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KYOTO RATIFICATION

1) BRITISH SCIENCE ADVISER GENERATES HEAT IN VISIT

Seattle Times

February 14, 2004

Internet: http://seattletimes.nwsourc.com/html/localnews/2001857962_warmside14m.html

In their showdown with Saddam Hussein, British Prime Minister Tony Blair and President Bush proved staunch allies. But in the gathering threat of global warming, the two nations have sharply different approaches, a policy difference that was spotlighted yesterday as Britain's chief government science adviser spoke in Seattle at the annual meeting of the American Association for the Advancement of Science. Sir David King, who has warned that climate change is a far greater threat to the world than is international terrorism, said that Britain has committed to a 60 percent reduction in carbon-dioxide emissions by 2050.

That is far beyond the reductions outlined in the 1997 Kyoto Protocol that set up an international framework for combating global warming. That protocol has been rejected by the Bush administration as unfair and ineffective, but it is supported by the British government. Britain plans to reach the 2050 goal through a wide range of voluntary and regulatory measures that already include a climate-change tax on industry intended to reduce CO2 emissions that contribute to global warming. "The British government is taking a leadership role in this, and we are looking to our partners in the rest of the world to (also) act on this," King said. Already, the British government has cut greenhouse gases by 13 percent compared to 1990 levels.

President Bush, early in his administration, came out against the United States signing the Kyoto Treaty, and many within the administration view global warming with a skeptic's eye. No Bush administration representatives appeared at yesterday's panel. But in an interview yesterday with The Seattle Times, Bush's science adviser, John Marburger, said the administration does view global warming as an "international issue" and welcomes international participation to try to cope with the problem. Marburger acknowledged that the U.S. and British governments now have sharp differences in solutions to the problem. Marburger said the United States was opting to try to combat the problem through major investments in new technology — such as hydrogen fuels — that would reduce carbon dioxide. Meanwhile, Britain is trying a regulatory approach.

But Marburger maintained that both Britain and the United States are trying to achieve the same end result. Marburger's view of U.S. policy was challenged yesterday by a U.S. scientist, Harvard's Dan Schrag, who joined King in an afternoon panel. "The assertion that our current administration has taken a different tack to reach the very similar end is simply untrue," said Schrag, a professor of earth and planetary sciences. Schrag said the Bush administration has rejected much of the science of global warming, and that investing billions of dollars to research new energy technology is no substitute for the kind of comprehensive policy developed by the British government. During the afternoon panel, British officials said recent floods and last summer's severe European heat wave

that claimed thousands of lives may be linked to global climate change, and those events underscore the risks of inaction. King said he has had repeated discussions with Bush administration officials about global warming. The most recent talks were earlier this week en route to Seattle. "The U.K. position is very clear — we will reduce our emissions beyond the Kyoto Protocol, and we are waiting for other partners to join us."

2) AUSTRALIAN BUSINESS FEELING PINCH FROM KYOTO ABSENCE

Eddie weekly summaries

February 13, 2004

Internet:

http://www.edie.net/gf.cfm?L=left_frame.html&R=http://www.edie.net/news/Archive/8063.cfm

Australian companies are starting to feel the negative repercussions of their government's continued abstinence from the Kyoto Protocol and the international emissions trading scheme. In a senate inquiry held this week, the Australian Institute spokesman Martin Thomas claimed a number of case studies showed other companies were being favoured for renewable energy contracts over Australian firms, a report in The Age online stated.

Australian companies are apparently losing out on international renewable energy contracts to European companies, who can offset such projects against domestic targets under the Protocol. Australia refused to sign the Protocol in 2002 after it feared it would be at a disadvantage if countries like the US also remained unsigned. At the start of January, this year, the Australian Greenhouse Office frustrated business by discontinuing work on the international emissions trading scheme. Arguments that a resignation from the Protocol was damaging Australian business potential were labelled as scare mongering by the Australian Business Council for Sustainable Energy. However a member of the Australian Wind Energy Association noted instances of wind energy contracts in China going to German and Danish companies who could access good loans, over Australian companies.

3) NO KYOTO, NO CONTRACTS, INQUIRY TOLD

Sydney Morning Herald

February 13, 2004

Internet: <http://www.smh.com.au/articles/2004/02/13/1076548213783.html>

Australia's absence from the Kyoto protocol on global greenhouse emissions is costing Australian companies contracts overseas, a senate inquiry was told. Australian Institute of Energy spokesman Martin Thomas said he had a number of case studies which showed other companies being favoured for renewable energy contracts over Australian firms. "We also have members who are actively developing bioenergy projects in China, also concerned that they can't compete with European businesses doing likewise," he said. "It's not a level playing field, because those businesses are from Australia."

Australian Greens Senator Bob Brown asked if that was because the companies were from Australia, which had not ratified the protocol. "That's correct," Mr Thomas said. "There are serious dollars involved because European companies can take credit for projects done in developing countries in meeting their targets domestically," he said. "As an example, if you are a European

solar energy supplier, you can do a project in China and then earn credits under the EU emissions trading scheme which is being introduced at the beginning of next year. "But what does an Australian company do? How can we factor in some sort of greenhouse benefit?"

Australian Business Council for Sustainable Energy executive director Ric Brazzale said the scare campaign about the Kyoto protocol costing jobs had been highly effective, and likened it to the reds under the bed claims of the Cold War. "Our view is that ... the scare element of the negativities has been huge and very, very well argued," Mr Brazzale said. "But it does not appear to have substance. We have not seen people going overseas with investments. In fact quite the opposite." He said there were few, if any, imposts connected to countries which have signed the protocol. "I do see ... that Kyoto, at the moment, is the best option for Australia." Australian Wind Energy Association chief executive Libby Anthony noted similar cases involving contracts for wind energy let in China to German and Danish companies who were able to access good loans, because of the clean technology benefits that come to them.

4) FORGET KYOTO AND MOVE ON, SAYS WORLD ENERGY COUNCIL

Reuters

February 12, 2004

Internet: <http://www.alertnet.org/thenews/newsdesk/SYD120347.htm>

CANBERRA, Feb 12 (Reuters) - The Kyoto climate treaty is irrelevant and it is time to move on and boost investment in reliable, clean energy for the future, although prices will rise, a leading international energy official said on Thursday. World Energy Council Secretary General Gerald Doucet said he doubted the Kyoto pact would ever come into effect, with Russia and Australia unlikely to ratify the treaty that aims to cut the emission of gases causing global warming by 5.2 percent by 2012. "Kyoto has served a political purpose but, in reality, will make no difference to actual levels of greenhouse gas emissions," Doucet said in an interview with Reuters.

The United Nations treaty stipulates that developed nations responsible for 55 percent of air pollution must ratify the pact for it to come into effect. But after top polluter, the United States, pulled out, Russia and Australia refused to sign up. Whether the protocol remained on the shelf was "irrelevant", as the international cooperation in drafting the treaty had already successfully raised awareness about greenhouse gas emissions, said Doucet, during an Asian tour to rally support for a World Energy Congress in Sydney in September.

FOCUS SHIFT

The focus in energy markets since the last world congress three-years ago had shifted from environmental concerns, and ensuring reliability and access to energy supplies from 2010 to 2030 was now the main issue. A lack of investment had led to a shortage of infrastructure, highlighted by recent blackouts in Italy, Canada and the United States, and the industry needed encouragement to invest more in sustainable energy projects, he said. However, this would come at a cost. The London-based World Energy Council, which has member committees in more than 90 nations, forecast a period of higher real energy prices.

"We believe these costs of emissions management should be built into the price of energy and that's why we say we are moving into a more expensive energy world," said Doucet, who has headed the non-government organisation for seven years. Setting arbitrary targets was misguided, said Doucet,

ruling out another world climate treaty along the lines of Kyoto and calling for international partnerships on clean technology such as the 15-nation "Carbon Capture Sequestration Leadership Forum". India and China, whose demand for energy was rising by up to eight percent a year, should invite investment in clean technology to meet their future energy needs, Doucet said.

"If you want reliable, affordable electricity you have to allow investment to take place so there is now a huge debate on investor-friendly regulation supporting market reform," he said. (\$1=A\$1.30)

5) TOP RUSSIAN OFFICIAL SAYS KYOTO PROTOCOL WILL NOT IMPROVE ECOLOGY

Gateway to Russia

February 11, 2004

Internet: http://www.gateway2russia.com/st/art_209806.php

In the present-day conditions, the Kyoto Protocol will not improve the ecological situation in the world, Russian Vice Premier and Minister of Agriculture Alexei Gordeyev told reporters on Wednesday. "In the present-day conditions, the Kyoto Protocol will not improve the ecological situation in the world, in particular because of the USA's refusal to ratify it," he noted. However, the Vice Premier remarked, the United States accounts for 25 percent of the world's economy.

"The Kyoto Protocol does not solve ecological problems, but it allows 'to trade,' among other things, in a global change of the climate and a negative influence on nature. It is science which must head the solution of this problem. After all the survival of mankind and the future of our planet depends on this," underscored the Russian Vice Premier. Alexei Gordeyev believes that a special structure should be formed in the United Nations which would take this process under control. As to Russia, its government, said Gordeyev, intends to carry out a preparatory work for the ratification of the Kyoto Protocol. However, the Vice Premier believes that it is necessary to appraise the consequences of this ratification.

6) GREENPEACE SAYS PUTIN PLAYING WITH PLANET

Reuters

February 10, 2004

Internet: <http://www.alertnet.org/thenews/newsdesk/L10654223.htm>

AMSTERDAM, Feb 10 (Reuters) - Environmental pressure group Greenpeace is increasingly doubtful that Russia, the world's second largest oil exporter, will ratify the Kyoto Protocol aimed at slowing climate change, its chief said. Greenpeace executive director Gerd Leipold also said in an interview with Reuters late on Monday he was disappointed that U.S. presidential nominees, like Democrat front-runner John Kerry, were not highlighting environmental issues. Russian President Vladimir Putin is playing political games with the planet's most crucial treaty, jeopardising the welfare of future generations, Leipold said. "The situation looked better a year ago. Obviously Russia is key in this whole thing and we are not fully optimistic. "Unfortunately, to Mr Putin, Kyoto is more a political football to be kicked around between his European and his U.S. friends than anything else," Leipold said. "Russia wants money," he added, saying Kyoto is important both for the issue itself and as a symbol. Russia shocked the European Union last year by suggesting it may not ratify Kyoto, a treaty to reduce emissions of gases blamed by many scientists for warming the atmosphere, leading to freak weather conditions and environmental damage.

RUSSIANS IN PIVOTAL ROLE

Russia can effectively stop the treaty coming into force if it does not ratify after the United States pulled out. President George W. Bush withdrew U.S. support in 2001. The treaty must be ratified by developed nations accounting for 55 percent of air pollution to come into force. With 17 percent of emissions, Russia holds a casting vote. "If Russia doesn't join then it is back to the drawing board since the U.S. is not on board," Leipold said. According to Greenpeace, a non-profit organisation with about three million supporters worldwide, extreme weather conditions caused about \$60 billion of damage last year. He said Greenpeace, which has been campaigning against environmental degradation since 1971, was disappointed that no U.S. presidential candidates were raising environmental issues in the run-up to the November election. "We don't think this is a wise thing because mainstream America cares about the environment. It's decisive in the elections to see who can win the middle vote. The environment seems to be one of the areas that is quite important."

7) INDIA URGED TO TALK TO RUSSIA ON KYOTO

The Hindu

February 6, 2004

Internet: <http://www.hindu.com/2004/02/07/stories/2004020702701200.htm>

NEW DELHI, FEB. 6. The chairperson of the Water Supply and Sanitation Collaborative Council, Jan P. Pronk, has asked India to impress upon Russia to ratify the Kyoto Protocol. Talking to reporters here on the sidelines of the Delhi Sustainable Development Summit-2004, Dr. Pronk said India should go to Russia on the issue as it went to Pakistan on some other issues. Dr. Pronk said that only international leaders could talk to Russia as there could be some room for negotiations.

"We need to help those who have ratified the Kyoto Protocol," he said and pointed out that India and China could come together on the issue as they formed a huge strength in terms of population. If the rest of the world accepts the Protocol, then Russia will have to and the United States would realise that multilateralism does work. Blaming politicians for not being able to push through the Protocol, he said it was ironic that the WTO had become functional and not the Kyoto Protocol. "I want the world to take a break from economic globalisation and work for environmental issues now. It is the big and the rich among the developing countries who have to raise the issues of the poor countries."

8) NO LINK BETWEEN RUSSIA-EU RELATIONS AND SIGNING OF KYOTO PROTOCOL: RUSSIA

EU Business

February 4, 2004

Internet: <http://www.eubusiness.com/afp/040204165816.43mik8sr>

Russian Foreign Minister Igor Ivanov on Wednesday rejected any attempt to link Russia's relations with the European Union to the ratification of the Kyoto Protocol. "The Kyoto Protocol is not an issue of discussion that determines relations between Russia and the European Union," Ivanov said, reacting to an appeal by European countries that Moscow adhere to the protocol, a move that would allow the United Nations' agreement to curb climate change to enter into force. "This issue is a

global one that must be considered taking into account our economic interests," he said, speaking at a joint press conference with his visiting Italian counterpart Franco Frattini. His comments came after an appeal Tuesday by the French and German environment ministers for Russia to sign the protocol. The Kyoto Protocol requires industrialised signatory countries to cut emissions of greenhouse gases, the carbon-based pollution that is a by-product of burning fossil fuels and which is blamed for driving climate change. The United States walked away from the deal in 2001. That means Russia holds the protocol's future in its hands under the accord's ratification arithmetic.

9) FRANCE, GERMANY CALL ON RUSSIA TO RATIFY KYOTO PROTOCOL

Xinhuanet

February 3, 2004

Internet: http://news.xinhuanet.com/english/2004-02/03/content_1296996.htm

PARIS, Feb. 3 (Xinhuanet) -- French and German environment ministers on Tuesday called on Russia to ratify the Kyoto Protocol so that the United Nations agreement on fighting global warming could enter into force. "Our joint action comes within the framework of the Kyoto Protocol and we renew our appeal to Russia to ratify the protocol," Germany's Juergen Trittin and France's Roselyne Bachelot said in a joint statement during their meeting in the French Atlantic seaside resort of La Baule. "We confirm that we are engaged to the implementation of the Kyoto Protocol and we call on all nations to do the same," said the statement. "An action of conviction is needed from Moscow," said the French environment minister at a press conference in La Baule.

For his part, Trittin reaffirmed that Kyoto offers Russia an array of financial benefits. The Kyoto Protocol, born in the Japanese city of that name six years ago, requires industrialized signatory countries to cut emissions of greenhouse gases, the carbon-based pollution that is a by-product of burning fossil fuels and which is blamed for driving climate change. Agreed as a "framework" agreement in 1997, it sets down the goals that industrialized countries, excluding poorer countries, would reduce their emissions of heat-trapping fossil gases by 2008-2012 as compared with their 1990 levels. The protocol suffered a crippling blow in March 2001 when the United States walked away, stripping the Protocol of the world's biggest polluter and carbon-market player.

As a result, the ratification by the Duma, the Russian parliament, is essential for pushing the number of industrialized signatories over a key threshold that will turn the draft deal into an international treaty. In December Moscow signaled it wanted more concessions on the rules on foreign investments and clean technology. In Moscow on Tuesday, Deputy Foreign Minister Alexander Losyukov said Russia "would determine its attitude toward the Kyoto protocol based on national interests."

10) KYOTO STAND A LURE FOR THE GREEN VOTER

AAU

January 30, 2004

Internet:

http://www.theaustralian.news.com.au/common/story_page/0,5744,8528984%255E30417,00.html

LABOR'S environment policy, and its decision to ratify the Kyoto Protocol on climate change, provided the "clearest, sharpest" difference between the ALP and the Coalition government going

into a federal election, NSW Premier Bob Carr declared yesterday. "This is the most demanding issue of our time," Labor's most senior and successful premier told delegates to the party's national conference in Sydney. "The delineation between us and our conservative opponents is as sharp as any other policy area, possibly a good deal sharper."

Mr Carr's comments follow a decision by the Howard Government earlier this month to halt work by the Australian Greenhouse Office on an international emissions-trading scheme because of uncertainty surrounding the Kyoto Protocol. Mr Carr had earlier described the decision as scandalous. NSW now wants to enlist the support of other states for a national greenhouse emissions-trading scheme.

Delegates at the national conference yesterday passed Labor's sustainable environment platform which includes ratifying the Kyoto Protocol – a step the Howard Government opposes. The platform is designed to boost Labor's appeal to the green vote at the federal election later this year. Conference delegates endorsed South Australian Premier Mike Rann's amendment calling for a Labor government to abandon plans for a national nuclear waste dump in his state. "I want this issue to be a major issue in the federal campaign in South Australia a few months from now," he said.

11) EU COMMISSIONER ATTACKS COLLEAGUE OVER KYOTO COMMENTS

EU Business

January 30, 2004

Internet: <http://www.eubusiness.com/afp/040130164934.7wcihya0>

Environment Commissioner Margot Wallstroem sharply upbraided a colleague Friday for "astonishing" comments that the EU might have to review its commitment to the Kyoto protocol on climate change. Loyola de Palacio, the Spanish commissioner responsible for energy issues, said last week that the European Union might have to review its stance if Russia refuses to ratify Kyoto. The comment came as a surprise given that the EU is the strongest backer of the agreement designed to tackle global warming, in the face of bitter US opposition and Russian foot-dragging. "Loyola should make a distinction between her personal view and the EU view," Wallstroem told reporters. "We lead from the very front. We have to stand firm," the Swedish commissioner said. "I find it astonishing that at a time when we are getting industry on board, at a time when we have the public on board because they understand the consequences of extreme weather ... that politicians start to send some ambiguous messages. "It is not very helpful if colleagues start questioning the issue."

De Palacio, speaking in Madrid last Friday, said the EU would have to "reconsider" its commitment to slash greenhouse gas emissions if Kyoto fails to get the all-important backing it needs from Russia. She had said that in this scenario, the EU would have to see "if there don't exist alternative systems allowing us on the one hand to respect the ultimate objective while also maintaining the competitiveness of our companies". But Wallstroem shot back that she did not "see any alternative to Kyoto except business as usual", and refused to speculate on the future if Russia refuses to adopt the accord. Russia holds Kyoto's future in its hands under the accord's ratification arithmetic, after US President George W. Bush walked away from the agreement three years ago. Russia has been sending mixed signals on Kyoto, most recently last month attaching new demands before it can ratify the protocol, a move that would transform the pact into a binding international treaty.

12) RUSSIA STILL UNDECIDED OVER KYOTO PROTOCOL

EcoLinks News Service

January 29, 2004

Internet: http://www.earthvision.net/ColdFusion/News_Page1.cfm?NewsID=26376&start=1

MOSCOW, January 29, 2004 – Russian officials are still undecided whether or not to approve the Kyoto Protocol. They say it is unfair to suggest that it is only Russia who is holding up the environmental treaty aimed at cutting greenhouse gases. "There are a considerable number of countries which have not ratified the protocol for one reason or another," said Foreign Minister Igor Ivanov. "I believe it would be unfair to say that Russia holds the key to the success of the Kyoto protocol."

