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GENERAL NEWS

- 1) FRENCH NATIONAL NAMED CHIEF OF UN METEOROLOGICAL AGENCY, United Nations, May 16, 2003
- 2) US\$11 MILLION TO BE PLEDGED TO CARIBBEAN; US HELPING REGION TO FIGHT GLOBAL WARMING, Barbados Advocate, May 16, 2003
- 3) COMBATING CLIMATE CHANGE, Kuensel Online (Bhutan), May 16, 2003
- 4) COST OF FLEXIBLE MECHANISMS WEIGHED UP FOR IRISH KYOTO TARGET, Edie weekly summaries, May 16, 2003
- 5) UN AFFILIATE TO HELP VADODARA CONSERVE ENERGY, Times of India, May 16, 2003
- 6) ISS IN FAVOR OF EXXONMOBIL GLOBAL WARMING PROPOSALS, Reuters, May 15, 2003
- 7) A NEW ROADMAP FOR U.S. GREENHOUSE GAS REDUCTIONS, ENS, May 15, 2003
- 8) EXXON SAID TO LAG MAJORS IN CLIMATE POLICY, Planet Ark, May 15, 2003
- 9) IRISH USE OF IMPORTED ENERGY GROWING, BizWorld, May 15, 2003
- 10) INDIA AND US TO SIGN DEAL ON TECH FOR HYDROGEN FUEL, Indian Express, May 15, 2003

- 11) STATE IS TOUTED AS THE CANARY IN THE GLOBAL WARMING COAL MINE; CONFEREES SAY EFFECTS OF GREENHOUSE GASES SEEN HERE FIRST ARE A RED FLAG, Anchorage Daily News, May 15, 2003
- 12) NASA FINDS SOOT HAS IMPACT ON GLOBAL CLIMATE, NASA, May 14, 2003
- 13) ENVIRONMENT-FRIENDLY PROJECTS MAY ATTRACT \$200 BN IN FDI, Rediff, May 14, 2003
- 14) GLOBAL WARMING'S LOCAL CROP IMPACTS FORECAST, Nature, May 14, 2003
- 15) SOLAR POWER CONFAB SERIES UNDER WAY, The Japan Times, May 13, 2003
- 16) BIOFUELS DIRECTIVE DEADLINE SET AS 2004, Environment-Centre, May 14, 2003
- 17) UK EMISSIONS SCHEME SEES 7MLN T CO2 CHANGE HANDS, Planet Ark, May 14, 2003
- 18) INDUSTRY IN SLOVENIA WITH ALL THE WORK LEFT TO DO, SRImedia, May 14, 2003
- 19) REGION-WIDE ENERGY MARKET PROPOSED, EU Observer, May 13, 2003
- 20) 'OIL DOMINANT' WORLD ENERGY SYSTEM FORESEEABLE BY 2030, WARNS REPORT, CORDIS News, May 13, 2003
- 21) UN SETS SCHEDULE TO TARGET ENVIRONMENTAL ISSUES, Planet Ark, May 12, 2003
- 22) JAPAN URGED TO BOOST RENEWABLE ENERGY USE OVER TEPCO, Kyodo News, May 12, 2003
- 23) RUSSIAN MINISTER BLOCKS KYOTO PROTOCOL, SAYS WWF, WWF, May 12, 2003
- 24) WWF PROVIDES BLUEPRINT FOR EU POWER SECTOR TO CURB GLOBAL WARMING NOW, WWF, May 12, 2003
- 25) EU WANTS TO SEE RUSSIAN ACTION ON KYOTO TREATY, Planet Ark, May 12, 2003
- 26) KYOTO SUPPORT SHOULD SPEED UP HYDRO PROJECT APPROVALS, SAYS QUEBEC UTILITY, Canadian Press, May 12, 2003
- 27) GLOBAL WARMING THREATENS FOOD SECURITY OF POOR NATIONS, OneWorld, May 12, 2003
- 28) ITALY BRINGS THE COMMUNITY DEVELOPMENT CARBON FUND CLOSER TO REALITY, World Bank, May 12, 2003
- 29) CARBON DIOXIDE OUTPUT FALLS, The Japan Times, May 11, 2003
- 30) GREENS WANT CLIMATE CHANGE STRATEGY SCRAPPED, RTE, May 11, 2003
- 31) OBAYASHI TO MAKE ELECTRICITY FROM GARBAGE, Asia Times, May 9, 2003
- 32) MALDIVES SEEKS HELP TO BATTLE EXTINCTION, AFP, May 9, 2003
- 33) RUSSIA SEEN KEY TO KYOTO PROTOCOL, The Moscow Times, May 8, 2003
- 34) CLIMATE CHANGE RAISES HEALTH RISKS FOR AUSTRALIANS, ABC, May 8, 2003
- 35) FORTUM WITH CLEAR CO2 ALLOCATION PRIORITIES, SRImedia, May 8, 2003
- 36) LIEBERMAN ROLLS OUT ENERGY INDEPENDENCE PLAN, ENS, May 7, 2003
- 37) MOSCOW TO HOST WORLD CLIMATE CHANGE CONFERENCE, Pravda, May 7, 2003
- 38) INDIA SERIOUS ABOUT TACKLING PROBLEM OF CLIMATE CHANGE: SEMINAR, IRNA, May 6, 2003
- 39) EU GREENHOUSE GAS EMISSIONS RISE FOR SECOND YEAR RUNNING, European Environment Agency, May 6, 2003
- 40) CARBON CREDIT TRADES ATTRACT INTEREST, RNZ, May 6, 2003
- 41) JAPAN, RUSSIA AT ODDS OVER PLAN TO REDUCE CO2, The Japan Times, May 5, 2003
- 42) FEDS ADDRESS ARCTIC CLIMATE RESEARCH, The Associated Press, May 5, 2003
- 43) GORE VISIT TO PUSH FOR KYOTO, Sydney Morning Herald, May 4, 2003
- 44) "INDIA, CHINA WILL DRIVE GLOBAL ENERGY USE INCREASE", Asian Tribune, May 2, 2003
- 45) EU WORRIED ABOUT KYOTO TREATY IMPLEMENTATION, AFP, May 2, 2003
- 46) GLOBAL TEMPERATURES TO INCREASE BY 2100, Jamaica Observer, May 1, 2003
- 47) OPPOSITION PARTIES TO STEP UP KYOTO PRESSURE, Dial Infolink, May 1, 2003
- 48) NEW YORK WILL SEEK EMISSION CUTS FROM ONTARIO PLANTS, STAR SAYS, Bloomberg, May 1, 2003
- 49) G-8 ENVIRONMENT MINISTERS SKIRT KYOTO PROTOCOL, Japan Today, April 28, 2003
- 50) CLIMATOLOGISTS GIVE WATERWORLD WARNING FOR EARTH, New Scientist, April 26, 2003
- 51) GLOBAL WARMING ACTIVISTS CLAIM BIG VICTORY, Inter Press Service, April 23, 2003

EDITORIAL/OPINIONS

- 52) EXPECT WORSE EFFECTS OF CLIMATE CHANGE by Grace Akumu, The Nation (Nairobi), May 16, 2003
- 53) TIME TO FOCUS BEYOND KYOTO, New Zealand Herald, May 15, 2003
- 54) GLOBAL WARMING RANKS HIGH AS HEALTH THREAT by Evan H. Delucia, Chicago Sun-Times, May 10, 2003
- 55) INVESTING IN INNOVATIVE ENERGY TECHNOLOGIES by Paula J. Dobriansky, Under Secretary of State for Global Affairs, Address to the Conference on Carbon Sequestration, Hilton Alexandria Mark Center, Alexandria, VA, US State Department, May 7, 2003
- 56) ADDRESS ON THE OCCASION OF THE OPENING OF THE FOURTEENTH WORLD METEOROLOGICAL CONGRESS by Professor G.O.P. Obasi Secretary-General, World Meteorological Organization, May 5, 2003
- 57) G8: DON'T MENTION THE "K" WORD, AFP, April 27, 2003

GENERAL NEWS

1) FRENCH NATIONAL NAMED CHIEF OF UN METEOROLOGICAL AGENCY

UN

May 16, 2003

Internet: <http://www.un.org/apps/news/story.asp?NewsID=7095&Cr=weather&Cr1=>

16 May – A French national has been named the next chief of the United Nations World Meteorological Organization (WMO). Countries meeting in Geneva for the fourteenth World Meteorological Congress appointed Michel Jarraud yesterday evening to a four-year term as Secretary-General of the WMO. He will succeed current chief Godwin O.P. Obasi of Nigeria on 1 January 2004. In his acceptance message, Mr. Jarraud highlighted many future challenges, including natural disaster prevention and mitigation, the affect of climate change, the development of National Meteorological and Hydrological Services (NMHSs) as well as hydrology and water resources. Before joining WMO in January 1995 as Deputy Secretary-General, Mr. Jarraud worked at the European Centre for Medium-Range Weather Forecasts (ECMWF).

Established as a specialized agency of the United Nations in 1951, WMO facilitates international cooperation in the establishment of networks of stations for making meteorological, hydrological and other observations, and to promote the rapid exchange of meteorological information, the standardization of meteorological observations and the uniform publication of observations and statistics. The 187-member Organization also furthers the application of meteorology to aviation, shipping, water problems, agriculture and other human activities, promotes operational hydrology and encourages research and training in meteorology.

2) US\$11 MILLION TO BE PLEDGED TO CARIBBEAN; US HELPING REGION TO FIGHT GLOBAL WARMING

Barbados Advocate

May 16 2003

Internet: <http://www.barbadosadvocate.com/NewViewNewsleft.cfm?Record=13357>

Washington – The United States is helping finance a project in conjunction with the World Bank's Global Environment Facility (GEF) to counter the destructive effects of global warming in the Caribbean. The "Mainstreaming Adaptation to Climate Change Project" will benefit 12 small island and low-lying countries in the region, the bank said in a recent statement. Those countries are: Antigua & Barbuda, the Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Jamaica, St. Kitts & Nevis, St. Lucia, St. Vincent & the Grenadines, and Trinidad and Tobago. The bank said that throughout the Caribbean region, global

warming is expected to cause significant changes both in sea temperatures and sea levels, and to intensify extreme weather events such as floods, heavy rains, and hurricanes.

As a result, both natural ecosystems and man-made projects will be at increased risk. The project helps Caribbean nations plan how to counteract these climate changes. The project is being financed by a \$5 million grant from the GEF, to be administered by CARICOM (the Caribbean Community trading bloc). That money is supplemented by grants of \$800 000 from the United States, \$2 million from Canada, and \$3.15 million from CARICOM governments. The United States is engaged in a number of other activities to protect the Caribbean. For instance, the US Coast Guard-led federal Caribbean Regional Response Team in Puerto Rico provides oil-spill response and response-training capability to the wider Caribbean region, while the US National Oceanic and Atmospheric Administration supports projects in fisheries and marine-protected areas. Another initiative, the US-led "White Water to Blue Water" partnership, supports the management of watersheds and marine ecosystems, with help from the private sector and non-governmental organizations.

3) COMBATING CLIMATE CHANGE

Kuensel Online (Bhutan)

May 16, 2003

Internet: <http://www.kuenselonline.com/article.php?sid=2850>

To combat the harmful effects of climate change, such as declining agricultural production and depleting forest and water resources, Bhutan is preparing what is called the technology needs assessment (TNA). TNA, an important development tool, helps a country identify the appropriate technologies required for the various development goals. It can list down the kinds of technologies required in a country to help control emission. "TNA will help figure out what kind of technologies a country needs, whether the identified technologies can provide any environmental benefits, or whether they are able to resist the problems of climate change," said the project manager, national environment commission (NEC), Thinley Namgyel. "It will also work out on the relevance of the technologies to the local situation."

Based on initial communication to the United Nation framework convention on climate change (UNFCCC) four sectors (industries, meteorological observation system, agriculture and energy) have been identified for TNA in Bhutan. The first greenhouse gas inventory for Bhutan observed that emission of greenhouse gases in the country was basically from the industrial sector. However, compared to developed and other developing countries, emission of greenhouse gases (GHG) was relatively negligible in Bhutan. Bhutan's large forest tracts also absorbed about five MT (metric tonne) of carbon dioxide emitted by other countries. "But that does not mean we will not be affected by the impact of climate change," Thinley Namgyel said. "The developing and the least developed countries are adversely affected by climate change. Therefore, potential mitigation measures should be worked out for the industrial sector for reduction of greenhouse gases."

There was also a need to strengthen the meteorological observation system to address issues with scientific and technical proof. "This is needed for adaptation purposes such as early warning systems for extreme weather events like storm and glacial lake outburst floods." Assessment of technology needs is also required for the agricultural sector which represents a significant sector in Bhutan with the majority of the population engaged in subsistence farming. Agriculture is most vulnerable to climate change. "Because of climate change, there is uneven distribution of rain in the different parts of the country that affects the agricultural production of the country," said a NEC official.

Although energy demand in Bhutan is met through hydro electricity, fuel wood and petroleum products, because of global warming and the rapid retreat of alpine glaciers, the implications for hydroelectric generation potential must be taken into account. Considering the heavy dependence of the economy on hydropower and the potential adverse impacts of climate change, alternative forms of renewable energies or increase in energy efficiency could be explored for adaptation strategies through TNA. "At the moment we

have low technical capacity to respond to climate changes,” said Thinley Namgyel. “We have to either borrow or buy technology from the advanced countries.”

4) COST OF FLEXIBLE MECHANISMS WEIGHED UP FOR IRISH KYOTO TARGET

Eddie weekly summaries

May 16, 2003

Internet: http://www.edie.net/gf.cfm?L=left_frame.html&R=http://www.edie.net/news/Archive/7011.cfm

The Kyoto Protocol’s flexible mechanisms could help Ireland meet its greenhouse gas emissions target under the agreement, a leading business association said this week. But pressure group Friends of the Irish Environment warned that use of such instruments could land the country with a massive bill, without even addressing the problem of the country’s burgeoning climate emission levels. Ireland has a Kyoto target to limit greenhouse gas emission growth to 13%, compared with 1990, by 2012. Meeting this target looks increasingly unlikely, according to a downbeat assessment of EU progress towards its combined target of an 8% reduction in carbon dioxide emissions, released last week by the European Environment Agency.

Ireland was named as one of three EU countries furthest from their targets, along with Spain and Portugal. The Irish Business and Employers Confederation (IBEC) said this week that the country was “at a critical juncture” in deciding how to meet its climate change obligations. The government could carry on with the climate change strategy as it stood or “make an urgent policy decision” on how much it will use Kyoto’s flexible mechanisms “to supplement domestic action towards the achievement of its target”, IBEC said in a statement. As it stood, the strategy was “predominately aimed at the industrial and energy sectors, which have already achieved a great deal through a decrease in energy intensity and by de-coupling energy consumption from industrial production, IBEC said. “This narrow concentration of effort is unbalanced and overlooks the significant possibilities which exist for less costly reductions in other sectors.”

Ireland is now six months into a review of its country’s climate change strategy, launched in 2000. The strategy included the phasing in of carbon taxes from 2002 – which are now expected some time this year – an end to coal-fired energy generation, and use of the EU emissions trading scheme. IBEC warned against involvement in EU emissions trading, saying that this would force up national electricity prices.

5) UN AFFILIATE TO HELP VADODARA CONSERVE ENERGY

Times of India

May 16, 2003

Internet: <http://timesofindia.indiatimes.com/cms.dll/xml/uncomp/articleshow?msid=46511534>

VADODARA: The Vadodara Municipal Corporation (VMC) is one of the seven municipal bodies in the country, and the only city in Gujarat, to be selected by the Canada based International Council for Local Environmental Initiatives (ICLEI) for implementing energy-saving initiatives. VMC was selected after it brought out a comprehensive plan for managing the city's energy consumption patterns. ICLEI is affiliated to the United Nations Framework Convention on Climate Change and is a conglomerate of more than 500 urban local governments world-wide.

"VMC used to spend Rs 32 crore annually on electricity bills alone. But with the implementation of the plan this amount was brought down to Rs 22 crore last year," says executive engineer Subodh Shah. In its recently-prepared annual report VMC's street light department, which also carries out energy audits of water supply and sewage treatment plants, claims to have saved almost 52 per cent of capital costs on street lighting and 25 per cent on pumping installations. Based on this report, the Canadian firm approached the civic body this year and also invited its representatives to an exchange programme to be held in Somerville and San Francisco in the US two months from now.

Having installed the annual programmable microprocessor-based automatic time switch in 150 street light facilities, the VMC saved almost 33 per cent on power costs. Against the annual usage of 74,500 KWH of

power per annum, VMC managed to bring down power consumption to 50,100 KWH per annum by using methods like staggering and increasing height of poles. According to senior officials in the VMC the total savings, generated within 54 months of the implementation of the revised energy scheme, can fund installation of street lights along an additional 21 roads in the city. Says South Asia project director of ICLEI, E B V Kumar, "The implementation of energy saving initiatives will become mandatory next year onwards with the central government's Bureau for Energy Efficiency issuing guidelines that would require each and every office in the city to be designed to curb energy losses. The guidelines were earlier restricted only to industries."

"Even though the per capita, per person, per annum, carbon emission levels in the city are one of the highest at 1.6 tonnes, when compared with that of Kolkotta which records 1.20 tonnes, 25 per cent of this pollution can be curbed by introducing energy efficient methods to check power consumption," says Shah. "This surely is a positive step towards saving precious fuel," says mayor N V Patel. "We have a number of environment related projects lined up for the coming two years, this is just one of them," adds Patel.

6) ISS IN FAVOR OF EXXONMOBIL GLOBAL WARMING PROPOSALS

Reuters

May 15, 2003

Internet: <http://www.forbes.com/markets/newswire/2003/05/15/rtr972774.html>

NEW YORK, May 15 (Reuters) - Shareholders of Exxon Mobil Corp. (nyse: XOM - news - people) should challenge the oil behemoth by voting for two proposals that would ask the company to formally address global warming and alternative energy issues, an influential shareholder group said on Thursday. Institutional Shareholder Services Inc. is recommending shareholders ask Exxon Mobil, the world's largest publicly traded oil company, to report on any risks to its operations, finances and reputation arising from climate change, and to explain how it will mitigate those risks.

ISS also recommended in favor of a proposal requesting that the company explain its stance with respect to developing renewable energy resources. The voting will take place at Exxon Mobil's annual meeting on May 28 in Dallas. In the report, ISS said it supports the proposals because they aim to provide information to shareholders that will help them assess financial risk and keep them "informed on issues affecting the company's core products and services." Exxon Mobil management has recommended against the proposals, saying the company "has developed and widely communicated our strategy on climate change." With respect to the proposal on renewable energy, Exxon Mobil said in its 2003 proxy that "future energy requirements ... will, in large measure, come from the development of oil and gas resources." The company's shares rose 8 cents to close at \$35.29 Thursday on the New York Stock Exchange.

7) A NEW ROADMAP FOR U.S. GREENHOUSE GAS REDUCTIONS

ENS

May 15, 2003

Internet: <http://ens-news.com/ens/may2003/2003-05-15-11.asp>

WASHINGTON, DC, May 15, 2003 (ENS) - The Bush administration may be steadfast against adopting any mandatory greenhouse gas emissions program, but there is increasing interest among some in the U.S. Congress for policies that would force the nation responsible for one quarter of the world's greenhouse gases to curb its emissions. And it is this discussion that the Pew Center on Global Climate Change hopes to influence with two new reports released today that analyze the best options available to tailor a mandatory greenhouse gas emissions program for the United States. "We are not at the point where Congress is going to pass a mandatory program, but there is growing interest," said Eileen Claussen, president of the Pew Center on Global Climate Change, an independent, nonprofit and nonpartisan organization. "We are at the very beginning of the debate on how to do this and that makes these reports extremely timely."

