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*12 WATER: DUBLIN CONFERENCE WARNS OF IMPENDING CRISIS

More than 500 experts from 113 countries attended the International Conference on Water and the Environment in Dublin, Ireland last week, calling for "new measures to help solve the emerging crisis in global freshwater resources" (GREENWIRE 1/31 #7). In response to a request from the Preparatory Committee for June's UNCED conference in Rio, the participants issued the "Dublin Statement," which called for "concerted action ... to reverse the present trends of overconsumption, pollution and rising threats from drought and floods" (ICWE release, 1/31). National Audubon Society's Steve Parcells: "The experts have confirmed that long-term water security and human welfare depends on protecting aquatic ecosystems" (Audubon release, 2/3).

FOR THOSE WHO COULDN'T MAKE DUBLIN: Some 200 scientists from 50 countries met in Fortaleza, Brazil, for the First International Conference on the Impact of Climactic Variations

To Protect Bush, U.N. Will Limit Access to Talks

By JAMES BROOKE

Special to The New York Times

RIO DE JANEIRO, June 7 — Fearing demonstrations against President Bush, the United Nations has drawn up plans to close the Earth Summit conference center to representatives of private environmental groups and to sharply reduce credentials for official delegations, United Nations officials said today.

Starting Thursday, the day before President Bush and as many as 110 heads of state and government are to meet here, a new credential system will bar virtually all private sector environmentalists from the center and will limit official missions to four delegates from each country, a United Nations official who attended an emergency security meeting on Friday said.

The official said he expected that press credentials would also be restricted. United Nations' credentials have been issued to about 1,500 environmentalists and to about 5,000 journalists.

150 Protest U.S. Policy

Today, about 150 Americans marched down Copacabana Beach in the first public protest here against the Bush Administration's environmental policies.

"George Bush, you are embarrassing us," read one banner raised by American environmentalists protesting the President's announced refusal to sign a treaty to protect plants and animals.

Chip Barber, one of the protest or-

ganizers, said, "We are here to show Brazilians that we are ashamed that our country is acting like a ball and chain at the Earth Summit."

The anti-Bush mood in Rio was summed up Friday by a front-page headline in an English language newspaper here: "U.S. Singled Out as Eco Bad Guy."

Some of the Americans here say the Bush-bashing is not justified.

Leftist Ties Seen

Senator Larry Pressler, Republican of South Dakota, complained today that the Earth Summit reminded him of "a meeting of the international left."

"I don't think people give the U.S. proper credit on environmental protection," he said.

Hoping to ease American "isolation" at the Earth Summit, Laurens Jan Brinkhorst, a spokesman for the European Community, cautioned Saturday at a press conference: "We don't want a slugging match of everybody against the United States."

There were new reports today that the United States would continue its a tough approach to a second treaty to be signed here, one to reduce emissions of carbon dioxide, methane and other gases believed capable of warming the earth's temperature.

During treaty talks in April and May, the United States succeeded in removing from the treaty any targets or timetables for the reduction of gases. The United States has said that it opposes timetables, arguing that they could be costly and could hurt economic activity.

Last week, three European countries — Austria, Switzerland and the Netherlands — started an initiative to commit signers to stabilize emissions immediately. In a separate move, Germany and other European nations are working to gain support for the rapid adoption of a treaty protocol to impose targets and timetables.

Fighting back, the United States sent a "threatening" letter to the Austrian Government in Vienna last week, according to one Austrian delegate here.

He declined to give details of the letter.

In addition, William K. Reilly, administrator of the Environmental Protection Agency, said here over the weekend that the United States will move to block the German initiative.

A Different U.S. View

Senator Albert Gore, a Tennessee Democrat who is leading a Congressional delegation here, said today, "I find it incomprehensible that we would object to other countries declaring that they want to meet targets and timetables."

More dissatisfaction with the Earth Summit came today from a group called Earth Parliament, a congress representing 220 groups from around the globe.

"At this moment governments of the

rich nations are discussing how to exert even more control over the less favored nations," read a statement adopted by the assembly. "In doing so, they continue to ignore our unique knowledge and technical skill which have been perfected over millennia in our special relationship with the ecosystems which we inhabit."

But the relationship of one Brazilian Indian to his environment caused environmentalists to wince today.

Mário Juruna, a 49-year-old member of the Xavante ethnic group, displayed for sale at the Global Forum, an environmental fair here, the skin of a spotted jaguar, an endangered species.

"When Indians are free, we are going to sell snakes, caymans, and jaguars," Mr. Juruna, said to the dismay of assembled naturalists.

Nation

Fear expressed of runaway greenhouse effect

By David Chandler
GLOBE STAFF

CHICAGO – Almost half of the climate scientists from around the world surveyed in a new poll say the greenhouse effect, caused by the burning of fossil fuels, could reach a point of no return, after which global warming would continue to increase no matter what measures were later taken to combat it.

A leading climatologist said, meanwhile, that efforts to adapt to warmer global temperatures could be thwarted by the unpredictable and chaotic nature of the changes, making it almost impossible to predict how a given area might be affected.

Thirteen percent of the climate scientists polled by the environmentalist group Greenpeace said that an unstoppable "runaway" greenhouse effect is likely, and another 32 percent said it is possible. Forty-seven percent said it is unlikely.

"This result reveals an as-yet poorly ex-

pressed fear among a growing number of climate scientists," said Jeremy Leggett, director of the science, atmosphere and energy program of Greenpeace International, "that global warming could lead not just to severe problems but complete ecological collapse."

Leggett said most climate models already predict global warming at a level that could produce significant damage to agriculture and ecosystems. "If these climate models prove – like all the forecasts of ozone depletion – to be significant underestimates, we are in potentially terminal trouble," he said.

The survey asked for predictions based on the assumption that no significant attempts would be made to cut back on emissions of carbon dioxide and other greenhouse gases. International negotiations about proposed policies to attempt to reduce such emissions will resume in New York on Feb 18.

Stephen Schneider, a climatologist with the National Center for Atmospheric Re-

**'If these climate models
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JEREMY LEGGETT
Greenpeace International

search in Boulder, Colo., warned of the unpredictability of the exact consequences of greenhouse warming in a lecture here at the annual meeting of the American Association for the Advancement of Science.

Schneider said that despite continuing

controversy over the exact impact of many factors involved in the greenhouse effect, "almost all the bouncing around from all the scientific uncertainties that has taken place in the last 20 years . . . has led to conclusions that have largely remained" within the same range: that a global warming of about 3 to 9 degrees is likely sometime during the next century – a range he characterized as being "from mild to catastrophic."

But Schneider strongly disagreed with a suggestion by the National Research Council's Adaptation Panel that agriculture might be able to adapt to such a change and that productivity could be maintained. That conclusion, he said, was based on the assumption that the temperature change would come as a smooth, predictable increase.

In fact, he said, it is more likely that "the more rapidly we force climate to change . . . the more it is 'transient,' and the more unpredictable it would be." And in turn, he said, "the harder it is to predict, the harder it is to adapt."

"It would be arrogant nonsense to say that we could predict the transient effects, or compensate for them," he said.

Most scientists agree that drastic reduction of greenhouse gas emissions – primarily by reducing the burning of fossil fuels and destruction of forests – could significantly reduce and delay the warming effect. But the scientists polled by Greenpeace warned that without such reductions the world could reach a point at which the warming might become unstoppable.

The reason for that concern is that there may be a variety of natural "feedback" effects that are not yet understood and which, for the most part, have not been included in computer models. For example, the depletion of the ozone layer – a separate and unrelated problem – could increase the greenhouse effect by damaging plankton in the world's oceans and thus reducing their ability to remove carbon dioxide, the principal greenhouse gas, from the air.

PHOTOCOPY
PRESERVATION

BUSH WOULD OUST RIO MEMO'S LEAKER

Calls Disclosure of Advice on Ecology Treaty 'Insidious'

By ANDREW ROSENTHAL
Special to The New York Times

WASHINGTON, June 7 — President Bush said today that he would like to dismiss the official who made public a confidential memo suggesting revisions that might reverse the American position on an international treaty to protect plants and animals.

"Help me find him," the President said at a news conference at Camp David, Md. "He'd be gainfully unemployed."

Mr. Bush and his aides were furious at the disclosure by an unidentified official last week of a confidential memorandum from William K. Reilly, the Administrator of the Environmental Protection Agency, who said the United States should agree to what he called "minor modifications" of the treaty being considered at the Earth Summit in Rio de Janeiro to alleviate international criticism of Washington's refusal to sign the document.

Hours after Mr. Reilly proposed the changes, the White House chief of staff, Samuel K. Skinner, and the President's domestic policy coordinator, Clayton Yeutter, rejected the idea.

Mr. Bush spoke at a news conference at Camp David, the Presidential retreat in the Catoctin Mountains, where he spent the weekend with Prime Minister John Major of Britain. Although Britain and Japan indicated on Friday that they would sign the agreement, known as the bio-diversity treaty, Mr. Major today avoided criticizing Mr. Bush for refusing to go along.

Britain's Problems 'Different'

"We all have different problems with the bio-diversity convention, on the levels of technology transfer, on the protection of intellectual property," Mr. Major said, adding that Britain's problems were "different than those of the United States."

Mr. Bush said Mr. Reilly had been doing his job when he proposed the changes in a confidential memo. But referring to an article published Friday in The New York Times, Mr. Bush said, "For someone, who may or not have been opposed to the document, to the treaty, or any changes, to leak it, it's insidious."

Although Mr. Bush acknowledged that there was no issue of national security at stake, he added: "I'd like to find the leaker, and I'd like to see the leaker fired — fired. Fired would be all right. No, but the reason is, it's very difficult to conduct government if somebody, in his or her infinite wisdom, can shape the wisdom by leaking documents."

Mr. Bush also said the political, military and ethnic upheavals sweeping Eastern Europe after the collapse of Communism were "growing pains."

"The new world order is not facing one common objective: an aggressive international Communism," Mr. Bush said.

"Nobody said that the emergence of freedom would be easy," he said, adding that of the countries now in the grip of political and ethnic unrest, "I don't know that any one of them wants to now turn its back on democracy."

NYT

6-8-92

STATEMENT OF
LIZ BARRATT-BROWN
ATTORNEY, NATURAL RESOURCES DEFENSE COUNCIL
MEMBER OF CAPE '92

The high hopes for the climate negotiations were dashed last week by the U.S. refusal to agree to an international commitment to stem carbon dioxide and other greenhouse gases. On last day of negotiations, the U.S. let one shoe fall -- committing to a package of modest actions at home but failing to join literally all other industrialized nations in their commitment to stabilize CO2 by the year 2000.

Like the ozone layer debate, the skeptics in the Administration have argued too little is known to act and action is too costly. Many of you will remember then Secretary of Energy Donald Hodel's "hats and sunglasses" policy. The skeptics may have won. We will have an ozone hole over the U.S. this summer while cheaper CFC substitutes flood the marketplace. Let's not make the same mistake with climate where energy efficiency measures are expected to make the U.S. more not less competitive with Europe and Japan. Let's not loose our forests for short-term profits. Let's not create a waste trade rather than reduce pollution at its source.

We have a major opportunity during Prepcom IV to reverse destructive policies. Yet the Bush Administration has played defense, engaging in "damage control" in order to preserve business as usual. The U.S. position entering Prepcom can be summarized as follows: NO TARGETS, NOT TIMETABLES, NO NEW MONEY, NO NEW INSTITUTIONS (E.G. NO CHANGE).

The U.S. has failed to protect old growth forests while calling on developing countries to protect their forests. The U.S. has undermined the Endangered Species Act while talking piously about protection of biodiversity. The U.S. has refused to ban a trade in hazardous waste and to join in fashioning a "Code of Conduct" for potentially hazardous biotechnology.

The American people are calling for a change. A recent Roper poll showed overwhelming support for increased taxes -- on the order of \$200 per year -- to pay for additional environmental protection. 50,000 people gathered to watch a live teleconference from New York on the Prepcom and write letters to the Administration. Congress is building support for resolutions aimed at more sustainable practices at home and U.S. leadership at the Earth Summit.

The message is: Sustainable development is not a term for developing countries alone. Every year the U.S. subsidizes billions in unsustainable practices. On public lands alone, the U.S. has subsidized:

- ** \$5 billion for mining in last 10 years
- ** \$600 million per year for deforestation of our national forests, mostly for road building
- ** \$2.2 billion for western water use, mostly for agriculture and cattle ranching
- ** Grazing fees that pay only 1/3 of the costs of administering the program, 1/4 the costs of the commercial price for grazing.