The Kyoto Protocol is a legally binding international agreement that will commit industrialized countries to reduce emissions of the six greenhouse gases: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur dioxide. For the treaty to be approved, the nations responsible for 55% of the air pollution must ratify it. Kyoto has so far reached 44%, making Russia's 17% a casting vote. The United States pulled out of the treaty in 2001 because they believed the treaty would harm its economy. Australia has also refused to approve the pact. The 55% target is intended to ensure that no country is bound by the protocol until a lot of others, including enough big industrialized countries have accepted it. The protocol will take effect once the target is met, and will then bind signatories into cutting emissions under an agreed program.

Russia claims they are still studying the potential impact of the treaty on Russia's economy. Ivanov said European opinion would influence the choice it eventually makes since the European Union is a firm backer and has encouraged Russia to ratify it. "Any decision on this will be based primarily on our own national interests. But we will also take account of the opinion of our partners, especially those from the European Union," said Ivanov.

13) EU LINKS RUSSIA'S WTO ENTRY TO KYOTO

Reuters

January 28, 2004

Internet: <http://www.reuters.co.uk/newsPackageArticle.jhtml?type=worldNews&storyID=447983§ion=news>

BERLIN (Reuters) - A senior European Union official has hinted at a possible trade-off in the coming months between Russia ratifying the Kyoto environment treaty and the EU easing Moscow's path to joining the World Trade Organisation. "There are signs of a political link between finalising the WTO negotiations and Russia's ratification of the Kyoto protocol," European enlargement commissioner Guenter Verheugen told a German parliamentary hearing. "In political contacts it has been noted that one could see it as a political package and I'm quite confident that on both issues we will see movement" in the first half of 2004, Verheugen added.

Russia shocked the EU last year by suggesting it may not ratify Kyoto, an international treaty to reduce emissions of gases blamed by many scientists for warming the atmosphere. Russia can effectively stop the treaty coming into force if it does not ratify after the United States pulled out. The treaty must be ratified by developed nations accounting for 55 percent of air pollution to come into force. Russia with 17 percent of emissions holds a casting vote. Some EU states have

suggested that if Russia does not ratify the treaty, the bloc should rethink its own policy on restricting carbon emissions, which some fear could make European industry less competitive by increasing its costs. Russia, the world's second largest oil exporter, has been seeking WTO entry for more than a decade. The EU is one of the most important power brokers at the Geneva-based organisation and is Russia's main trading partner.

Verheugen said there was no "formal, legal" link between the two issues but suggested Russia itself saw the two as related. "I understand it as an attempt to get us to relax some of our demands for Russian WTO entry and then to compensate for that by signing the Kyoto protocol," Verheugen said. In the past, negotiations between the EU and Russia have stalled over Russian gas company Gazprom's export monopoly and the big difference between prices charged for domestic and foreign energy consumers.

14) FOREIGN MINISTER DENIES DEPENDENCE OF KYOTO PROTOCOL ON RUSSIA'S DECISION

RBC

January 23, 2004

Internet: <http://www.rbcnews.com/free/20040123181815.shtml>

The fate of the Kyoto Protocol does not depend directly on Russia's position since some countries have not ratified it either, Russian Foreign Minister Igor Ivanov declared after negotiation with his French counterpart Dominique de Villepin. Ivanov stressed that Russia would take into account its own national interests when making a decision on ratifying this document. Speaking about Russian-French relations Ivanov expressed satisfaction with the pace of their development, which was promoted by regular meetings of the Russian and French presidents.

15) EUROPEANS 'CAN SAVE CLIMATE PACT'

BBC

January 20, 2004

Internet: <http://news.bbc.co.uk/2/hi/science/nature/3410519.stm>

Europe can still save the Kyoto Protocol, the international climate treaty, a US environmental leader says. Jonathan Lash, president of the World Resources Institute, told BBC News Online the Europeans held "the trump card" in making the treaty a reality. He said Europe should offer Russia the diplomatic and economic gains it was seeking if it ratified the protocol. The treaty will remain a dead letter unless Russia agrees to ratify it, and so far there is no clear sign it will. To come into effect, the protocol requires the ratification of countries representing at least 55% of the global total of carbon dioxide emissions.

CRUNCH YEAR

With the US and Australia refusing to take part, all the other major industrial powers must ratify the agreement for the quota to be reached, and Russia is the only country which has still not signed.

Mr Lash told BBC News Online: "The protocol is hanging in the balance: if the Russians don't ratify it in 2004, it will probably never be ratified. "People thought originally the Russians could

earn about \$20bn by selling their unused emission credits. "But now the US and the Australians have pulled out that's probably worth less than \$1bn, because there's far less demand for the credits.

"So Europe holds the trump card, and it can save Kyoto if it wants to. It's not a question of renegotiating the protocol, but of offering the Russians what they want in other areas. "First, they very badly want to join the World Trade Organisation. The Americans have no objections, but the Europeans do, and for them to agree to let Russia in would be very attractive to Moscow.

HIGH-LEVEL KICK START NEEDED

"Then Europe could offer the Russians enhanced investment guarantees, especially in the energy sector. That would help a lot to reassure them. "Finally, perhaps you could have a debt-for-cleanup swap, offering the Russians debt reductions if they spent roubles on reducing pollution.

"I can't imagine that happening at the level of environment ministers, and I think it would need a signal from 10 Downing Street. "And if there's some competition between Europe and the US over which way Russia will be looking in the future, this could help to swing things Europe's way."

Mr Lash said the world should pursue attempts to store the main greenhouse gas covered by the protocol, carbon dioxide, where it could not add to atmospheric levels, a process known as sequestration. He said he did not rule out an expansion of nuclear power to combat climate change: "I have a great sense of urgency about this. We don't have the luxury of being ideological."

PROJECTS, POLICIES AND MEASURES

16) CLEAN ENERGY EFFORT RIDES OCEAN WAVES

IPS

February 14, 2004

Internet: <http://www.ipsnews.net/africa/interna.asp?idnews=22414>

RIO DE JANEIRO, Feb 14 (IPS) - Surfers are not the only ones who will be enjoying the massive power of the Atlantic Ocean's waves on the Brazilian coast. For the first time in the Americas, ocean waves are to be used to generate electricity -- enough for 200 families in the northeastern state of Ceará. If all goes as planned, by the end of 2006 Brazil will debut the first wave-powered electrical plant in the western hemisphere, churning out a potential of 500 kilowatts. The project is being developed by the COPPE engineering graduate programme at Rio de Janeiro Federal University, which has already built a small-scale demonstration model at its Submarine Technology Laboratory (LTS).

Construction of the full-size plant based on this renewable source of energy became feasible with an agreement signed earlier this month by the Ceará state government and Electrobrás, the national electric company. "Ceará has the ideal conditions because the Trade Winds blow there, generating good, regular wave action," Segen Estefen, coordinator of the project and head of LTS, told Tierramérica. With some innovative technology, unlike wave power projects being developed in other countries, this alternative will be competitive, at a cost equivalent to the energy generated by the hydroelectric dams already operating in Brazil and 30 percent cheaper than wind energy, said Estefen. The new project is to be built on Brazil's Atlantic coast, near 70 percent of the 174 million

people in the country. The location helps save on the costs of transmission lines, which is what drives up rates for electricity coming from hydroelectric dams located far from consumers.

With 8,500 km of coastline, Brazil has enormous wave-power potential. Estefen estimates that it could contribute 15 percent of the electricity consumed in the country "within 10 to 15 years if the government decides to promote programmes" in that direction. The energy potential of all of the world's oceans is estimated at one or two terawatts (one terawatt is a trillion watts), enough to cover the energy demands of the global population, but most of that potential is not economically feasible to tap into. Using 10 to 20 percent of it "would be colossal," commented Estefen, adding that alternative sources "will always be complementary." The wave-powered plant designed by his team uses floats that, with the movement of the waves, activate a hydraulic pump which injects water into a hyperbaric chamber. This chamber was originally developed to test equipment for undersea exploration and deep-water oil drilling, and withstands extremely high pressure -- as in conditions at depths of 5,000 meters.

The hyperbaric chamber releases high-pressure jets of water that move the turbines which convert their energy into electricity. This invention takes advantage of existing technologies, especially those developed for ocean-bottom oil extraction, an area where Brazil has made major advances. The equipment is available and all of it can be produced in this country, keeping the project's costs down, says Estefen. Other countries that are further along in wave energy development, like Britain, with its two plants in operation and five in development, utilise oscillating columns of water to generate electricity.

A giant tube is inverted into the ocean, and the rising water level pushes up the air inside the tube, moving a turbine. And the reverse occurs when the water level decreases, as the wave diminishes, also generating electricity, explained Eliab Ricarte, whose doctorate research contributed to the Brazilian wave energy project. But the British technology involves great variations in output, with the rotation of the turbine doubling from one moment to the next, depending on the size of the wave and its movement. The Brazilian model, meanwhile, has the advantage of regularity, said Estefen. In Denmark, experts are developing what has been dubbed the "Wave Dragon", technology for a larger energy generating plant capable of putting out four megawatts. It requires high waves, out at sea, in order to move the turbines with the same force. Estefen noted that it would not be operable in summer because of the lack of large waves.

Australia and Japan are also developing technologies to take advantage of wave energy, and in the developing world, Brazil is joined by India and China. But for now, the norm is small prototypes, with a capacity of up to one megawatt. An effective contribution to commercial energy production remains a goal for the future, say the Brazilian experts. Interest in this alternative source has intensified in the past five years due to the priority given to climate change issues on the international agenda, according to the World Energy Council. There is greater emphasis on developing alternatives to fossil fuel-based energy, which produces climate changing greenhouse gases. Other contributing factors include the debate surrounding the Kyoto Protocol, which has not entered into force but sets goals for reducing greenhouse gas emissions, as well as the rise in petroleum prices.

Britain has set the standard with its 1999 decision to invest in ocean wave energy. The Japanese model is known as "Mighty Whale" and entails a column of oscillating water in a ship in the open sea, taking advantage of the greater energy potential farther from the coast. It was watching a video about that experiment that Ricarte decided to dedicate his doctoral thesis to ocean wave energy in Brazil. The Brazilian approach is to build relatively small installations, with a capacity of one to 30

megawatts, keeping the already low environmental impact to a minimum. There is also the possibility of "shared use", such as utilising the energy plants to protect the coast, reducing erosion. And in some cases the ocean bottom could be altered to obtain larger waves, and that could benefit surfers, says Ricarte.

17) KYOTO PROTOCOL LIMITS FAR OFF

Aftenposten

February 13, 2004

Internet: <http://www.aftenposten.no/english/local/article.jhtml?articleID=730635>

Norway reduced its total emissions of greenhouse gases by 2.5 percent from 2001-2002, but is far from the target set by the Kyoto protocol. Emissions have increased since 1990 but the rate of increase has lessened since 1996, Statistics Norway (SSB) reports. According to the Kyoto protocol, Norwegian greenhouse gas emissions in 2008-2012 should not be more than 1 percent higher than in 1990, the protocol's base year. In fact, since 1990 emissions are up 6 percent, with carbon dioxide emissions, due mainly to increased production of oil and gas and road traffic growth, increasing the most. Preliminary figures for 2003 will be released on April 1.

18) INDUSTRY BOYCOTTS EMISSIONS TRADING TALKS

Frankfurter Allgemeine

February 13, 2004

Internet: <http://www.faz.com/IN/INtemplates/eFAZ/docmain.asp?rub=%7BB1311FCE-FBFB-11D2-B228-00105A9CAF88%7D&doc=%7B47BED41D-8A72-4542-A533-E73C879D8A6C%7D>

Industry representatives boycotted negotiations on upcoming emissions trading legislation on Thursday, saying they would join the discussions when the economics and environment ministers had presented a unified draft on how to divvy up emissions certificates, each of which will allow a certain amount of carbon dioxide, or CO₂, to be expelled into the atmosphere. The dispute revolves around a plan, spearheaded by German Environment Minister Jürgen Trittin, to use emissions certificates to force companies to reduce their carbon dioxide emissions years ahead of the European Union's 2012 deadline, BDI industry association said.

But later on Thursday, Trittin said that industry had failed to reduce emissions according to schedule between 2000 and 2002 and had probably exited the negotiations because they wanted to "avoid answering uncomfortable questions." The BDI denied Trittin's claim. Trittin said his figures were based on information submitted to his ministry on Wednesday by the 2,300 plants participating in emissions trading showing a yearly increase between 2000 and 2002. However, since this report will be used to calculate the total number of emissions certificates to be handed out next year, experts have long predicted that the plants would make generous estimates.

Carbon dioxide is one of the six greenhouse gases listed in the Kyoto Protocol on climate change, which has not been ratified by the United States or Russia. In lieu of an international agreement, the EU decided to implement emissions trading on its own starting next January, by which time Germany is required to have its own legal and bureaucratic framework in place. The first step, which must be taken by late March, comprises deciding how many CO₂ certificates each of the 2,600 affected plants will receive. Until recently, industry had been little concerned by the

developments, counting on the government to keep its promise to limit compulsory emissions reductions to volumes determined in past EU agreements. But that was before Trittin, a Green, surprised them with draft legislation that would force companies to meet their reduction requirements by 2007 rather than by 2012.

This is possible because, at the request of big industry associations, Germany has chosen to develop a formula for dividing the certificates up among existing plants rather than putting them up for auction. This route, however, has opened the door for all sorts of special exemptions. With just weeks to go, industry lobbyists are fighting for special privileges. Electric utilities that burn natural gas, above all Eon, are the most likely winners. Trittin has said he will not give coal-burning plants more certificates than those which run on gas. Since emissions trading is limited to CO₂, gas-burning plants would be the clear winners, since they also emit methane, another greenhouse gas.

Coal-burning plants that are replaced by gas-burning plants would be able to retain their certificates and sell them on the market. Trittin plans to change the energy mix to 33 percent each from coal, gas and renewable energy from the current breakdown of 50 percent coal, 9 percent gas and the rest from nuclear energy and other sources. Electricity company Vattenfall Europe has said thousands of jobs would be lost if Trittin follows through with this plan. Increased demand for natural gas from Germany would probably cause Russia to burn coal in its own plants to fill demand from Germany, since there are no taxes or other levies on coal in that country. Affected industries may also move production to other countries. Experts say that emissions trading only makes sense if most producing countries are involved and if the trading includes all six greenhouse gases. It is unclear why the EU Commission has limited trading to CO₂.

The steel industry, which in 2001 was responsible for 51.4 million tons of the 504.5 million tons of CO₂ emitted by German industrial companies and power generators, fears that it will be the loser. Steel association VDEH said emissions trading could weaken Germany's steel industry, since it cannot reduce its CO₂ emissions. "The allocation of the certificates must be completely free and must not cause a restriction of production and investments," said the VDEH. In early February, Trittin told the Kölner Stadtanzeiger newspaper that the steel and glass industries would receive exactly the number of certificates they needed, since their emissions were "process related." But a spokesman for Thyssen Krupp said the Environment Ministry had a different definition of process related. "The steel industry has the potential to reduce its emissions by 1 to 2 percent in the medium term," he said. Trittin is demanding a reduction of 1.5 percent by 2007 and another 6 percent by 2012. "This could increase the price of steel by as much as 20 percent. That's an estimate, of course." In the past decade, Germany has reduced its emissions more than any other country in the EU. Since Germany signed the Kyoto Protocol in 1997, it has reduced its emissions of the six greenhouse gases by 19 percent. The target for Germany, set as part of a package with other EU countries, is 21 percent by 2012.

19) FIRST US POWER COMPANIES PLEDGE A POWER SWITCH

Edie weekly summaries

February 13, 2004

Internet:

http://www.edie.net/gf.cfm?L=left_frame.html&R=http://www.edie.net/news/Archive/8067.cfm

Five electric power companies across the United States have this week pledged to put a cap on their carbon dioxide emissions and have set themselves energy efficiency targets under a new campaign

by environmental group WWF. A solar array that BED worked on with the University of Vermont, installed in the roof of Royall Tyler Theatre. Courtesy of Burlington Electric Department WWF hopes to set these companies up as an example to the power sector, responsible for 37% of the world's CO2 emissions, through its new Powerswitch campaign, a spokesperson told edie. Austin Energy, Burlington Electric Department (BED), FPL Group Inc, Sacramento Municipal Utility District and Waverly Light and Power, have each agreed to significantly reduce their CO2 emissions.

In addition to this they will also be undertaking one of the following:

- to use renewables as the source for 20% of their electricity sold by 2020;
- to increase energy efficiency by 15% by 2020; or
- to retire the least efficient half of coal generation by 2020.

Three out of these five companies have committed to two of these targets. Ginette Hemley, managing vice president of WWF-US said: "These commitments demonstrate that innovative electric companies can make the switch to clean energy and reduce heat trapping CO2 emissions. Now energy companies and WWF are calling on the US congress to limit carbon dioxide pollution."

"By switching to clean renewable energy and increasing energy efficiency through innovative technologies and processes, each of these five power companies will significantly reduce their heat-trapping CO2 emissions and demonstrate how the whole US power sector can help protect our living planet from global warming by following suit," she said.

A spokesperson for the FPL Group, one of the US's largest power companies explained to edie their plans to translate their pledge into action: "Our efforts to achieve a 15 % increase in energy efficiency will be achieved primarily through the addition of more efficient, natural gas-fired combined cycle combustion turbine, generating units to meet new load requirements over the next few years. As the more efficient units come into service, less efficient units will run less, therefore emitting fewer CO2 emissions."

"FPL has taken a leadership position among US utilities in our environmental stewardship efforts and these efforts have been widely recognised by both the environmental and financial communities. We believe in leading by example and hope that our participation demonstrates that environmental stewardship is not only the right thing, but it's just good business," the spokesperson added.

20) UN AGENCY RELEASES NEW GUIDELINES ON CORPORATE ENVIRONMENTAL ACCOUNTING

UN Wire

February 13, 2004

Internet: <http://www.un.org/apps/news/story.asp?NewsID=9773&Cr=unctad&Cr1=>

The environmental performance of corporations and its link to their bottom line is the subject of new guidelines released today by the United Nations Conference on Trade and Development

(UNCTAD). Ciba Specialty Chemicals has already become the first multinational company to base its environmental reporting on the UNCTAD model, which is published in The Manual for the Preparers and Users of Eco-efficiency Indicators. The manual aims to standardize the presentation of a company's environmental performance and how this relates to financial results. According to UNCTAD, information on environmental performance "is increasingly demanded by stakeholders, especially in the post-Enron era."

Issues covered in the guidelines include water use, energy use, contributions to global warming, ozone-depleting substances and waste. UNCTAD chief Rubens Ricuperro, in a preface to the manual, says that while it is tough to quantify the impact of environmental factors on financial results, "the concept of eco-efficiency, where increased profits are achieved under conditions of declining environmental impact, demonstrates such a link." Ciba Specialty Chemicals Chairman and Chief Executive Officer Armin Meyer hailed the UNCTAD guidelines as "well founded and forward looking."

21) GREENHOUSE GAS CLAMPDOWN CONTINUES

EU Politix

February 13, 2004

Internet:

<http://www.eupolitix.com/EN/News/200402/b2a4c708-39c5-48d5-8669-59844bb4b63f.htm>

Europe's parliamentarians have delayed a vote on new laws to reduce the amount of certain greenhouse gases produced in Europe. The parliament's environment committee was due to be voting on a proposal to cut the use of fluorinated gases (known simply as 'F-gases'), used notably in car air-conditioning units, but this has now been moved to the next committee meeting. But due to a legal technicality, if the proposal is passed it could in fact reverse much of the most progressive legislation already in place. This is because some countries are way ahead of others in their efforts to reduce the use of F-gases.