Reducing greenhouse gas emissions, in particular carbon dioxide, is a tricky issue for American politicians. The Bush administration withdrew the nation's support for the Kyoto Protocol - the United Nations accord on greenhouse gas emissions - and refuses to commit to anything but voluntary measures to cut emissions of gases that most believe are contributing to global warming. The administration's hostility for mandatory greenhouse gas reductions comes against a backdrop of rising U.S. greenhouse gas emissions, which increased some 12 percent between 1990 and 2001 and are expected to increase another 12 percent by 2012. Rather than seek straight reductions of greenhouse gas emissions, the Bush administration is focused on reducing the nation's greenhouse gas intensity - the rate of emissions to economic output.

But many believe these efforts will do nothing to alleviate a growing problem and contend that mandatory measures are necessary. The reports released by the Pew Center indicate that emissions trading programs that have worked for other pollutants, such as acid rain, offer low cost mechanisms that could cut greenhouse gas emissions. One report analyzes the lessons of emissions trading and the second provides an evaluation of multiple options for program design. Emissions trading has a 40 year history in the United States and there is now ample evidence the theory behind the concept is valid, explained Denny Ellerman, coauthor of "Emissions Trading in the U.S.: Experience, Lessons, and Considerations for Greenhouse Gases." Ellerman, a senior lecturer at the Massachusetts Institute of Technology, and his coauthors reviewed the experience with six emissions trading programs and drew general lessons for the development of greenhouse gas reduction programs.

The primary attraction of emissions trading, Ellerman explained, is that a well designed program can provide a framework to meet emissions reduction goals at the lowest possible cost. By giving emissions sources flexibility to find and apply the lowest cost solutions to reduce pollution, such a program gives incentives for those with low cost compliance options to reduce emissions more than they would under command and control regulation. The trading of emissions credits provides further incentives and encourages both low cost and high cost compliance sources to achieve emissions reductions. In their report, the authors detail that these programs have been successful in the major objective of lowering the cost of meeting emissions reductions goals and have enhanced - not compromised - the achievement of environmental goals. Emissions trading programs have worked best when allowances or credits are clearly defined and when there is "an unquestioned ability to trade," Ellerman said. "Case by case certification of trades greatly diminishes emissions trading," he explained.

The report concludes that banking - allowing sources to reduce emissions early and accumulate credits or allowances for compliance in future periods - has played an important role in improving the economic and environmental performance of these programs. The matter of the initial allocation of credits is the "most contentious and difficult issue," for trading programs, Ellerman said, but the report finds that these concerns can be addressed without impairing the cost savings from trading or the environmental performance of the program. The report concludes that emissions trading seems well suited to addressing greenhouse gas emissions because the costs of reducing emissions varies widely and these pollutants are long lasting and affect areas far from where they are emitted. Opt in or voluntary features have a role that merits their inclusion in greenhouse gas emissions trading programs, according to the authors, but this should be determined by weighing the cost savings benefits against the emissions increasing potential.

The second report, "Designing a Mandatory Greenhouse Gas Reduction Program for the U.S." examines three options: a cap and trade program; a greenhouse gas tax; and sectoral hybrid programs. There are several types of cap and trade programs worth considering, explained coauthor Robert Nordhaus, a lawyer who specializes in federal electric, natural gas and environmental regulation. A conventional program sets a cap on emissions and allocates tradeable permits equal to the cap, whereas a "downstream" cap and trade program applies to sources of greenhouse gas emissions and requires them to surrender allowances equal to their emissions. Third, an "upstream" cap and trade program applies to fuel suppliers and requires them to surrender allowances equivalent to the carbon content of fossil fuels they distribute.

The authors find that a downstream cap and trade program would be "unadministrable" and that a standalone large source cap and trade program would have to be coupled with a program to cover other sectors. They contend that an economy wide upstream cap and trade program "may be the best one if it can be put in

place." But this approach would drive up the costs of gasoline and home heating fuels, the authors explain, and could be a political dead end. "New taxes is the third rail of American politics and if there is a fourth rail, it is higher energy costs and this combines both," explained Nordhaus. A greenhouse gas tax is also politically unfeasible, Nordhaus said, but the sectoral hybrid approach could work in the United States. This consists of a large source downstream program coupled with product efficiency standards, a combination that addresses emissions from sources such as automobiles and appliances that could not feasibly be covered by a downstream cap and trade program.

Building on existing standards programs, the authors explain, such a hybrid program could attain coverage of about 80 percent of the U.S. energy-related carbon dioxide emissions. It could prove more costly than other efforts, but it "may score better on political acceptability because it constrains domestic greenhouse gas emissions while largely shielding consumers from fuel price increases." Nordhaus said the European Union is working on this kind of a program and he believes the administrative complexity is overshadowed because it is "more politically appealable."

8) EXXON SAID TO LAG MAJORS IN CLIMATE POLICY

Planet Ark

May 15, 2003

Internet: <http://www.planetark.org/dailynewsstory.cfm/newsid/20792/story.htm>

NEW YORK - Top global energy company Exxon Mobil Corp. (XOM.N) is the poorest performer among leading world energy producers in responding to global climate change and disclosing greenhouse risks to investors, social investment groups said. London-based Claros Consulting released a report this week that said unlike its peers BP (BP.L) and Shell Oil Co. (SHEL.L) (RD.AS), Exxon Mobil does not support carbon trading, in which companies that produce greenhouse gases over set limits would have to purchase credits to emit over those limits.

Claros and Boston-based Coalition for Environmentally Responsible Economies also said that unlike ChevronTexaco (CVX.N) and Shell, Exxon does not participate in carbon pricing, which factors in the cost of carbon emissions when deciding whether to go ahead with projects. Energy companies produce substantial amounts of greenhouse gases such as carbon dioxide, that scientists say cause climate change. Insurance companies such as Munich Re (MUVGn.DE) say greenhouse risks, such as rising seas to low-lying nations and agricultural losses from global warming could soon total hundred of billions of dollars in the next 50 years.

TECHNOLOGY OR TRADE

An Exxon Mobil spokesman said while greenhouse gas emissions may indeed pose a threat, studies must continue to understand the risks and possible consequences. "Emissions trading really doesn't get you anywhere," said Exxon Mobil's Tom Cirigliano. "The answer is going to be new technology which absolutely reduces carbon dioxide and other greenhouse emissions." Exxon has made its oil refineries 37 percent more efficient since the 1970s, one example of how technology changes reduce emissions, Cirigliano said.

But Peter Altman, of Austin-based Campaign Exxon Mobil, said Exxon's refinery efficiency lags the efficiency rates of other industries such as chemical and steel as well as the 45 percent more efficient rate of the economy as a whole. Altman said Exxon Mobil does not disclose greenhouse risks on its financial reports as completely as energy concerns such as BP and ConocoPhillips. On its financial releases to the Securities Exchange Commission BP lists the risks associated with the Kyoto Protocol, which seeks to limit emissions and needs only Russia's approval to go into effect. BP's filings also mention the company's investments in alternative energies like wind and solar power which cut emissions.

But Cirigliano said the company would not seek to quantify its global warming risks. "There's a lot of smoke being blown around the whole issue of global climate change, and we're not going to participate in the PR

(public relations) efforts that some companies are involved in and the PR efforts that some environmental groups are involved in." Claros released the report ahead of Exxon's May 28 annual meeting in which shareholders are set to vote on three climate-related resolutions. At last year's annual meeting, 20.3 percent of shareholders voted for a resolution that would force the company to disclose its strategy for pursuing alternative energies such as wind and solar energy.

9) IRISH USE OF IMPORTED ENERGY GROWING

BizWorld

May 15, 2003

Internet: <http://www.businessworld.ie/livenews.htm?a=681603;s=rollingnews.htm>

Ireland's dependency on imported energy has grown from 65pc in 1990 to 87pc in 2001, and continues to increase, according to a report by Sustainable Energy Ireland (SEI), published today. This compares to an EU average dependency on external power of just 50pc. While Ireland is now producing more energy from renewable sources, its contribution to primary energy supply has remained at around 2pc over the same period, the report noted. Commenting at the launch of the report, David Taylor, chief executive of SEI, said, "The Celtic Tiger economy has seen substantial growth in Ireland's energy use over the last decade. While not rising as fast as economic output, it has pushed our greenhouse gas emissions well above the ceiling agreed under the Kyoto Protocol. Trends in transport, where CO2 emissions grew by 120pc on 1990 levels, give the greatest cause for concern."

"While there is absolutely no room for complacency by any sector of Irish society, it is not all bad news. Among the positive trends highlighted by this report are the increasing efficiency of industry, the growth in wind energy's contribution and the impact of improved energy efficiency in new houses. Looking forward, he highlighted the need for greater efficiency as means of stemming the growth in energy demand. "Likewise, we should look to increase the proportion of that demand which is secured from renewable resources such as wind and solar energy. In the long term, this will pave the way towards more sustainable energy and a more sustainable approach to life," he said. The report shows that imported oil remains the dominant energy source in Ireland, with its share of the fuel mix increasing from 46pc in 1990 to 58pc in 2001. Oil consumption almost doubled in absolute terms over this 11-year period.

The share of solid fuels - coal and peat - in the fuel mix has declined from 37pc to 20pc while the contribution from natural gas increased from 15pc to 21pc. However, with the decline of the Kinsale gas field, around 85pc of Ireland's natural gas consumption is currently imported. Renewable energy contributed only 1.7pc in 2001 compared with 1.8pc in 1990. However, in absolute terms certain renewable energy sources including wind and biomass increased since 1990 by 84pc, increasing their overall share from 1.2pc to 1.4pc. In particular since 1998, the growing contribution from wind energy is evident. According to the research, Ireland's overall energy consumption grew by 57pc between 1990 and 2001, prompted by significant economic growth. Growth in 2001 was 5.5pc while the average annual growth during the 1990-2001 period was 4.2pc.

Growth, averaging 7.1pc per annum, was highest in the transport sector which accounted for 30pc of Ireland's energy demand in 2001. The residential sector has grown at a slower rate of 2.4pc per annum and is now responsible for 26pc of energy consumption in Ireland. The report shows that greenhouse gas emissions in Ireland during 2001 were 27pc higher than their 1990 levels. This bears out the findings of a recent European Environment Agency report. Under the Kyoto Protocol, ratified by Ireland in 2002, Ireland's target is to limit annual greenhouse gas emissions to 13pc above 1990 levels by the period 2008 - 2012. Projections in the government's National Climate Change Strategy indicate that emissions levels may rise to 37pc above 1990 levels by 2010 if Ireland continues on a "business as usual" path, the report said.

10) INDIA AND US TO SIGN DEAL ON TECH FOR HYDROGEN FUEL

Indian Express

May 15, 2003

Internet: http://www.indianexpress.com/full_story.php?content_id=23986

New Delhi, May 15: George W Bush has a roadmap for "hydrogen economy" and India will take its first step towards becoming a willing partner towards realising it. In the next few days, the Government will sign an agreement with the US on 18 areas of cooperation dealing with cleaner and more efficient ways of using electricity and water. Hydrogen is one of the most important areas of cooperation to improve the world's climate and is seen as the most concrete of the 18 proposals at this stage. Bush's vision of the International Partnership is that consumers in participating countries will have a practical option of purchasing a competitively priced hydrogen-power vehicle, and be able to refuel it near their homes and places of work by 2020.

11) STATE IS TOUTED AS THE CANARY IN THE GLOBAL WARMING COAL MINE; CONFEREES SAY EFFECTS OF GREENHOUSE GASES SEEN HERE FIRST ARE A RED FLAG

Anchorage Daily News

May 15, 2003

Internet: <http://www.adn.com/front/story/3121496p-3145998c.html>

WASHINGTON -- Alaska summers have become warmer and drier, the winters less severe. And this is supposed to be a bad thing? " 'Alaskans for global warming.' I'm a member myself," joked Gunter Weller, director of the climate research center at the University of Alaska Fairbanks, referring to a popular bumper sticker. But so far, many of the signs of climate change aren't pretty, Weller said at a conference here Wednesday on the effects of global warming in Alaska. Roads have buckled over melting permafrost. The spruce bark beetle has killed huge swaths of Kenai Peninsula trees. Native hunters have to venture farther into the sea to reach whales and walrus. In the Interior, buildings sink unevenly as the ground softens, and coastal villages are losing houses and roads to erosion.

Climate change is serious business for Alaska, which is at the forefront in seeing the effects of global warming, Weller said. "The consequences are already visible," he said. "And as Alaska goes ... so goes the rest of the world. We should take these first signals that we see in Alaska seriously." Deborah Williams, director of the Alaska Conservation Foundation, also said Alaska should serve as an early-warning call for the rest of the nation. Her group sponsored the conference, she said, out of a "moral obligation" to explain what is happening to Alaska. Many of those who attended the talks work for other environmental groups that want to see limits on the production of greenhouse gases.

While still questioned in some quarters, the greenhouse theory -- that air pollution from modern transportation and industry is warming the climate -- has taken hold among scientists, Weller said. "The consensus in the scientific community is that there is a significant contribution of this anthropogenic (human-caused) greenhouse effect to climate change. A significant contribution." Presenters Wednesday talked about the changes Alaska is already seeing: less ice in the Arctic Ocean, rapidly shrinking glaciers, drying of ponds on the Seward Peninsula, increases in lake alkalinity, a longer snow-free period for the North Slope and shrubs overtaking tundra. The effects, according to one presenter, are even found in the ruined flesh of king salmon in the Yukon River.

Fish pathologist Richard Kocan of the University of Washington said subsistence fishermen began witnessing the problem in 1985. "The first thing they noticed is that some of the fish did not dry properly and that they had a fruity or vegetable-like smell to them," he said. The same fish also had white spots in their flesh and hearts. It was, scientists concluded, *Ichthyophonus*, a parasite common in herring and other fish. At first, fishermen said they saw only a few infected fish, but now as many as a third are afflicted.

Yukon king runs have been dismal in recent years, and the commercial fishery has collapsed. While other factors are believed to be major causes of the decline, Kocan believes *Ichthyophonus* is killing a significant number before they can spawn.

Here's the connection to warming: Lab tests and field work show *Ichthyophonus* flourishes in temperatures of 59 to 68 degrees, warmer than one would expect the Yukon to be. But the river has been warm, and Kocan said the warm summers coincide with the years when the fish disease was most severe. "Although these are hypotheses, they've been tested," he said. Sterling Gologergen, who works for the Norton Sound Health Corp. and is originally from Savoonga, said she worries that the climate changes will so alter subsistence practices that she won't be able to pass along what she knows to her grandchildren. The Yup'ik culture can't be taught with textbooks and PowerPoint presentations, she said. "We have to take our children and do actual activities," she said. Williams, who led the conference, said global warming could be called the most significant issue in Alaska.

Sen. Ted Stevens of Alaska said in an interview last year that the state is obviously showing effects of climate change but that the cause is unclear. He sponsored a bill in 2001 that would have pushed for more climate-change research and required a national strategy to stabilize greenhouse gases. Stevens said he doesn't agree with advocates of the Kyoto Protocol, a 1997 agreement that would have required industrialized nations to reduce their emissions of greenhouse gases. "They found something to hold up as ... proof of their theory, which they developed really as a means of retarding modernization and development throughout the world," he said. If greenhouse gases need to be reduced, there are other ways to reduce them, he said. One way, he suggested, would be to harvest old-growth forests and plant young trees. "Mature forests do not produce the same degree of contribution to the cleaning of our air that growing forests do," he said. Williams said the consensus of the conference was to support another pending bill, called McCain-Lieberman, that would limit the amount of greenhouse gases U.S. power plants and industries could emit. As for Stevens' bill, "people thought that was a good first step, but you need to take the second step," Williams said.

12) NASA FINDS SOOT HAS IMPACT ON GLOBAL CLIMATE

NASA

May 14, 2003

Internet: <http://www.spaceflightnow.com/news/n0305/14soot/>

A team of researchers, led by NASA and Columbia University scientists, found airborne, microscopic, black-carbon (soot) particles are even more plentiful around the world, and contribute more to climate change, than was previously assumed by the Intergovernmental Panel of Climate Change (IPCC). The researchers concluded if these soot particles are not reduced, at least as rapidly as light-colored pollutants, the world could warm more quickly. The findings appear in the latest issue of the Proceedings of the National Academy of Sciences. It is authored by Makiko Sato, James Hansen and others from NASA's Goddard Institute for Space Studies (GISS) and Columbia University, New York; Oleg Dubovik, Brent Holben and Mian Chin of NASA's Goddard Space Flight Center, Greenbelt, Md.; and Tica Novakov, Lawrence Berkeley National Laboratory, Berkeley, Calif.

Sato, Hansen and colleagues used global atmospheric measurements taken by the Aerosol Robotic Network (AERONET). AERONET is a global network of more than 100 sun photometers that measure the amount of sunlight absorbed by aerosols (fine particles in the air) at wavelengths from ultraviolet to infrared. The scientists compared the AERONET data with Chin's global-aerosol computer model and GISS climate model, both of which included sources of soot aerosols consistent with the estimates of the IPCC. The researchers found the amount of sunlight absorbed by soot was two-to-four times larger than previously assumed. This larger absorption is due in part to the way the tiny carbon particles are incorporated inside other larger particles: absorption is increased by light rays bouncing around inside the larger particle. According to the researchers, the larger absorption is attributable also to previous underestimates of the amount of soot in the atmosphere. The net result is soot contributes about twice as much to warming the world as had been estimated by the IPCC.

Black carbon or soot is generated from traffic, industrial pollution, outdoor fires and household burning of coal and biomass fuels. Soot is a product of incomplete combustion, especially of diesel fuels, biofuels, coal and outdoor biomass burning. Emissions are large in areas where cooking and heating are done with wood, field residue, cow dung and coal, at a low temperature that does not allow for complete combustion. The resulting soot particles absorb sunlight, just as dark pavement becomes hotter than light pavement. Both soot and the light-colored tiny particles, most of which are sulfates, pose problems for air quality around the world. Efforts are beginning to reduce the sulfate aerosols to address air quality issues. "There is a pitfall, however, in reducing sulfate emissions without simultaneously reducing black carbon emissions," Hansen said. Since soot is black, it absorbs heat and causes warming. Sulfate aerosols are white, reflect sunlight, and cause cooling. At present, the warming and cooling effects of the dark and light particles partially balance.

This research continues observations of global climate change. It was funded by NASA's Earth Science Enterprise. The Enterprise is dedicated to understanding the Earth as an integrated system and applying Earth System Science to improve prediction of climate, weather, and natural hazards using the unique vantage point of space.

13) ENVIRONMENT-FRIENDLY PROJECTS MAY ATTRACT \$200 BN IN FDI

Rediff

May 14, 2003

Internet: <http://www.rediff.com/money/2003/may/14fdi.htm>

India has the potential to attract \$200 million worth of foreign direct investment a year on account of projects aimed at reducing greenhouse gas emissions, according to an expert on clean development mechanism and climate change. A major portion of the investment would come from multi-lateral agencies and global energy majors, Jed Jones, principal consultant, KPMG and special advisor on climate change, said. The FDI estimate is lower than independent agencies' estimate of \$1 billion per year. However, India, the sixth largest producer of green house gases in the world, has to start implementing clean development mechanism projects soon to meet its targets.