CAPE '92 and the citizens of the U.S. are asking the U.S. negotiators to craft a different future and not to hold Prepcom hostage to business as usual. We don't have much time. March is critical. The time is now for change.



JOINT STATEMENT OF THE GROUP OF 77 AND CHINA
AT THE FOURTH UNCED PREPCOM, 2 MARCH 1992, NEW YORK
(Ambassador Jamsheed K.A. Marker,
Chairman of the Group of 77)

Mr. Chairman:

Permit me to express on behalf of the Group of 77 and China our serious desire to negotiate constructively towards a successful conclusion for the objectives of this process in time for the Rio Conference.

Our collective task would be considerably facilitated, Mr. Chairman, if we continue our work on the best available basis, that our mandate is contained within the agreed parameters of UNGA resolution 44/228. An agreement to continue our work on this basis constitutes the only modality for overcoming the time constraint before us in this last and vital session. We should now concentrate on elaborating measures and strategies flowing from the elements of resolution 44/228.

There is agreement that development and the eradication of poverty constitute prerequisites for collective action on the environment and cannot be considered in isolation from it. There is no distinction between the local and global environment.

Mr. Chairman, it has been agreed in resolution 44/228 that the consumption patterns and the wastes consequently generated by the developed countries are primarily responsible for the situation in which we find ourselves, and that the developed countries have the main responsibility of combating such pollution. The developed countries should therefore elaborate strategies and measures to reverse this situation.

This global compact on the environment and development towards which we are working in these negotiations requires an examination of the international economic environment, with a view to ensuring a more integrated approach to environment and development problems in relevant international forums without introducing new forms of conditionality. The developed countries must also make meaningful commitments on the finances, technology and the endogenous capacity-building required by the developing countries to join in redressing this situation for which they are not responsible.

Mr. Chairman, the Group of 77 will match statement with statement, process with process, and commitment with commitment within the context of our respective responsibilities. We, however, cannot be expected to match commitment with either statement or process.

Mr. Chairman, the Group of 77 and China will not be found wanting in these negotiations. We would like to reiterate the commitment of all our countries to provide a better environment for our citizens, a commitment which we are all putting into action within the constraints of our limited resources.

NYT 3/2/92

Balancing Industry With the Ecology

By PAUL LEWIS

Special to The New York Times

UNITED NATIONS, March 1 — A proposal for giving poor countries billions of dollars to help development without damage to the environment will be made on Monday at the opening of a major conference here.

Industrialized countries would provide such "earth increments" through existing aid-giving institutions.

The conference was called to prepare for the world environmental summit meeting in Rio de Janeiro in June: the United Nations Conference on Environment and Development.

The aid proposal, to be made by Maurice F. Strong, the Canadian who is Secretary General of the Rio meeting, highlights the major problem confronting the preparatory meeting: how to pay the huge cost of the environmental cleanup that the Rio session is expected to endorse.

The Price: \$125 Billion a Year

In an interview, Mr. Strong said the developing countries would need about \$125 billion a year in aid to pay for the new environmental programs, or \$70 billion more than all the financial assistance they now receive.

These new programs, intended to make economic development environmentally sustainable, include steps to

stabilize the climate by reducing emissions of gases implicated in global warming and to protect threatened plant and animal species.

In addition, the Rio conference is expected to adopt a general statement of ecological principles called the Earth Charter.

As their price for accepting these goals, developing countries are demanding additional financing from the industrialized world as well as free access to advanced technology that would help them industrialize without ecological damage.

Unrealistic, Official Says

Mr. Strong said that asking for another \$70 billion a year in aid was unrealistic in today's economy.

But he said his consultations with governments suggested that developing countries would be satisfied if the industrialized nations offered "an initial commitment" to provide "\$5 billion to \$10 billion a year in extra aid."

He said this money should be made available through several sources rather than from the single new Green Fund under third-world control that China and several developing countries favor.

In his address Monday, Mr. Strong will suggest that industrialized countries agree to add \$1 billion or \$2 billion

as an "earth increment" to the planned replenishment next year of the International Development Agency at the World Bank, which provides money virtually interest-free to the poorest countries.

This money would be earmarked for environmental projects. Major aid-giving countries are discussing replenishing the development agency with some \$17.5 billion over three years, starting in July 1993, when its current fund will be exhausted.

In addition, Mr. Strong said, he will call for rich countries to give more money to a new branch of the World Bank, the Global Environmental Facility, increasing the size of that fund to \$5 billion or \$6 billion, from \$1.5 billion.

The World Bank uses this fund to help pay for projects it thinks will benefit all countries. Its first loan went to Poland earlier this year to preserve an unspoiled forest.

First No, Then Yes From U.S.

Industrialized countries argue that the Global Environmental Facility constitutes the "new and additional resources" the developing world is asking for because the money they have put into it does not come from their regular aid budgets.

After first refusing to contribute, the Bush Administration changed position last week and said it would provide \$50 million to the global fund and \$25 million to individual developing countries to help pay for environmental projects.

In mid-April, immediately after the preparatory conference, former Prime Minister Noburu Takeshita of Japan will be the host of a high-level meeting in Tokyo to consider additional ways of financing the Rio conference's goals, including possible global taxes on energy and pollution.

Mr. Strong said he had asked Japan to set an example by committing itself to provide developing countries with substantial additional aid for environmental measures. Japanese newspapers have reported that the Government is considering a commitment similar to the \$12 billion it gave toward the cost of the Persian Gulf war.

The Rio Earth Summit, as it has been termed, comes exactly 20 years after the first United Nations Environment Conference, held in Stockholm in 1972, at which Mr. Strong also presided.

That meeting established environmental protection as an aim of government policy and led to the creation of environmental ministries in most developed countries.

USA Today 2-18-92

U.S. stance may derail global warming treaty

By Linda Kanamine
USA TODAY

The Bush administration's desire to go its own way is likely to ruin chances for a worldwide global-warming treaty before a June summit in Brazil.

Treaty talks resume today at the United Nations.

The administration is at odds with most countries on stabilizing carbon dioxide emissions at 1990 levels.

Instead, President Bush favors giving countries another year to devise independent strategies on heat-trapping gases such as carbon dioxide, methane and nitrous oxide.

"This enables nations to focus on those gases which they can control more efficiently," says Michael Deland of the president's Council on Environmental Quality.

Fiona Weir of Friends of the Earth International in London doesn't agree.

"The American position has

left the international negotiations mired," she says. "Urgent action is needed if we're to avoid sinking into another global environmental crisis."

The USA produces 20% of all greenhouse gases.

- Environmental impact, 7A
- Effect on the USA, 8B

OPINION USA

INTERVIEW

Global warming
a key to summit

Environmentalists say the president's refusal to join other countries in setting carbon dioxide emission limits could sink agreement.

Q: Why are the negotiations resuming today on global warming so important?

LASHOF: We see the negotiations as the keystone to the entire Earth Summit. A deadlock on the climate negotiations has the potential to undermine progress on the other issues. So it's essential for the United States

to reverse its current position on global warming and sign a treaty that effectively deals with the problem.

Q: But President Bush has refused to agree to specific controls on greenhouse emissions responsible for global warming. If the USA doesn't go along, what will happen?

BRAMBLE: That could sink the agreement among all the nations.

Q: Is the USA alone on the emissions issue?

BRAMBLE: We stand virtually alone on the climate issue. But more important is that we need to be leading and shaping these agreements. Because if we don't, they're not likely to come out to our advantage.

Q: What do you think the USA should do?

LASHOF: We've shown that an effective program of efficiency and renewable-energy investment could cut carbon dioxide emissions 25% by the year 2005 and 70% over 40 years at a net profit to the economy, creating jobs and helping move us to technologies needed for the 21st century.

Q: The administration position is that focusing on CO2 alone isn't the way to go.

LASHOF: We need to deal with all the different greenhouse gases. But in the past, the administration has used that as a shell game to hide the fact it's not doing anything to deal with the most important gas, carbon dioxide.

Q: Where do developing nations fit in the debate?

EDWARDS: The major issue they're raising is that they are unfairly taking the heat on global warming. While they produce a quarter of the world's CO2 emissions, they are expected to take undue re-



What is Earth Summit '92?

Purpose: A United Nations-sponsored meeting to develop a global plan for economic development and environmental protection of the Earth.

When: June 1992 in Rio de Janeiro, Brazil.

Key goals:

- ▶ Set targets, timetable to cut emissions of greenhouse gases, such as carbon dioxide, methane and CFCs, blamed for global warming.
- ▶ Revitalize economies of developing communities.
- ▶ Ensure availability of food, water and energy supplies, particularly to developing countries.
- ▶ Eradicate poverty.
- ▶ Prevent destruction of renewable resources.
- ▶ Protect and preserve diverse selection of plant, animal species.



What are the climate negotiations?

Purpose: Fifth and final pre-summit gathering for international negotiations to limit threat of global warming.

When: Feb. 18-28 in New York City.

USA TODAY

sponsibility for limiting their development strategies to help on the emissions problem.

Q: What is the cost if you don't get your way?

LASHOF: Undermining the sustainability of natural ecosystems. Putting our food security at risk over the longer run. Devastating coastal areas from sea level rise from global warming. Producing biological diversity both from global warming and forest destruction. Undermining long-term economic competitiveness.

Q: What will it cost the individual if you do get your way?

LASHOF: For example, you may pay \$500 more to buy a new car, but it will get 45 miles per gallon instead of 25 mpg. So you save about \$200 a year in gasoline.

Q: What are the signs that progress is being made on the environment overall?

EDWARDS: Citizens are beginning to ask questions about the impact of policies. Fundamentally, the subsidy we give the auto industry in lower gas

'Shortsighted approach'

The USA is committed to a comprehensive approach to the global warming problem that includes all greenhouse gases and their sources, not just carbon dioxide emissions, says Michael Deland, chairman of the president's Council on Environmental Quality.

The environmental expert says the carbon dioxide problem is peculiar to the industrialized nations and does not take into account the developing world.

"We have been unwilling to subscribe to the politically popular program of timetables and targets" for industrialized countries to limit emissions of greenhouse gases "that focus only on CO2 when there are several others that are of sub-

stantial importance in the equation," he says. "We think that is a very shortsighted approach."

Deland explains that the USA's proposal is to have individual nations come up with comprehensive action plans that would address the issue of global warming from each nation's perspective. Such a "holistic" approach would set up a worldwide trading mechanism in gases.

"You could have one nation make reductions in methane gas and another nation make reductions in CO2 and do so in a cost-effective manner that makes both environmental and economic sense," he says.

— Sharon Shahid

gard to these negotiations.

Q: Excluding the U.N. negotiations, what's the one thing you'd like to see the government do for the environment?

LASHOF: Increase automobile fuel-efficiency standards.

BRAMBLE: Improve efficiency in how we spend our energy because that would be a real national security boost.

EDWARDS: Take Detroit off welfare.