Denmark for example has already phased HFCs out of use in fridges altogether, and Austria is on track to do this by 2008, whilst domestic fridges are not even mentioned in the commission proposal. And because this means that legislation in Austria and Denmark is out of line with that in other member states it is considered to violate the EU's single market rules – and would therefore have to be scrapped in the event of the proposal becoming law.

Green groups are desperately lobbying to have the proposal's legal basis changed from the single market article to the environment article, which allows each member state to go about meeting environmental targets as it sees fit.

Fluorinated gases were promoted as an alternative for industry in the early 1990s when fears over the environmental impact of CFC gases led to their being banned. But F-gases, notably so-called 'SF6', can be up to 24,000 times more potent than the CFCs they replace. Greenpeace claims that the elimination of F-gases would be a major step towards the EU fulfilling its greenhouse gas reduction targets under the Kyoto protocol. But instead, they say, the European Commission is focusing only on cutting carbon dioxide emissions. "The EU is dictating to us how to meet Kyoto targets", said a Greenpeace spokesman. She pointed out that one gram of SF6 is the equivalent of 24 kilos of CO2.

To add insult to injury, the conservative MEP Robert Goodwill who is responsible for the proposal in parliament would like to increase the time allowed for car air-conditioning units to stop using F-gases. Greenpeace says this would in effect mean “eliminating the only progressive part of the legislation”. But Goodwill says his amendments are “just logic” given that in many cases “the whole car will have to be reengineered if it is not to emit these gases”. He says that in many cases a much more flammable substance will replace the f-gas, necessitating wholesale reworking of the cars internal workings. And he points out that it will be impossible for some car manufacturers to meet the commission targets of reducing emissions by 20 per cent per year – a company such as Porsche making only two models could only cut F-gases by 50 per cent, 100 per cent or not at all. F-gases do not exist naturally but are all man-made, and can linger in the environment for 3,000 years. Greenpeace claims that far less harmful alternatives, such as the natural refrigerant hydrocarbon, are available for most uses of F-gases.

22) GREENHOUSE EMISSIONS GROWING

Expatica

February 11, 2004

Internet: DPA

http://www.expatica.com/source/site_article.asp?subchannel_id=52&story_id=4571

HAMBURG - Warnings by scientists against the growth of greenhouse gasses seem to have gone largely unheeded with a German report showing emissions growing. Indeed, car emissions have doubled within a generation and the annual output of carbon dioxide has increased by about a quarter since the first World Climate Conference in Vienna 25 years ago. The industrialized countries first agreed on a target to reduce the emission of greenhouse gasses at the 1992 Earth Summit in Rio de Janeiro. However, even though they reached their - as yet non-binding - aim to bring emissions down to the levels of 1990 by the year 2000, this was by no means due to the climate protection measures that were taken.

Instead, it was largely the breakdown and economic restructuring of the countries of the former Communist Eastern bloc in the 1990s which slowed the output of the harmful gasses. Figures by the German Institute for Economic Research (DIW) show that the emissions of Western countries actually grew during the same period. And the United States, Canada and Australia even recorded double-figure increases in the output of greenhouse gasses. Only the European Union managed to lower their emissions slightly, and Germany succeeded in cutting levels by 18.3 percent.

At the Climate Conference in Berlin in 1995, the German government had set itself an independent, more far-reaching goal in the effort to save the climate. Former German Chancellor Helmut Kohl promised to reduce the country's emissions to a quarter of the 1990 levels by the year 2005. This goal, however, now looks increasingly unrealistic.

The industrial nations as a whole took another step at the Kyoto Global Climate Conference in Japan in 1997 when they agreed to reduce the 1990 rates by 5.2 percent by 2010. However, it is now more and more uncertain whether the Kyoto Protocol will ever be ratified. The US administration under President George W. Bush turned its back on it, and Russia has been delaying its response.

Most of the countries which did sign up to the agreement are also far from achieving the agreed goals. Since 1979, the carbon dioxide emissions caused by burning coal, oil and natural gas have

been growing less quickly than the world's population. However, even this is only a putative success, as most of the population growth occurred in developing countries where very little fossil fuels are burnt per capita of the population, Joerg Feddern of the Greenpeace environmental group points out. By contrast, energy requirements are expected to rise sharply in countries like China and India, with much of the output likely to be caused by increasing road traffic.

In Germany, traffic has been the only sector where carbon dioxide emissions have gone up in the last decade. According to the DIW, emissions caused by traffic rose by just under 9 percent between 1990 and 2002. The highest drop in emissions - 36 percent - was recorded in the industrial sector, whilst trade, commerce and services reported reductions of 36 percent, trailed by the energy sector with 15 percent and private households with 7 percent.

A glimmer of hope is that the total emissions caused by privately owned cars in the country have gone down slightly since 1999. Nobody can say for sure whether the increasing occurrence of floods and extraordinarily hot summers is a direct consequence of the climate change.

Most climate researchers, however, agree that the indicators for climate change are substantial and that the targets stipulated in the Kyoto Protocol are insufficient to contain the expected climate change within acceptable limits. Scientists suggest two measures: an increased use of alternative energy sources and adaptations to the changing environment, for instance, by building dams and cultivating less heat sensitive crops in Germany.

There are some encouraging signs for environmental progress in the industrial sector. Shell and BP are among the world's five leading producers of solar energy installations, and the two energy giants have also invested in the development of wind power. Rainer Winzenried, communications officers for Shell Germany Oil Ltd said: "Responsible corporate activity according to the principles of sustainability are vital for the continuing success of any business today."

Shell expects the world's energy needs to double or even triple and the consumption of fossil fuels would therefore continue to rise, he said. However, "Shell expects that sustainable energies will make up one third of the market by the year 2050," he said.

This is not enough, Greenpeace says. "We have to save 80 per cent of the carbon dioxide emissions by 2050 in order to get the climate change under control," said Feddern. Meanwhile, the Munich Reinsurance Company says it is bracing itself for an increase of greenhouse gas emissions. The summer heatwave in 2003 and other seemingly extraordinary weather events were only some of the indicators of a changing climate. "They show that we have to expect new kinds of weather and an increased risk of damages," the company says.

23) EU CARS SPEW OUT LESS CARBON DIOXIDE-REPORT

Reuters

February 12, 2004

Internet:

<http://www.reuters.co.uk/newsArticle.jhtml?type=healthNews&storyID=4347826§ion=news>

BRUSSELS (Reuters) - European Union plans to reduce amounts of carbon dioxide belching out from new passenger cars received a boost on Thursday with latest figures showing a fall of nearly 11 percent since 1995, the European Commission said. Road transport generates more than a fifth

of all carbon dioxide (CO₂) emissions in the EU, with passenger cars responsible for more than half of the pollution. But the Commission's latest report shows that carbon dioxide emissions fell by 10.8 percent between 1995 and 2002. The EU is aiming for a 35 percent drop by 2010 at the latest.

While European and Japanese carmaker associations were on track toward meeting voluntary commitments with the EU to produce cars emitting less carbon dioxide, Korean association KAMA was still lagging behind, the report said. "The Commission has repeatedly drawn KAMA's attention to this issue, and KAMA has reconfirmed its commitment to meet its targets," it said.

Under the 1997 Kyoto Protocol, the EU must cut its greenhouse gas emissions by eight percent by 2012. Carbon dioxide is widely seen as the main contributor to climate change. "If we want to reach our Kyoto targets, we have to lower CO₂ emissions from transport," Environment Commissioner Margot Wallstrom said in a statement. She added that all three associations would need to work harder to raise their average annual reduction rates.

24) GUATEMALAN VILLAGE GETS PAID FOR REDUCING GREENHOUSE GAS EMISSIONS

Green Empowerment

February 9, 2004

Internet:

<http://www.enn.com/direct/display-release.asp?objid=D1D1366D00000FA8D338001382B7186>

Mayan villagers in the Guatemalan highlands have just received funds in connection with greenhouse gas mitigation achieved through their community-owned micro-hydro power system. This is believed to be the first time that an indigenous people's organization has benefited from the nascent global greenhouse gas emissions market.

By building a renewable energy plant rather than a power plant fueled by natural gas or coal, the association in the small, isolated village of Chel is avoiding emissions of carbon dioxide and other gases that contribute to global warming. The EnerGreen Foundation, a Canadian foundation dedicated to serving people and saving the environment with renewable energy, donated \$25,000 (US) to the Chel Hydroelectric Association in Guatemala to support the cost of facilities and equipment for the project.

In addition, EnerGreen will be entitled to any "carbon credits" or other emission reduction benefits created by building the first 55kW phase of their 165kW micro hydro plant. According to EnerGreen's chairman, Jeff Arsenych, "This partnership with the Chel community is a new approach to renewable energy development that will be a model for future initiatives."

The exchange was facilitated by Green Empowerment, a Portland, Oregon-based non-profit that promotes renewable energy in the developing world, and Fundacion Solar, a Guatemalan non-profit renewable energy organization. EnerGreen's donation will fund the completion of a community-owned and operated micro hydro plant that will bring electricity to 2,258 people in an isolated Ixil-speaking community in Quiche, Guatemala, an area still recovering from the violent conflicts of the 1980s.

In this case, emission reduction credits are the 2147 tons of carbon dioxide that will not be generated as a result of constructing a micro hydro plant instead of a polluting fossil fuel sources for electricity. The private companies that sponsored EnerGreen for this purpose will receive proportional rights to any credits resulting from a portion of the Chel project. This exchange sets a precedent for channeling the global CO2 emission credit market to small-scale community-based renewable energy projects for rural people in developing countries.

25) CURBING COAL GENERATION KEY TO CO2 TARGET

Planet Ark

February 9, 2004

Internet: <http://www.planetark.com/dailynewsstory.cfm/newsid/23745/story.htm>

LONDON - Britain will easily meet its target under the Kyoto climate change protocol to cut greenhouse gas emissions but meeting the government's more ambitious goal to curb pollution depends on reducing coal burnt in electricity generation, a report says. "Our forecasts suggest the UK will comfortably meet the Kyoto target for a 12.5 percent reduction in greenhouse gases by 2008-2012," Paul Ekins, consultant to Cambridge Econometrics which published the study "UK Energy and the Environment" last week.

Britain's carbon dioxide emissions have fallen over the last decade thanks mainly to a switch to cleaner natural gas from coal in the power sector. Coal still accounts for about a third of generation. The government has set a domestic target of reducing carbon emissions by 20 percent on 1990 levels by 2010.

Last month, the government published a plan giving details of how companies will have to cut CO2 emissions to meet this target and take part in a European Union emissions trading scheme which comes into force in January. The plan said the power sector, among the top polluters, would have to shoulder most of the burden as it faced little international competition and could recoup extra costs through higher tariffs.

Cambridge Econometrics said the UK's carbon emissions in 2010 could range between eight percent and 21 percent below 1990 levels, although their latest forecast was for a reduction of 12.7 percent. "Clearly there is still everything to play for in respect of the (government's) 2010 goal," Ekins said.

"Policy makers should be under no illusions about the sheer scale of the challenge the domestic objective of carbon reduction still presents." The main obstacles to meeting the government's goal are expected big rises in emissions from households and road transport, the report said.

It said a reduction in emissions from the power sector would depend on prices for permits giving the right to pollute under the European Union scheme rising sufficiently to curb coal generation. It added that using gas for generation to fill the gap left by the closure of aging nuclear power stations would also help reduce emissions. The study forecast carbon emissions from the power industry were likely to fall to 36.1 million tonnes by 2010, up from its estimate of 33.5 million tonnes last year. The electricity sector produced 55.3 million tonnes of emissions in 1990. Total carbon emissions are expected to drop to 139.2 million tonnes in 2010 from 159 million tonnes in 1990.

26) INDIA LAUNCHES HYDROGEN-FUELLED VEHICLES IN NEW DELHI

ANI

February 7, 2004

Internet: <http://in.news.yahoo.com/040207/139/2bd6m.html>

New Delhi, Feb. 7 (ANI): India launched Hydrogen-fuelled vehicles on an experimental basis in New Delhi on Saturday. The Union Minister for Non-Conventional Energy Resources, Karia Munda, who flagged off the event, said the hydrogen-based technology will help to bring down environmental pollution. "Not only will it (hydrogen fuel) run two-wheelers or three-wheelers, but it will also be used as cooking gas and to light a bulb. The main thing is that it is never going to end. It is renewable," Munda said. Scientists around the world are still carrying out research on alternative and renewable resources of energy, as exhaustible fossil fuels pose associated environmental hazards, including global warming.

But there is little commercial application of battery powered and solar-powered vehicles and wind energy is limited to just a few suitable windy locations while nuclear energy poses a radiation hazard. Munda said the fuel would be commercially promoted with the help of industrial houses.

"We are going to hold a meeting on February 23, and we have called all industrialists. Industrial houses like TATA and Reliance can help us commercially. We will talk to them and then only will a road map be made," Munda said. Though abundantly available, hydrogen fuel is seldom used even in rockets, as it is the most inflammable material.

The United States has announced plans to spend 1.7 billion dollars on research for achieving tangible results in the field of hydrogen fuelled vehicles within the next two decades.

But in the absence of cheaper and assured alternative energy resources, both the U.S and Russia, have not yet ratified the Kyoto Protocol, which is aimed at cutting greenhouse gas emissions that have been blamed for global warming. India is among the 96 countries that have ratified the protocol.

27) MEP OFFERS BUSINESSES KYOTO TRADING INCENTIVE

Edie weekly summaries

February 6, 2004

Internet:

http://www.edie.net/gf.cfm?L=left_frame.html&R=http://www.edie.net/news/Archive/8035.cfm

The European parliament's lead MEP is scrutinising plans to link EU climate emission trading with the Kyoto flexible mechanisms and wants to give businesses early and easy access to overseas emission credits, it has emerged. In return he wants governments to agree for the first time to a binding quantitative cap on their use of the clean development mechanism (CDM) and joint implementation (JI). In his report for a European parliament environment committee meeting on Monday Alexander de Roo has tabled two key industry-friendly amendments to last year's directive proposal from the European Commission. Both aim to cement business engagement with the scheme.

In the first Mr de Roo says firms should have access to JI and CDM credits from 2005 instead of waiting until 2008. Second, he wants the credits to contribute to businesses' emission caps even before the Kyoto protocol comes into force.

The rapporteur says the first would give industry a "good start" to emissions trading. The second would prevent the scheme's success being "dependent on president Putin". Russian hesitation over ratification would otherwise increase the price of emission cuts, he says. Both changes would create business certainty and help quell dissent emerging in places such as Spain, he argues.

Even so, the concessions go against the Dutch green's environmentalist inclinations. "I've given them a lot - I'm already going quite far," he told Environment Daily on Thursday. Part of his motivation is a desire to tie up a rapid first-reading agreement with governments, a prospect he said was "possible but not certain". The council of ministers held its latest round of preliminary discussions on Monday; the parliamentary environment committee votes on 16 March. Any deal will have to be hammered out between then and the assembly's last plenary voting session in late April.

In return for easier business access to emission credits Mr de Roo says he wants a numerical limit on the combined use of CDM and JI by businesses and governments: 50% of the total emission reduction effort required by Kyoto. This would replace the Commission's proposed limit, which would apply to firms only: 8% of the total number of allowances distributed by governments. Governments agree with the latter step, but have so far resisted the former and the issue is shaping up to be the biggest obstacle to agreement. Repeating their stance during negotiations on the emission trading directive itself, most are arguing against a quantitative cap.

Mr de Roo says the limit would simply "make operational" the supplementary principle consistently championed throughout the international Kyoto negotiations. It would also force countries perceived to have difficult reduction targets, such as the Netherlands and Denmark, to make cuts at home instead of buying them abroad. Several other issues need to be sorted out: Mr de Roo wants to allow links between the EU scheme, any Australian and American states that take on emission caps in defiance of their national governments, as a gesture of support. He also wants to limit the number of hydropower dam projects that are eligible for the scheme, while some southern EU states want to expand the number of sinks projects open to firms.

28) AGREEMENT SIGNED ON GREENHOUSE GAS EMISSIONS

Stuff

February 5, 2004

Internet: <http://www.stuff.co.nz/stuff/0,2106,2806010a7693,00.html>

The Government and agricultural sector groups have signed an agreement on research into agricultural greenhouse gas emissions, Science Minister Pete Hodgson announced today. The agreement follows last year's scrapping of the controversial research levy - labelled the "fart tax" by farmers - which the Government announced but then decided against. It said at the time funding for a proposed science plan should be enough to remove the need for a statutory levy.

Today, Mr Hodgson said the Government would bear the cost under the Kyoto Protocol of the agricultural sector's non carbon dioxide emissions and would also maintain at least its current level of investment in agricultural greenhouse gas abatement research. In return, the sector would

undertake and fund its research strategy, co-ordinated by the Pastoral Greenhouse Gas Research Consortium.

The research aimed to identify, establish and develop practical ways of reducing emissions, particularly those that improved productivity. "It is very important that this research is done, as non-carbon dioxide emissions from pastoral agriculture make up more than half of New Zealand's total emissions," Mr Hodgson said. "The Government is covering the cost of those emissions because of the current absence of economic ways to reduce them and the importance of agriculture to our economy. "However, the long-term interests of the sector and the nation require a thorough and sustained search for practical ways to reduce emissions from pastoral farming."

29) UK IPE MULLS WEATHER, EMISSIONS, POWER CONTRACTS

Planet Ark

February 4, 2004

Internet: <http://www.planetark.com/dailynewsstory.cfm/newsid/23694/story.htm>

LONDON - The London-based International Petroleum Exchange is looking at launching weather derivatives and greenhouse gas emissions trading contracts as well as reviving its UK electricity futures market, chief executive Richard Ward said. "We are in discussions with a partner about how we can develop a weather business on the IPE," Ward told Reuters in an interview. "We are actively looking into the emissions market again and electricity's back on the agenda. We are seeing whether the market is ripe for a relaunch of the electricity contract."

The IPE, which trades Brent crude, gas oil and natural gas, suspended its electricity futures contract in March 2002 after it attracted little interest amid tough competition from over-the-counter brokers. The exchange also faces competition from the recently merged UKPX and APX power bourses. While these exchanges have attracted reasonable volumes in short-term trading, they have struggled to establish liquid markets in longer-term forward contracts. The UKPX said recently that its volumes had improved after the launch last year of revamped futures contracts.

Carbon dioxide emissions trade is set to take off with the launch early next year of the European Union emissions trading scheme, the centrepiece in the bloc's efforts to meet its obligation to curb pollution under the Kyoto protocol on climate change. Few trades have been done so far, all through brokers, but last month Austria's EXAA power exchange said it wanted to start trading carbon dioxide emission certificates. Weather derivatives trading has also been thin. London's Euronext. Liffe financial market launched European weather derivatives contracts in late 2001 but suspended them last summer after just a single deal was done.

30) COULD ALASKA TRADE FOREST RESTORATION FOR MONEY?

Juneau Empire

February 3, 2004

Internet: http://www.juneauempire.com/stories/020304/sta_forests.shtml

Restoration of forests, wetlands and other habitat that offset carbon dioxide emissions by cars and factories could raise million of dollars for Alaska, according to Rep. Ethan Berkowitz, an Anchorage Democrat. Under a new global commodities market, manufacturers and other

companies that emit greenhouse gases can purchase credits from entities that offset such emissions through methods such as reforestation. Berkowitz's proposal, heard Monday by the Senate Resources Committee, directs the state Department of Natural Resources to investigate how Alaska can participate in trading greenhouse commodities. He said there is potential for generating \$450 million in revenue for the state.