Jones, who was involved in preparing the requisite documentation for the clean development mechanism, said India could not wait for the implementation of the standards set in the future. Jones is also responsible for the joint implementation of projects to demonstrate the viability of cleaner norms as elaborated in the Marrakesh Accords. India is currently the sixth largest producer of greenhouse gases, contributing 3 per cent of the world's total emission. But its contribution to emissions is growing at more than 4 per cent (almost the rate of GDP growth) and which is twice the rate of the average world rate. The CDM projects will help not only India reduce green house gas emissions, it will help in increasing energy efficiencies of companies. A majority 55 per cent of the emissions come from the energy sector. The transportation sector also contributes to a major part of emissions, Jones added.

14) GLOBAL WARMING'S LOCAL CROP IMPACTS FORECAST

Nature

May 14, 2003

Internet: <http://www.nature.com/nsu/030512/030512-6.html>

A new technique that can estimate local weather patterns 50 years from now could help poorer countries to prepare for shifts in agricultural productivity. "We hope to get to the point where, at the household level, we can decide which crops and livestock are most suitable for future climatic conditions," says economist Phillip Thornton of the International Livestock Research Institute in Nairobi, Kenya. Previous studies estimated the impacts of climate change on continents or countries, rather than at finer scales. "We will need to have these kinds of analysis for the future," agrees land-use expert Mahendra Shah of the International Institute for Applied Systems Analysis in Laxenburg, Austria.

With colleague Peter Jones at the International Centre for Tropical Agriculture in Cali, Colombia, Thornton has devised a statistical tool called a synthetic weather simulator. The duo link this to a standard model that forecasts global climate change. Fed with ten years' worth of rainfall data from thousands of weather stations in Africa and South America, the simulator predicts the probability of future rainfall within 18-kilometre squares throughout the continents. "It won't tell you whether it's going to rain or not, but it will tell you what should be characteristic weather for that site," says Thornton. The researchers link this model to another that predicts how well maize, a developing world staple, grows depending on sunlight, temperature, rainfall and soil type. The system predicts a 10% average decrease in maize production by 2055, which could, in theory, be compensated for by improved crop varieties and farming technologies.

More alarmingly, the study suggests that some areas that are now producing tonnes of maize might not produce any 50 years from now. "It's the variability that's going to have the impact," says Thornton. "Some places will be absolutely devastated." Some areas of the Ethiopian highlands, for example, could have bumper maize crops by 2055 whereas others next door, which are now very productive, could yield next to nothing. Venezuela may have to shift its maize production from the north to the southwest of the country, which does not currently support the crop. It's very early days for trying to predict future weather patterns from one valley to the next, stress climate researchers.

There are five leading Global Climate Models (GCMs) - none perfect, all different. This latest study uses just one. "The work would really need to be repeated using other GCMs to remove uncertainty," says climate modeller Geoff Jenkins at the Hadley Centre for Climate Prediction and Research in Bracknell, UK. Better techniques for integrating local weather predictions with GCMs will also be needed, admits Thornton. "But we are getting to the stage when we can really zoom in," he says. The next iteration of their system should be accurate to a 10-km-square scale, he reckons. Statistics aside, says Shah, the situation on the ground is always more complex. Maize is grown twice a year in many parts of Africa and is often planted beside other crops. "The reality is multiple cropping," he says. The impacts of climate change on those crop yields will be even harder to predict.

15) SOLAR POWER CONFAB SERIES UNDER WAY

The Japan Times

May 13, 2003

Internet: <http://www.japantimes.co.jp/cgi-bin/getarticle.pl5?nn20030513a6.htm>

OSAKA (Kyodo) A nine-day series of international conferences began here Monday to look into ways to promote the use of solar power. The World PV Epoch in Osaka consists of three programs -- the Third World Conference on Photovoltaic Energy Conversion (WCPEC-3), from Monday to Friday; the WCPEC-3 Exhibition, from Wednesday to Sunday; and an international conference on photovoltaic power systems (PVPS) organized by the International Energy Agency, on May 19 and 20. Around 1,500 researchers and experts from 50 countries are scheduled to take part in WCPEC-3 to look into technological developments of photovoltaic power generation, organizers said.

During the WCPEC-3 Exhibition, solar power system manufacturers including Sharp Corp. and Kyocera Corp. will show off their latest home systems. Sharp President Katsuhiko Machida, head of the Japan Photovoltaic Energy Association, said in an opening speech that "developing high-efficiency, low-cost system equipment is a pressing issue" for the promotion of solar power. Osaka Gov. Fusae Ota sent a message describing the Osaka Municipal Government's efforts to reduce greenhouse gas emissions by 9 percent from current levels by using solar power in its sewage treatment system. The IEA PVPS International Conference is expected to draw 250 participants from 20 countries who will discuss how to reduce the cost of manufacturing photovoltaic power systems, the organizers said. Osaka was chosen as the venue of the World PV Epoch because it is home to many solar power system producers, including Sharp, the world's largest solar cell maker. Japan has about a 50 percent share of the world's solar cell market.

16) BIOFUELS DIRECTIVE DEADLINE SET AS 2004

Environment-Centre

May 14, 2003

Internet: <http://www.environment-centre.net/cgi-bin/croner/jsp/Editorial.do?cache=true&contentId=89908>

The Biofuels Directive will soon become law, when it is formally signed by the President of the European Parliament. Member States will then have until 31 December 2004 to transpose the Directive into national law. The new legislation to promote the use of "green" transport fuels, as alternatives to petrol and diesel, lays down targets for the progressive introduction of biofuels, ie fuels derived from agricultural, forestry and organic waste products, between now and 2010. These targets will have to be based on benchmarks set by the Directive, ie a 2% market share by December 2005 and a 5.75% market share by December 2010.

Member States must announce by July 2004 the first biofuel targets to be achieved by December 2005. The European Commission will undertake an evaluation of the implementation of the Directive before the end of 2006 and will then decide whether further legislative proposals are required. The Directive is seen as playing a dual role in improving the security of Europe's energy supplies since biofuels can be produced by European farmers and industry, as well as helping to reduce European greenhouse gas emissions, as agreed in the Kyoto Protocol. Biofuels are currently more expensive to produce than petrol or diesel. The European Commission has therefore also proposed that Member States should have greater powers to levy lower fuel duties on biofuels to enable them to be affordable to individual or corporate buyers.

17) UK EMISSIONS SCHEME SEES 7MLN T CO2 CHANGE HANDS

Planet Ark

May 14, 2003

Internet: <http://www.planetark.org/dailynewsstory.cfm/newsid/20785/story.htm>

LONDON - The first year of the voluntary UK emissions trading scheme saw around 900 companies exchange rights to emit over seven million tonnes worth of carbon dioxide, according to government figures released. "These are impressive figures for this fledgling market - UK business has gained valuable experience of trading in environmental markets," said environment minister Michael Meacher in a statement. The scheme, started in April 2002, was the world's first economy-wide national emissions trading market. Emissions trading enables companies that cut greenhouse gas emissions above government agreed targets to sell allowances to those unable to meet the reductions. The emissions are seen by many scientists as contributing to global warming.

The British government kickstarted the scheme with cash incentives for 32 organisations, including Shell, BP, DuPont and British Airways, of which 31 met their targets. Another 5,000 firms risked losing hefty tax rebates on energy use if they missed their targets, of which 866 entered trading, mostly as buyers. Thirty-five other players also traded, the government said. The government said last month that these 5,000 firms had slashed emissions of carbon dioxide by 13.5 million tonnes in 2002, or by more than three times its target of a 3.5 million tonne cut. It said it had allocated around 31.5 million emissions allowances to companies, over 7.2 million of which had been exchanged in about 2,000 transfers in the scheme's first year. These transfers could be between buyers and sellers or within a company, it said.

The government hoped for an large uptake to help meet its commitments under the United Nations Kyoto Protocol on climate change, ahead of mandatory European trading from 2005 and possible global trading. "I am sure we will continue to maintain our lead and establish the UK as a centre for greenhouse gas emissions trading as we move towards international trading systems," Meacher said. The U.N. said last week that Britain was well on course to meet its emissions goal under the Protocol of a 12.5 percent cut on 1990 levels by 2010. Industry analysts said last month the scheme had failed to balloon into a busy market in its first year as the companies risking losing tax rebates had not bought as much as expected, though firms had learned to set up trading mechanisms. Meanwhile they said some companies had made easy money

from the scheme by receiving government cash for committing to easily achievable targets and then by selling the allowances on the market.

See Also:

UK on track to meet Kyoto greenhouse gas cuts – UN, Planet Ark, May 12, 2003

<http://www.planetark.org/dailynewsstory.cfm/newsid/20752/story.htm>

UK 'will make bigger greenhouse cuts', BBC, May 8, 2003

<http://news.bbc.co.uk/2/hi/science/nature/3011169.stm>

UK on course for Kyoto targets says United Nations, May 7, 2003

<http://www.number-10.gov.uk/output/Page3619.asp>

18) INDUSTRY IN SLOVENIA WITH ALL THE WORK LEFT TO DO

SRImedia

May 14, 2003

Internet: http://www.srimedia.com/artman/publish/article_581.shtml

For Slovenian industry, preparing for EU membership also means preparing for CO2 emissions trading under the EU scheme. The country's Ministry of Environment is working hard to make sure Slovenia will be part of the scheme from the start, Nives Nared told Point Carbon. There are some concerns regarding the participation of the new EU members in the EU scheme on greenhouse gas emissions trading. Capacity problems and lack of data may provide real obstacles for the countries getting their CO2 allocation plans ready by March 2004. Slovenia, however, seems set to be prepared on time.

We have not and will not apply for a transition period. The allocation work was started in April. We will present the emissions trading Directive to industry, and perform analysis of the installations included, Nives Nared at the Ministry of Environment told Point Carbon. A constraint for us is that the Commission will only provide guidelines for allocation at the end of this year, which only leaves three months to complete allocation. However, the situation is the same for all countries, she added. Slovenia has introduced a CO2 tax, and companies included in the European scheme will have to be exempted from the tax, creating an income problem for the country. Nared is still optimistic about joining the scheme, and hopes to get industry on her side. Slovenian industry has not done anything yet to prepare for emissions trading. However, we will explain the scheme to them. Hopefully they will see the possibilities this brings, Nared concluded. Slovenia is the only of the eight Central and Eastern European countries to join the EU that has not already reached its Kyoto Protocol greenhouse gas emissions reductions target.

19) REGION-WIDE ENERGY MARKET PROPOSED

EU Observer

May 13, 2003

Internet: <http://www.euobserver.com/index.phtml?sid=9&aid=11189>

EUOBSERVER / BRUSSELS - The Commission on Tuesday put on the table far-reaching plans designed to secure the EU's gas supply for decades to come, pushing for a vast region-wide gas market. At its weekly meeting on Tuesday (13 May) the Commission adopted a communication on a new energy policy towards future neighbours - Norway, the Mediterranean area, Russia and other former Soviet republics. Neighbouring countries play a vital role in the Union's energy policy, the Commission stated. They supply a major part of the European Union's requirements for natural gas and oil, something which will grow significantly in the future.

The EU and Russia have been involved for several years in a broader Energy Dialogue with Russia, its main supplier of natural gas. In particular the EU wants to strengthen its ties with the Ukraine, Moldova and

Belarus. A lot of attention is now given to the Mediterranean area, where Algeria is an important supplier of gas. Norway also gets a mention. The EU is working on creating Euro-Med electricity and gas markets, as it expects that Maghreb countries can agree upon a clear timetable for the adoption of appropriate rules in 2003.

The Commission has also pushed its "Wider Europe" initiative aimed at strengthen co-operation with EU's Eastern and Southern neighbours. The proposal offers a single market, free trade, open investment regime and approximation of legislation. These countries are now offered the possibility of eventually becoming full, important and equal players in the European Union's internal gas and electricity markets. The new neighbours, most of them without chance of membership, will share everything with the EU, except common institutions.

See Also:

Developing energy co-operation with neighbouring Countries, EU, May 13, 2003

http://europa.eu.int/rapid/start/cgi/guesten.ksh?p_action.gettxt=gt&doc=IP/03/680|0|RAPID&lg=EN&display=

20) 'OIL DOMINANT' WORLD ENERGY SYSTEM FORESEEABLE BY 2030, WARNS REPORT

CORDIS News

May 13, 2003

Internet: [http://www.eubusiness.com/cgi-](http://www.eubusiness.com/cgi-bin/item.cgi?id=110109&d=101&h=240&f=56&dateformat=%o%20%B%20%Y)

[bin/item.cgi?id=110109&d=101&h=240&f=56&dateformat=%o%20%B%20%Y](http://www.eubusiness.com/cgi-bin/item.cgi?id=110109&d=101&h=240&f=56&dateformat=%o%20%B%20%Y)

Unless research activities and policies are stepped up to cut greenhouse gases and better promote the deployment of renewable energies, the world will have a huge energy and environmental crisis on its hands by 2030, predicts a study carried out by an EU consortium of research teams. The report entitled, 'world energy, technology and climate policy outlook' (WETO) assesses the impact of individual energy projections, energy technology progress and climate change indicators on the future of global energy systems. It estimates that if current energy consumption trends and structural changes in the global economy continue, the world's energy consumption will be doubled over the next thirty years.

As EU Commissioner for Research Philippe Busquin explains, such an assessment of the long term issues is key to future research and development in the field of energy and environment: 'We cannot afford to ignore these research findings and their implications for worldwide sustainable development. (...) This study provides us with an invaluable insight into the world's energy and environmental problems of the future. It will enable us to establish our future research and technological development priorities in the energy and environment field.'

One insight is that the world energy system will continue to be dominated by fossil fuels, making up almost 90 per cent of the total energy supply in 2030. Oil production will increase by 65 per cent and is expected to remain the main source of energy, followed by coal. In fact coal will continue to be extracted and production is expected to double by 2030, with most of the growth taking place in Asia and in Africa, notes the report. However, in Europe natural gas is expected to be the largest energy source after oil, but before coal and lignite. The report also shows however that European gas reserves are limited, which may lead to supply risks, as gas supplies will have to be imported from the Middle East and other regions, in order to meet the EU home market demand.

Given the continued dominance of fossil fuels, the report estimates that the world carbon dioxide emissions (CO₂) will increase rapidly at a rate of about two per cent a year. Alarmingly, CO₂ emissions are expected to be more than twice the level that they were in 1990 by 2030. While CO₂ emissions in Europe will rise by about 18 percent, the figures for the US show a 50 per cent increase. Furthermore, whereas developing countries accounted for only 30 per cent of emissions in 1990, the report finds that they will be responsible for more than half of the world's emissions by 2030. In light of these findings, '(t)o safeguard energy

supplies and meet our Kyoto commitments, Europe must intensify its research efforts,' said Mr Busquin. The report estimates that if nuclear and renewable energies were implemented on a larger scale, the costs incurred in order to meet Kyoto targets could be reduced by 30 per cent

However, by 2030, nuclear and renewable energies will represent less than 20 per cent of EU energy supply, the report notes. In an effort, to turn this figure around, 'the new EU framework programme for research is driving forward initiatives focusing on renewable energy sources, fuel cells and hydrogen technologies,' said Mr Busquin. Indeed, over two billion euro has been allotted for research into 'sustainable development, global change and ecosystems over the next four years.

The report is available online at: http://194.185.30.69/energysite/pdf/weto_final_report.pdf

21) UN SETS SCHEDULE TO TARGET ENVIRONMENTAL ISSUES

Planet Ark

May 12, 2003

Internet: <http://www.planetark.org/dailynewsstory.cfm/newsid/20755/story.htm>

UNITED NATIONS - A U.N. commission on the environment and development issued an 11-year schedule last week to address global environmental issues ranging from clean drinking water to waste management and tourism. The U.N. Commission on Sustainable Development set the schedule after a two-day meeting. The meeting built on last year's Earth Summit in Johannesburg, South Africa, which set a goal to halve by 2015 the proportion of people earning less than a dollar a day while preserving the planet's resources for future generations - known as sustainable development. "The primary focus was on working out arrangements to ensure that we really focus on implementation after Johannesburg," Nitin Desai, undersecretary-general, department of economic and social affairs, told a press briefing.

The commission formulated a schedule through 2017 devoting two-year periods to each of a series of related environmental issues. "A large number of these goals should be treated as instrumental toward the Millennium goals," Desai said. The United Nations 2000 Millennium Summit set the original goal of halving by 2015 the proportion of people earning less than a dollar a day. The initial two-year period, for 2004 and 2005, will focus on issues of water, sanitation, and human settlements. In 2006 and 2007, the focus will be on energy for sustainable development, industrial development, air pollution and atmosphere, and climate change.

In 2008 and 2009, the issues will be agriculture, rural development, land, drought, desertification and Africa. Topics for future years include transportation, chemicals, forests, biodiversity, mountains, oceans and seas and disaster management and vulnerability. Last year's Earth Summit set goals for key environmental areas such as reducing the number of people without access to proper sanitation, restoring depleted fish stocks, and improving biodiversity by cutting the rate at which rare animals and plants are becoming extinct.

22) JAPAN URGED TO BOOST RENEWABLE ENERGY USE OVER TEPCO

Kyodo News

May 12, 2003

Internet: <http://quotes.freerealtime.com/dl/frt/N?art=C2003051200132x5306&SA=Latest%20News>

TOKYO, May 12, 2003 (Kyodo via COMTEX) -- Japan should increase the use of renewable energy such as wind and solar power amid growing fears about possible electricity shortages this summer resulting from a scandal involving Tokyo Electric Power Co. (TEPCO), energy experts said at a recent symposium. They also warn that Japan and other industrialized economies can no longer rely heavily on fossil fuels, including crude oil, for their energy in the wake of the U.S.-led war in Iraq and the unstable situation in the Middle East.

Rob Bradley, an energy specialist at the Brussels-based nongovernmental organization Climate Action Network Europe, pointed out how vulnerable the world economy is without a stable supply of crude oil. At a recent symposium at Tokyo's Sophia University, Bradley cited a study showing that one major terrorist attack on Saudi Arabia's oil infrastructure could push oil prices up to \$150 a barrel for two years from the current \$25. Experts argued that less dependence on oil and coal would also give Japan and other developed economies a greater chance to meet their reduction targets for carbon dioxide (CO₂) and other greenhouse gas emissions under the 1997 Kyoto Protocol on global warming.

Although nuclear power emits no CO₂, it enjoys lukewarm support in Japan, particularly after TEPCO was found to have covered up defects at some of its 17 reactors over a number of years. Fears are growing that there may be power shortages in the Tokyo metropolitan area as early as June with all but one TEPCO's power plants shut down for safety checks in the wake of the scandal. Bernhard Zepter, the European Union (EU) ambassador to Japan, said at the symposium that foreign experts are carefully watching how Japan will cope with this pressing issue. "In Japan, where TEPCO's recent problems have been making people think hard about what a summer without air conditioning would be like, tough choices will need to be made," he said.

Zepter indicated Japan has the potential to develop renewable energy – which also includes energy derived from photovoltaic, thermal, waste and biomass sources -- given its technological prowess and financial clout. With conventional sources such as oil, coal and nuclear energy seen as unsustainable in the long-term, experts called on Japan and the United States to increase their use of renewable energy to match levels in the EU. According to Japan's Ministry of Economy, Trade and Industry, Japan and the U.S. plan to increase the rate of renewable energy of all types to 7% and 6.9%, respectively, in 2010, compared with a planned 12% for the 15-nation EU. In 2000, the level was 4.8% for Japan and 5.1% for the U.S., compared with 6% in the EU.