▶ Global warming, 8B



Edwards



Bramble



Lashof

By H. Darr Beiser, USA TODAY

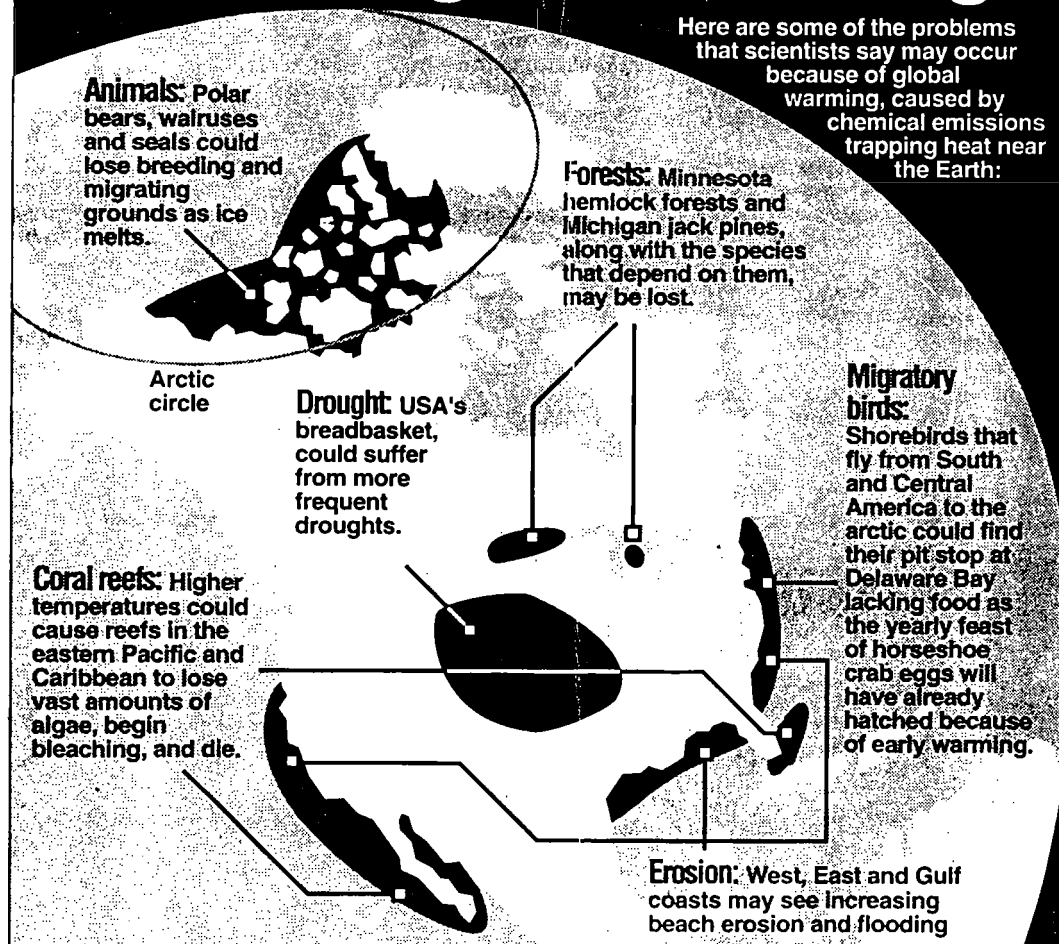
Don Edwards of the Panos Institute, Barbara Bramble of the National Wildlife Federation, and Dan Lashof of the Natural Resources Defense Council were interviewed by members of USA TODAY's editorial board and News and Life staffs.

THE ENVIRONMENT

Negotiations resume today on a global warming treaty — a plan that some say could cost industry billions of dollars. Because of those potential costs, the Bush administration opposes the treaty, citing scientific uncertainty.

Effects of global warming

Here are some of the problems that scientists say may occur because of global warming, caused by chemical emissions trapping heat near the Earth:



Source: World Wildlife Fund, USA TODAY research

By Bob Laird, USA TODAY

Bush, industry cool to calls for tough global warming controls

By Linda Kanamine
USA TODAY

Squabbling over whether, when and how to reduce heat-trapping gases in the environment picks up this week amid gloomy predictions of ecosystem disasters.

Representatives of more than 100 nations today resume negotiations at the United Nations. Goal: Combat global warming with an emissions-reduction treaty that could be signed at June's Earth Summit in Brazil. But environmentalists fear the talks will produce only hot air.

The Bush administration, fearing the costs of forcing industry controls, refuses to accede to Europe, Japan and most other countries favoring a cap of carbon dioxide emissions at 1990 levels by 2000.

Instead, the administration favors a loose agreement in which countries devise their own strategies to reduce all "greenhouse" gases.

"Carbon dioxide is the politically popular gas of the moment," says Michael DeLand of the president's Council on Environmental Quality. "Other countries committed to carbon dioxide reductions in a cavalier fashion, without any real idea of how those numbers will be achieved."

Critics say the administration has adopted an industry-coddling stall tactic.

"The United States is so much more

sloppy and apparently unwilling to clean up its act," says Fran Stivy-Weber of the U.S. Citizens Network for the United Nations Conference.

The greenhouse effect is an aberration of the process in which water vapor and carbon dioxide trap the sun's radiation and warm the Earth, making it liveable. Burning of coal, oil and gas has greatly boosted levels of carbon dioxide, methane, nitrous oxide and other gases, trapping too much heat near the ground.

Some projections say average temperatures will rise 4 to 8 degrees Fahrenheit within 100 years, melting polar ice caps. Rising seas will flood coastlines and weather patterns will be extreme.

A new World Wildlife Fund study says the unusually quick pace of warming, and not the actual temperature rise, will have grave effects on ecosystems:

► Already threatened species — the Florida panther, marine turtles, polar bears, migratory birds — won't be able to adapt to rapid habitat damage.

► Mangrove swamps, such as Bermuda's, will diminish as rising sea levels erode peat around tree roots, making them vulnerable to storms.

Some things, however, would thrive and spread as temperatures rise in colder climes: pest species and diseases.

Environmentalists say the first and easi-

est step to slowing global warming is to stabilize carbon dioxide at current levels.

"We can do that with practically no change at all," Stivy-Weber says.

The Union of Concerned Scientists says energy-efficient technologies — such as better insulation, lights, equipment, appliances and solar heating — could cut energy demand by half within 40 years.

The group's study says a \$2.7 trillion investment in efficient equipment now will save the USA \$5 trillion in overall electricity costs over 40 years.

"If we don't take the lead, we will be importing (energy-efficient) technologies for solving these problems," says Dan Lashof of the Natural Resources Defense Council. "This will undermine America's long-run economic competitiveness."

Some already are taking action to reduce carbon dioxide:

► New England Electric announced it would reduce carbon dioxide emissions from its power plants 20% by 2000.

► The American Forestry Association is planting an added 100 million trees, which filter carbon dioxide from the atmosphere.

And the EPA — along with 143 companies, six states and one city — launched the Green Lights project to install energy-efficient lights.

► Environmentalists' view, 7A

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Earth Summit Update

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Environmental and Energy Study Institute ■ 122 C Street, N.W., Suite 700, Washington, D.C. 20001 ■ (202) 628-1400

Approval of UNCED Resolution Delayed by Industry Lobbying

The passage of a resolution on U.S. policy toward UNCED by the House Foreign Affairs Committee was temporarily derailed February 27 by a last-minute lobbying campaign by energy industry and electric utility interests.

After assurances from Republicans on the committee that they would offer no opposition, the committee had been expected to approve the Fascell-Torricelli-Yatron resolution (H. Con. Res. 283) at a markup February 27. But one hour before the scheduled hearing and markup on the resolution, the Global Climate Coalition, an industry group that opposes any U.S. commitment to control greenhouse gas emissions, called committee staff to object to language in the resolution urging the President to negotiate an agreement that would "reduce the threat of climate change...."

Within minutes, the Edison Electric Institute, a trade association of investor-owned utilities, which is also a leading member of the Global Climate Coalition, demanded that the provision calling for reform of national accounting systems be eliminated from the resolution. Similar calls from individual utilities followed.

Finally, a leading private utility in Committee Chairman Dante Fascell's (D-Fla.) district made the same demand. The committee's chief of staff then called off the vote on the resolution until industry representatives had a chance to make their case. A meeting between those representatives and committee staff

is expected to decide whether or not the climate change language will be weakened.

Approval of the resolution by committee would clear the way for early floor action in the House of Representatives. Committee sources told *Earth Summit Update* on February 26 that Fascell intended to bring the resolution to the floor "on the earliest possible date." The resolution, co-sponsored by Fascell and Subcommittee Chairman Robert Torricelli (D-N.J.) and Gus Yatron (D-Pa.), was scheduled for approval just six days after separate resolutions introduced by Torricelli and Yatron were combined under Fascell's aegis. Other provisions of the resolution urge that the United States support a new mechanism for monitoring international

environmental agreements, programs for a global energy transition, new programs and institutions for increased energy efficiency in developing countries, agreements to eliminate land-based sources of marine pollution and consultations on debt reduction and natural resource conservation (see page 4 for partial text).

However, neither the State Department nor any industry group had previously objected to language calling for reform of national accounting systems in industrialized countries, which has been official U.S. policy since mid-1991.

For more information, contact House Foreign Affairs Committee, 2170 Rayburn, Washington, D.C. (202-225-5021).

U.S. May Veto Key Parts of Agenda 21

The U.S. delegation to PrepCom 4, facing a series of confrontations with most other delegations on a number of issues, is weighing the possibility of disassociating the United States from some key parts of Agenda 21, according to U.S. officials. Agenda 21 includes a long list of national and international actions on environment and development in 21 program areas, along with methods of implementation.

Officials told *Earth Summit Update* February 21 that the U.S. delegation will strive to achieve compromises wherever possible on Agenda 21 issues and that the deci-

sion to disassociate the United States from any of the negotiating documents would not be taken lightly. "It would be regarded as an unfriendly act," commented one U.S. official involved in delegation discussions. But U.S. officials are also afraid that there may not be enough time at the PrepCom to go through all of the issues in each program area of Agenda 21.

No decision has been made on how to handle the negotiating documents that call for significant policies and programs that the United States opposes, according to the officials, but the delegation is

See *Agenda 21*, page 3

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BC-ENVIRONMENT-GERMANY

BONN BACKS EARTH SUMMIT DESPITE BUDGET STRAIN

By Marcus Kabel

BONN, March 20, Reuter - Bonn is willing to pay more for world environment and development plans negotiated at the United Nations despite a budget stretched by German unity, Environment Minister Klaus Toepfer said on Friday.

Toepfer said Bonn will press for funds at a U.N. Earth Summit this June despite tough domestic spending limits imposed until 1995 to deflate a multi-billion mark (dollar) deficit.

"It is true that we have to run a very restrictive budget. But we have always made clear that we will not withdraw from our international responsibilities because of that," Toepfer told Reuters.

"The German government remains of the opinion that there will be new and additional financial measures," he said, referring to the U.N. Conference on the Environment and Development (UNCED) to be held in Brazil.

National delegations in New York this month are negotiating proposals to protect the Earth and aid developing countries that could cost industrial nations up to 600 billion dollars if

PRESS RETURN TO CONTINUE OR ENTER A REQUEST.

agreed in Brazil.

"The point is to get as many states as possible at UNCED to say 'yes, we too accept additional and new funding'," Toepfer said.

Toepfer spoke ahead of a Monday meeting of European Community environment ministers in Brussels who will discuss a joint position sought by the 12 EC states for the U.N. summit.

Economic powerhouse Germany is the EC's biggest nett contributor, but its finances have been strained by rebuilding former East Germany and pouring aid into Eastern Europe.

Toepfer said Bonn would not stop lobbying for more environment and development funding by its own five-year budget plan to slash a federal deficit that skyrocketed after German unity in 1990.

Finance Minister Theo Waigel last week repeated his commitment to strict budget discipline, pledging to narrow the deficit to 25 billion marks (15 billion dollars) in 1995 from 52.1 billion (31.2 billion dollars) in 1991.

Toepfer said it was more likely UNCED would top up existing funds than create whole new ones to pay for programmes like technology transfers from rich to poorer countries to battle pollution or preserve rain forests.

PLEASE ENTER A REQUEST.

President Bush Threatens to Boycott Rio Conference

President is Lone Holdout on Global Environmental Conference

World Leaders Gather: The United Nations Conference on Environment and Development (UNCED) to be held in Rio de Janeiro in June is likely to be the largest gathering of world leaders to discuss international environmental issues in two decades. Despite this, President Bush has not announced his intention to attend the conference.

A Lone Boycott: For a President who has repeatedly called for a strong American role in international affairs, his absence from this conference contradicts his own policy. Every major world leader has announced their intention to attend the Rio conference except for President Bush.

If ever there was a foreign trip the President should take, this one is it.

Bush Administration — Dragging Its Feet on Global Environmental Issues

The Bush Administration continues to resist any action that may yield meaningful results in improving the global environment. The expansive implementation strategy, known as "Agenda 21," which will be signed at the Rio conference, may be so watered down due to pressure from the Bush Administration that it will significantly lessen its impact and thereby slow progress on meaningful international cooperation on the environment.

Bush Won't Comment: The Bush Administration supports only broad policy statements for a separate convention on climate change but opposes making commitments on timetables or targets for controls on greenhouse gas emissions. For instance, the Bush Administration agrees on the need to reduce greenhouse gases, but will not commit to any specific limit on emissions of greenhouse gases.

U.S. Blocks Ozone Language: In the debate over atmospheric pollution, specifically ozone depletion, the U.S. has opposed language urging the replacement of all ozone depleting chemicals with non-ozone depleting chemicals.

U.S. Blocks Cutting Consumption: The U.S. has also opposed all attempts to address the issue of reducing natural resource consumption by industrialized countries. With just 5 percent of the world's population, the U.S. consumes 20 percent of the world's resources. If these figures are extended to include all industrialized countries, the ratio is even more compelling, 20 percent of the population consumes 80 percent of the resources.

Watered-down Rehash: Due to the intransigence of the U.S. position, it is feared that the final declaration of the Rio conference will be transformed from a strong, forward looking document to a meaningless statement that repeats past issues and concerns.