Berkowitz said international pollution agreements such as the Kyoto Protocol have established limits on the amount of carbon dioxide that can be emitted into the atmosphere. "Even if the U.S. does not sign the protocol, in order to conduct business with signatory countries, U.S. companies will need to either reduce their carbon emissions below the baseline established in the Kyoto Protocol or obtain carbon sequestration credits to offset the amount that exceeds the established level," according to a sponsor statement by Berkowitz. Tim King, director of the Carbon Technology Transfer Center in Washington state, said international oil companies such as British Petroleum, Amoco, Shell, Texaco and Exxon have carbon credit divisions that invest in projects such as reforestation to mitigate greenhouse emissions.

He said tree planting projects in Washington state have captured \$100 to \$200 per acre for landowners that have reforested their property. And an emerging market in Chicago, known as the Chicago Climate Exchange, trades carbon credits to various energy companies for about 95 cents a piece, King said. "There's no set system as yet here in the U.S., but Sydney, London and Tokyo have a fairly set carbon market," he said. "And the carbon credits in Europe sell for about \$3-\$4 a credit." Each credit accounts for about 1 ton of carbon dioxide, King said. Restoration of one acre of spruce trees devoured by bark beetles in the Kenai Peninsula would probably equal about one carbon credit each year, King said. But that acre continues to have value every year that acre of land is being managed, he said. The Senate Resources Committee still must approve Berkowitz' House Bill 196 before it goes to the full Senate for consideration

31) STUDY SAYS FIVE PERCENT OF GREENHOUSE GAS CAME FROM EXXON

Planet Ark

January 30, 2004

Internet: <http://www.planetark.com/dailynewsstory.cfm/newsid/23638/story.htm>

NEW YORK - Exxon Mobil Corp. has historically been responsible for about 5 percent of the world's carbon emissions, a finding that could prod more shareholder resolutions on climate change, environmental groups said on Wednesday. From 1882 to 2002, emissions of carbon dioxide from Exxon and its predecessor companies, through its operations and the burning of its products, totaled an estimated 20.3 billion metric tons, according to Washington, D.C.-based Friends of the Earth. That represents 4.7 percent to 5.3 percent of global carbon dioxide emissions during that time, the group said in a report.

The 120-year period in question starts in 1882, the year Exxon Mobil's ultimate predecessor, the Standard Oil Trust, was formed. The Boston-based Coalition for Environmentally Responsible Economies, which has helped organize shareholder resolutions aimed at changing Exxon Mobil's environmental practices, helped commission the report, titled "Exxon's Climate Footprint." The report said Exxon has been active in undermining climate science and policy making for years, in particular in lobbying against the Kyoto Protocol, the main international agreement to tackle climate change.

Exxon said the allegations by the environmental groups were without merit. "We've been extremely open with our shareholders and the public on our position on and our tangible actions to address climate change," Exxon Mobil spokeswoman Lauren Kerr said. She said Exxon has made its refineries and chemical plants 37 percent more efficient, which over the last 20 years has resulted in a reduction of carbon emissions of more than 200 million metric tons. Energy companies produce substantial amounts of greenhouse gases, such as carbon dioxide, that scientists say cause climate change.

Insurance companies such as Munich Re say greenhouse risks, such as rising seas in low-lying nations and agricultural losses from global warming, could total hundreds of billions of dollars in the next 50 years. Shareholders of Exxon Mobil, one of the world's biggest oil and gas companies, have filed three resolutions related to global warming this year, and for the first time the principal filers have been three public pension funds in New York City, Connecticut and Maine.

Exxon has also provided funds to Stanford University's Global Climate and Energy Project and has collaborated with the U.S. Energy Department's hydrogen fuel cell "Freedom Car" project, Kerr said. Last year, Exxon shareholders rejected a renewable energy measure with 79 percent opposed, compared with 80 percent opposed a year earlier. After shareholders voted down last year's resolution, Chief Executive and Chairman Lee Raymond said, "We don't invest to make social statements at the expense of shareholder return."

32) ACTION PLAN ON ENVIRONMENTAL TECHNOLOGIES LAUNCHED

Eddie weekly summaries

January 30, 2004

Internet:

http://www.edie.net/gf.cfm?L=left_frame.html&R=http://www.edie.net/news/Archive/7998.cfm

The European Commission has adopted an ambitious action plan to develop the wider use of environmental technologies, saying that they have the potential to improve the environment while simultaneously boosting companies' competitiveness. The action plan aims to overcome perceived barriers, such as the complexity of switching from traditional to new technologies and insufficient access to capital, and provide a boost to research and development expenditure.

Eleven priority actions have been identified to improve the uptake of environmental technologies. These include:

- Launching three technology platforms to bring together researchers, industry, financial institutions, decision makers and other stakeholders, to build a long term vision on research needs;
- Developing and agreeing on ambitious environmental performance targets for key products, processes and services to encourage uptake by business and consumers; and
- Mobilising financial instruments to share the risks of investing in environmental technologies.

The European Investment Bank, European Bank for Reconstruction and Development, and the funding mechanisms resulting from the Kyoto Protocol, such as the clean development mechanism

and joint implementation, will play a role in this. In addition, it proposes a reform of public procurement practices to promote the purchase of environmentally sound products and technologies as well as a review of EU state aid guidelines, which have, in the UK, impinged on the work of WRAP.

Environment Commissioner, Margot Wallstrom, said: "This action plan is a pragmatic way to address the joint sustainable development challenges of protecting the environment and at the same time enhancing innovation and competitiveness in Europe." She cited wind power as an example of technology which could help the environment and boost the economy, with exports from Europe now worth billions of Euros. Research Commissioner, Philippe Busquin, added that environmental technologies have a strong potential for growth and employment and said he hoped to see R&D expenditure grow by 3% by 2010.

Coinciding with this launch, the UK and Sweden held an environment technology day, bringing together figures from academia and industry and addressed by Elliot Morley and Lena Sommestad, the UK and Swedish Ministers for the environment. In his address, Mr Morley said he wanted to find practical ways to deliver new environmental technologies. "This will help us to break the long held perception that environmental damage is a necessary, if unwelcome, consequence of economic growth," he said. "Environmental technologies can play a central role in turning sustainable development from a concept into a social, economic and environmental reality."

The two ministers spent the afternoon visiting BedZed, the Beddington Zero Energy Development, which was the first carbon neutral community in Britain. Mr Morley said this was an excellent example of how environmental technologies can be used to deliver a more sustainable society.

Environmental Industries Commission (EIC) chairman, Adrian Wilkes, also welcomed the action plan. However, he felt that the plan lacks any bold policy measures, particularly on enforcement of legislation. "The EU must recognise that the key driver for environmental technologies is high environmental standards - created by regulation and green taxes," he said. "In particular the impact assessments of new environmental protection legislation must look at the full economic benefits of high environmental standards - not just the costs to polluting industries."

33) SHELL, CHEVTEX TO BENEFIT FROM UK EMISSIONS PROPOSAL

Planet Ark

January 26, 2004

Internet: <http://www.planetark.com/dailynewsstory.cfm/newsid/23571/story.htm>

LONDON - Oil majors Shell (RD.AS: Quote, Profile, Research) and ChevronTexaco (CVX.N: Quote, Profile, Research) are set to benefit from the British government's proposals to slash greenhouse gases, as their UK refineries have been given generous emissions allowances, an industry body said last week. The UK's Petroleum Industry Association Limited (PIAL) said most UK refineries had been given unrealistically large emissions cuts to make, but Shell 's Stanlow refinery and ChevronTexaco 's Pembroke plant had been allowed to increase their emissions.

"These are curious increases, and quite substantially above their historic levels," Ian Mcpherson of PIAL, which represents all main oil refining and marketing companies in the UK, told Reuters. Britain said on Monday it would cut its carbon dioxide (CO2) emissions in excess of its obligations under the United Nations Kyoto Protocol on climate change, prompting protests from industrial

consumers which fear this would lead to higher electricity costs. Greenhouse gases are blamed for contributing to global warming.

Shell's 262,000 barrels per day (bpd) Stanlow plant in central England and ChevronTexaco's 210,000 bpd Pembroke plant in Wales are two out of 11 UK refineries and around 1,500 installations for which the government has set CO2 emissions limits. No explanation has been provided for why the two plants have been given more emission allowances than others. The government says it will not comment on individual cases. Under an EU-wide trading scheme from 2005, companies that do not meet their targets will be allowed to buy carbon allowances from those which emit less than they are allowed.

ALLOWANCES TO BE REVISED

PIAL said earlier this week it was looking for a meeting with the Department of Environment, Farming and Rural Affairs (DEFRA) to discuss inconsistencies in how allowances had been calculated. "They have opened a consultation and this is a first draft based on data from operators such as refiners," said a spokeswoman from DEFRA. "They're going to have to resubmit - the figures will be revised before the final version." A spokeswoman for ChevronTexaco said there were inaccuracies in the UK proposals which needed to be addressed to ensure consistency, while a Shell spokesman said the company backed the overall direction the UK government was taking in regard to Kyoto.

PIAL said ChevronTexaco's plant had been allocated 2.364 million tonnes of carbon dioxide emissions a year between 2005-2007, while Stanlow had been given 3.968 million tonnes per year. If the companies have excess allowances they can sell them on the open market, with EU allowances changing hands at around 13 euros (\$16.43) a tonne. PIA said overall the emissions proposal could damage the UK refining sector. It said the government had also not taken account of tougher EU environmental legislation set to come into force, which compel refineries to produce cleaner fuels. "One problem with refining is that we're looking at a rising trend of having to make sulphur-free fuels, as you need more energy to take the sulphur out and so this requires more CO2 emissions," Mcpherson said. EU rules call for 50 parts per million (ppm) sulphur content in motor fuels by 2005 and 10ppm by 2011, although most of northwest Europe has already moved to 50ppm. Sulphur is blamed for acid rain and lung disease.

34) CO2 EMISSION CUTS MAY BANKRUPT FIRMS-EU'S PALACIO

Reuters

January 23, 2004

Internet: <http://www.alertnet.org/thenews/newsdesk/L23312196.htm>

MADRID, Jan 23 (Reuters) - European Union plans to cut carbon dioxide emissions could lead to bankruptcies and force firms to move overseas, if other countries do not meet their Kyoto targets, the EU energy commissioner said on Friday. The European Union has agreed to cut carbon dioxide (CO2) emissions to eight percent below 1990 levels by 2012, under the 1997 Kyoto Protocol. It is developing a plan to encourage firms to reduce the amount of the greenhouse gases they release. "Our industry will have very serious problems of competitiveness and there will be relocations. There will be bankruptcies and major problems," Loyola de Palacio, who is also responsible for transport, told a seminar in Madrid on shipbuilding.

Under the EU plans, firms will be allocated permits to produce less CO2 than they currently emit, and will have to conform either by cutting emissions or buying permits from others. European governments are resisting protests from industry groups that the bloc's CO2 reduction plans will hit business. A German environment ministry spokesman said Germany did not share de Palacio's concerns. "There are no indications of companies moving overseas or that it could lead to bankruptcies... Emissions trading is a modern and innovative tool to meet CO2 reduction goals in a very cost effective way," the spokesman said. De Palacio said the EU would stick to its obligations even if the Kyoto agreement was not ratified because Russia refuses to join. "I don't think we'll be able to renounce it (the eight percent cut)," she said.

Russia has so far resisted calls to join the Kyoto plan. The United States, the world's biggest polluter, has said it will not join the pact, which is designed to limit climate change caused by human activities. On Monday the UK published its emission reduction proposals -- which all EU countries must submit to Brussels by March -- arousing protests from industry lobby groups who said its tough targets would be a blow to British companies. The companies particularly objected to the intention to go beyond the UK's Kyoto target, while the government downplayed the negative impact on industry. Meanwhile on Wednesday, shares in German utilities soared after a government minister said the country's CO2 scheme would not hurt coal generators.

35) SPANISH UTILITIES PRESENT KYOTO PROPOSAL

Forbes

January 22, 2004

Internet: <http://www.forbes.com/business/energy/newswire/2004/01/23/rtr1224552.html>

MADRID, Jan 22 (Reuters) - Spanish electricity generators on Thursday presented the government with an industry plan containing differing proposals on how to reach Spain's Kyoto protocol targets on emissions, industry association UNESA said. Power generators offered a "sector proposal" with a variety of alternatives on cutting carbon dioxide emissions for the government to consider, UNESA said. "There is not a single solution. It points to distinct solutions for distinct scenarios. For example, what to do in the case of a rainy year, what to do in a dry year, how to deal with variations in the price of natural gas," said UNESA spokesman Antonio Petit.

European Union member states must present their national allocation plans on how to meet Kyoto standards to the European Commission by March. The Spanish state, committed to holding emissions to 15 percent above 1990 levels, is meeting with representatives of the major industries before formulating its plan. Power generators account for 51 percent of Spanish emissions.

All of Spain's power generation firms were present at Thursday's meeting with the government as well as foreign companies with generating interests in Spain such as AES (nyse: AES - news - people) of the United States and Belgium's Electrabel <ELCBt.BR>, the spokesman said. They included Spain's number two utility, Iberdrola <IBE.MC>, which produces a large share of its power through non-polluting hydroelectric and wind power generators and has opted out of previous industry proposals because its interests differ from those of the rest of the sector.

A power industry report from last year said the sector faced costs of 1.2 billion euros (\$1.53 billion) to meet the Kyoto protocol, although Petit said that report was now considered out of date. No new cost figures have been estimated, nor have power companies asked for government subsidies to meet their Kyoto targets, Petit said, without ruling out a request for economic aid in the future.

36) U.K. FIRMS LEERY OVER PLAN TO EXCEED KYOTO LIMITS ON GASES

Bloomberg News

January 20, 2004

Internet: <http://www.iht.com/articles/125667.html>

LONDON The government on Monday proposed a 16.3 percent reduction in emissions linked to global warming by 2008, going beyond promises made in the Kyoto Protocol and raising the prospect of increased costs for industries that include power companies, cement makers, steel makers and oil refiners. The proposal would require 2,000 factories and power stations to buy emission rights unless they reduce their carbon dioxide pollution by that amount from 1990 levels and by 20 percent by 2020, the Department of Trade and Industry said in a Regulatory News Service statement.

In the Kyoto Protocol, the first climate treaty that would require countries to curb emissions linked to global warming, Britain proposed a reduction of 12.5 percent by 2012. Britain's proposal is the first to be announced since the European Union mandated that nations come up with a plan for the trading of emissions starting in 2005. Companies operating in Britain, including E.ON, Exxon Mobil and Corus Group, may need to raise prices or take a cut in profits to help pay for any additional emission rights they need. The global market in pollution permits may be worth \$10 billion by 2007, based on sulfur trading in the United States, according to the Norwegian research firm Point Carbon.

"The U.K. is setting itself tougher targets than the Kyoto Protocol," said Andrew Wright, an analyst at UBS Warburg in London. "As a result, the allocations each installation will get will be less than expected under Kyoto." Power stations may be encouraged to reduce their emissions the most, according to a document outlining each installation's allocation, Wright said. "It's going to be a tougher target on the power sector because other sectors outside the scheme aren't expected to deliver as big reductions," he said. An allocation policy document was due to be released on Monday, a spokesman for the Department of Environment, Food and Rural Affairs said. By 2002, Britain had cut carbon emissions by about 9 percent, according to the department.

EU governments, seeking to lower emissions, are preparing similar plans to grant rights to emit carbon dioxide to owners of about 12,000 power plants and factories across the region. Britain seeks to cut the carbon it releases into the atmosphere by 60 percent by 2050, exceeding the obligations placed by the Kyoto Protocol, which the Bush administration has rejected as too expensive for business. Britain may have increased its carbon emissions from electricity production by 5.5 percent in the first three quarters of 2003 as generators switched to coal and oil when natural gas prices surged, a university lecturer said last week.

The amount of carbon dioxide emitted by generators may have risen to 141.5 million tons in the first nine months of 2003 from 134.2 million tons a year earlier, said Keith Tovey, from the School of Environmental Sciences at the University of East Anglia. Supplies of coal-fired power rose 13 percent in the period, while gas-fired power fell 5.7 percent. European utilities, including RWE, based in Germany, and Endesa, based in Spain, may become riskier borrowers because of the European Union rules to limit carbon dioxide emissions, an industry report said in August. "The effect of emissions trading is likely to have the greatest impact on utilities with significant amounts of unmodified coal and oil-fired generating capacity, such as E.ON, RWE, Enel SpA and Endesa," a report from Standard Poor's said. S&P said it expected the new measures to "impose an

additional level of debt and/or result in a reduction in the operating cash flows of many companies."

37) FIRMS PONDER PLANS TO CURB CLIMATE CHANGE

Ananova

January 19, 2004

Internet: http://www.ananova.com/news/story/sm_857292.html?menu=news.latestheadlines

Businesses across the country are considering proposals aimed at cutting the level of greenhouse gas emissions. The Government says it is committed to its national goal of moving towards a 20% reduction in emissions of carbon dioxide by 2010. The initial allocation of allowances for the first period of the scheme - from 2005 to 2007 - is consistent with an overall reduction in UK carbon dioxide emissions of 16.3%. Ministers said the new allocation was set at a "challenging but achievable" level. Secretary of State for the Department for Environment Food and Rural Affairs Margaret Beckett said the scheme was a vital measure in the drive to reduce greenhouse gas emissions across Europe. She said: "The allocation of emission allowances has been set at a challenging but achievable level which will encourage industry to invest in emission abatement and take advantage of the opportunities that trading has to offer."

She added that the overall number of allowances for UK industry were set at a level which moved the UK beyond its Kyoto Protocol commitment and towards a "tougher national goal". The new EU Greenhouse Gas Emissions Trading Scheme introduces limits or caps on the amount of carbon dioxide that can be emitted by industry. Carbon dioxide is widely believed to be the gas mainly responsible for the change in weather patterns. With increased risk of flood, drought, storms and polar ice melt, trading emissions between individual companies in EU countries is expected to play a major role in helping to slow down the crisis. The scheme will force EU companies to pay to pollute and be mandatory for around 12,000 factories Europe-wide, with 2,000 of them in the UK. Secretary of State for Trade and Industry Patricia Hewitt said the allocation set out this week is central to taking forward the Government's Energy White Paper. "It is designed to achieve the UK's climate change objectives while safeguarding security of supply and supporting the international competitiveness of UK industry," she said.

38) CONVENTION ON CLIMATE CHANGE DHAKA CALLS FOR URGENT GLOBAL MITIGATION

The New Nation

January 18, 2004

Internet: http://nation.ittefaq.com/artman/publish/article_7008.shtml

Environment and Forest Minister Shajahan Siraj on Saturday said that being the worst hit country by climate change, Bangladesh should continue to highlight the vulnerabilities of the least developed countries in the next sessions of Conference of Parties (COP) of the UN Framework Convention on Climate Change (UNFCCC) like just concluded COP-9 in Milan side by side with immediate global mitigation and adaptation measures. He was presiding the debriefing session held at his ministry's conference room here on COP-9 of UNFCCC. State Minister for Environment and Forest Jafrul Islam Chowdhury, Environment Secretary Sabihuddin Ahmed, FEJB Chairman Quamrul Islam Chowdhury, Director of Department of Environment (DOE) Mohammad

Reazuddin. BCAS Director Dr Atiq A Rahman and CARDMA Chairperson Hasna Moudud made presentations on different agendas and outcomes of the climate conference.