Etienne Reuter, minister-counsellor at the Delegation of the European Commission in Japan, said that although promotion of renewable energy requires considerable initial investment, it has many positive benefits including low pollution levels and creation of new jobs. "Governments and agencies such as the commission must make sure they apply instruments they have in the form of taxation, state aid and deregulation to give renewable energy a fair chance (to compete with conventional energy) and to speed up its introduction," he said. Reuter said he was encouraged by a Japanese government plan to ease regulations on the location of wind power generation plants by allowing electric power companies to build windmills in harbors, state forests and national parks to promote the spread of wind power generation. Currently, the plants are only permitted in principle to be built on privately held land. Izumi Ushiyama, a professor at the Ashikaga Institute of Technology in Tochigi Prefecture, said he hopes Japan will take the lead in promoting renewable energy not only for its own benefit but for developing countries in the Asia-Pacific, given rapidly increasing energy demand in the region.

23) RUSSIAN MINISTER BLOCKS KYOTO PROTOCOL, SAYS WWF

WWF

May 12, 2003

Internet: http://www.panda.org/news_facts/newsroom/press_releases/news.cfm?uNewsID=7101

Moscow, Russia – WWF today criticized the Russian Minister for Economic Development and Trade, Mr. German Gref, for blocking ratification of the Kyoto Protocol, the world's only international treaty to curb climate change by limiting global warming pollution. The Kyoto Protocol will only become international law if Russia ratifies. Following appeals from global leaders, Russian business circles, ecologists and the general public, Russian President Vladimir Putin recently intervened to push the Russian ratification process forward. The Russian Presidential Administration will work this week to get consensus among the four ministers responsible for agreeing the ratification document. However, WWF believes that Minister Gref who heads the lead Ministry for the issue is blocking the Kyoto dossier.

"Minister Gref is sitting on a pile of papers while the world waits. He risks drawing the wrath of 108 countries that have already ratified the Kyoto Protocol," said Alexey Kokorin, head of WWF-Russia's Climate Policy Programme. The clock is ticking on the ratification process in Russia. After a consensus this week, Minister Gref has to send the ratification bill and supplementary papers to the next government meeting, from where the document is passed on to the State Duma (the Lower House of the Parliament). WWF urges Minister Gref to move the dossier on the Kyoto Protocol forward so that ratification can be completed by July 2003. President Putin should be able to present written documentation about Russia's progress on ratification at next month's G8 meeting.

"The world should prevent a bureaucrat in Moscow from wasting the efforts of over a hundred governments, thousands of companies, and millions of people," said Jennifer Morgan, Director of WWF International's Climate Change Programme. The Kyoto Protocol was finalized two years ago as a first step to combat global warming. 108 countries have ratified the Kyoto Protocol, far more than the 55 countries needed. The countries ratifying must also represent 55 per cent of industrialized country CO₂ emissions. As the US and Australian governments have declared that they will not seek ratification, Russia is the pivotal country whose ratification makes the Kyoto Protocol enter into force.

24) WWF PROVIDES BLUEPRINT FOR EU POWER SECTOR TO CURB GLOBAL WARMING NOW

WWF

May 12, 2003

Internet: http://www.panda.org/news_facts/newsroom/press_releases/news.cfm?uNewsID=7034

Berlin, Germany – The EU power sector can cut carbon dioxide (CO₂) emissions that contribute to global warming to about 50 per cent of today's levels and reduce its dependency on dirty fossil fuels by 2020, according to a report released today by WWF.

The report, Low Carbon Electricity Systems, identifies feasible ways to substantially reduce CO₂ emissions by increasing the share of new renewables to up to 50 per cent of the total energy supply. With this blueprint for a climate-safe power sector, WWF is launching Power Switch!, a new initiative challenging electric utilities to switch from coal to clean power. Emissions released by the burning of fossil fuels like coal, oil, and gas, build up in the atmosphere, blanket the Earth and trap in heat, causing global warming. The power sector, which produces 37 per cent of global CO₂ emissions — the biggest single source of emissions — is crucial in making deep CO₂ cuts over the next two decades in order to stop global temperatures rising above the danger threshold of 2 degrees Celsius.

"The onus is on the power producers of the world, such as RWE, Vattenfall and E.ON in Germany," said Jennifer Morgan, Director of WWF's Climate Change Programme. "WWF challenges these companies to make a firm commitment to be a part of the solution to global warming. The technical solutions exist and are cost-effective — what we need to see now is responsible leadership amongst the biggest polluters."

The WWF report shows that with effective programmes for both reducing energy demand and stimulating investment in renewable energy, carbon neutrality for the entire power sector in the EU will be well on its way for achievement by 2040. Large power companies are in a prime place to move the world along that track. In Germany, for example, 50 per cent of old power stations are due to be replaced in the near future — the question is whether the new stations will use dirty coal or clean and efficient renewable energy.

The major challenge for energy policymakers will be to design and stimulate an effective market and implement programmes for energy efficiency and "new renewable" energy technologies — wind, sustainable biomass, and solar energy. Substantial changes to energy policies, energy taxes, and market incentives are required to meet the challenging targets set by WWF. Such changes will also ensure achievement of the Kyoto Protocol targets and set Europe on track for the deeper cuts required in the future.

"Efficiency and renewables are the double win for safe and secure electricity supply," said Jennifer Morgan. "A number of leadership utilities we are talking to have recognised the importance of acting now to curb global warming and are already rising to the challenge. WWF is recognizing companies moving towards new energy sources as 'Power Pioneers.'" WWF is currently in discussions with German RWE and E.ON, Swedish Vattenfall, and Italian ENEL, which are amongst the world's 20 most polluting power companies.

25) EU WANTS TO SEE RUSSIAN ACTION ON KYOTO TREATY

Planet Ark

May 12, 2003

Internet: <http://www.planetark.org/dailynewsstory.cfm/newsid/20764/story.htm>

STOCKHOLM - The European Union wants to see Russia taking active measures to ratify the Kyoto protocol fighting climate change, Environment Commissioner Margot Wallstrom told Reuters in an interview last week. Under a complex weighting system, Russia's ratification is crucial for the protocol to come into force after the withdrawal of the United States, the world's top air polluter. "Their intentions are clear. Now it's just a matter of them getting it done," Wallstrom said. "I guess it's in the hands of (President Vladimir) Putin himself and (Prime Minister Mikhail) Kasyanov." An important checkpoint to measure Russian action would be the EU-Russia summit in St Petersburg in late May, she said.

Wallstrom made clear Russia could not expect any more help from the EU to finance the treaty. "Of course it's about money, about rubles. They are trying to calculate how much it (the treaty) will give," she said. Wallstrom said the United States, which opposes the treaty, was also actively working to get Russia on its side. Another problem was that the consequences of global warming were not taken seriously by many in Russia, which stretches across the Arctic Circle, she said. "The basic knowledge of climate change is very bad," she said. "Even some scientists seem to claim that maybe it would even be good for Russia."

26) KYOTO SUPPORT SHOULD SPEED UP HYDRO PROJECT APPROVALS, SAYS QUEBEC UTILITY

Canadian Press

May 12, 2003

Internet: <http://www.canada.com/news/story.asp?id=3FB9FCFE-168E-4404-90A8-AD380D7713A2>

MONTREAL (CP) - Hydroelectric projects take too long to be approved, especially in light of Canada's support of the Kyoto environmental accord, Hydro-Quebec's president said Monday. While it may take 10 to 12 years for a hydro project to be put into service, the process takes only five years for other energy plants, he said in a speech to the Association de l'industrie électrique du Québec. The group represents the province's electrical industry. "Is it normal that it's simpler to get approval for a thermal energy project in Alberta than a hydroelectric plant here (in Québec)?" asked Andre Caille.

Ideally, it should take only six or seven years for hydro projects to be approved provincially, he said. Delays are caused by legal interpretations and environmental laws, which evaluate projects at each stage of the process rather than by the final results, he later told reporters. Caille called the delays unjustified when Canada signed the protocol to reduce greenhouse gases. Hydroelectricity is a so-called green energy, produced in a way that is environmentally friendly. The delays were raised by Natural Resources Minister Sam Hamad during two meetings Caille said he has had since the Liberals recently took power. Caille said more than 3,000 megawatts of electricity can be developed by 2012 "if the conditions are favourable."

Hydro-Quebec is also looking for a partner to generate 1,000 megawatts of electricity from harnessing the wind in the Gaspé region. Meanwhile, Caille defended an application for rate increases that was submitted for approval long before the government-owned utility earned more than \$1 billion in the first quarter of 2003. He said Quebecers benefit from among the lowest rates in North America, economic stimulus

generated by hydro projects and dividends returned to the provincial government to help pay for other services. The utility paid a record \$763 million in dividends last year to its sole owner, the Quebec government.

27) GLOBAL WARMING THREATENS FOOD SECURITY OF POOR NATIONS

OneWorld

May 12, 2003

Internet:

http://story.news.yahoo.com/news?tmpl=story&u=/oneworld/20030512/wl_oneworld/118151052755453

WASHINGTON, DC, May 12 (OneWorld) - Global warming could lead to a 10 percent drop in the production of maize in developing countries over the next 50 years, according to a new report published Monday by two key international research centers in the journal *Global Environmental Change*. Total annual losses in maize production could reach an annual average of 10 million tons, enough grain to feed 140 million people, according to the report which was based on results from an advanced computer model called MarkSim that simulates weather conditions at different locations based on data from thousands of weather stations worldwide. Some areas are likely to be hit much harder than others according to the report, which found that several large maize-producing countries such as Brazil, Mexico, South Africa, Nigeria and Tanzania could lose between 20 and 25 percent of production.

"The decline in production will not be across the board or evenly spread," according to economist Philip Thornton of the International Livestock Research Institute (ILRI) in Nairobi, Kenya who co-directed the project with geographer Peter Jones at the International Center for Tropical Agriculture (CIAT) in Cali, Colombia. "Our simulations suggest that rising temperatures and shifting rainfall patterns will vary widely from one agro-ecosystem to another." The result, however, could be disastrous for subsistence farmers who grow maize for their families and as feed for their farm animals--and for poor nations, especially in sub-Saharan Africa--and already are finding it difficult to cope with drought and the impact on the rural economy of the AIDS pandemic.

ILRI and CIAT, part of a global consortium of agricultural research centers for developing countries called the Consultative Group for International Agricultural Research (CGIAR), argue that the best way to mitigate the impact on maize production of the climatic changes is to develop new, drought-resistant varieties of maize and get them out to farmers as soon as possible. But this will require greater investment in agricultural research and extension services. Scientists have been worried about the possible agricultural impact of global warming--which most scientists agree is due in major part to the unprecedented emission of greenhouse gases into the atmosphere--for some time. The latest assessments by the Intergovernmental Panel on Climate Change (IPCC), composed of top atmospheric and climate scientists from around the world, estimate that the Earth's average surface temperature could rise by 1.5-5.8 degrees Celsius (2.5-10.4 degrees Fahrenheit) over the coming century.

They also agree that poor countries, especially in tropical areas, are likely to be hardest hit by changes in the climate resulting from warming. "With its low per capita fossil energy use, Sub-Saharan Africa has the lowest emissions of the greenhouse gases that are the major cause of climate change," then-IPCC Chairman Robert Watson noted to years ago. "Yet Sub-Saharan Africa--along with low-lying small island states--is the most vulnerable to climate change because widespread poverty limits its capabilities to adapt to a changing climate." Maize, known as corn in North America, is essential to the diets of hundreds of millions of people around the world, making it the world's third most important crop, after rice and wheat. Nearly 50 percent of the world's maize supply is produced in poor countries, where maize flour is a staple food for low-income people and maize stalks provide dry-season feed for farm animals.

Productivity of the crop varies widely around the world, with the most productive yields found in North America. In Latin America, maize yields currently average slightly more than three tons per hectare; in Africa, the average is only 1.5 tons. "A ton-per-hectare yield loss when farmers are producing just 1.5 tons of maize would be disastrous," said Masa Iwanaga, director of the International Maize and Wheat

Improvement Center (CIMMYT) in Mexico, another center of the CGIAR network. "But these consequences can probably be avoided if we step up research." Iwanaga noted that CIMMYT scientists in southern and eastern Africa have already developed drought-tolerant maize that produces 20-to-35 percent more grain than most contemporary varieties. "It's a good start, but what we need to do is find ways to make sure that these new varieties reach farmers quickly," he said. "It can take up to 10 years for a new cultivar to reach all of the farmers who want to use it." "Climate change doesn't give us that kind of time to respond," he warned.

Drought is not the only threat faced by farmers in these areas, according to the IPCC, which has warned that the increased frequency and intensity of tropical storms, flooding, landslides, abnormal sea-level rises, and other extreme weather conditions will also create major challenges to farmers and governments in poor countries. Researchers are particularly concerned about eastern and southern Africa, which has suffered a series of droughts that may be related to global warming. Yields have generally lagged in Africa in part because the "green revolution" has yet to take hold there. An estimated 170 million Africans currently depend on maize grown in a mixed crop-and-livestock farming system. "Less maize means less grain for poor people, less feed for farm animals, and less milk and meat for hungry households," according to ILRI director Carlos Sere. In African, animals contribute as much as 80 percent of farm cash income and provide draught power, fuel, and credit.

28) ITALY BRINGS THE COMMUNITY DEVELOPMENT CARBON FUND CLOSER TO REALITY

World Bank

May 12, 2003

Internet: <http://www.worldbank.org>

Washington D.C, May 12 —The groundbreaking Community Development Carbon Fund (CDCF) took a step closer to reality this week at World Bank headquarters when an agreement was signed between the Ministry for the Environment and Territory of Italy and the World Bank. According to the terms of the agreement, Italy will contribute US\$7.7 million to the World Bank's newly established Community Development Carbon Fund (CDCF) and receive in return certified emission reductions from small projects in least developed countries and poor communities in all developing countries. All these projects will measurably improve the quality of life of the communities involved.

Signing for Italy, the Ministry's Director General, Mr. Corrado Clini said "Italy looks forward to working together with the World Bank and other participants in this innovative partnership. It will allow Italy to reduce the costs of achieving its Kyoto commitments, while at the same time promoting the protection of the global environment." Italy will also participate in CDCFplus, the technical assistance facility established by the World Bank to build local capacity to develop and prepare CDCF projects.

The CDCF is focusing on a flexibility mechanism of the Kyoto Protocol—the Clean Development Mechanism (CDM)—that will allow OECD countries to fulfill some of their greenhouse gas emission reduction commitments through projects in the developing world. Emission reductions for dollars for clean development. "Payments for environmental services through innovative funds like the Community Fund, open new possibilities for the Bank to fulfill its poverty reduction mandate", said Ian Johnson, Vice-president of ESSD. "We are demonstrating that dealing with global issues like climate change can have profound positive impact at the community level." The Italian signing follows on a Canadian government commitment for \$2.5 million to participate in the CDCF.

Three years after it launched its carbon finance business with the Prototype Carbon Fund (PCF), the World Bank is expanding this initiative with this new fund. Carbon finance activities have taken on a new sense of urgency as evidence continues to mount that the Earth is getting significantly warmer, and some changes in climate are inevitable. Climate change, and accompanying disrupted weather patterns—caused by the greenhouse effect through atmospheric loading of greenhouse gases (carbon dioxide, methane, etc) could wreak havoc on the planet, particularly on large parts of the developing world.

Ken Newcombe, Senior Manager of World Bank Carbon Finance, pointed out that the signing was a historical occasion for the CDCF, and one in which “ Italy, for the first time, partners with the World Bank in the area of carbon finance. This contribution will pave the way for the CDCF to become operational by this summer as other expected participation agreements will be signed.”

There is a lot riding on the effort. The CDCF may be the best or only opportunity for some of the poorest countries to get any benefits from the Kyoto Protocol. Recent carbon market research done by the Bank shows that although the market for carbon emissions more than doubled in the last year, only 13 percent of direct private sector carbon emission reduction investment went to poor countries, and none to the poorest ones. With the CDCF, the World Bank will link private investors with community development projects, so that there are equitable benefits under the Kyoto Protocol.

The Bank has already received numerous project proposals that are potentially eligible within the CDCF—everything from renewable energy, energy efficiency, to methane capture, and agro-forestry projects, with significant and measurable community development benefits. One potential CDCF project in India would help replace clay brick with fly ash brick for the construction sector. The project envisages bundling 200 tiny sector units to manufacture the alternative brick. Fly ash is a waste product from burning bituminous coal. By avoiding clay, brick manufacturers avoid denuding fertile top soil, as well as major air pollution, and greenhouse gas emissions. This project would provide year round employment instead of seasonal employment, as is the case with clay bricks, as well as reduce carbon emissions.

Another proposed project in Kenya would reduce carbon dioxide emissions and raise tea growers’ income, by switching from fuel oil for tea drying, to wood fuels. Some 80 million liters of fuel oil would be replaced by wood fuel annually, adding to the growers’ profits by reducing their energy bills by 66 percent a year, and avoiding 240,000 tons of carbon dioxide equivalent annually from being pumped into the atmosphere.

29) CARBON DIOXIDE OUTPUT FALLS

The Japan Times
May 11, 2003

Internet: <http://www.japantimes.co.jp/cgi-bin/getarticle.pl5?nn20030511a4.htm>

A personalized electronic system developed by the Environment Ministry that alerts drivers of their vehicle's fuel consumption, the amount of time spent idling and other driving habits may help reduce carbon dioxide emission from motor vehicles. The program, known as the Eco-Drive Diagnosis System, involves collecting driving data such as engine revolutions and speeds, and automatically transmitting the information to a diagnosis center to be processed and analyzed. The center in turn will send -- by e-mail or via the Internet -- a daily report on the analysis to the driver. After a one-month experiment, Environment Ministry officials say there has been a noticeable decline among drivers involved in the program in such gas-wasting habits as keeping the engine running or pumping the engine while the vehicle is idle. As a result, officials say, output of carbon dioxide has fallen by an average of 6 percent among drivers involved in the experiment.

The Environment Ministry said the experiment was conducted in February in five regions -- Asahikawa, Sapporo, Sendai, Joetsu and Higashi-Osaka -- with about 110 drivers participating, ranging in age from people in their 20s to drivers in their 60s. Officials say the effect of the Eco-Drive alerts has been more pronounced among older drivers. Cutting carbon dioxide emissions, particularly from passenger vehicles, is a major item on the agenda in the fight against global warming. Environment Ministry officials say they will conduct another round of experiments during the summer before deciding whether to put the system into wider use. "While we still need to examine the long-term effectiveness of the system, it apparently works better than pamphlets and other one-way methods in raising drivers' awareness," an official said.

30) GREENS WANT CLIMATE CHANGE STRATEGY SCRAPPED

RTE

May 11, 2003

Internet: <http://www.rte.ie/news/2003/0511/greens.html>

The Green Party has called on the Government to scrap the National Climate Change Strategy. The call comes as new figures reveal that Ireland is the worst offender in Europe on Climate Change emissions. The figures from the European Environment Agency show that Ireland is already exceeding the targets set for 2008-2012. Environment spokesperson, Ciarán Cuffe, warned that failure to meet our carbon dioxide emissions targets may well result in steep fines from the European Union. The Green Party has called on the Government to increase spending on public transport; improve energy efficiency for building regulations; increase investment in wind energy and support improvement in insulation and efficiency in existing buildings. Last week the Green Party tabled a Dáil motion calling for a root and branch reform of the Programme for Government in order to attain the targets set under the Kyoto Protocol.

31) OBAYASHI TO MAKE ELECTRICITY FROM GARBAGE

Asia Times

May 9, 2003

Internet: <http://www.atimes.com/atimes/Japan/EE09Dh01.html>

TOKYO - Obayashi Corp is preparing to launch clean development mechanism (CDM) operations. The CDM system, outlined in the Kyoto Protocol, makes it possible to obtain greenhouse gas emission trading rights by engaging in energy-saving activities in developing countries. Obayashi recently looked into a CDM business proposal based on a waste-processing site in Thailand and confirmed its feasibility. The plan is to recover gas, chiefly methane, from the processing site and use it to generate electricity.