Bush Remains Hostage to Narrow Special Interests

Hostage to Interests: Unfortunately, President Bush continues to be held hostage to a group of special interests that have an interest in maintaining the *status quo* on the environment thus placing the planet and our children's future at risk. The Administration, paralyzed by fear of action, refuses to recognize the potential benefits of effective, job creating technologies that can reduce pollution and improve the global environment.

Whats at stake - The World's Environment

~~See~~

~~See~~

*21 EARTH SUMMIT: IS U.S. WEARING A BLACK, WHITE OR GRAY HAT?
by Philip Shabecoff

NEW YORK -- The Bush Administration is taking a lot of heat from critics who complain that the U.S. government is the major obstacle to a successful Earth Summit.

Last week, for example, the N.Y. TIMES carried a front page article quoting "rich and poor countries" saying that the United States is "endangering prospects" for the United Nations Conference on Environment and Development, to be held in Rio de Janeiro in June.

The criticism focuses in large measure on the United States' refusal to commit to specific sums of new financial aid to help the poorer countries develop in environmentally sustainable ways. It also is aimed at Washington's refusal, so far, to agree to a global warming treaty that includes goals and timetables for reducing carbon dioxide emissions.

But many of the diplomats and international civil servants working on preparations for the conference contend that the positions of the U.S. are so varied and complex that it would be an unjust oversimplification to cast Washington in the role of the spoiler.

Last week, E. Curtis Bohlen, the head of the United States delegation to the preparatory committee that is negotiating the agreements to be signed by chiefs of state in Rio, stated for the first time the Bush Administration's readiness to mobilize "new and additional" resources to help the developing countries. While it contained several ambiguities and made no specific pledges of money, the statement had a immediate and almost electrifying effect in instilling a new sense of optimism among the delegates.

Meanwhile, negotiations on the global warming treaty are continuing and, with the United States showing increasing signs of flexibility in its position, an agreement is possible by June.

That being said, it is true that the U.S. delegation is throwing a wet blanket over many of the aspirations of this conference.

One of the far-reaching goals of UNCED, for example, is to have the rich industrialized countries reduce waste and pollution and share the planet's wealth more equitably by reducing their consumption of resources, particularly energy. Such voluntary sacrifice by the rich countries is seen as part of a global bargain in which the poorer nations would take steps to stabilize populations and channel their development in ways that did not threaten the global commons.

But the United States is adamantly opposing any agreements to set global standards for consumption. The U.S. delegation, reflecting President Bush's declaration that the American standard of living is not negotiable, says that consumption

patterns are matters of national, not global concern.

Similarly, the United States has been almost alone in opposing a global attack on poverty, contending that is a matter to be addressed at the local and national levels. Ambassador Robert J. Ryan Jr. said that "people sitting in New York City" cannot deal with poverty in faraway lands. (Of course people sitting in the same building in New York City do manage to deal with such matters as internal political conflict in places like Cambodia.)

Another major goal of the conference is to promote the transfer of environmentally benign technologies from the rich to the poor countries at preferential and concessional terms. The United States is digging in its heels against such a formula and is calling instead for "technical cooperation" which does not obligate the rich countries to give any financial breaks to the poor.

The United States is opposing the inclusion of threats to the environment from military weapons in conference documents. It wants to reserve the option of using the oceans as a final resting place for its decommissioned nuclear submarines.

Generally, the U.S. has been against any language in the conference texts which place obligations on governments to act to assure sustainable development or to help the poor countries. Instead, U.S. negotiators have sought to ensure that any goals set by the conference will entail only voluntary compliance by member governments if they think such compliance is appropriate.

But the U.S., of course, is not the only nation here taking hard-line positions that stand in the way of consensus agreements. The bloc of developing nations has been heavy-handed in making its agreement on any environmental program conditional on commitments of substantial sums of additional aid. They have also vigorously fought any proposals that smack of an infringement on national sovereignty.

Other industrialized countries take the same negative posture on finances, technology and other issues as the United States -- they just do it quietly and let the United States take the criticism.

Nevertheless, many of the environmentalists and others here complain that, at best, the United States is conducting damage-control operations in the preparations for the Earth Summit, seeking only to limit its obligations in the post-Rio period. Members of the American delegation, however, insist they are playing a very active, positive role in many of the huge range of issues that faces the delegates -- and some of the U.N. officials agree.

One official said that the American delegates, in contrast to some of the Europeans, were especially active in trying to set an institutional mechanism to assure there is a permanent follow-

up to the Earth Summit.

Ambassador Ryan said at a news conference on Friday that the United States has been especially effective in negotiating an agreement to protect the oceans. The technology cooperation issue, he said, was settled on the basis of a text submitted by the U.S. delegation. The U.S. delegates have also been very active on chemical and waste issues and introduced proposals for a community right-to-know about the hazards of chemicals in their vicinity. "I don't think any country has taken a stronger position in recognizing the role of the nongovernmental organizations in this process," Ryan said.

If the United States has gotten a bad rap as the villain of the preparations for Rio, it has also failed to exercise decisive leadership in the Earth Summit process. No nation has done so yet. Former Japanese environmental minister Kazuo Aichi said at a news conference that his country would step forward as leader of the effort to save the global environment. But the Japanese government has given little evidence it is willing to do so. Neither has the European Community been particularly forceful here.

Maurice Strong, secretary-general of the conference, and Tommy Koh, the Singapore diplomat who is chairman of the preparatory committee, have given forceful leadership on the road to Rio.

But the United Nations is an organization of nation-states. Unless a major nation or group of nations steps forward to demand decisive action to assure an environmentally sustainable global economy, whatever measures that are taken in Rio are likely to be inadequate to the enormous task that faces the international community in the coming years.

===== MEDIA MONITOR =====

*22 TV MONITOR

CNN's "Crossfire" hosted Fred Smith of the Competitive Enterprise Institute and Rafe Pomerance of the World Resources Institute for debates on global warming and whether President Bush should attend the Earth Summit in Rio. Smith said increased carbon dioxide levels might not be so bad: "We know that carbon dioxide is a plant fertilizer which is a positive benefit to the peoples of the world. ... Most of the indications are [that increased carbon dioxide levels] look pretty good. Warmer winters, warmer nights, no effect during the day because of clouding. ... We're basically moving towards a world that sounds a lot more like heaven than hell." Show co-host John Sununu: "The fundamental issue is, do you make a trillion dollar commitment to stop growth and economic development?" Pomerance: "The first steps you take are the cheapest ones. ... The point is

UNCED — Buchanan vs Bush

FYI

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MINNEAPOLIS (AP) -- Minnesota Republican leaders want Patrick Buchanan -- if he won't take their advice to get out of the race -- to spend his time here focusing on Congress and leaving President Bush alone.

Nothing doing, says the defiant GOP challenger.

"They asked me not to get in in the first place. We didn't take their advice then; we're not taking it now," Buchanan said as he began a three-day visit to Minnesota.

The conservative commentator met briefly on Tuesday with state party Chairman Bob Weinholzer, who issued a statement asking Buchanan to withdraw and support Bush.

"We are hoping Mr. Buchanan is here to do battle with the Democrats," said Weinholzer, state co-chairman of the Bush campaign. "If he insists on staying in, (we ask) that he focus on Congress and go after them."

Buchanan did one thing the GOP leaders wanted: He aimed at least some of his fire at Congress.

Buchanan was sharply critical of Congress at a news conference but also said administration policies are outdated and Bush is a "man of yesterday."

"He is locked into the patterns and ideas of yesterday, and tomorrow is coming right down the road at us," he said. "There's a whole new world order."

Buchanan said voters are "fed up with broken promises, with unbalanced budgets, with \$500 billion dollar S&L scandals, with secret pay raises in the middle of the night, with check-kiting schemes."

"They want a vehicle to say, 'We're fed up with both political establishments and we want change in America' and I can be a vehicle of that protest," Buchanan said.

Buchanan attacked foreign aid and called for cutting \$15 billion, especially funds for Israel and Egypt.

He also criticized plans to bail out the former Soviet Union and offered debt relief as an alternative. The president was unveiling his long-awaited aid package to the former Soviet republics today.

Buchanan also urged Bush to avoid the "Earth Summit" June 1-12 in Rio de Janeiro, saying carbon dioxide limits being urged would strike a "crippling blow to the American economy."

"We think if I can keep this campaign going, we can get a lot more out of Mr. Bush," he said. "I think we can get him to use the line-item veto, we can get him to index capital gains, we can get him to stay home from that Rio summit."

Bush has said he would refuse to go along with a blanket cut in carbon dioxide emissions, which some researchers say causes global warming.

WALL ST. STALL.
3-31-92

Road to Tokyo, Rio, Bitburg

President Bush, we hear, is thinking about topping off his Tokyo trip with a jaunt to Rio de Janeiro for the international "Earth Summit" in early June. The notion seems to be that he could reap hosannas by charming the environmentalists and sating the cash appetite of the Third World. In short, his travel managers have a sure nose for debacle.

The "Earth Summit" will attract 30,000 government officials and environmental activists who will spend \$30 million to discuss how to reduce the world's consumption of resources. The summit's theme is "sustainable development," which amounts to a call for reduced development. This theory holds that developed nations such as the U.S. have spoiled the environment by engaging in economic activity and must cut back on everything from energy consumption to water use.

But since in fact wealthy nations keep themselves cleaner, poor nations struggling to get wealthy will also have to reduce their economic growth. To convince them to do so, the Rio summit will try to get wealthier nations to pony up an additional \$70 billion in foreign aid. This is a kind of bribe the advanced nations will pay to keep the developing nations from developing and thereby creating pollution. Even if the money actually reached poor people rather than local kleptocrats, we doubt that the American people will be attracted by the nobility of this cause.

Then there is the matter of two legally binding treaties the U.S. is being pressured to sign in Rio. One would require the U.S. to preserve the exist-

ing diversity of its plant and animal life, and another would set limits on emissions of carbon dioxide and other gases said to contribute to global warming. If taken seriously, these measures imply anything from national zoning laws to population limits on cities.

All in all, Rio is about the last place a U.S. President ought to show up, especially during an election campaign. All of us certainly do want to work for a decent environment, and all of us want the Third World to develop economically. But at any given moment the demands of each is an insatiable maw; no matter what he does, the President can expect continued criticism from these quarters. His attendance at Rio will only escalate expectations, demands and criticism. Meanwhile, he'll have to explain to voters back home why the government can't afford to spend more money on domestic concerns. Going to Rio is putting the President in a no-win situation, like toting auto executives along to Japan.

We wonder what Mr. Bush's travel agents have in mind for his next trip. A little climb on Mount Pinatubo perhaps? Maybe he could visit South Africa and start a dialogue with Xhosa and Zulu factions. Maybe he could personally save the West Bank and Gaza Strip. For the European leg, Mr. Bush could look in at Sarajevo, the capital of the almost-nation of Bosnia, where World War I was touched off. And finally, we have no doubt some German politicians could be found who would be happy to give him a guided tour of that military cemetery in Bitburg.

BUSH — UNCED

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PHILADELPHIA INQUIRER

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LETTERS TO THE EDITOR

AD PRAISING ADOPTION BRINGS STRONG REACTIONS

The Arthur S. DeMoss Foundation pro-life ads are wonderful, positive, life affirming. They do not attack Roe v. Wade or criticize the abortion industry. They simply point to the best choice - life.

The vehemence of criticism from the usual pro-abortion fanatics in the National Organization for Women, National Abortion Rights Action League and Planned Parenthood only points up what we in the pro-life movement have been saying all along. These organizations and their supporters are pro-abortion, anti-child and anti-life. Their support of abortion is really based on hatred - for men, for bearing children and sadly, for their own womanhood.

Their criticism of these beautiful, positive ads speaks volumes about their bitterness, their selfishness and their callous disregard for any human life

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other than their own.

Thomas A. De Simone
Marlton, Burlington County

LIMITED VIEWPOINT

"If you have ever been a mother, the (Arthur S. DeMoss Foundation) ad evokes a tremendous surge of love," said Peggy Kenny of the Louisiana Right to Life Federation (as quoted in Fawn Vrazo's March 15 article, "A new tack in abortion debate, and new discord").

Well, I am a mother, and when I see these ads, I get a surge all right - of anger and disgust at the limited viewpoint being portrayed. I want to know where the birth mother is - why isn't her anguish and sacrifice portrayed? And I want to know why all the children shown are physically and mentally healthy. Why aren't the thousands of physically and mentally handicapped children - who will never be adopted - shown as being available for adoption right now?