Siraj pointed out that all major political parties were now almost in consensus on environmental issues including the threat of climate change and that was why the nation could argue at international negotiations in a much more louder voice as Dhaka was not a major emitter rather on the receiving end in any degree of climate change. Jafrul sought cooperation of all professionals, experts and civil society bodies in sharpening the national position on climate change side by side implementation of national policies. Detailing the outcomes of the COP-9 at Milan, Sabihuddin emphasised on the need for more sharpening the negotiation skills and said that Bangladesh should more strongly pursue its environmental diplomacy to protect the interests of the least developed countries and the G-77, block of 134 developing countries, for our own survival. Quamrul gave a summary of the outcomes of all nine sessions of the conference of parties and said this ninth session of COP would have been much more hectic if Russia would have ratified the landmark Kyoto Protocol signed in 1997 to combat climate change. But, unfortunately, COP nine was not the meeting of parties to the Kyoto Protocol as it is yet to enter into force because of Russia's non-ratification.

He asked for integration of climate change in the national budget and planning, water policy, land policy, disaster management policy, health policy as well as poverty reduction strategy of the country side by side intensifying national negotiation skills by highlighting Bangladesh's vulnerability in next COP-10 in Argentina in December 2004. Reazuddin called for ensuring more investment to adopt mitigation and adaptation measures to face climate change. Dr. Atiq gave a rundown of the global politics surrounding climate change and observed that Bangladesh would be affected much more than many of the small island countries like Maldives and Kiribiti on population and area-wise. Hasna Moudud said Bangladesh had already started to experience impacts of climate change and the entire Sunderbans, the largest mangrove forest of the world and one of the big carbon sink, would be inundated because of sea-level rise. Representatives from different ministries, divisions, civil society bodies took part in the discussions.

CLIMATE IMPACTS

39) TUVALU TO DISAPPEAR BENEATH TIDES

Al Jazeera

February 16, 2004

Internet: <http://english.aljazeera.net/NR/exeres/F15AF4C2-217B-4921-8238-02DEFC3BF22A.htm>

Weather authorities in Tuvalu have warned that their small South Pacific nation is likely to be inundated by unusual tides later this week. Tuvalu, home to 11,500 people living on nine scattered atolls all less than 4.5 metres above sea level, will be hit on Thursday and Friday by "king tides" associated with the new moon, Hilia Vavae of the Tuvalu Meteorological Office said. "We are not quite sure what will happen but we expect most of the areas will be flooded by the sea for an hour or so," she said. On Thursday at 0440 GMT the tide will peak at 3.07 metres and on Friday at 0519 GMT will reach 3.1 metres. Vavae said on the capital atoll of Funafuti homes and perhaps the airport would be flooded, along with her own office. She did not expect the flooding to be as bad as in 2001 when most of the island disappeared. That was associated with an extreme La Nina global weather phenomena.

The extent of flooding during king tides depends also on local weather conditions at the time. Vavae said at this point they were predicting rain bands over the islands, but no severe storms. Over the last decade, successive Tuvalu leaders have claimed their state will be the first victim of sea level rise associated with global warming. They have used the argument to claim special immigration access to New Zealand and recently were in discussion with another Pacific state, Niue, on moving their people there. Niue last month was severely damaged by a cyclone.

Vavae said the local people tended not to be concerned by the king tides although successive high tides had left the island's once fresh water lens too brackish for any more use. She said while parts of Funafuti were sinking, including an area where a University of Hawaii tide gauge stands, she added it was too soon to tell what would happen to Tuvalu in the long term. Tuvalu, 1100km north of Fiji and about 3400km northeast of Australia, is the Polynesian or Ellice Island part of the former British colony of the Gilbert and Ellice Islands. The Gilberts became Kiribati and both won independence in 1979.

40) SHRINKING SINK? CARBON FERTILIZATION MAY BE FLIMSY WEAPON AGAINST WARMING

American Association for the Advancement of Science

February 16, 2004

Internet: http://www.innovations-report.com/html/reports/environment_sciences/report-25846.html

A growing body of evidence questions calculations by the Intergovernmental Panel on Climate Change that the land will automatically provide a significant, long-term carbon "sink" to offset some of the effects of greenhouse gas emissions. Scientists reported these findings today at the 2004 AAAS (Triple-A-S) Annual Meeting. The latest information about carbon dioxide fertilization – by which plants soak up carbon from the atmosphere – "really paints a different picture of the way the world works," said panelist Chris Field of the Carnegie Institution of Washington.

In a book edited by Field and scheduled for publication in late February, researchers concluded that the land contains many large pools of carbon that are likely to shrink in the coming century. A key reason for the differing conclusions, Field and his colleagues found, is that the predictions of the Intergovernmental Panel on Climate Change and other studies have relied on models that don't reflect some of the major processes by which carbon circulates through the environment. Field and his colleagues also have discovered in a previous study that there may not be enough biologically available nitrogen to support certain optimistic estimates of the land's capacity for carbon fertilization. "If you put together these two lines of evidence, we're looking at a future in which we may see less carbon being removed from the atmosphere," Field said.

"The fact that carbon dioxide fertilization is likely to be more modest does not imply that carbon management through planting trees is a bad idea," Field explained. "Planting trees is a great idea. It's just that the trees will grow at their 'normal' rates or slightly faster, rather than at supercharged rates." Field co-organized the symposium with Stephen Schneider of Stanford University, pulling together speakers studying a variety of different landscapes, who met at the Annual Meeting of the American Association for the Advancement of Science (AAAS). Jeff Dukes of the University of Massachusetts Boston has been monitoring changes in a California grassland, over five years of exposure to various types of environmental change. Presenting a new analysis covering five years of data, Dukes reported that their response to elevated atmospheric carbon dioxide was minimal.

"Carbon dioxide may boost or suppress grassland productivity in some years, but over the longer term it's pretty much a wash," Dukes said. A seven-year study of a pine forest has produced similar results. According to William Schlesinger of the Nicholas School at Duke University, the Duke Forest Free Air Carbon Enrichment (FACE) experiment showed that enriching carbon dioxide in a young loblolly pine initially enhanced growth by 10 to 20 percent, with higher values in the driest years. But, various lines of evidence suggest that soil nutrients are deficient to support long-term growth stimulation, Schlesinger said. Schlesinger stressed that planting trees is an effective way to sequester carbon, but "shouldn't expect those trees to grow much faster in the high CO₂ world of the future."

Ultimately, the Earth's ability to take up carbon will depend on the oceans. The oceans have already absorbed some 400 billion tons of fossil fuel carbon dioxide, and this trend will continue; ocean uptake now is more than 20 million tons of carbon dioxide per day, according to Peter Brewer of the Monterey Bay Aquarium Research Institute. "But is this a blessing or a problem?" he asked. Some researchers have considered direct ocean disposal of carbon dioxide, raising questions as to the impact of changing ocean acidity, or "pH" on marine life. Experiments to examine the impact of elevated carbon dioxide levels on the land are commonplace.

Brewer reported on the first small-scale ocean experiments, in which his research team added carbon dioxide to the deep-sea off California, and thus perturbed the pH of the surrounding ocean, exposing animals to waters that may simulate the ocean of the late 21st century. He described some new experimental techniques that should make it possible to extend these types of experiments, making them both spatially larger and longer-lasting. "It's the only way to find out how coral reefs, deep-sea fisheries and other marine environments will react to a change in ocean pH; you have to do the experiment," he said.

41) CLIMATE CHANGE 'WIPING OUT WORLD'S CORAL REEFS'

The Scotsman

February 13, 2004

Internet: <http://news.scotsman.com/latest.cfm?id=2530563>

Half the world's coral reefs could be wiped out or badly damaged by the end of the century, a leading ocean scientist predicted today. The chief agent of this destruction was climate change, said Dr Richard Aronson, who helped compile the most definitive study yet on the impact of global warming on reefs. He said there could no longer be any doubt about the threat to the natural wonders often described as the "oceans' rainforests".

Speaking at the American Association for the Advancement of Science's annual meeting, in Seattle, he said: "We're saying it's happening. There's no escaping the consequences – coral reefs are being damaged by climate change." About 25% of the world's coral had already been wiped out or extensively damaged by warming oceans, pollution and disease – all of which were linked to human activity. In years to come, if nothing was done to resolve the problem, a further 30% could suffer the same fate, said Dr Aronson. "More than half will be ruined or degraded by 2100," he warned.

The scientist, from the Dauphin Island Sea Laboratory in Alabama, USA, joined other experts today to discuss the report "Coral Reefs & Global Climate Change: Potential Contributions of Climate Change to Stresses on Coral Reef Ecosystems". The study, released today, identified the

direct and knock-on effects of global warming on coral reefs. It showed that climate change endangered coral reefs directly in two important ways. First, higher water temperatures promoted “bleaching“, where corals were weakened and killed after losing the vital algae that live symbiotically within them. Secondly, as carbon dioxide built up in the atmosphere, more of it dissolved into the oceans, making the water more acid. This reduced the levels of carbonate that corals use to grow their skeletons and build up reefs. Atmospheric carbon dioxide levels were about 280 parts per million in 1880. By 2000 they had increased to 367 parts per million, and by 2050 they were expected to reach 463 to 623 parts per million.

At the same time warmer temperatures had the indirect effect of allowing harmful diseases to flourish. These were further encouraged by man-made pollutants running off the land into the sea which nourish bacteria and fungi. Dr Aronson said even an increase in temperature of one or two degrees centigrade could have a “devastating” impact on coral. One effect was to heighten the impact of freak “El Nino” events – disturbances in the Pacific ocean-atmosphere weather system that can have a major impact on climate around the world. The El Nino of 1997-98, boosted by global warming, produced the hottest tropical temperatures ever recorded. That event alone destroyed 16% of the world’s corals through bleaching. “Global warming is ratcheting up the temperatures of these El Nino events,” said Dr Aronson.

Dr Joan Kleypas, from the National Centre for Atmospheric Research in Boulder, Colorado, one of the report’s co-authors, said although coral reefs had adjusted to periods of gradual warming in the past, the rate of change now taking place was unprecedented. “These coral communities will be pulled apart,” she said. “They’re not going to function very well as coral reefs any more.” Destruction of coral reefs was likely to have an enormous impact on human society, said the report. It was estimated that tens of millions of people depended on reefs, both as a food source and because of the way they prevented the erosion of tropical shorelines. Coral reefs were said to generate a total annual income of 30 billion US dollars. Dr Aronson said even in his lifetime, the Caribbean reefs he knew as a child had changed beyond recognition. “If you go around the Caribbean today, the coral reefs look like hell, they’re horrendous,” he said.

42) GLACIERS MELT IN ARGENTINA'S PATAGONIA, AS CLIMATE CHANGES

Pravda

February 12, 2004

Internet: http://english.pravda.ru/world/20/91/368/12036_Glaciers.html

Evidence of glaciers melting has been released by Greenpeace in Buenos Aires. New visual of the effects of climate change was released this week, by the environmental group, Greenpeace in Buenos Aires. New photos of Patagonian glaciers taken by a research team were compared to old ones taken by Catholic missionaries in 1928. The evidence is irrefutable: what was a glacier -pure ice- 76 years ago, it is now a beautiful lake. Greenpeace campaigner Joris Thijssen, said in a press release: "Rising temperatures are causing glaciers to melt all over the world. Here in Patagonia, they are disappearing at a rate of 42 cubic kilometers every year - faster than anywhere else on Earth. There are many reasons for the speed of the retreat and climate change is the trigger of this process."

According to Greenpeace activists, "in recent years melting of the glaciers in Patagonia has accelerated which indicates human induced climate change. From 1995 through 2000 the rate of ice loss from the ice fields more than doubled". They also warned about a future increasing in the level

of seas: "The sheer volume of melt water from glaciers is causing the sea levels to rise, increasing the risk of flooding in many of the world's coastal areas. It is also starting to cause problems for people who depend on the glaciers for their fresh water supply. This may cause enormous problems in the future given that a third of the world's population.

Members of the environmental group said Greenpeace has been touring Patagonia and Chile for four weeks, investigating the extent to which the glaciers and ice-fields there are disappearing. Greenpeace research team's findings confirm that a number of large glaciers, such as the San Quintin and Upsala glaciers, part of the Northern and Southern Patagonian ice-fields, "have significantly thinned and have retreated several kilometers in recent years". A recent study by the journal Nature showed that climate change could drive a million of the world's species to extinction as soon as 2050. "Climate change is a global problem - not only do we risk losing the world's glaciers but we are already witnessing an increased frequency and severity of floods, droughts and storms, loss of coral reefs, rises in sea levels and a rapid spread of diseases such as malaria," added Thijssen.

Greenpeace denounced that climate change is occurring because "we use energy created by fossil fuels -oil, coal and gas. When these fuels are burned, they release carbon dioxide (CO₂), a so called 'greenhouse gas' that causes the Earth to warm". "We all use energy in our daily lives and so we all have a part to play in solving this global crisis. Instead of relying on fossil fuels for our energy, we must make sure we are provided with clean energy from the sun, wind and small-scale hydro," concluded Thijssen.

43) 20-YEAR ALERT OVER FAILING RAINFORESTS

Evening Standard

February 11, 2004

Internet: <http://www.thisislondon.co.uk/news/articles/9084370?source=Evening%20Standard>

The special ability of rainforests to hold back global warming is failing and could end in 20 years scientists warn today. That would raise temperatures by up to eight degrees in the next century, causing huge climate change and threatening humans, the report from the Royal Society reveals. Rainforests play a vital part in "mopping up" carbon dioxide, which - if left in the air - would add to the greenhouse effect that leads to global warming. The forests' action is known as the "carbon sink".

But scientists have discovered that the life cycle of forests is speeding up, reducing their ability to absorb carbon dioxide. Ironically, the life cycle is being accelerated by existing global warming - creating a potentially devastating vicious circle. The report says temperatures have risen half a degree in the Amazon region in the past 20 years. Over the same period the rate at which forests are growing and dying has doubled. Dr Oliver Philip of Leeds University who co-authored one three Royal Society papers on the rainforests, said: "Computer simulations show the carbon sink cannot be taken for granted. The process could be reversed in two decades by the combined effects of deforestation and global warming."

Two further papers show some Amazonian rainforests are already starting to break up. Experts believe recent forest fires have significantly damaged some forests and their monkey and bird populations. They warn that human welfare across the world could be endangered and want urgent action to limit carbon-dioxide emissions. The news comes as the Government's leading science

advisor, Professor David King, prepares to address American scientists at a conference on Friday. He is expected to criticise President George Bush's lack of action on climate change. America produces more than 20 per cent of the world's carbon emissions. However, it will not sign the Kyoto treaty that limits emissions of gases that lead to global warming. Britain, along with other European Union nations, have signed the treaty.

44) SHANGHAI MAY SLIDE UNDER WAVES IN 600 YEARS - PAPER

Planet Ark

February 10, 2004

Internet: <http://www.planetark.com/dailynewsstory.cfm/newsid/23764/story.htm>

SHANGHAI - Rising sea levels due to global warming mean the gleaming skyscrapers of China's financial hub Shanghai could be entirely submerged in 600 years, a state newspaper said. Academics worry that Shanghai, which state media report sank as much as 2.63 metres between 1921 and 1965 due to the overpumping of underground water, may descend further under the weight of a construction frenzy of the past decade. The sea had risen 20 mm since 2000 and should keep climbing over the next decade, the Shanghai Daily said, citing a report from the State Ocean Administration.

"Shanghai and a number of other coastal cities have been drawing heavily on groundwater for a couple of decades, depleting it and causing (the cities) to sink," said one U.S.-based researcher. Excessive construction of tall buildings was to blame for 30 percent of Shanghai's subsidence since 1990, Xinhua said, when the city embarked on a whirlwind of construction that has dotted its skyline with often bizarre, futuristic towers.

Lujiazui, the financial district where Japan's Mori Building Co is erecting a 101-storey skyscraper that could be the world's tallest, is sinking 12 to 15 millimetres a year, Xinhua said. The area is home to the country's main stock exchange and a host of multinationals that have chosen to make Shanghai the focus of a push into the Chinese market. The city government is now considering limiting the number of high rises. "This is apparently not a serious enough problem to stop the building of the world's tallest building," said one locally based foreign diplomat.

45) POLLUTION IS BLAMED FOR THINNER AIR AT EDGE OF ATMOSPHERE

New York Times

February 10, 2004

Internet: <http://www.nytimes.com/2004/02/10/science/earth/10SKY.html>

Scientists say they have found strong new evidence that carbon dioxide, the main smokestack and tailpipe emission linked to global warming, is cooling and shrinking the atmosphere's outermost layers in ways that could aid as well as endanger space activities. The average density of the air in the region more than 60 miles up — just a trillionth of that near the surface — has dropped 10 percent over the last 36 years, and it could decline by a total of 50 percent by the end of the century, scientists at the Naval Research Laboratory in Washington report.

The effect had long been predicted, but observations showing that it is occurring have been scant. Satellites, less affected by friction with the outer atmosphere, should be able to stay aloft longer but

may be in more danger from collisions with orbiting debris, which would also last longer, the scientists said. The only logical cause for the contraction and cooling is the rising level of carbon dioxide, the researchers said.

The other possible influences, including variations in the sun, have been accounted for, said Dr. John T. Emmert, a George Mason University researcher working at the Navy lab, who is the lead author of a paper in the current *Journal of Geophysical Research — Space Physics*. The link to carbon dioxide is very likely, Dr. Emmert said, adding, "There are not that many other options left."

The findings provide some of the clearest evidence that emissions of carbon dioxide and other so-called greenhouse gases can significantly change the dynamics and even the dimensions of the atmosphere, Dr. Emmert said. "We're impacting the environment all the way out to space," he added. Earlier studies by American and European researchers had found spotty evidence of the cooling and contraction, but the new analysis appears to cement the case, several experts not involved in the latest study said. "This is pretty compelling evidence for the effects of carbon dioxide," said Dr. Gerald M. Keating, a research scientist at George Washington University and the Langley Research Center of NASA, who made some of the original measurements of the phenomenon. "The whole structure of the upper atmosphere will change as this effect becomes stronger and stronger."

The changes in density were measured in the thermosphere, a layer of hot, rarefied air 60 to 400 miles above the surface, including the region where many satellites and spacecraft orbit. The anticipated effects on spacecraft and debris come through the relationship between the density of air and the drag it exerts. The lower the density of the thermosphere, the less drag on everything that orbits there, from the International Space Station to old rocket casings.

Dr. Emmert said a 50 percent decline in density, by reducing friction, could halve the rate of descent of satellites and debris, extending the life of orbiting equipment but also hazards. The thermosphere changes were detected by sifting precise Air Force records on the orbits of thousands of objects like satellites, meteors and spent rocket sections. The researchers focused on 27 objects that had records dating from the 1960's and crisscrossed the thermosphere in a variety of orbits, assessing orbital changes compared with changes in the sun and other factors.

Dr. Keating's study in 2000 looked at five objects. British researchers in the late 1990's used measurements of the ionosphere, the blanket of charged particles in the thermosphere, to estimate that that part of the atmosphere was contracting, probably from building greenhouse gases. But those measurements sample only a small portion of the atmosphere, experts said.