The company determined revenues and expenditures for the proposal assuming operation from 2007-2016. It sees initial investments in power generation equipment of 120 million yen (US\$1 million). It expects sales of power generated from the recovered gas to be 250 million yen. In addition, the firm expects the methane gas collected over 10 years to be the equivalent of 550,000 tons of carbon dioxide. It expects trading in the emission rights to this CO₂ to yield an income of 140 million yen. Obayashi is now making preparations to move forward on the development of the operations. With domestic demand for construction down, it aims to develop CDM projects abroad.

32) MALDIVES SEEKS HELP TO BATTLE EXTINCTION

AFP

May 9, 2003

Internet:

http://story.news.yahoo.com/news?tmpl=story&u=/afp/20030509/wl_sthasia_afp/srilanka_maldives_030509085946

COLOMBO (AFP) - Visiting Maldives President Maumoon Abdul Gayoom has called for global efforts to battle the rising seas that threaten to engulf his tiny atoll nation. Gayoom, 64, said he discussed environmental issues with Sri Lankan leaders and stressed that global warming (news - web sites) was not a problem confined to low-lying nations. "Ecological degradation is of great concern to Sri Lanka and the Maldives," Gayoom told reporters at the end of his four-day official visit here on Friday. "The consequences of this are not felt only in low-lying areas, but also in the US and other developed countries." Maldives, a nation of 1,192 tiny coral island's scattered some 800 kilometres (500 miles) across the equator, is believed to be one of the countries most vulnerable to the effects of global warming which is leading to rising sea levels.

He said there should be collective efforts to control green house gases that contribute to global warming.

"We are monitoring sea level rises in the Maldives and so far there is no established proof that there is a rise," Gayoom said. "But that does not mean that it is not happening. "A majority of scientists agree that the sea levels are rising and it can be a very serious threat." He said the Maldives had begun a nationwide campaign to plant trees in a bid to reduce the effects of global warming and the atoll nation has also banned coral mining. Gayoom warned that the sea, which provides the livelihood for most of his 250,000 Sunni Muslim population, could become their "eternal grave" in a matter of decades.

The Maldives drew attention in 1987 when Gayoom told the United Nations general assembly that a two metre (6.6 feet) rise in the sea level would submerge his country and make them environmental refugees. In a bid to prevent the nation going underwater, Gayoom in 1997 started building a brand new island by taking sand from the bottom of the sea. The island, known as Hulhumale, will be ready to accommodate some 280 families by the end of this year, he said. He said the island was also being built to ease congestion in the capital island Male which is just one mile (1.6 kilometres) long. Male is overcrowded with some 70,000 residents as well as another 20,000 to 30,000 who visit it at any given time.

Hulhumale will be three times bigger than the 1.77 square kilometre (0.7 square miles) capital Male. It is made in such a way that it will be 1.5 metres above sea level in a country where the average altitude is just one metre. Gayoom himself was nearly swept into the Indian Ocean when tidal waves battered his capital island, Male, in April 1987. "While I was inspecting the (storm) damage, a large wave reared up suddenly and buffeted the vehicle I was in," Gayoom wrote later. "It was a moment of fear, not for my own safety, but for the safety of the people of Maldives." Gayoom is the longest serving head of state in Asia, holding the post of president since 1978. The country's per capita income has risen in the past 25 years from 200 US dollars to 2,100 US dollars.

33) RUSSIA SEEN KEY TO KYOTO PROTOCOL

The Moscow Times

May 8, 2003

Internet: <http://www.themoscowtimes.com/stories/2003/05/08/042.html>

As the host of a key global warming conference this fall and as a potential signatory with a swing vote on the contentious Kyoto Protocol, Russia has found itself at the forefront of the climate change debate. "We are looking forward to serious, interesting discussions," Yury Izrael, chair of the conference's organizing committee, told reporters Wednesday. "We are not going to create new contradictions but ... find out what is really going on on this planet -- warming or cooling." This question and whether or not global warming poses a big enough threat to warrant the solution's price tag are at the heart of reports -- more than 500 of them -- submitted for experts' discussion in Moscow this September when they gather at the third International Conference on Climate Changes.

The 1997 Kyoto Protocol seeks to minimize climate changes by reducing emissions of carbon dioxide and methane, gases believed to cause global warming by trapping the sun's heat in the atmosphere. In order for it to graduate into a binding treaty, nations representing 55 percent of global emissions must sign on. Russia alone accounts for 17.4 percent of global emissions. Given the other, mostly European, signatories, Kyoto will pass if Russia joins. Many countries -- most prominently, the United States -- argue that the protocol's requirements are too expensive to implement. The agreement calls for developed nations to reduce emissions to 5 percent below their 1990 level as early as 2008.

U.S. President George W. Bush provoked the ire of many signatories when he rejected the pact in 2001, saying the tough regulations would choke the country's economy. The U.S. Center for Public Policy Research said in an April report that if Kyoto is ratified, gas prices would rise from 14 cents to 66 cents a gallon by 2010, while electricity prices would increase anywhere from 2 percent to 86 percent, costing the U.S. economy \$400 billion per year. Russia does not have a comparable report quantifying the potential economic toll, Izrael said. "The most important issue -- whether [ratifying the Kyoto Protocol] will bring about an improvement of the climate or its stabilization, or its worsening, is not clear," he said.

The conference is expected to attract 1,200 participants from around the world. Scientists from 52 countries have submitted 530 reports for the conference so far. Politicians and economists will grapple with the short- and long-term consequences of climate change, he said.

See Also:

Russia to stage climate conference, but undecided on Kyoto, AFP, May 7, 2003

http://story.news.yahoo.com/news?tmpl=story&u=/afp/20030507/sc_afp/un_climate_russia_030507155737

34) CLIMATE CHANGE RAISES HEALTH RISKS FOR AUSTRALIANS

ABC

May 8, 2003

Internet: <http://www.abc.net.au/science/news/stories/s849861.htm>

Australia's first official assessment of the risks to public health from climate change predicts rising global temperatures will cause more Australians to become ill or die from heat, flooding, and infectious diseases. Entitled Human Health and Climate Change in Oceania and released this week by Australia's Department of Health and Ageing, one of its lead authors is Professor Tony McMichael of the Australian National University in Canberra, who also took a leading role in an earlier assessment of the risk to global health for the United Nations.

The multidisciplinary collaboration linked projections of changes in regional temperatures and rainfall in 2020 and 2050 with information on how diseases respond to altered climatic conditions. According to the report Australia is expected to become hotter and drier over the next century with annual average temperatures approximately 2 to 3 °C higher over much of continent by the 2050s. Rainfall is predicted to increase in Central Australia and the Kimberley, and to decrease by around one third in south-west Australia. When it does rain, however, storms are likely to be intense.

The report documents the likely knock-on effects to ecology and human society caused by changes in climate. For example, the estimated annual 1100 deaths of people aged over 65 from hot summers in capital cities each year is expected to increase by several hundred over the next 50 years. Annual flood-related deaths and injuries are expected to rise by up to 240% by 2020 in some regions, and the frequency and intensity of food-borne and water-borne diseases is also expected to rise. Biological conditions may become more favourable for the spread of vector-borne diseases like malaria and dengue although this could be kept in check so long as public health surveillance and infrastructure was maintained, the report said.

PACIFIC ISLANDS HARDEST HIT

The report finds that the Pacific islands are likely to suffer larger scale and irreversible impacts on human health and welfare due to climate change. Sea level, for example, is predicted to rise by up to 30 cm by 2030, up to nearly one metre in 100 years, and will probably drive migrations of environmental refugees, it said. "For the Pacific region, the number of people who experience flooding by the 2050s could increase by a factor of more than 50, to between 60,000 and 90,000 in an average year," said the report. "As well as the impact of flooding on settlements, the impact of sea-level rise on freshwater quality and quantity is likely to be a critical threat to Pacific Island health and welfare."

In a statement from the Australian National University, project leader Professor Tony McMichael called for timely action to tackle the cause of global warming. "Reducing greenhouse gas emissions is a primary preventive health strategy," he said. "This research strengthens the case for Australia and other countries to reduce greenhouse gas emissions as soon as possible." Unlike 103 other countries, the Australian Government is yet to ratify the 1997 Kyoto Protocol international agreement to reduce greenhouse gas emissions. An inventory by the Australian Greenhouse Office shows that from 1990 to 2000, Australia's net greenhouse emissions increased by 6.3%.

See Also:

The report online at: http://www.health.gov.au/pubhlth/publicat/document/metadata/env_climate.htm

Australia to pay price for global warming – report, Planet Ark , May 12, 2003
<http://www.planetark.org/dailynewsstory.cfm/newsid/20757/story.htm>

Australia to Pay Price for Global Warming-Report, Reuters, May 9, 2003
http://story.news.yahoo.com/news?tmpl=story&cid=570&ncid=753&e=7&u=/nm/20030509/sc_nm/environment_pacific_dc

35) FORTUM WITH CLEAR CO2 ALLOCATION PRIORITIES

SRImedia

May 8, 2003

Internet: http://www.srimedia.com/artman/publish/article_566.shtml

Leading Finnish energy company Fortum has performed its own allocation exercises since the European Commission published its emissions trading Directive proposal, and has participated in the allocation analyses done by its European and national sector associations. As a result, the company has a clear idea of what it wants from the allocation process. - In our opinion the dynamics of the industry should be carefully taken into account when allocating to different industrial activities. This means that we prefer the future scenario based allocation and by no means for instance the use of 1990 as the reference.

With the same logic we do not like the European Parliament's rapporteur Jorge Moreira da Silva's proposal of putting a cap to the emissions trading sector allocation, Heikki Niininen told Point Carbon's newsletter Carbon Market Europe. When it comes to allocation to different installations, we prefer benchmarking, not grandfathering, because this ensures better the rewarding of good performance, including early actions. The specific emissions of a sector would be one option for benchmarking. If the past is used as a component of the allocation formula, then it should rather be a set of recent years than one single fixed year, he added. Fortum has already established a Climate Fund that has invested in the World Bank's Prototype Carbon Fund. The fund will operate within the rules specified in the Kyoto Protocol.

36) LIEBERMAN ROLLS OUT ENERGY INDEPENDENCE PLAN

ENS

May 7, 2003

Internet: <http://ens-news.com/ens/may2003/2003-05-07-11.asp>

WASHINGTON, DC, May 7, 2003 (ENS) - Democratic presidential candidate Joe Lieberman proposed a billion energy plan today that he says would cut U.S. dependence on foreign oil by two thirds within 10 years and would improve the nation's environment. The plan calls for increased fuel economy standards, more renewable energy use and a \$15 billion investment in clean coal technology, Lieberman said, and will allow the nation to seize control of its energy future. "For too long our economy and our security have been at the mercy of foreign oil producers," Lieberman told today's audience at the Washington D.C. headquarters of the environmental think tank Resources for the Future.

Lieberman said his plan will make the nation's air cleaner and its citizens healthier. "But more than that, our nation will be more secure and our economy stronger," he said. Currently a U.S. Senator from Connecticut, Lieberman is one of nine Democrats vying for the party's nomination to face Bush in the 2004 election. In 2000, Lieberman was the party's nominee for Vice President. In his speech, Lieberman criticized President George W. Bush for focusing on increased domestic oil and gas production and inviting "oil companies to write his energy policies." The President has done nothing to reduce the nation's demand for oil even as the risks from growing foreign dependence become increasingly apparent, Lieberman said.

At the center of Lieberman's plan is a new approach to the issue of fuel economy. The low fuel economy of many of the nation's cars and trucks is a leading contributor to a growing demand for oil, but efforts to increase federal standards have failed. "For too long we have been caught in a stale debate between those who say that fuel efficiency standards are unachievable and those who want to micromanage the actions of individual automobile manufacturers," Lieberman said. "That debate has gotten us nowhere." Under his plan, Lieberman calls for a market based approach through a national fuel efficiency standard that would set the goal of reducing oil consumption by two million barrels of oil a day by 2015.

Automakers should be afforded flexibility in meeting this goal, Lieberman says, and could receive pollution credits for exceeding minimum standards that could be traded between automakers. "In the old system, companies that figured out how to cut corners were rewarded," Lieberman said. "In the new system, those who figure out how to cut pollution will be rewarded." The plan calls for the nation to make smarter use of its existing natural energy resources, Lieberman said, and the "centerpiece of this goal" is a \$15 billion investment over 10 years into cleaner coal technologies. The United States has a 200 year supply of coal, Lieberman explained, and new technologies show promise in allowing cleaner use of a traditionally dirty fuel. The plan puts particular focus on Integrated Gasification-Combined Cycle technology, which Lieberman says can turn coal into clean burning hydrogen. The byproduct from this process - carbon dioxide (CO₂) - can be disposed of by "injecting it deep underground," Lieberman said. "Coal has been an integral part of our past and with this investment we can make it an important part of our future," Lieberman said. "I believe we can protect, and even create, jobs in the hard hit coal production regions of our nation."

Yet many scientists are wary of sequestering CO₂ underground inside coal seams and fields of briny water. They say it is uncertain if the gas could be contained and believe large amounts of CO₂ could force millions of gallons of salty water to the Earth's surface. Some argue the concept is at best a short term solution but President Bush is also a believer and has pledged \$1 billion for development, including several million dollars for studying sequestration. Lieberman says his plan is much more aggressive than the President's, as is his proposal to speed the deployment of new, clean technologies through a \$6.5 billion research and development program to create fuel cells.

Although fuel cell technology is another item touted by the Bush administration, Lieberman's plan is some five times what Bush has earmarked for fuel cell research and has a goal of 100,000 fuel cell vehicles on the road by 2010 and 2.5 million by 2020. Lieberman says he would give tax breaks for hybrid and natural gas vehicles and would set a renewable portfolio standard that would mandate electric companies purchase 20 percent of their energy from renewable sources by 2020. Lieberman criticized Bush for pulling the United States out of the Kyoto Protocol and said it has caused "one of the most serious breaks between America and the rest of the world."

"We need to rejoin the world in working on a global problem that we contribute to more than anyone else," he said. "This would be one of the best things the U.S. could do to reconnect with the rest of the world on a number of issues." The nation can improve its energy independence without harming the environment or ruining public lands, Lieberman said, and he slammed Bush for continued efforts to open the Arctic National Wildlife Refuge (ANWR) to oil drilling. "To have ANWR as the centerpiece of an energy plan is outrageous," Lieberman said. New drilling on the Outer Continental Shelf is also off limits in the Lieberman plan. There is a role for public lands in energy development, Lieberman said, but these decisions need to be held to "a higher standard" than what is used by the current administration. "George W. Bush is blind to reality. The central, unavoidable fact is that we use 25 percent of the world's oil but possess only two to three percent of its reserves," Lieberman said. "We can drill all we want, but the well will soon run dry and our economy will be left running on fumes."

See Also:

Lieberman unveils energy plan, BBC, May 7, 2003, <http://news.bbc.co.uk/2/hi/americas/3008895.stm>
Lieberman Wants to Cut Oil Imports Two-Thirds, Reuters, May 7, 2003
<http://asia.reuters.com/newsArticle.jhtml?type=politicsNews&storyID=2698948>

37) MOSCOW TO HOST WORLD CLIMATE CHANGE CONFERENCE

Pravda

May 7, 2003

Internet: <http://newsfromrussia.com/main/2003/05/07/46706.html>

From September 9th till October 3rd Moscow will host the World Conference on Climate Change, held on the initiative of Russian President Vladimir Putin, with the support of the UN and G8 leaders. The news was announced at a press conference by the organising committee's representative, director of the Global Climate and Ecology Institute of the Meteorological Office of the Russian Academy of Sciences, academician Yuri Izrael.

The conference's topicality lies in the recent steady trend in world climate changes, he said. Scientific observations show that over the past 100 years the average air temperature on the Earth has grown by 0.6 degree, and "this has already led to certain consequences" in the life of human community, Izrael pointed out. Moreover, the concentration of carbon dioxide in the atmosphere has increased by 31 per cent over 100 years and is still rising. This is a result of human activities, as carbon dioxide concentration rises after burning organic fuel, the scientist explained.

In this connection, it is necessary to hold a broad discussion of the current knowledge of the climate and its changes, he emphasised. The conference will also touch upon practical measures of governments to adjust for the current changes and to reduce man's impact on the climate. The conference participants can work out corresponding recommendations to their governments. However, the conference will not adopt "any political decisions, protocols or conventions, like the Kyoto one", Izrael underlined. The discussion will be mainly scientific and not political. About 1,200 people representing governments, scientific communities and business circles of many countries are expected to attend the conference. 52 countries and 7 international organisations have already applied for participation. The organising committee is headed by Russian Deputy Prime Minister, Agriculture Minister Alexei Gordeyev.

38) INDIA SERIOUS ABOUT TACKLING PROBLEM OF CLIMATE CHANGE: SEMINAR

IRNA

May 6, 2003

Internet: <http://www.irna.com/en/head/030506082322.ehe.shtml>

New Delhi, May 6, IRNA -- India's Minister of State for Power, Jayawanti Mehta, said on Monday that India is serious about tackling the problem of climate change. Mehta while speaking at a one-day seminar on Asian Regional Research Programme in Energy, Environment and Climate said that India has already initiated measures that have significant Green House gases mitigation impacts which include promotion of energy efficient technologies, harnessing of enormous potential of the renewable sources of energy such as hydro and wind energy, energy conservation measure etc.

She said renewable sources of energy have emerged as a viable option to achieve the goal of sustainable development in India and government is promoting various technologies like wind, solar, cogeneration and biogas plants. Such measures are essential even otherwise to make Indian industry globally competitive, to reduce production costs and to preserve the precious fossil fuels, she added. The seminar disseminated the findings of the Studies on mitigation of Green House Gas and environment emission in the fields of Power, Urban Transport, Biomass and Small and Medium Industries. The studies in the seminar revealed that hydro and combine cycle gas turbines are the least cost options considering the emission constraints, biomass integrated gasification combined cycle are most promising Clean Development Mechanism option and introduction of Decentralized Power Generation would reduce capacity addition and optimize capacity utilization.

39) EU GREENHOUSE GAS EMISSIONS RISE FOR SECOND YEAR RUNNING

European Environment Agency

May 6, 2003

Internet: <http://org.eea.eu.int/documents/newsreleases/ghg-2003-en>

Greenhouse gas (GHG) emissions from the European Union have increased for the second consecutive year, moving the EU further away from meeting its commitment to achieve a substantial emissions cut by the 2008-2012 period. Total EU emissions of six gases widely considered to be contributing to global climate change are estimated to have stood 1.0% higher in 2001, the latest year for which data are available, than a year earlier, the annual emissions inventory compiled by the European Environment Agency shows. A preliminary assessment indicates that the main reasons for the rise were a colder winter in most EU countries that led households to burn more heating fuel, higher emissions from transport and greater use of fossil fuels in electricity and heat production.

Despite the increase from 2000, EU GHG emissions in 2001 stood 2.3% below their level in 1990. However, this was less of a drop than in the two previous years. In 2000 emissions had stood 3.3% lower than in 1990 and in 1999, 3.6% lower. The EU must bring down its emissions of the six gases to 8% below their 1990 level by 2008-2012 if it is to comply with the Kyoto Protocol on combatting climate change. The inventory represents best estimates and is subject to annual revision. It does not take account of the impact of land use and forestry, which can either produce emissions or absorb them, because no internationally accepted methodologies exist yet.