The money would have been better spent on placing these "unadoptable" children into loving homes. Until we take care of the children we already have, we cannot justify creating more who will be abandoned.

Lorraine Petrie
Cherry Hill

IF IT'S A CHOICE, SHUT UP

In the March 15 article about the pro-life television commercials, Debbie Levy McKenney is quoted as saying, "Adoption is a legitimate choice."

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Actions of course speak louder than words. The actions of Ms. McKenney and other pro-abortion advocates give a much more accurate picture of their feelings on adoption. Planned Parenthood supporters are trying to find a way to block these advertisements. Yet at the same time Planned Parenthood affiliates have spent megabucks on full-page ads in many newspapers and magazines. I suppose they would like freedom of speech to be reserved for only

those who agree with their point of view.

Ms. McKenney describes her reaction to the ads as ''screaming and pacing'' and ''very, very angry.'' This is hardly what we would expect from someone who feels adoption is a ''legitimate choice.''

One must wonder why the mere mention of adoption would bring about such a response. Why would anyone prefer having a child torn limb from limb to placing the child in a loving home?

The answer unfortunately is simple: Money. Abortion is big business. Clinics do not make a profit by referring a client to an organization such as Birthright, which will help her carry her baby to term. After all, as in any business, it's the bottom line that counts.

Barbara Burke

Voorhees

BIRTH MOTHER IS VICTIMIZED

I've seen anti-abortion commercials on several television stations that I feel should be taken off of the air.

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One of the ways that our family puts commercials into the proper perspective is to ask the question ''What are they selling us now?'' When this anti-abortion commercial came on, we had to think for a minute, but decided that the message was that ''mothers don't count.''

The commercials present a rosy picture of supply and demand, implying that there is a lucrative market for white babies. Well, we already know that, but our society has always shied away from advertising babies and paying for them because it could encourage women to have children for monetary gain - to get paid for their labor. This is seen as a threat because it trivializes human life.

Yet people are not outraged by this commercial even though it encourages the production of children to satisfy the demand for healthy, white babies. It's accepted because it does not appear to trivialize human life.

The makers of the commercial were careful not to include the birth mother, because it is her life that is being trivialized and it is she who is being victimized by this message.

People take this commercial seriously because no one cares if the woman survives economically, emotionally or even physically. She has committed a transgression against society and must do penance - she must pay for her sin. ''A'' for adoption has become society's new scarlet letter.

Kathleen Gentilcore Ruben

Marlton, Burlington County

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THIS IS CAUSE FOR SCREAMING?

Above the din of the abortion battlefield, the DeMoss Foundation gently struck a chord with its ''Life. What a beautiful choice'' ad.

Planned Parenthood supporters called for a ban on the ad and pro-abortion leader Debbie Levy McKenney was caused to ''scream and pace.''

If the truth and beauty of the DeMoss Foundation ad disturbs the pro-abortion leaders, perhaps they should ask themselves why.

Mary B. Hickey

Unionville, Chester county

WHAT ABOUT IMPERFECT BABIES?

Those ''Life. What a beautiful choice'' ads on prime time TV have been sticking in my craw for some time now.

To me these ads are saying: All babies are born happy and healthy and grow up to lead productive lives; don't deny them the right to life because they

weren't planned.

Well, that's just great, except that all babies are not born happy and healthy, whether they're planned or unplanned. And to imply that they are is wrong.

Those ads would sit a lot better with me if they showed some of the failures as well as the successes. Showing a drooling kid in a wheelchair or a 20-year-old banging his head against a wall might bring a different reaction from the viewer than showing happy kids getting hugged.

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And this is all beside the point of the so-called crack babies and those who are kept alive by extraordinary means only to face barren, futile lives, many of them in institutions.

I object to those ads because I do not think the end justifies the means.
Anne B. McClellan

Newtown Square, Delaware County

A POSITIVE MESSAGE

"Life. What a beautiful choice!"

That is the message of a series by the anti-abortion people. At last, some people in this group have finally begun using their brains rather than their emotions. Congratulations! This is a positive message with which most pro-choice people can agree.

I pray this group will now communicate with the abortion clinic terrorists and help them understand how their tactics are actually counterproductive to the communication process. Perhaps then both sides in the abortion issue will begin to have a dialogue instead of confrontations.

Tom Long
Media

IMPROVING ENTERPRISE ZONES

The excellent March 8 Commentary Page article by Donald Kimelman on the lonely vigil of Seitchik & Sons illustrates how an enterprise zone business toughs it out. Zone residents and businesses are crying out for adequate anti-

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crime measures. Businesses want tax incentives to come into zones, low loans to stay in them and "adequate" city services to prosper in them.

Enterprise zone businesses and the city administration need to form a "public-private partnership" if we're to incubate businesses in Philadelphia. Zone members and the city need to communicate in order to get mutual solutions to mutual problems. So how can we develop a comprehensive long-range strategic planning process to survive and prosper?

As president of the Hunting Park West Enterprise Zone Business Association, I propose the creation of a blue-ribbon committee of leading enterprise zone businessmen and women, community neighborhood leaders, and city administration spokespeople, to discuss enterprise zone issues and needs. Their concerns should not be limited solely to city services and anti-crime measures, but should include looking for ways to make our enterprise zones (and inner-city areas) safer, better functioning and more prosperous.

Bernard E. Featherman
Philadelphia

RIO EVENT IS OF HIGHEST IMPORTANCE

 In response to the March 8 editorial on President*~~Bush's~~*avoidance of the United Nation's Conference on Environment and Development*(UNCED)*in Rio de Janeiro in June, I am pleased to finally see the issue beginning to be discussed in the public forum. The lack of public awareness about the conference is both sad and alarming. However I fear the timing of the

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editorial may be a day late and a dollar short.

Although the stance taken was that Mr.*Bush*should go, the suggestions could have been made that citizens could help encourage U.S. participation by supporting the congressional resolutions that call for the United States to play a substantial leading role at*UNCED.*Also, the importance of the final preparatory meetings currently being held at the United Nations headquarters in New York cannot be exaggerated. A call for citizen pressure could help influence the*Bush*administration to play a more substantial role.

A sense of political vision beyond the elections in November would see UNCED as a landmark for the future course of humankind, a benchmark signaling which of the two possible paths we will take:

Will we follow the path the Bush administration has thus far exemplified - business as usual, procrastinating our way into the future until we have degraded our planet into a global ghetto and are inevitably forced to make changes out of desperate necessity? Or will we begin the change in Rio and meet the monumental challenge ahead of us with the kind of national vision John F. Kennedy called for to put the United States on the moon?

The global conference in Rio is not high on the President's priorities because he suffers from political nearsightedness, a disease that will be cured only by public outcry. But the window of opportunity is also quickly ending.

There is no issue of greater importance than the opportunity presented

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before us to create a more viable future. We the people must encourage our government to take the role of leadership at Rio in June. Nothing less is acceptable.

John Hasse

Mullica Hill, Gloucester County

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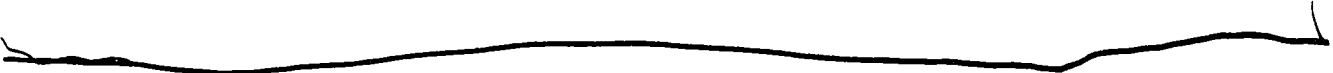
Your editorial about President Bush and the upcoming ''Earth Summit'' conference made some good points about the need for the United States to be more supportive of international environment-protecting measures. But it failed to note the excellent economic reasons for taking such a stance.

Because this country began to legislate seriously about the environment earlier than other nations, we now have the best developed, and in many ways the most technically advanced environmental cleanup industry. This industry generated domestic sales of \$130 billion in 1991, continued to grow at a double-digit pace, currently employs two million people and exported more than \$6 billion worth of pollution control equipment and environmental services last year.

The endemic ecological woes now sweeping the planet are providing enormous economic opportunities to export our own hard-won expertise in this field - a process that would not only benefit the natural environment, but prove a boom to our national economy. Instead of fudging on environmental protection to protect domestic polluters, in other words, Mr. Bush should go to Rio and

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ballyhoo our unique abilities to solve ecological problems.

The old choice paradigm that pits ''the environment against economic development'' is totally passe. You either have a clean, efficient, low-polluting and prosperous society, or you become a foul, waste-spewing economic backwater. It would be nice if ''our man in Rio'' were to reflect an understanding of this new environmental economics at the Earth Summit.



GLOBAL WARMING NETWORK ONLINE TODAY

A Daily Executive Summary Covering World News on Climate Change

INTERNATIONAL REPORT

SUCCESS OF UNCED HANGS IN THE BALANCE AS NATIONS ASK "WHO WILL PAY?"

Last Friday, the final round of UNCED Preparatory Committee deliberations ended on a note of disillusionment for many involved. The major covenants including the World Forest Agreement, the legally binding Climate Change and Biodiversity Conventions, and the Earth Charter, a proposed "Magna Carte for the Planet", remain unresolved. The primary cause of the stalemate is the issue of funding.

UN officials have estimated the costs of environmental cleanup and the funding of appropriate technology for developing nations at around \$125-150 billion. The financial responsibilities would be split among the wealthier industrialized nations. Disagreements as to who should pay what, and how much, have virtually paralyzed the Earth Summit negotiations.

Assistant Secretary of State, Curtis Bohlen said that "we've lost a great opportunity. It's a great disappointment to many of us that we could not agree on finances." World Forest Agreement talks took a turn for the worst when Malaysia blocked any hopes for a compromise. Malaysia is currently denuding its forests at the most rapid rate in the world.

The Climate Convention and World Forest Agreement are strongly tied together as proposals that attempt to halt global warming. Scientists have identified the world's forests as a major carbon sink that plays an integral role in the earth's climatic regulation.

The 160 participating nations did come to a relative agreement on the basic commitment of all nations to sustainable development (See "Earth Summit Principles below).

The text of the declaration indicates a recognition by the industrialized nations of their role in environmentally sustainable economic growth. The document states that those who pollute should take the responsibility for the cleanup costs.

The draft of the declaration is not a legally binding document. Efforts are underway to provide mechanisms for enforcement through a UN monitoring system.

(WASHINGTON POST: 4/4)

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ENVIRONMENTALISTS GIVE U.S. AN "F" AT UNCED PREPCOM NEGOTIATIONS

Representatives of the environmental non-governmental organizations (NGOs) citing a lack of political leadership and commitment to the values of the Earth Summit, vowed to take matters into their own hands come this June in Rio de Janeiro.

Preparatory sessions have been bogged down in hours of disagreement over singular words and phrases contained in documents that are hundreds of pages in length.

The NGOs reserved their harshest criticism for the United States. Barbara Bramble of the National Wildlife Federation speaking on behalf of the environmental NGOs, accused the United States of "seeking to remove every reference to implementation (of any environmental program)." She also

pointed out that U.S. negotiators were attempting to remove a requirement that all nations submit an annual environmental progress report.

The U.S. has consistently rejected international proposals for curbing the emissions of CO₂, the principal contributor to anthropogenic, global warming.

(BOSTON GLOBE: 4/3)

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EDITORIALS, REVIEWS AND ASIDES

DECLARATION OF EARTH SUMMIT PRINCIPLES

The following are excerpts from the working draft of a declaration of sustainable development principles to be signed this June at UNCED:

THE CONFERENCE ON ENVIRONMENT AND DEVELOPMENT

"Principle 1: Human beings are at the center of concern for sustainable development. They are entitled to a healthy and productive life in harmony with nature.

"Principle 2: States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies, and the responsibility to insure that activities within their jurisdiction or control do not cause damage to the environment of other states or of areas beyond the limits of national jurisdiction.

"Principle 3: The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations.

"Principle 5: All states and all people shall cooperate in the essential task of eradicating poverty as an indispensable requirement for sustainable development, in order to decrease the disparities in standards of living and better meet the needs of the majority of the people of the world.

"Principle 8: To achieve sustainable development and a higher quality of life for all people, states should reduce and eliminate unsustainable patterns of production and consumption and promote appropriate demographic policies.

"Principle 13: States shall develop national law regarding liability and compensation for the victims of pollution and other environmental damage. States shall also cooperate in an expeditious and more determined manner to develop further international law regarding liability and compensation for adverse affects of environmental damage caused by activities within their jurisdiction or control to areas beyond their jurisdiction.

"Principle 15: In order to protect the environment, the precautionary approach shall be widely applied to states according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."

For a copy of this document call UN Info, Phone:(202) 289-8670.