The link between carbon dioxide and high-altitude cooling is much clearer than the gas's link to warming near the surface, scientists said, because the highest atmospheric layer, barely more than a scattering of ions and molecules, sees no confounding influence from clouds, weather systems and oceans.

"When the composition of gases changes, their radiation effects show up quickly," said Dr. John R. Christy, director of the Earth System Science Center at the University of Alabama. Near the surface, the influences driving temperature shifts are far harder to discern. "Down here," Dr. Christy said, "energy transfers are affected by a lot of other things."

Correction: Feb. 13, 2004

An article in Science Times on Tuesday about research on evidence that the outermost layer of the atmosphere is cooling and contracting included an incorrect reference to orbiting objects studied. They did not include meteors.

46) MASS EXTINCTIONS IN PERU DUE TO CLIMATE CHANGE

Science aGOGO

February 9, 2004

Internet: http://www.scienceagogo.com/news/20040109022910data_trunc_sys.shtml

The new century may bring hundreds or even thousands of plant and animal extinctions to the Andes Mountains of Peru according to new research by Florida Institute of Technology Paleo-Ecologist Mark Bush. Bush's findings, chronicled in the journal Science, result from the study of the first continuous record of Andean climate change during the past 48,000 years. The Andes region of Peru is one of the most biologically diverse areas on the planet. In the article, Bush and fellow researchers Miles Silman of Wake Forest University and Florida Tech graduate student Dunia Urrego, discovered a possible reason for this remarkable biodiversity by comparing North and South American warming over many millennia.

At the end of the ice age, North America and the northern hemisphere in general, experience an abrupt warming of 5 degrees Celsius over two centuries. Bush expected to find the same results in South America. What he found instead was a much more gradual warming, 5 degrees over several millennia. This discovery may explain why there was less extinction in the Andes coming out of the last ice age, as well as why the area may be particularly susceptible to global warming.

"According to the International Panel on Climate Change, we can expect a minimum of one to two degrees Celsius increase in temperature in the Andes by the end of this century," Bush said. "Our record shows that climate change of this kind has never happened in the past 48,000 years. It is not a natural phenomenon."

Bush predicts that species that can migrate readily, such as birds and butterflies, may be the least affected, whereas species that are less mobile will be vulnerable to extinction. Playing into the equation will be the continuing presence of man. Farmers will be able to extend their agricultural activities further upslope into what is now cloud forest. The result will be an increasingly fragmented landscape that presents barriers to the dispersal of wildlife, trapping them in increasingly inhospitable climatic conditions.

47) CLOUD FORESTS, WATER SOURCE TO MILLIONS, FACE RISK

Reuters

February 9, 2004

Internet: <http://www.alertnet.org/thenews/newsdesk/B378157.htm>

KUALA LUMPUR, Feb 9 (Reuters) - A warming climate threatens tropical mountain forests that strip moisture from clouds and supply water to millions of people in Africa and Latin America, experts said in a U.N. report released on Monday. Cloud forests in equatorial and sub-equatorial regions of Latin America, Africa and Asia, account for just 2.5 percent, or 400,000 sq km (154,000 sq miles) of world tropical forest cover. But the benefits are felt way beyond their boundaries.

Clean and predictable water supplies from such forests in La Tigra National park in Honduras meet 40 percent of demand in the capital Tegucigalpa, says the report, 'Cloud Forest Agenda'.

The capitals of Ecuador, Mexico and Tanzania are other cities that consume cloud forest water. But the habitats could disappear because of a range of factors including a warmer climate, predicted by scientists as the result of increased atmospheric concentrations of sunlight-trapping gases released from fossil fuel burning.

"A unique feature of these forests is that they can capture moisture through condensation from the clouds, which also makes these habitats very sensitive to climate change," said Philip Bubb, one of the co-authors of the report, in a statement. The risk was both to water supplies and the dozens of species found only in such habitats, he said. Other risks include forest clearance for farming, fires, road construction and the introduction of species from other parts of the world.

Their combined effects could mean the loss of huge concentrations of unique mammal, bird and frog species, said the report, released as 2,000 delegates began a two-week meeting in Kuala Lumpur intended to stem the rate of global extinction. Officials from 188 countries and other parties to the Convention on Biological Diversity (CBD) will look at ways to curb the effects of climate change on species and promote greater protection for forests, river systems, oceans and mountains.

The meeting will also see developing countries -- home to the bulk of the world's species -- negotiate with developed ones over how they can benefit from protecting their assets and providing access to them. Opening the meeting, Klaus Toepfer, chief of the United Nations Environment Programme, said efforts to slow global species loss and to cut poverty must go hand in hand. "For the poorest of the poor, nature is wealth," he said. "We know that to have sustainable development, we have to concentrate on the financial capital, on the human capital but also the nature capital."

48) EARTH COULD WIN GLOBAL WARMING BATTLE, BUT MAY LOSE SPECIES, SAY SCIENTISTS

Eddie weekly summaries

February 6, 2004

Internet:

http://www.edie.net/gf.cfm?L=left_frame.html&R=http://www.edie.net/news/Archive/8021.cfm

If the earth could do it once, 180 million years ago, it can do it again. That's the conclusion UK scientists studying the earth's response to global warming have come to - but they warn many species became extinct over the recovery period and may well do again. Researchers at the Open University, Milton Keynes, believe they have discovered new evidence, which shows how the earth underwent and recovered from severe global warming during dinosaur times.

Their results are published in the current edition of the journal *Geology*. A large amount of volcanic activity, which released greater amounts of carbon dioxide, in Southern Africa and Antarctica caused a gradual warming of the earth at this time. This in turn caused the destabilisation of methane on sea beds, which rapidly transformed into CO₂, causing severe global warming - increasing temperatures by around 5°C, Dr Anthony Cohen lead researcher on the study told edie.

He said this intensive rise in temperatures created the conditions for chemical reactions to take place quicker - with a 5°C rise allowing reaction times to increase five fold. "Our new evidence has shown that this warming caused the weathering of rocks on the Earth's surface to rapidly increase by at least 400%. This intense rock weathering effectively put a break on global warming through chemical reactions that consumed the atmosphere's extra CO₂," he explained. However, the scientists do not know at what point the earth will start to self regulate or how long it takes to beat the conflict with global warming.

Dr Cohen also warns that certain creatures did not live to see the regulation of the earth's climate - for instance 84% of marine bivalve species became extinct, as did some species of dinosaur. He pointed to a study published earlier this year for potential effects of climate change on today's species. But surely naturally occurring global warming would direct different behaviour from the earth than the man-made conditions we experience today would. Not so say Dr Cohen. "It doesn't really matter what sets the earth's reaction off, its response may well be the same. The difficulty we have is predicting when the tipping of the scales will happen," he said.

49) CLIMATE CHANGE BIGGER THAN TERROR FIGHT: ANDERSON

The Star

February 3, 2004

Internet: http://www.thestar.com/NASApp/cs/ContentServer?pagename=thestar/Layout/Article_Type1&c=Article&cid=1075849417704&call_pageid=968332188492&col=968705899037

VICTORIA - Climate change is a greater international enemy than terrorism, Environment Minister David Anderson said today. Prime Minister Paul Martin's throne speech signals that the Liberal government will make the battle against climate change one of its top priorities, Anderson said in a telephone interview from Ottawa. "Current preoccupation is with terrorism, but in the long term climate change will outweigh terrorism as an issue for the international community," he said. Since the Sept. 11, 2001, terrorist attacks in the United States that killed almost 5,000 people, Canada has passed a new security law, sent troops to Afghanistan and tightened security at border points and airports.

U.S. President George Bush has consistently said terrorism is the top issue facing the world's safety and security. "Terrorism is very important," said Anderson. "I don't want to minimize the importance of terrorism, but over the century or two centuries ahead, climate change is going to become one of the most, and probably will be the overwhelming international issue." He said he welcomes the government's foreign policy review, suggesting a review of environmental policy will become part of that exercise. Canada will remain on the international environmental stage with Martin's commitment to meet the climate change targets of the Kyoto Protocol, Anderson said.

"All the doubters should now get down to figuring out a way to achieve the target and not spend time trying to figure out ways to avoid it," he said. "We're going to meet that target and it's not that difficult. All we have to do is get going."

Canada must cut global warming greenhouse gas emissions to 1990 levels, less six per cent, by 2012. The Kyoto Protocol was ratified by former prime minister Jean Chrétien's Liberal government. Anderson was environment minister for much of the Kyoto debate. Anderson said the throne speech looks beyond the coming election and focuses on the next decade. He said he wasn't predicting an election win, but "we're looking so good in the polls. "You're never sure, but I will say there's no need to have a speech from the throne directed to the election," he said. Martin, who

promised to cure Western alienation, never directly mentioned the West in his speech, but Western Canada, and especially British Columbia will benefit greatly from the promised initiatives, Anderson said. "He clearly made the decision not to mention provinces, not to mention individual cities, and to talk generically about the nation as a whole," he said.

50) NORTH AMERICA, EUROPE MAY COOL IN WARMER WORLD

Daily Times

January 26, 2004

Internet: http://www.dailytimes.com.pk/default.asp?page=story_26-1-2004_pg6_10

Parts of Europe and North America could get drastically colder if warming Atlantic ocean currents are halted by a surprise side-effect of global warming, scientists said on Wednesday. The possible shut-down of the Gulf Stream is one of several catastrophic changes — ranging from collapses of fish stocks to more frequent forest fires — that could be triggered by human activities, they said in a book launched in Sweden. "In the worst case it (the Gulf Stream) could shut down... it might even happen this century," said Stefan Rahmstorf of the Potsdam Institute for Climate Impact Research in Germany. "This would trigger a regional cooling, but not an Ice Age."

Climate models indicated a surge of fresh water into the North Atlantic from a melting of northern glaciers caused by global warming could stop the current that sweeps warm waters from the Gulf of Mexico towards Europe. "The Eastern coast of Canada and the United States would also be affected. This is sometimes wrongly perceived as a European problem by American politicians," he told Reuters. He said the Gulf Stream had collapsed about 20 times in the past 100,000 years, most recently at the tail of the last Ice Age about 8,000 years ago after an abrupt melting of icecaps. If the Gulf Stream stopped, average temperatures might fall by 5-10 Celsius (10-20F) in Scandinavia or by 3-4C in Germany.

By contrast, global warming, widely blamed on emissions of gases like carbon dioxide from cars and factories, is expected to raise global average temperatures by 1.4-5.8C by 2100. The U.N. Kyoto Protocol on limiting global warming hinges on Russia's yes or no. Moscow is undecided and President Vladimir Putin said his country might benefit from warmer world weather, though a halt of Gulf Stream would make northwest Russia colder. Rahmstorf's study was included in a new book, "Global Change and the Earth System: a planet under pressure", which looks at the impact of the surge in the human population to six billion people, ranging from stripped forests to rising temperatures. —Reuters.

51) ISLAND NATIONS AND CLIMATE CHANGE

Environment News Service

January 26, 2004

Internet: <http://www.oneworld.net/article/view/77593/1/>

NASSAU, Bahamas, January 26, 2004 (ENS) - A baby who was injured during Cyclone Heta in the South Pacific island country of Niue died today in an Auckland, New Zealand hospital after clinging to life for three weeks. His death coincides with the start of a meeting here of stakeholders from small island states around the world who will try to devise strategies to prevent deaths like his

due to the negative effects of global warming--extreme storms, droughts and the submergence of their lands.

On January 7, Cyclone Heta virtually wiped out island infrastructure in Niue, the smallest nation in the world. The worst cyclone in memory, a category 5 storm packing winds of 184 miles per hour, demolished the capital of the tiny South Pacific island state. One other person died and several others were injured. To boost Niue's tiny population of some 1,700 individuals, Niuean Premier Young Vivian said last week that he plans to "import" some of the 10,000 people who crowd the low-lying South Pacific atolls of Tuvalu. He said resettlement negotiations between the two small island states began last October.

Tuvalans may see cyclone-prone Niue as a good place to live. Global warming threatens to submerge Tuvalu, and current residents are facing threats to their fresh water sources and crops caused by rising sea levels. The Intergovernmental Panel on Climate Change has forecast a rise in sea level for Tuvalu of up to 88 centimeters in the next century. Still, in 2000 Australia rejected a request from Tuvalu to take part in a resettlement program for its residents. Small island developing states are particularly vulnerable to natural hazards, as well as to the negative impacts of global change, whether these are environmental, cultural, social or economic, according to the UN Educational, Scientific and Cultural Organization (UNESCO), which is involved in the stakeholders' strategy sessions.

As part of the international strategy to address these issues, defined during the 2002 World Summit on Sustainable Development, a meeting of some 300 stakeholders from island states in the Caribbean, the Mediterranean, South China Seas, and the Pacific, Atlantic and Indian Oceans is taking place this week at the Radisson Cable Beach and Golf Resort in Nassau. This week's meeting will prepare the agenda for a major ministerial meeting on small islands in Mauritius later this year. The strategizing is based on a Programme of Action agreed to 10 years ago in Barbados which centers around an internationally understood "special case" for sustainable development in island states.

This case puts forward the economic, social, and environmental vulnerabilities of island states and their reduced capacity to cope compared with other parts of the globe. The South Pacific is not the only island group threatened by the negative impacts of climate change. Sea level rise as a result of global warming is predicted to cause problems for all coastal states, but in the Indian Ocean the Maldives islands are at risk of complete submergence. And, UNESCO points out, as tourism becomes the economic mainstay of many small islands, unchecked development brings the risk of environmental degradation and the loss of biodiversity, indigenous knowledge, customs and languages.

At the ministerial meeting in Mauritius, scheduled for August 30 to September 3, the focus will be on the vulnerabilities of small island developing states. Extreme storms stirred up by a warming climate place the small islands in their path at greater risk than ever before. Russell Howorth, acting director of the South Pacific Applied Geoscience Commission said Thursday that not only is a category five cyclone like Heta not the norm for this region, but that the path that Heta took, as well as its impact were unusual. "More often, cyclones impact up to three or at the most, four countries, severely impacting not all," he said. "In the case of Heta, it has caused severe damage in five countries - American Samoa, Cook Islands, Niue, Samoa and Tonga."

The international review process taking place in Nassau this week and in Mauritius this August can help national island governments determine a way to establish comprehensive hazard assessment

and risk management practices. Together with other UN institutions, UNESCO is working with local stakeholders to address the challenges faced by small islands in all regions, such as a shortage of freshwater, coastal erosion, isolation, high communication and energy cost, as well as threats to their unique, but fragile biological diversity. UNESCO says that other of the agency's activities focus on issues that are familiar to industrializing countries everywhere, yet are often amplified in small, remote islands, such as the empowerment of young people, school dropout, growing crime and violence, HIV/AIDS education, using new information and communication technologies, and promoting cultural diversity.

And on Niue, the drinking water has been restored and the electricity is flowing once again, and a boatload of carpenters arrived last week from Tahiti to help rebuild the homes, offices, and the island's one hospital. New Zealand will provide \$5 million for reconstruction work on Niue. Other donors, including Australia and France, have also helped the island nation to recover. Premier Young told the Australian Broadcasting Corporation on Thursday, "This certainly demonstrates to us that people do care for the smallest nation in the world." But next year the planet's climate may be warmer if little is done to curb greenhouse gases, and the future storms that roar across the Pacific may be even more devastating to Niue than Cyclone Heta.

52) SMALL ISLAND STATES HOPE TO RESURFACE ON WORLD STAGE

IPS

January 22, 2004

Internet: <http://www.ipsnews.net/africa/interna.asp?idnews=22044>

UNITED NATIONS, Jan 22 (IPS) - The world's small island developing countries are preparing to launch sustainable development for a second time. Ten years ago, in the aftermath of the 1992 Earth Summit in Rio, United Nations member states agreed on a plan to help the small island developing states (SIDS) make economic progress in an ecologically friendly manner. The Barbados Programme of Action (BPoA) specified a variety of measures to be implemented on issues such as climate change, waste management, energy resources, biodiversity and the development of human capacity.

But many of the plans were never put into action. "Since the adoption of the BPoA in 1994, SIDS have become even more vulnerable on all three pillars of sustainable development" (economic, social and environmental development), said Mohammed Arrouchi on behalf of the largest coalition of developing countries, the Group of 77, during last year's session of the U.N. General Assembly. According to Anwarul K. Chowdhury, the SIDS were unable to implement the programme because of their smallness, remoteness and, hence, a lack of capacity. "The development of a country is the primary responsibility of that country", said the secretary general of the upcoming conference to review the BPoA, but "while the countries start warming up to implement their role, it is the international organisations and the multilateral bodies which can really trigger (development)."

In his speech, Arrouchi criticised the international community for "inconsistent and inadequate" aid to the island states, while the SIDS, he said, were still committed to the plan of action. Meanwhile their economic prospects have deteriorated with declines in commodity prices, loss of traditional markets and falling levels of development aid and foreign direct investment, added Arrouchi. Official development aid (ODA) to SIDS fell from 2.3 million dollars in 1994 to 1.7 million dollars in 2001. "We can certainly say that there has been tremendous efforts on behalf of the small

islands", said Espen Ronneberg, inter-regional adviser for SIDS at the U.N. Department of Economic and Social Affairs. He adds, "there is a certain level of donor support, but it is not what we had expected".

The 'Barbados +10' review will take place this year from Aug. 30 to Sep. 4 in Mauritius. "The meeting will be a wonderful opportunity for a resurgence of the interest for the SIDS", Chowdhury told reporters at a press conference in New York. "These countries get marginalized in global attention." From Jan. 26 to 30, SIDS' representatives will meet in Bahamas, to agree on a strategic paper for the Mauritius conference. SIDS face the same problems as other countries struggling for a better life for their people, but they get an additional set of challenges. "Most of these countries are tucked into various corners of the world, very far away from the major trading centres, major centres of activities of the world", said Chowdhury.

If the states consist of several islands, they might also be dispersed. For example, a flight between the two main Marshall Islands takes about 50 minutes. These transportation restraints further reduce their place in international markets. Also, many small islands depend on single commodities, such as coffee, sugar, bananas or fish, as their main export and money-earner. Because of this dependence, any change to the market of those products creates a huge economic upheaval. "We generally associate (the SIDS) with their idyllic nature and beauty, but we do not consider how fragile their economies and eco-systems are, how vulnerable they are to natural disasters", said Chowdhury.

For example, in the first week of January a cyclone hit the South Pacific island of Niue. U.N. officials estimate that the resources to clean up and rebuild the island will exceed by three times the value of goods produced on Niue annually. Thousands of kilometres away, if the sea level continues to rise at its current speed -- 10-20 cm in the past 100 years -- Malé, capital of the Indian Ocean state of Maldives, will disappear by 2100, according to projections. Even in the best-case scenario, only one-half of the city will be left. While some scientists argue no conclusive evidence exists that the sea level is rising, most researchers believe there is an increase, due to climate change, the global warming of air and sea. SIDS are victims of that latter process, to which they contribute little. "If you reduced all the emissions of greenhouse gases from all the small islands to zero, it still would not make any difference in the global picture", said Ronneberg, adding that the small islands contribute just 0.12 per cent of global greenhouse gas emissions.

The largest polluter is the United States, which has refused to ratify a global treaty, the Kyoto protocol, on cutting emissions. Island states also face new challenges. "When the Barbados programme was adapted in 1994, two areas -- which have now emerged as major areas of interest and concern -- did not exist in that fashion. One is HIV/AIDS", said Chowdhury. "The second area is information and communication technology". While HIV/AIDS is a growing problem, especially in the Caribbean, the Internet might be one of the first products of globalisation to benefit SIDS, he adds. "It is felt that the remoteness could be addressed through information technology", Chowdhury says, suggesting that a potential concrete benefit is E-trade -- the global trade in services by Internet. But access to the World Wide Web is still uncommon on many of the islands.