EU emissions of carbon dioxide (CO₂), by far the most important greenhouse gas, accounting for 82 % of total EU GHG emissions, increased by 1.6% between 2000 and 2001. They also stood 1.6% higher in 2001 than in 1990. Revised figures show that the EU held its CO₂ emissions in 2000 at their 1990 level, as it had committed itself to do. Initial data had indicated that CO₂ emissions in 2000 were 0.5% lower than in 1990. Increased heating needs meant that CO₂ emissions from households and small businesses jumped 6.0% in 2001 from a year earlier, contributing substantially to the increase in overall GHG emissions. Germany, France and the United Kingdom saw the biggest rises in CO₂ emissions from households and small businesses. CO₂ emissions from electricity and heat production rose by 1.5% between 2000 and 2001, and those from transport by 1.3%. The main reasons for these increases are growing production of power and heat from fossil fuels, in particular coal, and a continuing increase in transport volumes, especially in road transport.

The latest figures show that 10 of the 15 Member States are heading towards overshooting their agreed share of the EU GHG emissions target by a wide margin. This is the case for Austria, Belgium, Denmark, Finland, Greece, Ireland, Italy, the Netherlands, Portugal and Spain. Big increases in emissions from 2000 to 2001 occurred in Austria (+4.8%) and Finland (+7.3%). Initial analysis indicates these were partly due to the cold winter but also to lower rainfall which cut hydropower production in both countries and reduced Finland's imports through the Nordic electricity market. Consequently Austria and Finland had to increase their use of fossil fuels for power and heat production.

Ireland, Spain and Portugal are furthest away from keeping to their share of the EU target. Ireland's emissions in 2001 stood 31% higher than in 1990, well over double the 13% increase it is allowed between 1990 and 2008- 2012. For the first time in five years Spain's emissions decreased, by 1.1% compared with 2000, due to higher hydropower production which reduced use of fossil fuels for power and heat. Luxembourg shows the biggest GHG emissions cut of any Member State in percentage terms, decreasing by 44% since 1990. Germany, the largest EU emitter, has achieved the deepest reduction among the big Member States, with a 18% cut since 1990. Between 2000 and 2001 Germany's emissions rose by 1.2%, however. Details of EU and Member State emissions are shown in the Annex to this news release. EEA will publish an analysis of the emission figures and trends, together with latest projections for the year 2010, in autumn 2003.

The inventory is available on the EEA's web site at http://reports.eea.eu.int/technical_report_2003_95/en

See Also:

Commissioner Wallström calls for more stringent measures and policies to cut EU greenhouse gas emissions, EU, May 6, 2003,

http://europa.eu.int/rapid/start/cgi/guesten.ksh?p_action.gettxt=gt&doc=IP/03/632|0|RAPID&lg=EN&display=

EU greenhouse gas up, Wallstrom calls for action, Planet Ark EU, May 8, 2003

<http://www.planetark.org/dailynewsstory.cfm/newsid/20713/story.htm>

EU Falling Behind on Greenhouse Goals, The Guardian, May 7, 2003

<http://www.guardian.co.uk/worldlatest/story/0,1280,-2647267,00.html>

Belgium on gas emission blacklist, Expatica, May 7, 2003

http://www.expatica.com/belgium.asp?pad=88,89.&item_id=31044

Europe slips on greenhouse targets, BBC, May 6, 2003

<http://news.bbc.co.uk/2/hi/science/nature/2996219.stm>

40) CARBON CREDIT TRADES ATTRACT INTEREST

RNZ

May 6, 2003

Internet: http://onebusiness.nzoom.com/onebusiness_detail/0,1245,187931-3-166,00.html

Australian companies are taking a close interest in the way New Zealand is going about dealing with climate change. That follows the signing of the first Negotiated Greenhouse Agreement between The New Zealand Refining Company and the government. So far Australian companies are keen for their New Zealand subsidiaries to follow, but they're watching carefully to see whether New Zealand firms get any competitive advantage from early adoption of climate change policies. Negotiated agreements are the government's inducement to reduce industrial greenhouse gas emissions. Karen Price of Minter Ellison Rudd Watts who helped draw up the final document for NZ Refining says its attracted the interest of several Australian companies.

Companies qualify for a negotiated agreements if they can show they would otherwise be forced to move offshore or go out of business if they had to pay a carbon tax. In return for an exemption from the tax they agree to adopt international best practice to minimise their own greenhouse gas emissions. Price says this is not a sop and has to be independently audited. The government and NZ Refining took a year to negotiate the first agreement. Though some parts of the documentation may act as a blueprint there's likely to be substantial work required by other firms or industries. Price says sector or industry agreements may be appropriate where the cost would otherwise be prohibitive. Banks and finance companies in Australia are also taking an interest primarily to see how carbon trading will work.

41) JAPAN, RUSSIA AT ODDS OVER PLAN TO REDUCE CO2

The Japan Times

May 5, 2003

Internet: <http://www.japantimes.co.jp/cgi-bin/getarticle.pl5?nn20030505a4.htm>

MOSCOW (Kyodo) Japan and Russia are at odds over a possible agreement related to swapping credits earned for reducing carbon dioxide emissions, it was learned Sunday. According to negotiators from both countries, the two are trying to work out an intergovernmental pact on the joint implementation of reductions as part of efforts to curb global warming. The talks ran into rough waters after Russia reversed its position on an earlier agreement. It is now refusing to allow Japan to take all the CO2 emission-reduction credits in the envisioned Japan-supported energy projects in Russia, according to negotiation sources.

Japanese negotiators said they will continue attempts to reach an agreement, but Mukhamed Tsikanov, Russian deputy economic development and trade minister, said there is a possibility that Moscow may give up on concluding the pact if differences remain. If concluded, the pact is expected to be the first full-fledged intergovernmental agreement on emissions reduction under the 1997 Kyoto Protocol aimed at curbing global warming. But negotiations will most likely continue for some time. The negotiated projects will be under the framework of the protocol's "joint implementation." This is one of three flexible mechanisms built into the agreement to allow nations to meet their reduction pledges by means of foreign transactions.

Under the joint initiative between the countries, Japan is expected to take responsibility for construction projects at coal-fired power plants that would convert fuel into natural gas. The plants would be in Russia's Sakhalin and Khabarovsk, the sources said. As a trade-off, Japan would get all the credits for CO2 emissions reductions attained from these projects, they said. In preliminary talks held in January, the two sides agreed that Russia would foot part of the costs, including the value-added tax on building materials, import duties and transportation, according to the sources. But Russia recently began to argue that it cannot allow Japan to take all the CO2 reduction credits as it is paying part of the construction-related costs, the sources said. Under the protocol, Japan is required to cut emissions of CO2 and other greenhouse gases by 6 percent from 1990 levels between 2008 and 2012.

42) FEDS ADDRESS ARCTIC CLIMATE RESEARCH

The Associated Press

May 5, 2003

Internet: <http://www.adn.com/alaska/story/3067407p-3090763c.html>

FAIRBANKS -- Arctic climate research should focus on such concerns as rising winter temperatures, thinning sea ice and thawing permafrost, said the Bush administration's global climate change program director. James Mahoney, assistant Secretary of Commerce for oceans and atmosphere, said a 13-agency group will release a plan June 25 outlining these and other priority areas for federal research. Mahoney spoke last week in Arlington, Va., at the annual meeting of the Arctic Science Consortium of the United States, a group of agencies and research institutions with headquarters in Fairbanks.

Mahoney named several other areas that need further research: changes in the distribution of animals and plants, more freshwater flowing from Siberian rivers and recent Arctic Ocean temperature increases. "The role of the Arctic in climate change is a focal point of our U.S. global change and climate change science program," he said. Mahoney said recent Arctic Ocean temperature increases are an example of the intriguing but still uncertain facts indicating the global climate's direction, the Fairbanks Daily News-Miner reported. He showed the audience a color-coded chart reflecting all historic air temperature readings from longitudes around the Arctic. Since 1985, he noted, "we see a predominance of red, which represents warming or positive temperature anomalies."

The chart showed the years between 1960 and 1985 predominantly green, depicting a cooling trend, but that period was preceded by stripes of red in many regions. The challenge is to find a "believable mechanism" to explain the variations, Mahoney said. "So I consider this an ideal illustration of both the importance and relevance of information of change that must be addressed and a demonstration of some of the confounding information," he said. Mahoney also described how an influx of fresh water in the Arctic Ocean from Siberian rivers and other sources could upset the water currents that now dominate.

43) GORE VISIT TO PUSH FOR KYOTO

Sydney Morning Herald

May 4, 2003

Internet: <http://www.smh.com.au/articles/2003/05/03/1051876899977.html>

AL Gore, the former US vice-president who won the popular vote at the last presidential election, will visit Australia this month to urge the Howard Government to sign the Kyoto agreement on reducing greenhouse

gases. Mr Gore will speak at Sydney's Westin Hotel on May 29 and argue against US President George Bush's policies on global security and environmental sustainability. In 2000, Mr Gore, the Democratic Party's nominee for president, won 500,000 more votes across America than Mr Bush. His supporters also argue that he won the key state of Florida but the Republican-dominated Supreme Court ruled in favour of Mr Bush. Mr Gore has since announced he will not seek the Democratic presidential endorsement in 2004. He will meet Premier Bob Carr and former federal Liberal leader John Hewson, who are pressuring the Federal Government to ratify the Kyoto accord.

44) "INDIA, CHINA WILL DRIVE GLOBAL ENERGY USE INCREASE"

Asian Tribune

May 2, 2003

Internet: http://www.asiantribune.com/show_news.php?id=4059

Washington, (IANS) May 02: The U.S. Energy Department says much of the projected 58 percent growth in worldwide consumption of commercial energy is expected to occur in rapidly industrialising developing countries such as India, China and South Korea. The Energy Information Administration (EIA), an independent statistical agency in the department, lowered "substantially" its projection for a rise in energy demand in South America as a result of political and economic problems in the region last year.

The EIA Thursday released its International Energy Outlook 2003, which covers the period between 2001 and 2025. With the use of natural gas projected to grow nearly 100 percent over that time, the natural gas share of total energy consumption is expected to increase by five percentage points to 28 percent. By comparison, consumption of oil, the dominant fuel type, is forecast to increase by 55 percent and its share of the energy mix to remain at 38 percent, says EIA. The EIA also highlighted the expected decline in the role of nuclear power, continued reliance on coal as an important source for electricity generation, projected growth in renewable energy use, and continued rise of carbon dioxide emissions coming from the combustion of fossil fuels.

It says nuclear power accounted for 19 percent of the world's total electricity supply in 2001. It projects a drop in the nuclear share of electricity, to 12 percent in 2025, as the current trend away from nuclear power in most countries is expected to continue. Despite its declining share of global electricity production, it, however, says nuclear power will continue to be a significant source of electricity. Some countries, particularly in Asia, are expected to continue to build new nuclear units, with China, India, Japan, and South Korea projected to add a combined 45 gigawatts between 2001 and 2025. The document projects a substantial decline in coal use for Western and Eastern Europe, and the former Soviet Union, where natural gas is increasingly being used for electricity generation. However, large increases are projected for developing Asia, with China and India combined accounting for 75 percent of the world's increment in coal use over the forecast.

45) EU WORRIED ABOUT KYOTO TREATY IMPLEMENTATION

AFP

May 2, 2003

Internet: <http://www.eubusiness.com/cgi-bin/item.cgi?id=109364&d=101&h=240&f=56&dateformat=%25o%20%25B%20%25Y>

ATHENS, May 2 (AFP) - European Commission President Romano Prodi urged non-EU countries to ratify the 1997 Kyoto global warming treaty Friday, with official sources saying the chief of the EU's executive was very worried about the slackening pace of the treaty's ratification process. "We must keep up the momentum for ratification," Prodi said after the conclusion of a EU-Japan summit. "Joint efforts must be taken in this direction," Prodi told a joint press conference with Greek Prime Minister Costas Simitis, whose country holds the EU presidency, and Japanese Prime Minister Junichiro Koizumi.

Speaking to AFP, a Japanese foreign ministry official close to the talks quoted Prodi as saying that he was very worried about the Kyoto protocol. "The momentum is losing steam," Prodi was quoted as saying. Despite the fact that more than 100, mostly developing nations, have already ratified the treaty, the United States' and Australia's withdrawal from it means that Russia must ratify the treaty for it to enter into force. The treaty sets individual targets for industrialised countries -- but not developing ones -- to trim their emissions of carbon gases, the byproduct of burning fossil fuels, by a deadline of 2008-2012, with 1990 the base year. The treaty requires participants to reduce emissions on average by 5.2 percent. The EU had initially wanted the Protocol to enter into force ahead of the Johannesburg world summit on sustainable development in September 2002.

46) GLOBAL TEMPERATURES TO INCREASE BY 2100

Jamaica Observer

May 1, 2003

Internet: http://www.jamaicaobserver.com/news/html/20030430T210000-0500_43132_OBS_GLOBAL_TEMPERATURES_TO_INCREASE_BY_.asp

THE Inter-governmental Panel on Climate Change (IPCC) is predicting that by the year 2100, global temperature will increase by 4.5 degrees Celsius. Marine biologist, Marcia Creary, said the panel has developed a number of scenarios for which it has based its prediction for the increase in temperature. In one scenario, the IPCC has predicted that there will be low emission of green house gases, for example, carbon dioxide and methane, while in another scenario it is believed that there would be a high level of gas emission, resulting in higher increases in temperature.

Creary was addressing a recent National Scientific Conference on the Environment, organised by the Jamaica Institute of Environmental Professionals (JIEP). In her presentation on 'Climate Change in the Caribbean', to the Jamaica Conference Centre gathering, Creary focused briefly on climate change initiatives and the Adaptation to Climate Change in the Caribbean Project (ACCCP). She explained that component six of this project, would specifically deal with adaptation strategies in the water sector. Creary also mentioned several projects, which she said were being undertaken to correct the numerous environmental issues facing the Caribbean.

"The first such initiative was the Caribbean Planning for Adaptation to Climate Change (CPACC), which ran from 1998-2001. The present initiative, Adaptation for Climate Change in the Caribbean (ACCC) started in 2002 and is expected to be completed by 2004," she said. She added that the ACCC project has the important function of keeping the momentum going for the whole issue of climate change initiative.

"The ACCC is funded by the Canadian International Development Agency, which came into being, to bridge the gap between CPACC and the Mainstreaming Adaptation for Climate Change Project, because the great intention was that this project should have followed one after the other, but it did not happen that way," she stated. The IPCC is an international organisation mandated to assess the scientific and technical information about climate change in an objective, transparent and comprehensive manner. It is comprised of hundreds of scientific and technical experts, and thousands of other people who provide peer reviews.

47) OPPOSITION PARTIES TO STEP UP KYOTO PRESSURE

Dial Infolink

May 1, 2003

Internet: <http://www.dialinfolink.com.au/articles/97/0c016297.asp>

Opposition parties will try to force the federal government to ratify the Kyoto Protocol by introducing a new bill into parliament next month. The government has so far rejected the world pact to soften the impact of climate change and is liaising with business and industry on an alternative plan to cut greenhouse gas emissions. The government wants to pursue measures other than the protocol to cut pollution and emissions which cause global warming. It argues ratifying the protocol as it stands would harm industry and cost jobs.

The Australian Greens introduced into parliament last year a private members' bill to ratify the protocol. Opposition environment spokesman Kelvin Thomson said he would introduce a private members' bill to try to get the government to ratify the pact. This week marks the fifth anniversary of Australia signing the protocol. But it has yet to ratify the agreement. "The proposed legislation will give legal effect to Australia's Kyoto target and ensure Australian industry can take advantage of emerging new markets when the treaty comes into international force," Thomson said after addressing an emissions trading summit in Sydney.

"Over 100 countries have now ratified the treaty and ratification by the Russian Federation will ensure that the protocol will come into international force this year." Russia is expected to ratify the protocol later this year. Greens Senator Bob Brown said he introduced his own bill into parliament last year but had still not heard from Labor or the government as to whether it would be supported. "I call on both major parties to commit to expediting the bill through the Senate as soon as possible, then onto the House of Representatives where the Greens will test the resolve of major party backbenchers," Senator Brown said. The government's refusal to ratify the pact was an international embarrassment, Senator Brown said. But at the emissions trading summit, parliamentary secretary Sharman Stone said the government was focused on new policy directions on climate change after liaising with states, territories and industry.

48) NEW YORK WILL SEEK EMISSION CUTS FROM ONTARIO PLANTS, STAR SAYS

Bloomberg
May 1, 2003

Internet: <http://quote.bloomberg.com/apps/news?pid=10000082&sid=amG6E7JFBSwU&refer=canada>

Toronto, May 1 (Bloomberg) -- New York state will press Ontario to cut pollution from three coal-fired electricity-generating plants under provisions of the North American Free Trade Agreement, the Toronto Star reported. New York Attorney-General Eliot Spitzer will file a submission with a NAFTA agency, complaining that emissions from Ontario Power Generation's Nanticoke, Lambton and Lakeview plants are damaging the environment and public health in the state, the newspaper said, citing unnamed people. Spitzer has sued utilities in neighboring Ohio for similar pollution in recent years, the Star said. New York is now broadening its initiative to include Canadian plants, Marc Violette, Spitzer's spokesman, told the newspaper. The complaint, scheduled to be announced in Buffalo later today, would be the first by a government since the trade agreement took effect in 1994. Previous submissions have come from individuals or citizen groups, the newspaper said.

49) G-8 ENVIRONMENT MINISTERS SKIRT KYOTO PROTOCOL

Japan Today
April 28, 2003

Internet: <http://www.japantoday.com/e/?content=news&cat=9&id=258214>

PARIS — Environment ministers from the Group of Eight (G-8) major nations issued a joint communique Sunday without touching on the thorny issue of their commitment to early implementation of the 1997 Kyoto Protocol on global warming after their three-day talks. The United States apparently pressed its G-8 partners — Britain, Canada, France, Germany, Italy, Japan and Russia — to skirt the issue due to its objection to the protocol, which Washington has already opted to stay out of, observers said. (Kyodo News).

50) CLIMATOLOGISTS GIVE WATERWORLD WARNING FOR EARTH

New Scientist
April 26, 2003

Internet: <http://www.newscientist.com/hottopics/climate/climate.jsp?id=ns99993655>

As the world gets warmer, it is getting wetter. And one of the main conclusions reached at Europe's largest ever earth sciences conference was that we are less prepared for it than ever. While some delegates were still reeling from the catastrophic floods that hit the continent in August 2002, others warned that the risk of

future flooding has been vastly underestimated. And studies of past episodes of climate change suggest that a wetter world may be not only a consequence of global warming but a trigger for further, more dramatic temperature rises.

The first task was to take stock, in a session devoted to analysing last summer's floods. Most agreed the event was a freak of nature - an unfortunate and unpredictable convergence of events. A cyclone disappeared and then reappeared over central Europe, taking everyone by surprise. It was followed a couple of days later by a second more powerful cyclone that was halted by a region of high pressure, causing it to dump its huge load of rain over a relatively small area. "It was like a perfect storm," says Jiri Stehlik from Prague's Czech Hydrometeorological Institute.

The floods hit hardest in the Czech Republic, where 15 people died and 220,000 were evacuated. In Prague a flood this severe would normally be expected only once every 500 years; in the south of the country it was a once-in-1000-year event, and some areas received half their expected annual rainfall in just four days. Freak of nature or not, the disaster was an ominous warning of the kind of events likely to be triggered as global temperatures rise. And they could happen more often than we thought, according to Richard Betts from Britain's Hadley Centre for Climate Prediction and Research in Berkshire. He warned colleagues at the meeting that they have been underestimating the risk of future flooding. Current models of how climate change will affect average rainfall only take account of the ability of air to hold more water as it gets warmer. This means there will be more evaporation in a warmer world, and therefore more rainfall. This alone would increase river flows worldwide by about one per cent by 2100, making rivers more likely to burst their banks.