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ENVIRONMENT AID FOR POOR NATIONS AGREED AT THE U.N.

SOME ISSUES UNRESOLVED

Industrialized Countries Vow to Help Others to Develop Without Hurting Nature

NEW YORK TIMES
4-5-92
Pg. 1

By PAUL LEWIS

Special to The New York Times

UNITED NATIONS, April 4 — Representatives from more than 160 nations agreed early today on a document that commits the industrial nations of the Northern Hemisphere to help poorer Southern countries develop in a way that will not damage the environment.

The document, in draft form, was the only full accord to come out of five weeks of negotiations here in preparation for an international environmental conference in Rio de Janeiro in June.

But three other major issues taken up in the preparatory negotiations remain unresolved.

What Was Not Settled

Although the conference adopted portions of Agenda 21, a plan for cleaning up the world's environment in the 21st century, disputes continue on how to pay for the cleanup, whether developing countries should have free access to new, environmentally sound technologies, and how to safeguard the world's forests. Discussion of these issues resume in Rio.

Also unresolved are two legally binding conventions — one on stabilizing climate and the other on protecting the diversity of plant and animal life.

The draft Rio Declaration on Environment and Development commits the world's nations to a number of principles that have not been universally accepted before. At its heart is an agreement that eradicating poverty is an "indispensable requirement for sustainable development." [Text of the declaration, page 10.]

Costs and Precautions

The other main points are that those who pollute should bear the cost of cleaning up, that nations should guard against environmental damage even if there are not established scientific reasons for precautions, that women have "a vital role in environmental management and development" and that while nations have a right to exploit their own resources, they have no right to "cause damage to the environment of other states or of areas beyond the limits of national jurisdiction."

The richer northern countries acknowledge, in convoluted language, that the damage their own industrialization has done, as well as the greater wealth they have acquired, give them a special responsibility to help poorer lands raise living standards in environmentally safe ways.

And developing countries, which have environmental problems like overgrazing of land and the destruction of forests, pledge to curb soaring birthrates that contribute to poverty and to environmental degradation.

The declaration, which was adopted early this morning, emerged out of a

Continued on Page 10, Column 3

Continued From Page 1

long and bitter North-South political struggle that dominated the meeting.

At first, the negotiators hoped to draft an Earth Charter, which the industrial nations saw as a relatively short statement, committing countries in soaring, visionary language to safeguard the world's natural inheritance.

But developing nations insisted on a more detailed, pragmatic document that would force the North to take responsibility for the world's environmental difficulties and promise to help them continue their development safely. In addition to financial help, the developing countries are asking the richer ones to share new manufacturing techniques that will enable them to industrialize without polluting.

At the last moment, Israel threatened to prevent unanimous approval of the declaration, arguing that a reference to safeguarding the natural resources of "people under oppression, domination and occupation" constituted "political pollution" of the text by the Palestine Liberation Organization and its Arab allies.

But this dispute was put aside, and the conference approved the compromise draft by acclamation.

Third World Nations Happy

"The declaration captures the middle ground between the North's concern with cleaning up the environment and the South's concern with continuing its economic development," a Western diplomat said afterward.

Developing countries appeared particularly pleased with the final text, seeing it as a victory for their view that any general statement of environmental principles must also address their development needs.

"Developing countries feared recolonization through environmental conditionalities because they are weaker than the North," said Tariq Osman Hyder of Pakistan, chief negotiator for the Group of 77, as the developing countries call themselves at the United Nations. "But this document achieves a middle point between northern and southern goals."

Annual Cost Estimate

The United States gave some ground during the talks. Before, it did not acknowledge the need for new resources in developing countries to help pay for cleaning up the environment. But after criticism, Washington agreed to join others from the industrial world in the view that developing countries will need further resources. No indus-



Steve Berman

Maurice Strong, Secretary General of the United Nations Conference on Environment and Development, during a news conference before the end of five weeks of negotiations in preparation for an international environmental meeting in Rio de Janeiro in June.

trial nation has committed any specific amount of money.

It is estimated that the poorer nations will need \$125 billion a year in foreign assistance to fully carry out Agenda 21 — about \$70 billion more than the \$55 billion they receive in aid from the North today.

Such an increase in aid is generally dismissed as unrealistic in the present economic climate. But some European diplomats say they expect the wealthy nations to pledge \$3 billion to \$6 billion in additional assistance at the Rio meeting. In addition they argue that current aid will increasingly be given

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Trying to avoid the damage that can go with development.

for environmentally sound projects related to Agenda 21.

North and South are also divided over how to give the poorer countries better access to environmentally sound technologies developed in the industrial world and how to protect the world's remaining forests.

Malaysia, India and other developing countries with substantial forests are reluctant to acknowledge that they have an obligation to preserve them in order to prevent changes in climate that affect other countries, as the North wants.

Providing Enforcement

While neither today's draft declaration nor the full Agenda 21 is legally binding, a means for monitoring compliance is expected to be devised in Rio de Janeiro. This would put pressure on violators through public criticism, much like with the enforcement of human rights standards.

Some nations favor creating a new Sustainable Development Commission to follow up on the commitments made by nations in Rio de Janeiro, while others say this should fall to the United Nations Economic and Social Council.

The United States remains at loggerheads with the rest of the world in negotiations on a binding international convention on combating global warming.

The Bush Administration continues to refuse to set specific detailed targets for curbing emissions that contribute to rises in temperature. Increasingly sharp criticism of the United States has come from the European Community, which insists on a treaty with specific emission limits.

And Mr. Bush has not said whether he will be among the more than 60 heads of state and government who have pledged to attend the Rio conference.

Jean Rippert, the French chairman of the negotiating body for this convention has scheduled a small meeting of key countries in Paris later this month to try to find a compromise before the next formal round of negotiations in New York in May. Separate negotiations on the convention protecting the biological diversity of plants and animals are making better progress.

I called Kerry's

LD & told we
expect 45-60 min.

He said fine, if it looks
like less for any reason he
will call me & we will go
fight our own time battle.

Don't let Steve reach a
time agreement we don't like.

UNITED NATIONS, April 4 — Following is the draft text of a declaration of principles for encouraging environmentally responsible development that is to be considered in June by leaders attending an environmental summit meeting in Rio de Janeiro:

THE CONFERENCE ON ENVIRONMENT AND DEVELOPMENT,

HAVING MET at Rio de Janeiro from June 3 to 14 1992,

REAFFIRMING the Declaration of the United Nations Conference on the Human Environment, adopted at Stockholm on June 16, 1972, and seeking to build upon it;

WITH THE GOAL OF establishing a new and equitable global partnership through the creation of new levels of cooperation among states, key sectors of societies and people,

WORKING TOWARD international agreements which respect the interests of all and protect the integrity of the global environmental and developmental system,

RECOGNIZING the integral and interdependent nature of the earth, our home,

PROCLAIMS that:

Principle 1. Human beings are at the center of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature.

Principle 2. States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies, and the responsibility to insure that activities within their jurisdiction or control do not cause damage to the environment of other states or of areas beyond the limits of national jurisdiction.

Principle 3. The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations.

Principle 4. In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it.

Principle 5. All states and all people shall cooperate in the essential task of eradicating poverty as an indispensable requirement for sustainable development, in order to decrease the disparities in standards of living and better meet the needs of the majority of the people of the world.

Principle 6. The special situation and needs of developing countries, particularly the least developed and those most environmentally vulnerable, shall be given special priority. International actions in the field of environment and development should also address the interests and needs of all countries.

Principle 7. States shall cooperate in a spirit of global partnership to conserve, protect and restore the health and integrity of the earth's ecosystem. In view of the different contributions to global environmental degradation, states have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command.

Principle 8. To achieve sustainable development and a higher quality of life for all people, states should reduce and eliminate unsustainable patterns of production and consumption and promote appropriate demographic policies.

Principle 9. States should cooperate to strengthen endogenous capacity building for sustainable development by improving scientific understanding

through exchanges of scientific and technological knowledge, and by enhancing the development, adaptation, diffusion and transfer of technologies, including new and innovative technologies.

Principle 10. Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.

Principle 11. States shall enact effective environmental legislation. Environmental standards, management objectives and priorities should reflect the environmental and developmental context to which they apply. Standards applied by some countries may be inappropriate and of unwarranted economic and social cost to other countries, in particular developing countries.

Principle 12. States should cooperate to promote a supportive and open international economic system that would lead to economic growth and sustainable development in all countries, to better address the problems of environmental degradation. Trade policy measures for environmental purposes should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade. Unilateral actions to deal with environmental challenges outside the jurisdiction of the importing country should be avoided. Environmental measures addressing trans-boundary or global environmental problems should, as far as possible, be based on an international consensus.

Principle 13. States shall develop national law regarding liability and compensation for the victims of pollution and other environmental damage. States shall also cooperate in an expeditious and more determined manner to develop further international law regarding liability and compensation for adverse effects of environmental dam-

ON WOMEN'S ROLE

"Women have a vital role in environmental management and development. Their full participation is therefore essential to achieve sustainable development."

age caused by activities within their jurisdiction or control to areas beyond their jurisdiction.

Principle 14. States should effectively cooperate to discourage or prevent the relocation and transfer to other states of any activities and substances that cause severe environmental degradation or are found to be harmful to human health.

Principle 15. In order to protect the environment, the precautionary approach shall be widely applied to states according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

Principle 16. National authorities should endeavor to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment.

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Principle 17. Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority.

Principle 18. States shall immediately notify other states of any natural disasters or other emergencies that are likely to produce sudden harmful effects on the environment of those states. Every effort shall be made by the international community to help states so afflicted.

Principle 19. States shall provide prior and timely notification and relevant information to potentially affected states on activities that may have a significant adverse trans-boundary environmental effect and shall consult with those states at an early stage and in good faith.

Principle 20. Women have a vital role in environmental management and development. Their full

ON SPREADING THREATS

"States should effectively cooperate to discourage or prevent the relocation and transfer to other states of any activities and substances that cause severe environmental degradation or are found to be harmful to human health."

participation is therefore essential to achieve sustainable development.

Principle 21. The creativity, ideals and courage of the youth of the world should be mobilized to forge a global partnership in order to achieve sustainable development and insure a better future for all.

Principle 22. Indigenous people and their communities, and other local communities, have a vital role in environmental management and development because of their knowledge and traditional practices. States should recognize and duly support their identity, culture and interests and enable their effective participation in the achievement of sustainable development.

Principle 23. The environment and natural resources of people under oppression, domination and occupation shall be protected.

Principle 24. Warfare is inherently destructive of sustainable development. States shall therefore respect international law providing protection for the environment in times of armed conflict and cooperate in its further development, as necessary.

Principle 25. Peace, development and environmental protection are interdependent and indivisible.

Principle 26. States shall resolve all their environmental disputes peacefully and by appropriate means in accordance with the Charter of the United Nations.

Principle 27. States and people shall cooperate in good faith and in a spirit of partnership in the fulfillment of the principles embodied in this Declaration and in the further development of international law in the field of sustainable development.

NYT 3-24-92

U.S. Under Fire In Talks at U.N. On Environment

Poor Nations Ask Help to Cut Gas Emissions

By PAUL LEWIS
Special to The New York Times

UNITED NATIONS, March 23 — Rich and poor countries attending a five-week conference here say the United States is endangering prospects for the international environmental meeting planned for Rio de Janeiro next June.

These countries say that by refusing to promise more environmental aid to the third world or to set limits for emissions of gases that contribute to global warming, the United States threatens to sabotage the two most important agreements to be taken up at the Rio meeting.

The purpose of the Rio talks, which are expected to draw thousands of participants from more than 170 countries, is to plan for a world economy that can continue to grow without irreversible ecological damage.

Cleanup Plan Threatened

The American stand threatens Agenda 21, an ambitious, international environmental cleanup plan for the next century, because of third world requests for additional aid and new environmental technologies from industrialized northern countries.

The 12 European Community countries as well as Canada and Scandinavia are ready to give additional aid, but have not committed themselves to specific amounts.

There has been no visible result so far from a meeting last week of the conference's Secretary General, Maurice F. Strong of Canada, with Treasury Secretary Nicholas F. Brady, the national security adviser, Brent Scowcroft, and the White House chief of staff, Samuel P. Skinner, in an effort to change the American position.

Today Senator Al Gore, a Democrat from Tennessee who will lead the Senate contingent to the Rio meetings, told delegates that the United States must

Continued on Page A6, Column 1

U.S. Is Drawing Fire for Policies On World Environment Meeting

Continued From Page A1

exercise leadership to insure their success, saying that at a minimum agreement must be reached on "new and additional" aid to the third world and on the stabilization of emissions.