Another promising sector is renewable energy. Most of the SIDS must import petroleum for transport and electricity generation, but at the same time they have a huge potential for wind and solar power. A car mechanic on the South Pacific island of Vanuatu recently devised a way to use coconut oil to power automotive diesel engines, producing a "clean" energy that might reduce greenhouse gases and also provide a great opportunity for the local economy. (END/2004).

53) SKI RESORTS GLOOMY ON GLOBAL WARMING

iAfrica.com

January 20, 2004

Internet: <http://travel.iafrica.com/bulletinboard/297403.htm>

Global warming and global ageing are clouding the future of Europe's ski resorts, which account for two-thirds of the worldwide skiing market, ringing in an annual turnover of 18 to 20 billion euros. "There is a long list of threats facing the French winter sports market," said Eric Guilpart, marketing manager for the Compagnie des Alpes, which has been looking at future economic prospects for the resorts. "Climate change, population ageing and the opening of markets are three of the most important factors," he said.

Over the past decade, resorts across Europe have expressed increasing concern about the early melting of the snow cover. The Swiss Association of Winter Sports Resorts says that in the past 20 years the length of the season in the Swiss mountains has been shortened by 12 days due to the increase in temperature. In the French city of Grenoble, the Snow Research Centre said that a 1.8-degree increase in temperature in France would shorten the annual length of snow cover at above 1500 metres to 135 days from 170 (minus 20 percent) in the northern Alps, and to 90 days from 120 (minus 25 percent) in the southern Alps.

INNOVATE TO SURVIVE

"Resorts are going to have to prepare for some radical changes in the 30 to 40 years to come," said Guilpart. "Though they may be unable to 'transport' villages higher up, they will have to be able to take clients to places where there is snow, by linking low-lying resorts to slopes higher up using mass carrier systems." Resort managers, as well as manufacturers of skiing equipment, are having to adapt to the change such as by levelling slopes and planting grass there to enable skiers to practise the sport with a thin cover of only 20 centimetres of powder, instead of the current standard requirement of 70 centimetres to one metre of snow.

As the population ages, the percentage of ski buffs is falling. In France for example 17 percent of 20-year-olds take part in winter sports against only one percent of 60-year-olds. On the other hand, the fact that more and more people have learnt how to ski in recent years will somewhat offset ageing. In 1975, 4.8 percent of skiers were aged between 40 and 49, but a decade from now 14 percent of that same age group is expected to be on the slopes. "In 2015 we expect that 20 percent of the skiers will be aged over 50", said Guilpart. Meanwhile winter resorts in Austria, France, Italy and Switzerland — which account for three-quarters of Europe's skiing — are continuing efforts to attract increasing numbers of visitors from countries without major resorts, such as Britain, the Benelux nations, Ukraine and the Baltic nations.

And as fast rail services are developed across the continent, some 35 to 40 million skiers, or more than one of every 10 Europeans, can now access the slopes in a matter of hours. With increased leisure time and improved economic conditions in eastern and central Europe, winter sports moreover are becoming increasingly accessible to a wider number of people. One positive factor, said Guilpart, was that skiing was "one of the rare economic sectors to remain free of new competition. Apart from China, there are no new resorts being set up in the world." The US market has remained stable for more than 15 years while the Japanese market, which once accounted for a quarter of the global ski market, has crumbled due to the economic crisis in Asia.

54) EARTH 'ENTERING UNCHARTED WATERS'

BBC

January 20, 2004

Internet: <http://news.bbc.co.uk/2/hi/science/nature/3411053.stm>

The Earth has entered a new era, one in which human beings may be the dominant force, say four environmental leaders. In the International Herald Tribune, they say the uncertainty, magnitude and speed of change in many of the Earth's systems is without precedent. The four, who include Margot Wallstrom, the European environment commissioner, say uncertainty cannot excuse inaction. They believe humanity may cross some critical thresholds unawares, setting off changes which cannot be reversed.

CHANGE AT A GALLOP

The other authors are Professor Bert Bolin, founding chair of the Intergovernmental Panel on Climate Change; Professor Paul Crutzen, winner of the 1995 Nobel prize for chemistry; and Dr Will Steffen, director of the International Geosphere-Biosphere Programme (IGBP). Their article, The Earth's Threatened Life-Support System: A Global Wake-Up Call, marks the publication of an IGBP book, Global Change And The Earth System: A Planet Under Pressure. They write: "Our planet is changing fast. Change is a fact of life, but in recent decades many environmental indicators have moved outside the range of variation of the last half million years... "It is the magnitude and rate of human-driven change that are most alarming. "The human-driven increase in atmospheric carbon dioxide is nearly 100 parts per million and still growing - already equal to the entire range experienced between an ice age and a warm period such as the present.

"And this human-driven increase has occurred at least 10 times faster than any natural increase in the last half million years." They envisage the possibility, beyond 2050, of "rapid regional climate change, as would be caused by changes in ocean circulation in the North Atlantic, and irreversible changes, such as the melting of the Greenland ice sheet and the concomitant sea-level rise of six metres".

NO COMPASS

The authors write: "The Earth has entered the so-called Anthropocene - the geologic epoch in which humans are a significant and sometimes dominating environmental force. "Records from the geological past indicate that never before has the Earth experienced the current suite of simultaneous changes: we are sailing into planetary terra incognita." They argue for a precautionary approach, partly because natural systems can flip very rapidly from one stable state to another.

The writers say: "We are unsure of just how serious our interference with Earth system dynamics will prove to be, but... there are significant risks of rapid and irreversible changes to which it would be very difficult to adapt." Dr Steffen told BBC News Online: "It would take about a millennium for the Greenland ice sheet to melt. But we could reach the trigger point that makes the process unstoppable within the next century. "The book makes the point that this is global change - it looks at the range of effects, at how they're happening simultaneously, and at how they're reinforcing each other. "It's a synthesis of the science, the best consensus - and it honestly acknowledges the unknowns."

STATEMENTS & EDITORIALS

55) ENVIRONMENTAL REFUGEES: WHEN THE SOIL DIES AND THE WELL DRIES by Lester R. Brown

IHT

February 13, 2004

Internet: <http://www.iht.com/articles/129497.html>

The writer is president of the Earth Policy Institute.

WASHINGTON In mid-October 2003, Italian authorities discovered a boat carrying refugees from Africa bound for Italy. Adrift for more than two weeks and without fuel, food and water, many of the passengers had died. At first the dead were tossed overboard. But after a point, the remaining survivors lacked the strength to hoist the bodies over the side. The refugees were believed to be Somalis. We do not know whether they were political, economic or environmental refugees.

Failed states like Somalia produce all three. Somalia is an ecological basket case, with overpopulation, overgrazing and desertification destroying its pastoral economy. Although the modern world has extensive experience with people migrating for political and economic reasons, we are now seeing a swelling flow of refugees driven from their homes by environmental pressures. Modern experience with this phenomenon in the United States began when nearly three million "Okies" from the southern Great Plains left during the Dust Bowl of the 1930s, many of them moving to California.

Today, bodies wash ashore daily in Italy, France and Spain, the result of desperate acts by desperate people in Africa. And each day hundreds of Mexicans risk their lives trying to cross the U.S. border, many after abandoning plots of land too small or too eroded to make a living. Another flow of environmental refugees comes from Haiti, where the land is denuded of vegetation and the soil is washing into the sea. America's Dust Bowl refugees were early examples of environmental migration, but their numbers will pale compared with what lies ahead if we continue with business as usual. Among the new refugees are people being forced to move because of wells running dry.

Thus far the evacuations have been of villages, but eventually whole cities might have to be relocated, such as Sana, the capital of Yemen, or Quetta, the capital of Pakistan's Baluchistan Province. The World Bank expects Sana, where the water table is falling by six meters (20 feet) a year, to have exhausted its remaining water supply by 2010. Quetta, originally designed for 50,000 people, now has 1 million inhabitants, all of whom depend on 2,000 wells pumping water deep from underground, depleting what is believed to be a fossil or nonreplenishable aquifer. Like Sana, Quetta may have enough water for the rest of this decade, but then its future is in doubt.

Most of the nearly three billion people to be added to the world's population by 2050 will live in countries where water tables are already falling and where population growth swells the ranks of those sinking into hydrological poverty. Water refugees are likely to become commonplace. Villages in northwestern India have been abandoned because overpumping had depleted the local aquifers and villagers could no longer reach water. Millions of villagers in northern and western China and in parts of Mexico may have to move because of a lack of water. Spreading deserts are also displacing people. In China, where the Gobi Desert is growing by 10,400 square kilometers (4,000 square miles) a year, the refugee stream is swelling. A photograph in *Desert Witness*, a book on desertification by the Chinese photographer Lu Tongjing, shows what looks like a perfectly

normal village in the western reaches of Inner Mongolia - except for one thing. There are no people. Its 4,000 residents were forced to leave because the aquifer was depleted, leaving them with no water.

In Iran, villages abandoned because of spreading deserts already number in the thousands. In the vicinity of Damavand, a small town within an hour's drive of Tehran, 88 villages have been abandoned. In Nigeria, 3,500 square kilometers of land become desert each year, making desertification the country's leading environmental problem. Another source of refugees, potentially a huge one, is rising seas. The Intergovernmental Panel on Climate Change, in a study in early 2001, reported that the sea level could rise by nearly one meter (3 feet) this century. But research completed since then indicates that ice is melting much faster than earlier reported, suggesting that the rise may be much higher.

Even a one-meter rise in sea level would inundate half of Bangladesh's rice-growing land, forcing the relocation of 40 million people. Other Asian countries with rice-growing river floodplains, including China, India, Indonesia, Pakistan, the Philippines, South Korea, Thailand and Vietnam, could bolster the mass exodus from rising seas to the hundreds of millions. The rising flow of environmental refugees is yet another indicator that modern civilization is out of sync with the earth's natural support systems. Among other things, it tells us that we need a worldwide effort to fill the family planning gap and to create the social conditions that will accelerate the shift to smaller families, a global campaign to raise water productivity, and an energy strategy that will cut carbon dioxide emissions and stabilize the earth's climate.

56) STATEMENT OF ENERGY SECRETARY SPENCER ABRAHAM REGARDING UNITED STATES LEADERSHIP ON GLOBAL CLIMATE CHANGE

US Newswire

February 13, 2004

Internet: <http://releases.usnewswire.com/GetRelease.asp?id=148-02132004>

WASHINGTON, Feb. 13 /U.S. Newswire/ -- U.S. Energy Secretary Spencer Abraham released the following statement on the Administration's global climate change initiatives:

"The Bush Administration is committed to a comprehensive, innovative program of domestic and international initiatives to reduce greenhouse gas emissions. Those who question the administration's commitment to addressing global climate change do not fully appreciate the global benefit of the scientific and technological investments the U.S. has made and is making through a variety of programs. The U.S. takes the issue of global climate change very seriously and is leading the world in investments, several billions of dollars each year, to understand and address it.

"The United States is a Party to the United Nations Framework Convention on Climate Change, which has the ultimate goal of stabilizing greenhouse gas concentrations in the atmosphere at a level that prevents dangerous human interference with the climate system. This can be accomplished in one of two ways -- through short-term excessive regulations like those that would be required for U.S. compliance with the Kyoto Protocol, or through the development of new low- or zero-emissions energy technologies that will allow us to make larger long-term reductions in emissions while maintaining economic growth.

"We have chosen the latter approach: the Bush Administration will spend approximately \$4 billion during this fiscal year on climate change science and technology R&D and has requested increases in key investments in FY 2005. President Bush also supports more than \$4 billion in tax incentives to spur the use of clean, renewable energy and energy-efficient technologies. "For FY 2005, the Bush Administration has requested increases of \$115 million, or 50 percent, for U.S. participation in four international climate change technology initiatives: the Hydrogen Fuel Initiative, Carbon Sequestration, Generation IV Nuclear Systems, and the International Thermonuclear Experimental Reactor. International cooperation is a key aspect of our technology approach, and we are pleased to be partners with the U.K. and/or the European Union in four of our most important multilateral efforts to address the risk of climate change. We have also negotiated climate change agreements with 14 countries or regional groups that together account for more than 70 percent of global greenhouse gas emissions.

"As we work on developing these long-term breakthrough energy technologies, we are also taking action in the near-term. Two years ago, President Bush set an aggressive national goal of reducing greenhouse gas intensity 18 percent by 2012. Since then we have vigorously pursued that goal through nearly 60 Federal programs, including: DOE's Climate VISION program, which involves voluntary industry-wide commitments to reduce emissions in 12 energy-intensive sectors, and EPA's Climate Leaders, which involves 50 major companies that have developed comprehensive climate change strategies with corporate-wide emissions reduction goals. The USDA has also modified its farm conservation programs to encourage farmers to set aside farmland for carbon sequestration. "This Administration is proud of our Nation's leadership in climate change science and technology, and we intend to continue leading the world in our efforts."

57) CLIMATE COLLAPSE: The Pentagon's Weather Nightmare by David Stipp

Fortune

February, 9, 2004

Internet: <http://www.fortune.com/fortune/technology/articles/0,15114,582584-1,00.html>

Global warming may be bad news for future generations, but let's face it, most of us spend as little time worrying about it as we did about al Qaeda before 9/11. Like the terrorists, though, the seemingly remote climate risk may hit home sooner and harder than we ever imagined. In fact, the prospect has become so real that the Pentagon's strategic planners are grappling with it.

The threat that has riveted their attention is this: Global warming, rather than causing gradual, centuries-spanning change, may be pushing the climate to a tipping point. Growing evidence suggests the ocean-atmosphere system that controls the world's climate can lurch from one state to another in less than a decade—like a canoe that's gradually tilted until suddenly it flips over. Scientists don't know how close the system is to a critical threshold. But abrupt climate change may well occur in the not-too-distant future. If it does, the need to rapidly adapt may overwhelm many societies—thereby upsetting the geopolitical balance of power.

Though triggered by warming, such change would probably cause cooling in the Northern Hemisphere, leading to longer, harsher winters in much of the U.S. and Europe. Worse, it would cause massive droughts, turning farmland to dust bowls and forests to ashes. Picture last fall's California wildfires as a regular thing. Or imagine similar disasters destabilizing nuclear powers such as Pakistan or Russia—it's easy to see why the Pentagon has become interested in abrupt climate change. Climate researchers began getting seriously concerned about it a decade ago, after

studying temperature indicators embedded in ancient layers of Arctic ice. The data show that a number of dramatic shifts in average temperature took place in the past with shocking speed—in some cases, just a few years.

The case for angst was buttressed by a theory regarded as the most likely explanation for the abrupt changes. The eastern U.S. and northern Europe, it seems, are warmed by a huge Atlantic Ocean current that flows north from the tropics—that's why Britain, at Labrador's latitude, is relatively temperate. Pumping out warm, moist air, this "great conveyor" current gets cooler and denser as it moves north. That causes the current to sink in the North Atlantic, where it heads south again in the ocean depths. The sinking process draws more water from the south, keeping the roughly circular current on the go. But when the climate warms, according to the theory, fresh water from melting Arctic glaciers flows into the North Atlantic, lowering the current's salinity—and its density and tendency to sink. A warmer climate also increases rainfall and runoff into the current, further lowering its saltiness. As a result, the conveyor loses its main motive force and can rapidly collapse, turning off the huge heat pump and altering the climate over much of the Northern Hemisphere.

Scientists aren't sure what caused the warming that triggered such collapses in the remote past. (Clearly it wasn't humans and their factories.) But the data from Arctic ice and other sources suggest the atmospheric changes that preceded earlier collapses were dismayingly similar to today's global warming. As the Ice Age began drawing to a close about 13,000 years ago, for example, temperatures in Greenland rose to levels near those of recent decades. Then they abruptly plunged as the conveyor apparently shut down, ushering in the "Younger Dryas" period, a 1,300-year reversion to ice-age conditions. (A dryas is an Arctic flower that flourished in Europe at the time.)

Though Mother Nature caused past abrupt climate changes, the one that may be shaping up today probably has more to do with us. In 2001 an international panel of climate experts concluded that there is increasingly strong evidence that most of the global warming observed over the past 50 years is attributable to human activities—mainly the burning of fossil fuels such as oil and coal, which release heat-trapping carbon dioxide. Indicators of the warming include shrinking Arctic ice, melting alpine glaciers, and markedly earlier springs at northerly latitudes. A few years ago such changes seemed signs of possible trouble for our kids or grandkids. Today they seem portents of a cataclysm that may not conveniently wait until we're history.

Accordingly, the spotlight in climate research is shifting from gradual to rapid change. In 2002 the National Academy of Sciences issued a report concluding that human activities could trigger abrupt change. Last year the World Economic Forum in Davos, Switzerland, included a session at which Robert Gagosian, director of the Woods Hole Oceanographic Institution in Massachusetts, urged policymakers to consider the implications of possible abrupt climate change within two decades. Such jeremiads are beginning to reverberate more widely. Billionaire Gary Comer, founder of Lands' End, has adopted abrupt climate change as a philanthropic cause. Hollywood has also discovered the issue—next summer 20th Century Fox is expected to release *The Day After Tomorrow*, a big-budget disaster movie starring Dennis Quaid as a scientist trying to save the world from an ice age precipitated by global warming. Fox's flick will doubtless be apocalyptically edifying. But what would abrupt climate change really be like?

Scientists generally refuse to say much about that, citing a data deficit. But recently, renowned Department of Defense planner Andrew Marshall sponsored a groundbreaking effort to come to grips with the question. A Pentagon legend, Marshall, 82, is known as the Defense Department's "Yoda"—a balding, bespectacled sage whose pronouncements on looming risks have long had an

outsized influence on defense policy. Since 1973 he has headed a secretive think tank whose role is to envision future threats to national security. The Department of Defense's push on ballistic-missile defense is known as his brainchild. Three years ago Defense Secretary Donald Rumsfeld picked him to lead a sweeping review on military "transformation," the shift toward nimble forces and smart weapons.

When scientists' work on abrupt climate change popped onto his radar screen, Marshall tapped another eminent visionary, Peter Schwartz, to write a report on the national-security implications of the threat. Schwartz formerly headed planning at Royal Dutch/Shell Group and has since consulted with organizations ranging from the CIA to DreamWorks—he helped create futuristic scenarios for Steven Spielberg's film *Minority Report*. Schwartz and co-author Doug Randall at the Monitor Group's Global Business Network, a scenario-planning think tank in Emeryville, Calif., contacted top climate experts and pushed them to talk about what-ifs that they usually shy away from—at least in public.

The result is an unclassified report, completed late last year, that the Pentagon has agreed to share with *FORTUNE*. It doesn't pretend to be a forecast. Rather, it sketches a dramatic but plausible scenario to help planners think about coping strategies. Here is an abridged version: A total shutdown of the ocean conveyor might lead to a big chill like the Younger Dryas, when icebergs appeared as far south as the coast of Portugal. Or the conveyor might only temporarily slow down, potentially causing an era like the "Little Ice Age," a time of hard winters, violent storms, and droughts between 1300 and 1850. That period's weather extremes caused horrific famines, but it was mild compared with the Younger Dryas.