But that picture ignores the effects of greenhouse gases on plants, Betts pointed out. In response to high levels of carbon dioxide, plants shrink their stomata - the holes in the surface of their leaves through which gases pass in and out. This drastically reduces water loss from the plants, leaving more water in the soil. When Betts included these changes in his models of groundwater levels, he found the effect could increase groundwater by 10 per cent over the next century - 10 times as much as global warming alone. A region of central Africa covering part of the Democratic Republic of Congo was one of the worst-affected locations, with soils in the area dealing with an extra six centimetres of water a year.

WHEN WETLANDS RULED THE WORLD

Delegates in sessions devoted to past episodes of climate change also talked about the implications of rising rainfall - and whether it could be a trigger for rapid warming, not just a consequence. One of the liveliest debates concerned the most dramatic changes in the Earth's climate: steep jumps in temperature that can occur in a matter of decades as ice ages draw to a close. Understanding how and why these swings happened is critical to working out whether we are now at risk of triggering something similar. One popular explanation is that slight initial temperature changes cause a sudden release of vast amounts of the greenhouse gas methane held frozen beneath the seabed in a form known as a gas hydrate. But Mark Maslin from University College London shook things up by suggesting that wetlands were to blame - at least for the most recent rapid warming event, after the last ice age about 18,000 years ago.

His theory came about as a way to settle an argument between oceanographers and land-based palaeontologists. From computer models of plant growth, land-based researchers calculate that about 1000 gigatonnes of carbon has been added to land since the last ice age. This all comes from CO₂ in the sea, transferred via the atmosphere. But oceanographers looking at marine sediments reckon only 500 gigatonnes of carbon has been lost from the ocean. They work this out by measuring the relative amounts of carbon-12 and carbon-13 isotopes in the water over time. Plants preferentially use carbon-12, so the more carbon they take up, the higher the proportion of carbon-13 left in the sea.

Maslin says this overlooks the fact that a blast of methane hydrate would add a dose of carbon-12 to the water. So the ocean could have lost more carbon-13 to the land than previously realised. He calculates that the release of 120 gigatonnes of methane hydrate would reconcile the oceanographers' and palaeontologists' results. But that is only one-third of the amount of methane that ice cores dating from the time show flooded

the atmosphere. So hydrates cannot have been the main cause of the warming: most of the methane must have come from somewhere else, says Maslin. He points to marshes and wetlands as the most likely source, as bacteria in these swamps are a major source of methane. If an initial nudge in climate made the world wetter, that could have extended wetlands and triggered further, rapid warming. There is separate evidence that the amount of water flowing from the Amazon wetlands nearly doubled during this period, he points out.

FROZEN IN TIME

Teams drilling deep into Antarctic ice are working hard to resolve the question. While marine sediments show roughly how global temperatures changed in the past, the gases trapped in bubbles in ancient ice reveal the make-up of the atmosphere, and will help reveal what caused the changes. So far, periods of dramatic warming have been seen in Greenland ice, but not at the South Pole. A core currently being drilled in Dronning Maud Land should confirm whether warming affected the entire planet with equal severity, and show how the timing of the methane increases relates to the temperature changes.

The core has a good chance of doing this, as the high snowfall rate at the site makes it possible to pick out individual years. The first half of the core, going back to 50,000 years ago, arrived in Germany in April and is sitting in the freezer waiting to be studied. The same team is also drilling a core at Dome Concordia in Antarctica, which reaches back even further in time to a period 800,000 years ago when the climate wobbled between warm spells and ice ages twice as fast as it does today. In January, the team reached a depth of 3201 metres, corresponding to 950,000 years ago, smashing the record for the deepest ever core. Sadly, the outlook for climatologists interested in the present day was not so hopeful. As they unravel the role of water and wetlands in setting the course that global warming will take, it is becoming increasingly clear that the data on river flow and rainfall which they plug into their models (and which can be used to predict imminent floods) is getting worse, not better. Murugesu Sivapalan, a hydrologist from the University of Western Australia, reported to the conference that river and rain gauges have been the first casualties of cuts to water management budgets. He says there are now only 2000 working gauges in Africa, half the number 25 years ago, and that numbers are also falling in Europe, Australia and Japan. "Flood risk is increasing," he says. "Clearly our tools are no longer adequate to deal with that."

The EGS-AGU-EUG Joint Assembly took place in Nice, France, from 7 to 11 April.

51) GLOBAL WARMING ACTIVISTS CLAIM BIG VICTORY

Inter Press Service

April 23, 2003

Internet: <http://www.corpwatch.org/news/PND.jsp?articleid=6531>

The season of corporate shareholder meetings is just beginning, but already global warming activists have claimed a major victory in the first of a series of 14 anticipated fights with some of the country's largest companies. A resolution calling on American Electric Power (AEP), one of the nation's biggest emitters of the greenhouse gases that are believed to contribute to climate change, to take "early action" to reduce emissions garnered almost 27 percent of shareholder support at the company's annual meeting Wednesday in Ohio.

The resolution - and a similar one that was defeated by an undisclosed margin at a meeting of General Electric's shareholder meeting late Wednesday - calls on management to report back on the economic risks and benefits of the companies' past, present and planned future emissions of the major greenhouse gases, which include carbon dioxide (CO2), sulphur dioxide, nitrogen oxide, and mercury. "This is a stunning result," said David Gardner, a consultant to the Coalition for Environmentally Responsible Economics (CERES), which helps to co-ordinate shareholder challenges to corporate environmental policies and advises a number of significant institutional investors. "These are much higher numbers than we've seen in the past, especially for a first-time vote by shareholders of a major company on global warming, and clearly shows a sharply rising concern on their part about potential financial implications for companies," he added.

That assessment was echoed by Leslie Lowe of the Interfaith Center on Corporate Responsibility (ICCR) whose member organizations have a combined investment portfolio worth about \$110 billion. Noting that the average vote achieved by global-warming resolutions presented at seven shareholder meetings last year was 18 percent, she said, "the final tally of shareholder support [in the AEP vote] exceeded our most ambitious projections". "It sends a strong signal to the U.S. utilities industry that you can't just ignore global warming or pay it some kind of token lip service. Religious shareholders and other concerned investors are understandably worried that the value of the stock they possess is being held ransom to the refusal of companies like AEP to come to terms fully with the reality of climate change."

While 27 percent does not constitute a majority of shares in a company, it is an unusually high vote for shareholder resolutions. Until just a few years ago, most of them gained three percent or less on their first run, in part because management often controls a large portion of shares through proxies and direct ownership, and most institutional investors and money managers have traditionally voted automatically with management. But this has changed in recent years as concerns about corporate governance, especially executive compensation and the independence of the board of directors from management, have escalated. Precisely because management usually has such a large percentage of shares in its pocket, "getting 10 or 12 percent of the vote is usually considered sending a strong message to management", according to David Schilling, who directs ICCR's Global Corporate Accountability Programme.

But in the last two years, there has been an explosion in resolutions concerning exclusively social or environmental issues, which are also receiving a higher share of the vote. Last year, for example, more than 31 percent of shares voted at Unocal's annual meeting approved a resolution urging the oil giant's board of directors to implement a company-wide employee policy based on core labor rights as defined by the International Labor Organization (ILO). Global-warming activists have made among the most spectacular gains in shareholder contests, particularly since the completion of the Kyoto Protocol, an international accord to reduce greenhouse gas emissions that has been signed by virtually all industrialized countries but rejected by the Bush administration. In the spring shareholder season of 2001, global-warming resolutions averaged a respectable 10 percent, and then almost doubled last year.

Environmental groups have argued that U.S. companies risk losing heavily to foreign rivals in the international marketplace over time if they do not begin to reduce their emissions and their reliance on fossil fuels, whether or not the United States ever ratifies Kyoto. Studies produced by the World Resources Institute and other respected groups have shown that the failure of companies to assess those risks and take action accordingly will ultimately hurt their bottom line and stock price. Those studies have had a major impact on institutional investors, particularly pension funds like CalPERS, California's largest public employee fund, which has about \$150 billion in assets, as well as their advisers, like Institutional Shareholder Services, Inc, which counseled its clients to vote for AEP's resolution.

Wednesday's AEP vote was the first of two more shareholder contests against the managements of what activists call the "Filthy Five" electrical utilities which, together, produce 10 percent of all U.S. CO2 emissions, or almost three percent of the global total. They include Southern Company and TXU Corporation. Of the five, AEP is the biggest emitter, primarily because about 70 percent of its electricity is produced by burning coal. The AEP resolution was sponsored by the State of Connecticut Plans and Trust Fund and Christian Brothers Investment Services, which manages about \$3 billion dollars for Catholic organizations. Both are ICCR members. "This is a material financial issue to the entire electric utility industry, and the kind of disclosure we are seeking should become standard practice on an industry-wide basis," said Julie Tanner of Christian Brothers. "Today, a significant share of AEP shareholders sent a message to management that they are not content to sit by while the company in which they hold stock fails to address this very serious hidden risk to the value of company shares."

Altogether, 14 global-warming-related resolutions have been cleared by the Securities and Exchange Commission (SEC) for votes this season. Besides the electric utility sector, targeted companies include automakers like General Motors and Ford and big oil and gas producers, including ChevronTexaco and ExxonMobil. Last year, a resolution that urged ExxonMobil to move more aggressively into renewable energy sources garnered 20 percent of shares, up from nine percent the year before.

EDITORIAL/OPINIONS

52) EXPECT WORSE EFFECTS OF CLIMATE CHANGE by Grace Akumu

The Nation (Nairobi)

May 16, 2003

Internet: <http://allafrica.com/stories/200305160026.html>

Ms Akumu is executive director, Climate Network Africa

In 2001, the Inter-governmental Panel on Climate Change revealed that, though, due to underdevelopment, Africa emits negligible amounts of greenhouse gases, it will suffer the most from the impact of climate change. Remember the 1997/98 El Nino flooding? Remember the severe La Nina drought of 2000? We should expect more of these phenomena in the near future, caused by global warming. It will no longer be like before. Our ancestors used to predict the weather and knew when to plant and when not. Climate change is going to cause weather variability and we shall continue to witness the displaced weather patterns confront us today.

What has precipitated this faster pace? Emissions of greenhouse gases - carbon dioxide, methane and nitrous oxides and a host of chlorofluorocarbons - into the atmosphere from industrial processes, energy production and use, transport, the type of agriculture practised, deforestation. Countries like the United States, all European member states, Japan, Canada, Australia and New Zealand are the leading emitters of greenhouse gases, with the United States being the single largest culprit. These countries produce what is called "luxury" emissions. For example, the World Bank, in its World Development Report of 2002, estimates that the developed nations spent \$1 billion a day in agricultural subsidies alone to keep their farmers happy, subsequently dumping those products in the Third World. In regions such as Africa, we are responsible only for what is termed as "survival" emissions.

Although Africa is not to blame for the current state of climate change, we are on the receiving end. During the Climate Change Convention and its Kyoto Protocol, industrialised countries agreed that they are historically and now responsible for the largest share of greenhouse gas emissions. They also agreed to assist developing countries with financial and technological resources to adapt to the impact of climate change. The ball is now in their court. They must move quickly to reduce their greenhouse gas emissions and fulfil their commitments as our people are dying of "natural" calamities. African governments face even more challenges in infrastructural development as their efforts are hampered by the impact of climate change. There have been some major international developments in the area of climate change. For example, in 1979, together with the International Council of Scientific Unions, the World Meteorological Organisation (WMO) convened the First World Climate Conference because there was a general agreement that the climate was changing at a faster rate than envisioned.

In 1988, the Inter-governmental Panel on Climate Change was established jointly by the WMO and the United Nations Environment Programme (Unep) "to study all aspects of possible climatic changes, including the socio-economic implications". In 1990, the Second World Climate Conference agreed that urgent action was needed, including international negotiation of a Framework Convention on Climate Change. This was reinforced in 1992 during the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro, during which the UN Framework Convention on Climate Change (UNFCCC) was opened for signature. Many governments signed, including Kenya.

This October, another such conference will be convened in Moscow. All these conferences reveal the concern world leaders have over climate change. Since 1992, there have been at least two global climate change conferences every year in different capital cities, including Bonn, the seat of the UNFCCC secretariat. This is not to mention the myriad of regional, sub-regional and national workshops and conferences taking place all the time. However, the greatest dilemma remains the failure by industrialised countries to fulfil their commitments. It is now time our governments and citizens began to pressure

industrialised countries to remain true to their commitments as our developmental goals will remain a pipe dream unless climate change is checked.

Our governments will not be able to cope with health problems associated with wet conditions - malaria, cholera, typhoid and pneumonia - and those associated with dry conditions including diarrhoea, conjunctivitis, chest congestion and coughs. This will mean more investments in health by our governments, which already have their hands full with the Aids crisis. On the agricultural sector, the challenges will be even more severe. Our food security will be seriously affected, with the attendant consequences of starvation and famine. On energy, since 80 per cent of our electricity is hydro-generated, during severe droughts, we shall have more power interruptions and blackouts, seriously affecting our industrial output. Considering Africa's level of development, we cannot adapt to the negative impacts of climate change without outside intervention. Africa's fate will lie squarely on the doorsteps of the industrialised countries responsible for spewing all those greenhouse gases. Their reluctance to reduce these emissions will only make matters worse.

53) TIME TO FOCUS BEYOND KYOTO

New Zealand Herald

May 15, 2003

Internet:

<http://www.nzherald.co.nz/business/businessstorydisplay.cfm?storyID=3501959&thesection=business&thesubsection=dialogue&thesecondsubsection=&thetickercode=>

The Kyoto Protocol has absorbed the world's attention for much too long, says Dr Rajendra Pachauri, chairman of the United Nations' Intergovernmental Panel on Climate Change. "There is an opportunity cost to that. We have lost a clear focus on the long-term problem of climate change and what should be done to solve it," he said in an address to the Energy Federation of New Zealand and the Institution of Professional Engineers in Wellington last Friday. While the Kyoto Protocol was important, it would not be the end of the world if it did not come into force, Pachauri said. The protocol would come into force if, but only if, Russia ratified it.

But since the United States and Australia had declined to ratify it, the arithmetic of Kyoto had changed to the extent that the remaining countries with commitments could meet their targets by buying hot air and forest sink credits and not reducing emissions of greenhouse gases at all, he said. "Hot air" is jargon for the carbon credits or tradable rights to emit greenhouse gases which eastern European countries will have to sell. Because 1990 is the baseline for Kyoto obligations and because so many smokestacks in the former Soviet Union have gone cold since then, Russian and the other successor countries have credits to sell for the drop in emissions since then.

Forest sink credits arise under a Kyoto provision that recognises that plantation forests established on land not previously forested, while they are growing, are withdrawing carbon dioxide from the atmosphere. New Zealand expects to have more forest sink credits than it would need to cover the increase in its emissions since 1990. In practice, however, Pachauri believes the Kyoto countries will implement domestic action plans that deliver some emission reductions. Public opinion would not allow Governments to just buy their way to compliance. Pachauri said it was more likely than not that the protocol would come into force and it was time to focus where we should go beyond Kyoto. "The world has to agree on target greenhouse gas concentration levels," Pachauri said. "I would like to think that when negotiations begin in 2005 [on commitments for Kyoto's second commitment period, beyond 2012] the first thing they concentrate on is this set of issues. Otherwise we might just get tokenism."

But Pachauri told theHerald that it was not for the panel to define where the danger level in greenhouse gas concentrations lies, even though it was under pressure from some Governments to do so. "That is a value judgment. All the IPCC can do is try to assess the vulnerability of specific systems, the Arctic for example or coral reefs, to specific levels of climate change. If we can provide that to policy makers and negotiators it is up to them to define what is dangerous," he said. "If you are a small island in the Pacific you would

probably say we have already crossed that threshold of dangerous. If you are living in a coastal area where salinity has gone up you would probably have a similar view." The IPCC's world had to be policy-relevant but not policy-prescriptive, Pachauri said. It was always at risk of shoot-the-messenger attacks from those who had a political position against doing anything about climate change. "As the whole debate on climate change gets heated, as the stakes get higher, I suspect the IPCC will become more of a whipping boy."

Its next comprehensive report, the fourth, is due in 2007. In addition to updating the scientific work which drives the whole process, it would have more of a focus on the regional impacts of climate change, Pachauri said. It would also focus more on adaptation - living with climate change - as well as mitigation, trying to reduce it. Such was the inertia in the global climate, changes arising from emissions which had already occurred would be felt for hundreds of years, no matter what was done now to reduce further emissions. "So we need to understand what the impacts are going to be and what the adaptation possibilities are," Pachauri said. Expect more focus, too, on the socio-economic impacts of climate change. For Pachauri, who has doctorates in economics and engineering, this is familiar ground. "Coming from India I know what the impact of receding glaciers in the Himalayas would be. The water supply for about half a billion people is at stake. Likewise, if sea-level rise inundates 20 to 25 per cent of Bangladesh that would cause a major upheaval in the entire subcontinent."

President George W. Bush, when he pulled the US out of Kyoto, cited among other reasons the fact that developing countries had no obligations to limit emissions, even though they would probably overtake developed country emissions within 20 years. Pachauri said the language in the UN Framework Convention on Climate Change, which speaks of a "common but differentiated response", recognised that climate change was the legacy of historic emissions, not emissions which take place today. Nor can we lose sight of the reality that about 2 billion people don't have access to modern energy devices. That mass of humanity is behaving exactly as their ancestors have for hundreds of years. So there is an equity issue here that cannot be ignored," he said. But as global citizens, he said, developing countries would not be serving their own interests if they took an obdurate stance and said they were not going to do anything about climate change.

54) GLOBAL WARMING RANKS HIGH AS HEALTH THREAT by Evan H. DeLucia

Chicago Sun-Times

May 10, 2003

Internet: <http://www.suntimes.com/output/otherviews/cst-edt-ref10.html>

Evan H. DeLucia is professor and head of the department of plant biology at the University of Illinois at Urbana-Champaign.

In the shadow of war and concern over the SARS epidemic, another Earth Day came and went (April 22) with little fanfare. Yet one of the greatest threats to global security and human health continues to grow, largely unchecked by the government. The combustion of fossil fuels and subsequent release of carbon dioxide into the atmosphere is warming the Earth, and this change in climate will influence our way of life. There is now absolute certainty within the scientific community that the world is warming at an alarming rate.

Leading climate scientists who make up the Intergovernmental Panel on Climate Change have concluded that this warming can no longer be blamed on sunspots and other natural factors. Human activities that produce carbon dioxide are the overwhelming cause. The National Academy of Sciences has joined international scientists in calling for the reduction of carbon dioxide emissions. The IPCC estimates that if the increase in carbon dioxide in the atmosphere is unchecked, the world could be as much as 10 degrees Fahrenheit warmer by 2100 than it is today. Since 1850, the planet has warmed by more than 1 degree, and the effects of this increase are becoming increasingly evident. Glaciers are retreating, the ice sheets at the poles are shrinking, sea levels are rising and the distribution of many plants and animals is changing. While these changes may seem distant to Midwesterners, climate change is liable to have a serious impact on crops, rainfall and general storm activity.

In an experiment at the University of Illinois, my colleagues and I are exposing a soybean crop to elevated carbon dioxide to simulate the atmosphere in 2050. Our initial results were quite positive: The harvestable yield of beans increased about 15 percent. This was not too surprising because plants consume large amounts of carbon dioxide in the process of photosynthesis. But last summer we made an unexpected discovery with potentially unpleasant consequences for farmers and consumers: Insects consumed more than twice as much foliage from plants grown under elevated carbon dioxide than beans grown under normal conditions.