"The United States must use its moral authority, its political and economic strength and its leadership skills to resolve the impasses that are frustrating progress," Senator Gore said.

America's reluctance to commit itself to freezing its emissions of "greenhouse" gases at 1990 levels by the year 2000 imperils agreement on the planned new international convention on stabilizing the global climate, which is supposed to be the centerpiece of the Rio agreement.

Last week the Environmental Protection Agency administrator, William K. Reilly, told the conference that the Administration planned no fundamental changes in its position on climate change, saying it would continue to resist "top down directives or commitments and targets, the costs and consequences of which we have not yet fully assessed."

While Washington opposes specific, binding commitments on cutting emis-

Rich and poor nations are pressing the U.S.

sions of carbon dioxide and other gases, Mr. Reilly said that the United States was still committed to reducing these emissions through practical action.

'A Futile Exercise'

In an effort to save the separate negotiations on the climate treaty, the United States and about 20 other countries have been invited to a meeting in Paris on April 15, Portugal, the current president of the European Community, announced today. The participants will try to resolve the standoff before the final round of negotiations opens in New York on April 30.

"It would be a pity if the convention had to be postponed until after Rio," Portugal's representative to the United Nations, João Pereira Bastos, said at a news conference, adding that Europe would find an American-style convention that did not require detailed commitments unacceptably weak. In a clear reference to the United States, Mr. Bastos said it would be "a futile exercise" for Europe to press ahead with its own climate stabilization plan unless "other regions" joined in.

Partly because of these disagreements, the conference of more than 170 countries meeting here to prepare the agenda for the Rio meeting has entered its fourth week with little progress to report.

But progress is also being slowed, delegates say, by the breadth and complexity of the agenda because it identifies poverty and its effects as a fundamental environmental threat and says that only when it has been abolished will the global environment be safe. As a result, the conference is bogged down in quarrels over economic and social issues that at first sight seem far removed from the environment, including debt relief, slum clearance, the Uruguay Round of trade talks and subsidies for northern farmers that block the agricultural exports of poor countries.

Old Quarrels Reopened

These issues complicate the negotiating process by taking up time and reopening old quarrels between the North and the South. The fact that

Government and industry officials introduced the nation's first "ozone friendly" supermarket in Glens Falls, N.Y. Business Day, page D1.

many of these questions are the subject of continuing negotiations in other international forums makes the discussions here even more complex.

"With 60 percent of our time gone, we've only negotiated 5 to 10 percent of the output," Canada's chief delegate, John Bell, who is chairman of the group dealing with financial questions, said last week. "Increased funding for the developing world is absolutely central. It's frustrating we haven't even started negotiations."

Asked about America's reluctance to provide aid, Pakistan's United Nations representative, Jamsheed K. A. Markar, current president of the Group of 77, as the developing countries call themselves, said that he did not wish to single out the policies of any individual countries for public criticism. But in an interview he made clear that the developing world remained unhappy with Washington's stance, saying: "Without financial commitments it is difficult to know how this will all end. That's the biggest stumbling block for the developing world."

Chile's delegate, Vincent Sánchez, said: "This conference could fail. We've agreed absolutely nothing of real significance so far."

Already, an important attempt to draft a convention to save the world's rain forests has collapsed because mainly northern, industrial countries and southern, undeveloped countries cannot agree on who is to blame for their destruction.

Progress Is Expected

While few delegates deny that the Rio preparatory conference has reached a critical phase, some say progress will pick up in the two remaining weeks as countries realize time is running out. "These big conferences usually reach a low point about now," said Britain's delegate, Fiona McConnell. "It's often darkest just before the dawn."

But increasingly participants here say that the Rio meetings must be judged less on concrete agreements than on broad global initiatives to make economic development environmentally sustainable.

"Rio must be seen as the start of a process, not the end," Mr. Strong, the conference's Secretary General, said today.

The last world environmental conference, held in Stockholm 20 years ago, resulted in most governments' creating environmental ministries.

Agenda 21, the 800-page global environmental action plan, lays down new goals and standards in virtually every field.

To carry out their part of this agenda, developing countries say they will require \$70 billion in additional aid each year over the \$55 billion they now receive from northern industrialized countries.

Relations Embittered

Most industrialized nations are ready to make firm pledges of new resources and access to technology that will allow developing countries to make a safe transition to industrialization. But the Bush Administration continues to resist even a general commitment, even though it recently made an additional \$75 million available in environmental aid for developing countries.

The result, many delegates say, has been a general embittering of North-South relations at the conference, with the Group of 77 pushing a number of demands the northern countries consider extreme, politicized and unacceptable.

WALL ST. JOURNAL
4-7-92

Earth Summit Has Put Bush on the Spot

Issue Is Whether to Attend Meeting in Brazil

By ROSE GUTFELD

Staff Reporter of THE WALL STREET JOURNAL

WASHINGTON—To the National Audubon Society, this June's Earth Summit in Rio de Janeiro will be "the most important meeting in the history of mankind."

Radio ads and billboards urge President Bush to attend. Movie theaters and cable-television stations show announcements filled with images of raging fires, billowing smoke and frightened animals, with actor James Earl Jones telling viewers that "at stake is the entire human race." For \$6.95, people can dial a telephone number and send one of five pre-written Earth Telegrams to the White House. A painting by Robert Rauschenberg is dedicated to the official Earth Summit Pledge. And there's a newspaper and a documentary in the works.

There even are plans for an Earth Summit concert.

The Rio conference, officially called the United Nations Conference on Environment and Development, is designed to be an ecological Bretton Woods, where world leaders shaped the post-World War II international financial system at a 1944 conference in New Hampshire. The heads of as many as 160 nations hope the Rio meeting will put the world on a path of sustainable development, in other words, a path that will allow for continued development without overexploitation of resources and environmental degradation. Among other goals, negotiators hope to produce binding treaties aimed at limiting global warming and halting the loss of key species of plants and animals. They also will seek agreements on forests, oceans and assistance for developing countries.

The summit will be held on the 20th anniversary of the Stockholm conference, the first international gathering on the environment.

To Patrick Buchanan and other conservative critics of President Bush, the conference is the product of a dangerous mix of Third World bureaucrats seeking to shame the developing nations into giving more foreign aid and environmental ex-

tremists pushing hysterical notions of planetary peril. In a letter to President Bush, Rep. Tom DeLay (R., Texas) said, "The rush to impose global regulations will have a negative impact on the world economy, jobs, standards of living and health, with the most severe consequences falling on the developing nations and the poor."

Environmental groups reject the notion that cleaning up the environment will slow economic growth. They note, for example, that increasing energy efficiency can lead both to cost savings and a reduction in emissions of carbon dioxide, the prime suspect in the buildup of greenhouse gases that many scientists contend may lead to a disastrous warming of the Earth.

Despite a series of preparatory meetings over the past two years, significant questions, which may well determine the success or failure of the summit, remain unresolved. These include:

—Will President Bush attend? Environmental Protection Agency chief William Reilly and other advisers are urging Mr. Bush to go, and there have been increasing indications lately that he will do so. Last week, for example, there were several high-level White House meetings on the Rio conference and on a possible climate-change treaty. But the president, mindful of conservative opposition, isn't disclosing his plans.

—Will the U.S. sign a treaty aimed at curbing global warming? The next negotiating session comes at the end of this month in New York. Administration officials are crafting language under which nations would promise to try by 2000 to stabilize per-capita emissions of carbon dioxide at 1990 levels, but wouldn't pledge to achieve that goal. U.S. officials contend

that such an accord, which would include procedures to assess progress every few years, could be mild enough to be acceptable to business groups but strong enough to satisfy European nations that have pushed for a binding treaty.

—How much money, if any, will the developed world provide to help the Third World develop in an environmentally friendly way? Some organizers of the summit have said that "sustainable development" eventually will require \$70 billion of new aid on top of the \$50 billion currently provided each year. More realistically, delegates have discussed a range of \$3 billion to \$6 billion, but even those amounts don't appear to be forthcoming.

At any rate, the hoopla is building. Big Blue Foundation, the environmental media group that organized the telegram drive, says its billboard campaign, begun yesterday in Los Angeles, is soon to go nationwide. The Rauschenberg painting dedicated to the pledge—which states, in part, "I pledge to act to the best of my ability to help make the Earth a secure and hospitable home for present and future generations," is also available on posters.

Theodore Kheel, the New York labor lawyer and chairman of the Earth Summit Committee to Promote the Pledge, said film maker Peter Bogdanovich is producing a short documentary showing people reciting the pledge in six languages. Mr. Kheel publishes the "Earth Summit Times," which will come out during the summit and which has already appeared during preparatory meetings.

"It's a little different from settling labor disputes," said Mr. Kheel. "And I feel we're doing something."

54 REU 04-15-92 22:24 EST 29 Lines. Copyright 1992. All rights reserved.
BC-EARTH-BUSH

NBC NEWS SAYS BUSH WILL ATTEND EARTH SUMMIT

WASHINGTON, April 15, Reuter - President George Bush will attend the multinational "'Earth Summit'" in Brazil this June, according to diplomatic sources quoted by NBC News on Wednesday, but White House officials said no decision has been made.

The administration has said Bush will not attend the United Nations Conference on Environment and Development unless it is "'productive.'"

A National Security Council official and a White House spokeswoman both said Bush had not yet reached a decision on attending and did not know when Bush would decide.

Bush's apparent reluctance about going to the summit has sparked criticism that the avowed "'environment president'" is not interested in solving major issues facing the planet.

The NBC report gave no details or reasons for the apparent change, simply quoting the sources as saying Bush would go.

But one administration official, who did not want to be identified, said of the NBC report, "'It was wrong, I don't know where they got it from. Nothing has changed.'"

The Rio conference, set for June 3 to 14, attempts to pool
PRESS RETURN TO CONTINUE OR ENTER A REQUEST.

the complex issues of poverty and pollution into a collection of statements, treaties and guidelines never attempted before.

Bush has been criticised both for failing to take leadership in the summit and for not adopting a global warming agreement, the centrepiece of the meeting.

Bush has said he would not sign if the treaty includes limits on carbon dioxide emissions in 2000 to 1990 levels.

55 AP 04-16-92 01:31 EST 70 Lines. Copyright 1992. All rights reserved.
PM-ME--Rio Roosevelt, Bjt,600<

AP Photo<

Explorers Return From Brazil Jungle<

AUGUSTA, Maine (AP) Members of an expedition that followed Theodore Roosevelt's trail along a remote river deep in Brazil's

bloodsucking insects.

They were constantly wet from the daily rain and 99 percent humidity in the jungle, where temperatures stayed in the 90s.

The river was so narrow and shallow in some places that team members had to pack their rafts and equipment and slash their way through the jungle with machetes.

Asked what was the most difficult part of the journey, Tweed
PRESS RETURN TO CONTINUE OR ENTER A REQUEST.

WASH. POST
5-5-92

Environmental Concern Mounts in Developing Nations

Associated Press

Environmental damage, once dismissed as a concern of the rich, is now widely recognized as a threat to human health, according to a 22-nation poll released yesterday by the Gallup organization.

Protecting the environment has joined problems of economic livelihood, crime and violence as "major concerns around the world," the George H. Gallup International Institute said in its "Health of the Planet Survey."

The survey questioned the as-

sumption that rich and poor countries are deeply split over who is to blame for environmental problems, an issue thought to be hampering negotiations for the U.N. "Earth Summit" next month in Rio de Janeiro.

"Residents of poor, rapidly growing nations acknowledge the threat of overpopulation and also accept partial responsibility for creating global problems," the Gallup report said, while people from richer countries "recognize the disproportionate impact" on the environment from their industries and lifestyles.

Polling from as many as 12 more

countries will be added in three or four months, said Washington State University sociologist Riley E. Dunlap, the project director.

Majorities in all 22 countries believe that the environment will affect the health of their children or grandchildren, the survey said. The question of whether the environment affects health today was answered "yes" by majorities in 10 more countries: South Korea (76 percent), India (74), Mexico (68), United States (67), Turkey (63), Chile (56), Hungary (55), Britain (53), Brazil (51) and Canada (51).

In 20 of the 22 countries, majorities chose statements favoring environmental protection even at the risk of slowing economic growth,

Majorities in 16 of the 22 countries, including India, Chile and Mexico in the low-income category, said they were willing to pay higher prices to meet environmental protection costs.

