July 31, 2002

Internet: <http://www.gristmagazine.com/maindish/powershift073102.asp>

Two hundred-odd years ago, on his way out of office, George Washington famously advised his successors to avoid entangling alliances with foreign nations. That was in 1796 -- pre-NAFTA, pre-International Monetary Fund, and pre-globalization, not to mention pre-Darwin, pre-internal combustion engine, and pre-Republican Party -- hell, back then, all of Texas was still ruled by Spain. In the 18th century, Washington's advice might have been sound. But in the 21st, the United States can't avoid entanglement: Our T-shirts come from Taiwan, our PCBs drift toward Africa, California-based corporations do business in Djibouti, and policy made in D.C. affects people in Palestine.

All of which leaves the current President George entirely unmoved. Ever since taking office, he has not merely avoided but actually undone foreign alliances, entangling or otherwise. Take his decision to withdraw from the Kyoto Protocol on climate change. The U.S. generates fully 36 percent of the industrial world's greenhouse gas emissions, yet it is almost alone among industrialized nations in not ratifying Kyoto. Bush's attitude toward climate change amounts to an abdication of responsibility, a kind of modern-day Let Them Eat Carbon. But when you drop the ball, someone else is bound to pick it up: As the nation's leadership actively eschews alliances (except with industry), the nation's people are busy forging them. In dorm rooms and board rooms, in city halls and houses of worship -- all across the country, a grassroots network of activists is implementing the best maxim the environmental movement ever coined: They are thinking about global climate change, and combating it locally.

Case in point: Earlier this summer, the California legislature passed a landmark law requiring dramatic cuts in carbon dioxide emissions from vehicles. The Bush administration, which is in bed with every relevant industry from auto to oil, wouldn't have touched the legislation with a 10-foot pole, but California's courage could change the way cars are made in our nation.

The California example is the biggest and boldest, but other, more modest climate change initiatives are springing up all over the country. Their collective impact might not be enough to stabilize the climate, but it just might be sufficient to enact a fundamental power shift: raising public awareness, making climate change a key political issue, catapulting proactive candidates into office, and ousting do-nothing

incumbents. It might also auger another kind of power shift -- from dependence on energy sources that pollute our environment and alter our climate to a nation powered by clean energy.

In this special edition, Grist looks at efforts to combat climate change in the absence of federal leadership: Katherine Ellison, an author and Pulitzer Prize-winning journalist, examines the origins and implications of the trend toward local climate change initiatives.

<http://www.gristmagazine.com/maindish/ellison073102.asp>

Journalist Shelley Smithson looks at university-based climate change initiatives, from buying green energy to building green dorms. <http://www.gristmagazine.com/maindish/smithson073102.asp>

Amanda Griscom, environmental journalist and author of the Grist column "Powers That Be," writes about corporate initiatives to cut greenhouse gas emissions.

<http://www.gristmagazine.com/powers/powers073102.asp>

Ross Gelbspan, author of *The Heat Is On*, takes on the big Beltway environmental organizations for their failure to exercise leadership on climate change.

<http://www.gristmagazine.com/soapbox/gelbspan073102.asp>

Journalist Hal Clifford takes a close look at the city of Aspen, which currently boasts the world's most expensive carbon tax. <http://www.gristmagazine.com/maindish/clifford073102.asp>

Activist Kristin Casper offers a frontline perspective on local climate work, in Grist's diary section.

<http://www.gristmagazine.com/dearme/casper073002.asp>

54) NEWS RELEASE: WRI REPORT WARNS ENVIRONMENTAL RISKS COULD REDUCE SHAREHOLDER VALUE OF LEADING OIL AND GAS COMPANIES

WRI

July 24, 2002

Internet: http://newsroom.wri.org/newsrelease_text.cfm?NewsReleaseID=122

WASHINGTON, DC and LONDON, July 24, 2002 -- A new World Resources Institute (WRI) report released today calls on investors to pay closer attention to how oil and gas companies are exposed to environmental risks. The new WRI report, *Changing Oil: Emerging environmental risks and shareholder value in the oil and gas industry*, warns that shareholders in leading oil and gas companies could see losses of more than six percent of their investments due to prospective actions to curb climate change and growing constraints on access to energy reserves. The report also finds that companies have made only very limited disclosure to investors on the relevance of these issues for future financial performance. Sixteen leading oil and gas companies were studied. They are: Amerada Hess (AHC), Apache (APA), BP (BP), Burlington Resources (BR), ChevronTexaco (CVX), ConocoPhillips (COP), Eni (E), Enterprise Oil (ETP), ExxonMobil (XOM), Occidental Petroleum (OXY), Repsol YPF (REP), Royal Dutch/Shell Group (RD), Sunoco (SUN), TotalFinaElf (TOT), Unocal (UCL), and Valero Energy (VLO). As of June 30, 2002, these companies had a combined market capitalization of nearly \$1 trillion.

More information on the report is available online at:

<http://capmarkets.wri.org/publication.cfm?PubID=3719>

55) KYOTO POSSIBLE WITHOUT HURTING ECONOMY: CEOS FINANCIAL POST POLL

Financial Post

July 30, 2002

Internet: <http://www.nationalpost.com/financialpost/story.html?id={231C60BA-7DBA-43EE-BD72-927D56A779BB}>

OTTAWA- Business leaders believe implementing the Kyoto Protocol on climate change can be achieved without causing major economic disruption, says a Financial Post poll. Some 57% of the executives said greenhouse emissions could be cut drastically with little economic impact -- the same position expressed by David Anderson, the Minister of the Environment.

The Kyoto questions, conducted by COMPAS Inc., the polling company, were part of a twice-annual survey for the Financial Post called *The Business Agenda*.

The executives were asked to rate on a scale of one to seven whether it would be possible to reduce emissions without hurting the economy; 57% of the respondents rated the possibility of little economic damage between five and seven. Meanwhile, 29% of respondents said they were firmly opposed to the Kyoto Protocol and 13% had no opinion. Steve Kiar, a COMPAS senior partner, said the poll response is surprising because such key business groups as the Canadian Chamber of Commerce, the Canadian Manufacturers and Exporters and the Canadian Association of Petroleum Producers have warned that implementing the treaty would be devastating for the Canadian economy. "[The poll shows] a fairly optimistic view," said Mr. Kiar. "They believe Kyoto doesn't entail serious, significant costs to the economy. "They see [climate change] as a serious problem but don't see it requiring a drastic solution."

The poll, a survey of 500 senior business people, was completed in June. The results are deemed accurate to within five percentage points 19 times out of 20. Last month, the Canadian Council of Chief Executives, which represents Canada's blue-chip companies, called Kyoto a "straitjacket" that will undermine the country's ability to meet its social and economic priorities.

In February, the Canadian Manufacturers and Exporters said Kyoto would wipe out 450,000 manufacturing jobs in Canada, and that it would cost the economy up to \$40-billion and force a radical lifestyle change on people. However, this latest COMPAS poll is similar to previous findings: In the first such poll, in 1998, 60% of those surveyed thought Kyoto could be implemented without hurting the economy. Mr. Kiar believes this shows the anti-Kyoto campaign "is not really resonating with business leaders. "I'm a little surprised that when you have the lines drawn so clearly, really, attitudes have not changed very much."