It appears that leaves exposed to high carbon dioxide accumulated more sugars and were sweeter to insects. This suggests that insects will pose a bigger threat to agriculture, either reducing yield or forcing farmers to spray more insecticides, increasing costs as well as damaging land and waterways with additional chemicals. There are other threats. Mathematical models indicate that warming will speed evaporation from the soil and increase rainfall; the Midwest will suffer from more severe spring flooding and more serious summer droughts. Corn productivity is projected to decline by as much as 40 percent in the southern Great Lakes region.

Climate warming will also increase the frequency and intensity of storms. The Environmental Protection Agency already is working to help the insurance industry prepare for a costly future. Earlier this year, the parliament in Canada joined 97 other countries and endorsed the Kyoto Protocol, an international agreement to reduce carbon dioxide produced by fossil fuels burned in cars and factories. All the members of the European Community and Scandinavia have agreed to the accord. So have Mexico and most nations of South America. The Bush administration steadfastly has refused to endorse Kyoto. Instead the White House has proposed a five-year plan to study climate change, conveniently putting any hard decisions beyond the next presidential election cycle.

As a scientist, I agree that many uncertainties remain, but the word from the scientific community is clear and unambiguous: Humans are pumping more carbon dioxide into the atmosphere, causing the planet to warm ever more rapidly. Combatting climate change requires the same aggressive steps by Washington as the more dramatic threats to our welfare from terrorist attacks or a nuclear arsenal. After all, what is the meaning of "global security" when the world's only superpower (and also the world's super polluter) refuses to take action against a threat that is well within its powers to defeat?

55) INVESTING IN INNOVATIVE ENERGY TECHNOLOGIES by Paula J. Dobriansky, Under Secretary of State for Global Affairs

Address to the Conference on Carbon Sequestration
Hilton Alexandria Mark Center, Alexandria, VA
US State Department
May 7, 2003

Internet: <http://www.scoop.co.nz/mason/stories/WO0305/S00109.htm>

This second conference on carbon sequestration is most timely and extremely relevant. I looked over the agenda for this week and I must say that it is comprehensive and substantive. Now, what I would like to do today is place carbon sequestration in the larger policy landscape. We live in an era of remarkable technological innovation and change. Whether you think of microelectronics, biotechnology, nanotechnology, or nuclear fusion, there is a large array of emerging technologies with astonishing potential to change our lives. Over the next generation we will begin to see the effects of what I call transformational technologies in our daily lives.

Addressing global climate change will require a sustained effort involving all nations over many generations, and an approach that will harness the power of markets, the creativity of entrepreneurs, and draw upon the best scientific research. What is essential is to embark on a trajectory that will at once enhance energy security and economic competitiveness while significantly reducing future greenhouse gas. Absent significant breakthroughs in energy technologies, however, it is difficult to see how such a glide path can be attained.

A major scientific study published last November in *Science* made this point succinctly. The study surveyed possible future energy sources, evaluating them for their capability to supply massive amounts of carbon emission-free energy and for their potential for large-scale commercialization. Based on their analysis, the researchers concluded that no refinements of existing technologies would allow us to approach the goal of stabilizing atmospheric greenhouse gas concentrations. Instead, we require what constitutes a revolutionary transformation in the way we think about energy production and use. This means developing and deploying cutting-edge technologies on a market-basis over the course of the coming two generations.

Carbon sequestration is one of the key innovative and transformational technologies I referred to earlier. The simple, unavoidable fact is that fossil energy use is and will continue to be a major source of affordable energy and power for many developed and developing countries as they strive to ensure their long-term economic vitality.

Fossil fuels account for approximately 85% of energy use today, and they will remain the dominant source of global energy for the coming decades. In particular, the world holds abundant coal resources. This coal is in many cases the cheapest and most available energy source for developing countries. Just consider that in rapidly developing countries such as China and India, of the Asia Pacific region, coal recently surpassed oil as the single largest source of energy. Coal use continues to increase, with current projections suggesting that world coal use will increase by more than half over the next three decades.

In light of such realities, it just makes good sense to invest in new technologies for cost-effective clean fossil fuels, especially coal. Critical in this technology mix are investments in technologies that allow for the capture, separation and storage of the carbon emitted by combustion of fossil fuels, to keep it from entering the atmosphere. And the diffusion of effective technology that we hope is successfully developed will be of enormous benefit to developed and developing countries alike. That is why the U.S. Government has launched an international effort to advance the development of carbon capture, separation and storage technologies. Earlier this year, President Bush announced the Administration's new Carbon Sequestration Initiative. In his statement, the President said We will work together on this important effort to meet the world's growing energy needs, while protecting the health of our people and our environment.

The initiative has two components. The first is an international initiative called the Carbon Sequestration Leadership Forum designed to initially bring together 14 countries to promote research, development and deployment in the area. The Forum provides a way for the United States and other governments to take action by working in collaboration on this cutting-edge technology. We will realize the promise for effective action in several ways: one, by partnering with the private sector on carbon sequestration activities already underway; two, by strengthening international multilateral efforts in developing, demonstrating and deploying carbon sequestration technologies; and three, by mobilizing international resources. Next month, ministers and other high-level officials from various countries will meet in a major international conference in Washington to kick-off this groundbreaking initiative. We have invited representatives from 13 countries and the European Union to participate in this Forum. The countries are as follows: Australia, Brazil, Canada, China, Colombia, India, Italy, Japan, Mexico, Norway, the Russian Federation, South Africa and the United Kingdom.

The second element of the Carbon Sequestration Initiative is a pioneering \$1 billion, public-private effort to construct the world's first fossil fuel, emissions-free power and hydrogen production plant that Undersecretary Card described yesterday. Carbon capture, separation and storage will be critical technology for the entire world in the twenty-first century. If successfully deployed, it will enable the sustainable use of the world's abundant fossil fuel resources and no less importantly, and emission-free production of hydrogen. In the absence of this technology, it will be far more challenging to address global carbon emissions.

Development of this technology, however, is still in its early stages. Commercial deployment remains just over the horizon, hopefully, early in the coming decade. The Carbon Sequestration Leadership Forum provides a vital mechanism to facilitate such collaboration. Carbon sequestration is but one of a host of transformational new energy technologies that hold the promise of creating whole new industries and

providing clean and abundant sources of energy. Another major initiative that we have embarked on is the President's hydrogen initiative. This initiative provides \$1.7 billion over the next 5 years to develop hydrogen-powered fuel cells, a hydrogen infrastructure, and advanced automobile technologies, with the hope of commercialization by about 2020. As President Bush has stated, We're on the cutting edge of change that is going to dramatically change this country for the better.

This effort on hydrogen is directly linked to our efforts on carbon sequestration. Our ability to capture and store carbon will allow us to use our immense coal reserves as sources for the hydrogen fuels, without contributing to the build-up of greenhouse gases in the atmosphere. As we move forward with this initiative, our ability to work with other countries will help ensure more rapid and coordinated development and deployment of these technologies, needed infrastructure, and universal codes and standards to help us make the transition to a hydrogen economy.

Energy Secretary Abraham outlined last week our view of an International Partnership for a Hydrogen Economy. We hope to help lead the international community toward a hydrogen economy by working with a group of OECD and key developing nations that have strong interest and R&D capacity on hydrogen and fuel cells. If we succeed in doing so, as Secretary Abraham has said, our children and grandchildren can be spared the price spikes, the volatility and the environmental uncertainty that we know today. They can grow up in a world marked by energy security, economic vitality, and a healthy environment. .

We are also taking actions to actively engage our international partners on nuclear fusion technologies. Earlier this year the United States rejoined negotiations on the International Thermonuclear Experimental Reactor (ITER). If successful, this \$5 billion, internationally-supported research project will advance progress toward producing clean, renewable, commercially-available fusion energy by the middle of the century. Our partners in this endeavor include the United Kingdom, the EU, Russia, Japan, China, and Canada. While it remains a great challenge, if our efforts are successful, fusion, the energy of the sun and stars, can provide an abundant source of emission-free energy.

In addition, I would be remiss not to mention the Generation IV initiative, a DOE-led initiative of ten countries advancing R&D to develop improved nuclear power systems to be commercially deployable by 2030. Nuclear power, which provides some 21% of electricity in the United States is, after all, by far, the most widely deployed source of emission-free electricity. While there is a wide array of other technologies such as nanotechnologies that are also likely to have a large impact on energy in the future, this portfolio of technologies that are the focus of the President's energy security and climate change strategy, offer a continuum of new 21st century energy technologies: carbon sequestration over the coming decade; hydrogen over the coming generation; and nuclear fusion out to mid century or beyond. R&D investment and partnerships domestic and global -- underscore the President's commitment to lead the world on climate change -- and our view that the key to stabilizing greenhouse gas emissions is developing and deploying new, clean energy technologies. Indeed, these technologies offer the hope of clean and abundant sources of energy to millions if not billions of the men, women, and children throughout the world.

To realize this promise, the President has laid out what constitutes a revolutionary roadmap, tapping into a wide variety of energy sources. This involves the development and deployment of new and cleaner energy technologies that will help us address climate change while dramatically enhancing our energy security. As President Bush said in February of this year, by being bold and innovative, we can change the way we do business here in America; we can change our dependence upon foreign sources of energy; we can help with the quality of the air; we can make a fundamental difference for the future of our children.

Development of these technologies depends on continued strong economic growth. Growth is part of the solution to climate change, not the cause of it because nations with growing economies are nations that can afford to invest in the necessary technology. The President's climate change plan builds on the knowledge about the need for an effective global response to climate change. Over the last year, the State Department, with support from our fellow agencies, has initiated action-oriented, climate change dialogues with more than 14 nations and regional entities, which together represent more than 75% of the world's greenhouse gas emissions. These partnerships have resulted in important action to pursue research on global climate change

and deploy climate observation systems, collaborate on a number of the energy and sequestration technologies that I have described, and explore methodologies for monitoring and measuring greenhouse gas emissions. Our activities on the domestic and international fronts complement one another.

When thinking about the task before us, I am reminded of the words of Sir Winston Churchill, who explained that a pessimist sees the difficulty in every opportunity; an optimist sees the opportunity in every difficulty. There is no doubt that stabilizing atmospheric greenhouse gas concentrations, while achieving sustained economic growth around the world and enhancing our energy security, is an enormous challenge. But with this challenge comes great opportunities. If successful, we will develop the cutting-edge technologies required to offer all people access to affordable and abundant sources of energy, while lessening human impact on the environment. In my view, this will be one of the great legacies of our actions.

56) ADDRESS ON THE OCCASION OF THE OPENING OF THE FOURTEENTH WORLD METEOROLOGICAL CONGRESS by Professor G.O.P. Obasi Secretary-General

World Meteorological Organization

May 5, 2003

Internet: <http://www.wmo.ch/web/Press/Opening-Cg-XIV.doc>

It is a distinct honour and pleasure for me to extend a warm welcome to all delegates and the representatives of international organizations as we commence the Fourteenth World Meteorological Congress. In particular, it is a privilege to welcome the Ministers and high-level Government Officials of so many of our Members, many of whom had received me warmly during my visits to their respective countries. I particularly wish to extend a warm welcome to His Royal Highness, Prince Ulukalala Lavaka Ata, Prime Minister of the Kingdom of Tonga. We are therefore grateful for their accepting our invitation to join us on this auspicious occasion. I am also pleased to congratulate Bhutan and Kiribati, two countries that have recently acceded to the WMO Convention and extend our warm welcome to their delegates to this Congress.

As the membership of the World Meteorological Organization (WMO) continues to grow, we recall that this year marks the 150th anniversary of the First International Meteorological Conference which formally underlined the importance of meteorology and stressed that international cooperation in the science was a sine qua non to progress. This spirit of cooperation led to the establishment of the International Meteorological Organization in 1873 and subsequently in 1950 to the World Meteorological Organization, a specialized Agency of the United Nations.

For the World Meteorological Organization, Congress remains the highest policy-making organ. It offers to each of its 187 Members the opportunity to contribute to the formulation of WMO's policies and Programmes and to the implementation strategies that should guide the Organization into the future. Decisions taken by Congress have implications on the effectiveness of WMO and in some cases affect the contributions of the National Meteorological and Hydrological Services (NMHSs) in addressing many of the current and long-term concerns of humankind at national, regional and global levels. The World Meteorological Congress that convenes today will be invited to consider and provide guidance on a wide range of issues of relevance to the sustainable development of nations. The issues include:

- Mitigation of natural disasters that have in recent years caused over 60 000 deaths, affected 200 million people, and led to economic losses of up to US\$ 100 billion annually. In particular, it is to be recalled that the 1997-1998 El Niño event alone caused damages estimated at US\$ 96 billion;
- The challenge of water resources management, as over 1.2 billion people presently have no access to drinking water and sanitation and 31 developing countries representing 2.8 billion people already face chronic water problems;
- Issues related to climate change that may enhance the degradation of the environment and cause sea-level rise with adverse consequences for Small Islands Developing States and coastal areas;
- The depletion of the ozone layer, an issue that endangers life on planet Earth;

- Support to food security, as 800 million people face chronic food shortages and malnutrition; and desertification continues to threaten the livelihood of millions of people.
- Support to other vital sectors of the economy including transport, health and tourism; and,
- Assistance to Members to meet their international obligations related to the conventions on climate change, desertification and ozone as well as those arising from global conferences such as the United Nations Millennium Summit and the 2002 World Summit on Sustainable Development (WSSD).

To a large extent, the contributions of WMO in these areas, including the timely warnings on many of today's environmental concerns have been possible due to painstaking efforts in providing accurate and continuous data and projections of the state of the global atmosphere, water resources and the oceans through WMO's unique programmes and networks of stations and Centres. In this regard, I am pleased to inform you that a publication on WMO's role and contributions, particularly in the more recent years, entitled "A Decade of Progress – The World Meteorological Organization in the 1990s and the New Century", provides additional information on the subject.

The leadership role of WMO in applying scientific and technological innovations, its unflinching support to capacity building including human resources development and its persistent efforts in ensuring that the benefits accruing from related advances in the sciences of meteorology and hydrology are sustained and available to all countries, particularly the developing countries, have been the hallmark of the Organization. In this respect, support for the weaker Services of the world remains a cornerstone of international cooperation and therefore an innovative support programme for Least Developed Countries is being proposed to Congress.

In view of its leadership role in its own field of competence, WMO is recognized Universally as the UN system's authoritative voice on the state and behaviour of the Earth's atmosphere, its interactions with the oceans, the climate it generates and the resulting distribution of water resources on Earth. In this context, the challenge to Congress is to ensure that the significant benefits that the world community derives from WMO system are maintained, even enhanced, recognizing that WMO is one of the foremost organizations in the service of humankind.

Indeed, WMO's symbiotic relationship with National Meteorological and Hydrological Services (NMHSs) ensures that their contribution to the well being of humankind at national and global levels is carried out in a most cost-effective manner. It is reckoned that, at national level, the cost-benefit ratio of meteorological services is 1:10. At the international level, the cost-effectiveness of WMO can be partially measured by the fact that the Organization ensures the optimum operation of national meteorological, hydrological and related infrastructures as well as the availability of products and services globally worth more than \$ 6 billion dollars a year; that is, a figure 135 times compared to the cost of running WMO. I would therefore invite Congress to take measures that will ensure the enhancement of the comparative advantage of WMO.

The evolution of the global economy, as engendered by globalization and unprecedented advances in science and technology demand that the Organization is strategically placed so that every nation benefits in an equitable manner, from the evolving global socio-economic environment and from the Programmes of the Organization. WMO should therefore continue to develop innovative ways of delivering services, ensuring free and unrestricted exchange of data and products, enhancing partnership with interested parties, while at the same time enhancing its basic system.

As Congress takes up these and other issues, I have every confidence that this will be done in the spirit of cooperation that has long been the hallmark of WMO's meetings. As we look forward to the future, Congress has to keep in view the need to maintain the delicate balance between continuity and change. I have no doubt that the collective wisdom of Congress will prevail in forging a consensus towards enhanced progress and strengthened contribution of the sciences of meteorology and hydrology to society. Certainly, there will be difficulties to overcome. Nonetheless, in unity and harmony, the Organization can turn challenges into opportunities, stumbling blocks into stepping stones. The path may be long and arduous; yet, let us remember that a journey of a thousand miles begins with a single step. Even now, that single

important step can be taken to ensure that WMO continues to serve the cause of humanity and the enhancement of international cooperation, which can help to secure security among nations as well as peace, progress and prosperity.

I thank you again, your Royal Highness, Honourable Ministers for being with us on this auspicious occasion, and hope that you will all enjoy your participation in this Congress.

57) G8: DON'T MENTION THE "K" WORD

AFP

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Global warming may billed by scientists as the biggest long-term threat to human survival but it was a fading ghost at the Group of Eight (G8) environment ministers' meeting here. Fresh studies are published almost every week that add to evidence of man-made climate change, but the problem merited only an oblique mention in the meeting's final communique on Sunday: an unspecified commitment to "reduce greenhouse gas emissions." And the only global weapon for tackling the threat -- the Kyoto Protocol -- did not rate even a single reference, in deference no doubt to US objections to it and to the troubled state of international relations today.

It was the first time that the "K" word had been bleached out of the G8 environmental parlay since President George W. Bush, an unashamed opponent of the climate change pact, took office in January 2001. The previous ministerial get-togethers, in Trieste, Italy in 2001 and in Banff, Canada, in 2002 each had a reference to Kyoto that accommodated US objections to it. Kyoto requires industrialised signatories to cut emissions of carbon pollution, released by burning oil, gas and coal, by a target date of 2008-12 compared with their 1991 levels. These "greenhouse gases" linger invisibly in the atmosphere, trapping heat from the Sun and causing the temperature of the seas to rise, with what could be catastrophic changes on the Earth's climate system a few decades from now.

Abandonment by the United States, the world's biggest fossil-fuel polluter, almost destroyed efforts to complete Kyoto and ignited a huge row with the European Union. Eventually the pact was saved thanks to EU concessions to other countries, but under the mathematics of its rulebook, ratification by Russia is vital for it to take effect. Sources said Kyoto's quasi-invisibility here was in deference to the international political mood, where the emphasis is on restoring calm and dialogue after the storms of the Iraqi war. "We know where we stand, so there is little use in discussing it," European Environment Commissioner Margot Wallstrom told AFP, when asked whether she had discussed Kyoto with US Environmental Protection Agency (EPA) Administrator Christie Whitman.

Russia's junior minister for natural resources, Irina Ossokina, admitted that there was a split within her government about Kyoto, but insisted the treaty would be ratified as promised. "I would like to underline that we at the ministry of natural resources are wholly and truly for the ratification of the kyoto protocol... but unfortunately we have a difference of opinion within the country," she said. "We were hoping to ratify this summer but we were having differences with our economic advisors," she said. "But we are trying to (resolve) this as soon as possible to have the opportunity for our president to see you straight in the eye at Evian to just tell you the exact date," she said, referring to the G8 summit at a French resort in early June. The problem lay in calculating Russia's expectations of revenue from a trading system that will be set up under Kyoto, Ossokina said.

Under it, countries that are below their pollution quota that sell that margin to countries that are above their quota, thus applying a powerful financial incentive to polluters to clean up their act. Russia had initially expected a windfall, because its pollution output has fallen dramatically because of the collapse of the energy-inefficient Soviet economic system. It thus hoped to be able to sell huge "surpluses" to the United States, the biggest polluter. But the pullout by the United States has meant that the future carbon market has lost its biggest buyer and prices are likely to plummet in consequence. The G8's communique on Sunday

pledged to achieve "the ultimate objective" of Kyoto's parent treaty, the United Nations Framework Convention on Climate Change (UNFCCC), which the United States has signed and ratified. The group comprises Britain, Canada, France, Germany, Italy, Japan, Russia and the United States, as well as the European Commission.