For planning purposes, it makes sense to focus on a midrange case of abrupt change. A century of cold, dry, windy weather across the Northern Hemisphere that suddenly came on 8,200 years ago fits the bill—its severity fell between that of the Younger Dryas and the Little Ice Age. The event is thought to have been triggered by a conveyor collapse after a time of rising temperatures not unlike today's global warming. Suppose it recurred, beginning in 2010. Here are some of the things that might happen by 2020: At first the changes are easily mistaken for normal weather variation—allowing skeptics to dismiss them as a "blip" of little importance and leaving policymakers and the public paralyzed with uncertainty. But by 2020 there is little doubt that something drastic is happening. The average temperature has fallen by up to five degrees Fahrenheit in some regions of North America and Asia and up to six degrees in parts of Europe. (By comparison, the average temperature over the North Atlantic during the last ice age was ten to 15 degrees lower than it is today.) Massive droughts have begun in key agricultural regions. The average annual rainfall has dropped by nearly 30% in northern Europe, and its climate has become more like Siberia's.

Violent storms are increasingly common as the conveyor becomes wobbly on its way to collapse. A particularly severe storm causes the ocean to break through levees in the Netherlands, making coastal cities such as the Hague unlivable. In California the delta island levees in the Sacramento River area are breached, disrupting the aqueduct system transporting water from north to south.

Megadroughts afflict the U.S., especially in the southern states, along with winds that are 15% stronger on average than they are now, causing widespread dust storms and soil loss. The U.S. is better positioned to cope than most nations, however, thanks to its diverse growing climates, wealth, technology, and abundant resources. That has a downside, though: It magnifies the haves-vs.-have-nots gap and fosters bellicose finger-pointing at America.

Turning inward, the U.S. effectively seeks to build a fortress around itself to preserve resources. Borders are strengthened to hold back starving immigrants from Mexico, South America, and the Caribbean islands—waves of boat people pose especially grim problems. Tension between the U.S. and Mexico rises as the U.S. reneges on a 1944 treaty that guarantees water flow from the Colorado River into Mexico. America is forced to meet its rising energy demand with options that are costly both economically and politically, including nuclear power and onerous Middle Eastern contracts. Yet it survives without catastrophic losses.

Europe, hardest hit by its temperature drop, struggles to deal with immigrants from Scandinavia seeking warmer climes to the south. Southern Europe is beleaguered by refugees from hard-hit countries in Africa and elsewhere. But Western Europe's wealth helps buffer it from catastrophe. Australia's size and resources help it cope, as does its location—the conveyor shutdown mainly affects the Northern Hemisphere. Japan has fewer resources but is able to draw on its social cohesion to cope—its government is able to induce population-wide behavior changes to conserve resources. China's huge population and food demand make it particularly vulnerable. It is hit by increasingly unpredictable monsoon rains, which cause devastating floods in drought-denuded areas. Other parts of Asia and East Africa are similarly stressed. Much of Bangladesh becomes nearly uninhabitable because of a rising sea level, which contaminates inland water supplies. Countries whose diversity already produces conflict, such as India and Indonesia, are hard-pressed to maintain internal order while coping with the unfolding changes.

As the decade progresses, pressures to act become irresistible—history shows that whenever humans have faced a choice between starving or raiding, they raid. Imagine Eastern European countries, struggling to feed their populations, invading Russia—which is weakened by a population that is already in decline—for access to its minerals and energy supplies. Or picture Japan eyeing nearby Russian oil and gas reserves to power desalination plants and energy-intensive farming. Envision nuclear-armed Pakistan, India, and China skirmishing at their borders over refugees, access to shared rivers, and arable land. Or Spain and Portugal fighting over fishing rights—fisheries are disrupted around the world as water temperatures change, causing fish to migrate to new habitats.

Growing tensions engender novel alliances. Canada joins fortress America in a North American bloc. (Alternatively, Canada may seek to keep its abundant hydropower for itself, straining its ties with the energy-hungry U.S.) North and South Korea align to create a technically savvy, nuclear-armed entity. Europe forms a truly unified bloc to curb its immigration problems and protect against aggressors. Russia, threatened by impoverished neighbors in dire straits, may join the European bloc. Nuclear arms proliferation is inevitable. Oil supplies are stretched thin as climate cooling drives up demand. Many countries seek to shore up their energy supplies with nuclear energy, accelerating nuclear proliferation. Japan, South Korea, and Germany develop nuclear-weapons capabilities, as do Iran, Egypt, and North Korea. Israel, China, India, and Pakistan also are poised to use the bomb.

The changes relentlessly hammer the world's "carrying capacity"—the natural resources, social organizations, and economic networks that support the population. Technological progress and market forces, which have long helped boost Earth's carrying capacity, can do little to offset the crisis—it is too widespread and unfolds too fast. As the planet's carrying capacity shrinks, an ancient pattern reemerges: the eruption of desperate, all-out wars over food, water, and energy supplies. As Harvard archeologist Steven LeBlanc has noted, wars over resources were the norm until about three centuries ago. When such conflicts broke out, 25% of a population's adult males usually died. As abrupt climate change hits home, warfare may again come to define human life.

Over the past decade, data have accumulated suggesting that the plausibility of abrupt climate change is higher than most of the scientific community, and perhaps all of the political community, are prepared to accept. In light of such findings, we should be asking when abrupt change will happen, what the impacts will be, and how we can prepare—not whether it will really happen.

In fact, the climate record suggests that abrupt change is inevitable at some point, regardless of human activity. Among other things, we should:

- Speed research on the forces that can trigger abrupt climate change, how it unfolds, and how we'll know it's occurring.
- Sponsor studies on the scenarios that might play out, including ecological, social, economic, and political fallout on key food-producing regions.
- Identify "no regrets" strategies to ensure reliable access to food and water and to ensure our national security.
- Form teams to prepare responses to possible massive migration, and food and water shortages.
- Explore ways to offset abrupt cooling—today it appears easier to warm than to cool the climate via human activities, so there may be "geo-engineering" options available to prevent a catastrophic temperature drop.

In sum, the risk of abrupt climate change remains uncertain, and it is quite possibly small. But given its dire consequences, it should be elevated beyond a scientific debate. Action now matters, because we may be able to reduce its likelihood of happening, and we can certainly be better prepared if it does. It is time to recognize it as a national security concern. The Pentagon's reaction to this sobering report isn't known—in keeping with his reputation for reticence, Andy Marshall declined to be interviewed. But the fact that he's concerned may signal a sea change in the debate about global warming. At least some federal thought leaders may be starting to perceive climate change less as a political annoyance and more as an issue demanding action.

If so, the case for acting now to address climate change, long a hard sell in Washington, may be gaining influential support, if only behind the scenes. Policymakers may even be emboldened to take steps such as tightening fuel-economy standards for new passenger vehicles, a measure that would simultaneously lower emissions of greenhouse gases, reduce America's perilous reliance on OPEC oil, cut its trade deficit, and put money in consumers' pockets. Oh, yes—and give the Pentagon's fretful Yoda a little less to worry about.

58) SOLUTION TO POWER NEEDS IS BLOWING IN THE WIND

NZ Herald

February 9, 2004

Internet: <http://www.nzherald.co.nz/storydisplay.cfm?storyID=3548027&thesection=news&thesubsection=dialogue>

John Blakeley, the convener of the Sustainable Energy Forum, is a research fellow at Unitec.

The Green Party has started a campaign to stop Project Aqua, Meridian Energy's planned \$1.2 billion hydro-electric project on the Lower Waitaki River. The Greens say they are not prepared to see one of our major remaining braided rivers turned into a "muddy trickle". For a number of years, the national electricity demand has increased on average by 2 per cent, which is about an extra 800

gigawatt hours (GWh) a year. Project Aqua will produce 3000 GWh in an average year and 2000 GWh in a very dry year. It will be built over at least six years. Meridian hopes the first power will be produced in 2008, and that the project will be completed around 2011.

From the above figures it is clear Project Aqua will provide a little under four years of the country's electricity demand growth in a normal year, so by itself it can only produce about half of the expected increase in demand over the next eight years. Nevertheless, combined with a number of other smaller electricity generation projects, it should be sufficient to cover our increasing need for power and maintain security of supply. The question that now needs to be addressed is: if as a result of the level of environmental opposition Aqua does not proceed expeditiously, what are the alternatives for maintaining security of supply up to around 2011?

The first and obvious solution is to remove the growth in electricity demand by a combination of more efficient energy use and conservation. It has frequently been said that there is the potential to remove 20 per cent of our consumption in this way but there is little evidence yet to suggest that consumer habits are changing. Much more encouragement of better insulation of new houses and installing solar water heating in new and existing houses would be a good place to start, as well as much wider use of energy-efficient light bulbs.

There has been some success in encouraging energy efficiency over the past three years, but this has been masked by other factors such as population growth, increasing use of household appliances and industrial growth, to the extent that there is no noticeable difference in the rate of electricity growth compared with previous years. Furthermore, if the Government's goals for increased economic growth are to be achieved over the next decade, there must be sufficient electricity available. Hydro power is still the predominant source (65 per cent) of our electricity generation but apart from Project Aqua what other future hydro options are there?

Hydro projects take a number of years to plan, design and gain environmental approvals, so it is unlikely that any other substantial hydro project could even be under construction within the next five years. For larger hydro projects over 50 megawatts capacity, a great deal of work has been done to investigate potential, but most of these projects have been discounted on technical feasibility, economic or environmental grounds. No larger hydro projects are being considered in the North Island. Further south, the potential seems to be limited to the Upper and Lower Clutha River and Project Aqua, plus perhaps a possibility or two on the West Coast.

The potential for smaller hydro projects is also surprisingly limited at anything like today's electricity price. Possibly the total buildable resource in a considerable number of smaller projects around the country is no more than 500MW, which is less than the capacity of Project Aqua.

There is potential for further geothermal projects to be developed in the North Island, providing environmental approvals can be obtained, but probably only a quite limited amount of increased generation will occur within the next eight years. As far as new fossil-fuel generation plants are concerned, work is already under way on a new 360MW combined-cycle gas-fired power station at Huntly. This will initially use natural gas previously destined for the much less efficient original Huntly station, which will increasingly have to use coal, with considerably increased greenhouse gas emissions as a result.

With the running down of the Maui gas field, two other new combined-cycle plants at Otahuhu and Stratford, for which environmental approvals were obtained several years ago, have not proceeded because of the uncertainty of future gas supplies. The new Huntly station will use gas from the new

Pohokura and then Kupe gas fields once these are developed. Imported liquefied natural gas has been suggested as another possibility, but is likely to be too expensive to use for electricity generation and would also make the country vulnerable to international price and supply fluctuations. Further coal-fired power stations could be considered because the country has abundant coal reserves, but proceeding with such projects would be inconsistent with New Zealand's ratification of the Kyoto Protocol because of their high level of greenhouse gas emissions.

We are left with only one other realistic alternative to proceeding with Project Aqua - a very substantial and urgent programme of constructing wind farms. This is already getting under way but continuing strong Government encouragement will be needed. Because suitable wind conditions for generation can only be relied upon for about 40 per cent of the time, in lieu of the 540MW capacity of Project Aqua there would probably need to be 700 to 800MW of additional wind power capacity constructed. This could comprise about 10 wind farms around the country, each comparable to the Tararua wind farm currently being expanded near Ashhurst, or the Te Apiti wind farm which is soon to be built near Woodville. There is an upper limit to wind power capacity beyond which new storage technologies will be needed to keep the electricity grid stable in fluctuating wind conditions. This limit is probably at least 1000MW and could be as high as 1500MW, so is not likely to be a problem for the next decade. In the meantime we can use the storage capacity of our hydro lakes to balance fluctuating wind power generation.

Plan B is, therefore, to construct a number of wind farms over the next eight years, assuming that the required environmental consents can be obtained. Otherwise, if Project Aqua falls over because of mounting environmental opposition and competition for water use, New Zealand's electricity supply is likely to be severely compromised within the next five to seven years by the lack of new generation capacity.

59) U.S. BACKTRACKS ON CLIMATE CHANGE PROPOSALS

Nunarsiaq

February 6, 2004

Internet: http://www.nunatsiaq.com/news/nunavut/40206_11.html

The United States has changed its mind about supporting any policy recommendations from the Arctic Council on how to curb climate change in the Arctic. "Climate change is not an issue on which all governments see eye to eye, and you don't have a document printed up from within the council framework ... that is not the way international work is done," said an uneasy senior official in Washington, D.C. who was willing to comment on the promise on anonymity. "You would set up a situation that could be very divisive.... When you're talking about the future of the Arctic Council, we would do it harm, honestly, by setting up a process, letting a process go that was potentially going to set a lot of conflicts. That is not good for the council."

The Arctic Council was set up in 1996 to help circumpolar states cooperate on common issues, especially environmental issues. The members include Canada, the U.S., Denmark, Finland, Iceland, Norway, Sweden and Russia, with indigenous peoples as non-voting permanent participants. The council is intended to work on a consensus basis. As a result of the U.S. stance, the Arctic Council has decided to put "on hold" the drafting of any policy recommendations with respect to climate change in the Arctic. The council's permanent participants are disturbed by this development because it's a detour from the original plan. The Barrow Declaration, adopted by the

ministers of the Arctic Council's member states when they met in Alaska in October 2000, states these policy recommendations would be released next November at their meeting in Iceland.

In the Barrow Declaration, the Arctic Council endorsed an Arctic Climate Impact Assessment that would contain three documents: a science assessment, a summary document and a policy document. All three would be produced simultaneously. At the time, the U.S., then under the liberal-leaning administration of President Bill Clinton, was enthusiastic about the ACIA process and even offered to place its secretariat at the University of Alaska in Fairbanks. "It's true everybody approved it, but people have come to realize that we were embarked on a process that wasn't quite sensible, quite frankly ... the mood in Barrow was very excited and positive that the council was finally going to move ahead on this project," said the U.S. State Department official. "I think we didn't necessarily think through about the details of developing policy recommendations."

Last December, the permanent participants, including the Inuit Circumpolar Conference, the Arctic Athabaskan Council, the Gwich'in Council International, the Russian Association of Indigenous Peoples of the North and the Saami Council, signed a letter to Gunnar Pálsson, the Icelandic chair of the Arctic Council, urging the council not to freeze the recommendation drafting process.

"Over the past few years, the Permanent Participants have repeatedly stated ... that the ACIA process demonstrates that the Arctic Council is a unique model of international cooperation ... throughout the Arctic, indigenous peoples are waiting for the outcome of this important work." The ACIA report has input from 250 scientists and is already, in its draft form, a 1,500-page document, nicknamed "the brick."

"It's not finished yet ... there are sections that are still being edited. The work isn't done on it - what it finally is going to say isn't available to policy makers yet," said the U.S. official. "You don't start writing your policy conclusions before the experts finish their work." That's why in August, the U.S. said it wouldn't support any policy document dealing with climate change next November. Its statement on the policy document says "these policy recommendations should be developed only after the governments have had an opportunity to consider the scientific document on which they are based and draw their conclusions." The U.S. statement was distributed at a policy planning meeting on a plain sheet of paper that had no identifying logo. "The arguments there still hold true, and nobody's changed their minds about what we said there," said the official. "That isn't all there is to say, but it's not like we're going to take anything we said in that paper back."

The ACIA confirms global climate change is "amplified" in the Arctic and says what happens in the Arctic will occur elsewhere in the world a decade or so later. The ACIA says Arctic marine mammals will be "pushed to extinction" by 2070-90 as a result of a serious depletion of sea ice. It also signals an opening of the Northwest Passage for general cargo vessels by the end of this century, at the very latest. "Of course, it's controversial," said ACIA secretariat's executive director, Gunter Weller, in a telephone interview from Fairbanks, Alaska. "We have documented major impacts on the environment, on people and the economies ... not all the findings are absolutely negative or bleak. Some of the effects are not so bad, some are beneficial, it depends on your point of view."

Based on the draft ACIA scientific document, a policy committee, led by two working committees within the Arctic Council, met several times, adopted a framework and produced draft policy recommendations. The draft recommendations say, among other things, that Arctic Council member states should:

- Adopt climate change strategies to reduce greenhouse gases and develop alternative energy sources.
- Work closely with affected communities to help them adapt and manage the impacts of climate change.
- Develop new economic opportunities in a sustainable way.
- Revise conservation policies.
- "Manage and regulate" risks associated with melting of the permafrost, erosion, etc.

"There are some obvious politics involved with the policy statement," Weller said. "[But] I think the suppression of a document that comes up with recommendations isn't a very good thing."

The U.S., under President George W. Bush, has not supported the ratification of the Kyoto Protocol on climate change, either. Since the Arctic Council was established, the U.S. has also blocked several other council initiatives. The U.S. opposed adopting any overall framework or set of principles for its sustainable development program, in favour of a project-by-project approach. The U.S. has also been against any sharing of the council's expenses. Every two years, one member country hosts the council's secretariat, assuming the costs of its operation. Denmark and, to a lesser extent, Canada are the only two countries that support the Indigenous Peoples' secretariat in Copenhagen, which offers support to the indigenous participants. Due to U.S. pressure, the Arctic Council doesn't deal with any defense or military issues affecting the Arctic.

60) CANDIDATES ON THE ISSUES: GLOBAL WARMING

Associated Press

February 3, 2004

Internet:

<http://www.sfgate.com/cgi-bin/article.cgi?f=/news/archive/2004/02/03/politics1346EST0612.DTL>

The Associated Press chooses an issue three times a week and asks the presidential candidates a question about it. Today's question and responses:

GLOBAL WARMING: Should the United States support the Kyoto treaty to limit global warming?
Democrats:

Wesley Clark: "Not only did President Bush pull out of Kyoto, but he has utterly failed to address the problem of global warming in a serious way at all, choosing instead to deny the science, effectively hiding his head in the sand. We need to re-engage with the international community to address carbon emissions and global warming more broadly. Whether it's rejoining Kyoto or finding other multilateral approaches, we have to address this global problem with global leadership."

Howard Dean: "We must reject the Bush doctrine of isolationism and rejoin the international dialogue on global climate change. A Dean administration will work to re-engage with the international community to deal with the environmental, economic and public health threats of global warming. We must also actively reduce our own emissions and set an example to our neighbors. The technologies for cleaner power plants, factories, and vehicles are present; now we need real accountability -- firm and fair standards to level the playing field and give industries the incentives to adopt and improve these technologies."

Sen. John Edwards: "America must be a leader in the world's effort to reduce global warming. While the Kyoto agreement had problems, President Bush made a terrible mistake in simply walking away from Kyoto and our allies. We must work with other nations for an international framework that reduces global warming and maintains America's economic strength at the same time."

Sen. John Kerry: "Some of our most serious environmental challenges -- and opportunities -- are taking place on an international stage and they require American leadership in the international community. Unlike the Bush administration, I will not abdicate this responsibility and opportunity. I will make sure that the U.S. re-engages in the development of an international climate change strategy to address global warming, and identifies workable responses that provide opportunities for American technology and know-how."

Rep. Dennis Kucinich: "Conserving energy and complying with the Kyoto Protocol would promote national security and Mideast peace as well as curb global warming. As president, I will sign the Kyoto climate change treaty because we need it for our children and our grandchildren."

Sen. Joe Lieberman: "Yes. I attended and supported the work at the international conferences in Buenos Aires and Kyoto. Recently, Senator John McCain and I introduced groundbreaking legislation to help cut greenhouse gas emissions."

Al Sharpton: No response.

President Bush: No response.