Because the number of people questioned personally by Gallup affiliates in each country varied, the margin of error ranged from plus or minus 2 percent to plus or minus 4 percent.

F.T.
5.7.92

BOOK REVIEW

Green grow the profits

The business world faces a dilemma over the environment. In only a month, political leaders from more than 100 countries will gather in Rio de Janeiro for the grandly named Earth Summit. The conference halls will be packed with thousands of environmental pressure groups agitating for action. And the whole world – or such is the organisers' hope – will be watching. Who knows what will result?

At the very least, the politicians will want to avoid a wasted journey by signing a commitment to get the world economy on to a more sustainable path. But they might also agree to more concrete measures, like taxation or regulation, to tackle the specific ills of global warming, deforestation and pollution.

The chances of that are rather small. The run-up to the summit has exposed a world deeply divided on green issues; it cannot even agree an agenda, let alone a plan of action. But it is easy to see why some business people view Rio as an ominous prospect. They may welcome the fact that environmental issues have finally got on to the global agenda. But Rio will not simplify their life; it could make it more difficult.

Much of the trouble lies in business's poor image, and the widespread view that protection of the environment and the pursuit of profit are fundamentally at odds with each other.

A group of 50 top businessmen has got together to try to deal with these issues, and this book is the result of their labours. It comes very late in the day, and a lot of it will cut little ice with Mr Greenperson, but it is unquestionably one of the more important contributions to Rio.

The prime mover is Stephan Schmidheiny, a little-known but highly successful Swiss businessman who was invited by the Rio

CHANGING COURSE By Stephan Schmidheiny and the Business Council for Sustainable Development

*The MIT Press. £20.50 hardback,
£9.95 paperback. 355 pages*

organisers to become their adviser. Rather than do the job alone, he formed a business council with the top executives of companies such as Shell, ABB Asea Brown Boveri, Volkswagen, 3M, Nissan Motor and Dupont, and all have contributed from their experience.

There are several strands to their message. The central ones are that business favours sustainable development, that it accepts the need for environmental policies, and that it recognises its responsibility to help the developing world out of its difficulties. In other words, greenery and profit-making can coexist.

But these arguments are also highly qualified. Sustainable development must be achieved by means of free and open markets, environmental measures should be imposed through economic instruments (like taxes) rather than controls (which distort) or self-regulation (which encourages business cartels). And if business is to enrich the Third World with its technology, it must be on the basis of "co-operation" (ie on commercial terms) rather than "transfers" (terms mandated by government).

None of this sounds specially surprising. But the book fleshes out these positions with 38 studies of businesses resolving conflicts with the environment.

There is the case of New England Electric, the US utility which devised a system with its regulators that enabled it to profit if its customers reduced demand through conservation. Previously NEE's earnings had been based solely on

the amount of electricity it had sold.

Another case relates how Dow Chemical adopted a policy of eliminating harmful waste at source rather than by treating it at the end of the waste pipe, meaning that only a minimal amount now ends up in a landfill.

In a quote that typifies much of this book, Dow's president, Frank Popoff, says: "Surveys show that the public is sceptical of industry's efforts at environmental protection. If we fail to take the initiative, the result will be a regulatory crunch that costs us – and the public – dearly without achieving significant benefits."

Other cases show how Shell promoted local nationals in Nigeria, Henkel developed the phosphate-free detergent which eventually swept Europe, and Volkswagen designed the recyclable car.

This book is undoubtedly well-intentioned, but the question is how much impact it will make. The case studies are rather predictable: the company always triumphs over adversity. This was a deliberate decision "designed to provide positive examples to motivate others to take action", the authors say.

But what a pity they did not develop a tantalising reference to 3M being forced to discard a water-based process for making audio tape because it was not good enough. This is not because, as the authors say "too often the media focuses on errors and accidents". It is because the world knows that business is having a tough time adjusting to environmental pressures, and it needs to be convinced that businessmen are acting out of genuine motives.

As NEE chief executive John Rowe says in the book's most memorable quote: "The rat has to smell the cheese."

David Lascelles

Los Angeles Times

THURSDAY, MAY 14, 1992 A3

Negotiators Clash Over Wildlife Treaty

■ **Environment:** U.S. criticism of an accord on biological diversity sparks trouble at Kenya talks.

By MAURA DOLAN
TIMES ENVIRONMENTAL WRITER

Representatives of more than 80 nations, meeting in Nairobi, Kenya, to negotiate a treaty to protect the world's wildlife and its habitat, are clashing over language intended to spur conservation but denounced by the United States as an infringement of states' rights.

The talks, which began Monday and will continue through next Wednesday, are aimed at producing a biological-diversity treaty that could be signed by world leaders at the Earth Summit in Rio de Janeiro next month.

Some environmental activists, citing an internal memorandum by Vice President Dan Quayle's staff criticizing many of the proposed treaty's provisions, have charged that the Bush Administration is trying to gut the document.

Among the potential stumbling blocks is language that would require signatory countries to regulate or manage biological resources, including plants and animals, for their conservation and sustainable use.

Washington has objected to the wording, contending that it would inadvertently switch jurisdiction for wildlife management from the states to the federal government.

"What we are trying to do is work out language . . . that makes clear that this is shared responsibility in this country," said Curtis Bohlen, assistant secretary of state for oceans, the environment and science and a former senior vice president of the World Wildlife Fund.

"But in the process of trying to introduce language to do that, people have perceived it as an effort to weaken the convention," Bohlen added. "I assure you that is not our intention."

Another potential sticking point has been an effort by some countries to write a treaty that calls for strong environmental and health safeguards in the release of genetically engineered organisms.

U.S. negotiators have said the United States will not sign any treaty that includes measures that would further regulate the biotechnology industry, which uses genetic engineering in the making of items ranging from new drugs to agricultural products.

"But I think the chances are that [disagreements] can be worked out on that," Bohlen said.

Kenton Miller, senior associate of the World Resources Institute, a

Washington-based environmentalist think tank, said the treaty would be a "fundamental step forward" because it would require nations for the first time to be responsible for the conservation of their species and landscapes.

But in the Nairobi negotiations, the United States has been "systematically trying to weaken and remove obligations" from the text on instructions from Washington, Miller said in a telephone interview from Nairobi.

Sen. Albert Gore Jr. (D-Tenn.) gathered signatures Wednesday for a letter to President Bush asking for a treaty that stresses conservation of biological diversity. "I think that the Administration is intent on gutting the bio-diversity treaty, and I think the arguments which are being highlighted in their public statements are not their real concerns," Gore said in a telephone interview from Washington.

"I think that they are worried about offending some parts of the biotech industry by leaving open in the convention a possibility for future regulation."

John Fitzgerald, who is monitoring the Nairobi talks for Defenders of Wildlife, an environmental group, agreed.

"The U.S. continued their parade of destruction, marching through this treaty and gutting any article that means anything," Fitzgerald complained from Nairobi.

He said U.S. negotiators have consistently added such language as "as far as possible" or "as appropriate" to reduce the obligations of signatories. He complained that the United States also opposes language that would require countries to perform an environmental impact assessment of projects on the high seas or overseas.

So far, countries such as Australia, New Zealand and, on occasion, Germany have blocked many proposed U.S. changes, Fitzgerald said, while India, a developing country on the brink of industrialization, has embraced them.

Bohlen of the State Department said some of Washington's proposed revisions are intended to protect the freedom of the U.S. Navy. For instance, he said, the Navy fears that applying the treaty to marine areas would reduce freedom of navigation.

Bohlen noted that the U.S. Agency for International Development a foreign aid program, already does environmental impact assessments of projects overseas.

SUNDAY, MAY 3, 1992

The Washington Post

OUTLOOK

Commentary and Opinion

Not Flying Down to Rio

How Bush Is Ducking the Global Warming Treaty

By Al Gore

FOR THE BUSH administration, deciding whether the United States can afford to reduce emissions of carbon dioxide has all the seriousness of a rigged television game show: They know the answer before they ask the question. And the answer is "no."

That's the wrong answer. In fact, it's a dangerous answer, with severe consequences not just for the United States and for our economy, but also—because carbon dioxide is the principal cause of global warming—for the global economy, the global environment and for humanity.

There is an urgent need for a reality check. Urgent, because a draft agreement on climate change—a compromise released late Friday—leaves many goals unmet. This draft compromise comes as nations from around the world meet for the sixth time in an effort to craft a new international agreement to control emissions of carbon dioxide and confront global warming in time for the agreement to be signed at the Earth Summit in June.

Each time these nations have negotiated, intransigence from President Bush and his representatives has blocked progress. Now, there is a weak compromise, clouded by confusing and dense language and without any specific targets and timetables for action, but a compromise. Unfortunately, it appears as though the United States—in-

Al Gore is the junior Democratic senator from Tennessee.



CHRIS MULLEN FOR THE WASHINGTON POST

stead of moving forward—has pulled every other nation back to craft an agreement far short of what could have been accomplished. A treaty without specific targets and timetables is a hollow promise. There is no assurance it will be kept and no promise of future benefit. This is the final negotiating session, and every indication is that the United States will con-

See GLOBAL C4, Col. 1

Not Flying Down to Rio

GLOBAL, From C1

tinued to do all it can to weaken the language of any treaty.

That's why a reality check is needed. The administration is selectively sorting through the data to get the answers it wants, ignoring even the findings of its own agencies whenever they don't support the administration's advance conclusions.

For many months, the administration took the position that the United States cannot afford to stabilize emissions of carbon dioxide at 1990 levels by the year 2000—and sign the climate convention at the international Earth Summit—because the economic impact would be debilitating. However, the administration's most recent analysis, "U.S. Views on Global Climate Change," shows not only that we can afford to stabilize emissions but that voluntary energy conservation and other measures have brought the United States close to meeting the proposed targets and timetables—while actually enhancing business profits. What was once called too expensive is now called a bargain too good to pass up.

But instead of seizing this as a plausible justification for a change in position—and one that would be politically palatable to the president's conservative critics—the administration now argues that this good news means the United States doesn't need to sign an international agreement—or at least not one that actually requires us to do anything.

The economic analysis that supported the report's findings was debated intensely within the administration; it is unclear whether the

conclusions were reached as much by politics as by facts. But, by the administration's own reckoning, the United States can nearly achieve stabilization of carbon dioxide emissions at 1990 levels by the year 2000, and—again by the administration's own reckoning—easily meet targets and timetables in language now being negotiated by other nations. The Bush administration has stubbornly blocked a binding commitment to these goals on the grounds that the United States, of all the world's developed nations, is uniquely unable to reach meet them.

Indeed, the administration has consistently endorsed the idea that business profits can only be hurt by the effort to curb global warming embodied in specific targets and timetables. For example, previous Department of Energy (DOE) analyses, such as the National Energy Strategy and the DOE Report to Congress, "Limiting Net Greenhouse Gas Emissions in the United States," concluded that many of the options now considered profitable would, in fact, hurt the economy. The administration justifies its stubborn opposition to a strict climate change agreement—indeed, to any serious U.S. effort to reduce emissions of carbon dioxide—by arguing we can't afford it.

But a closer look at the administration's own analyses of the costs and benefits discloses numerous examples of faulty analysis:

■ DOE emphasizes energy production over conservation in its modeling. That's what a National Research Council committee—put to work by the department to evaluate the anal-

ysis behind the National Energy Strategy—concluded. The committee's interim report offers a number of criticisms and points up fundamental flaws in the analysis DOE used to craft the energy strategy. How then can the Energy Department continue to use this energy plan, with its flawed analysis, to justify claims that aggressive conservation policies hurt the economy?

■ The National Energy Strategy analysis assumes that the U.S. gross national product will grow at an average annual rate of 3.2 percent between 1990 and 2000, while more realistic current estimates are between 2 and 2.5 percent. Even DOE's Annual Energy Outlook, compiled by the Energy Information Administration, uses a 2.3 percent growth rate. These seemingly small differences have a tremendous impact on projections of carbon dioxide emissions.

For example, a 3.2 percent annual average growth rate will forecast an economy that is 9 percent larger over the course of a decade. The effect of this is to substantially inflate—perhaps as much as double—projections of the increases of carbon dioxide emissions, making the job of stabilizing or reducing emissions seem tougher than it will be in reality.

■ DOE's projections of future carbon dioxide emissions by the nation's electric utilities are based on an outdated 1986 industry forecast of the impact of utility-sponsored energy programs. But the industry updated its own analysis in 1990, forecasting that demand for electricity will grow by only 1.8 percent annually in the 1990s, significantly lower growth—and therefore, lower emissions—than DOE projected. DOE ignored the new information and built an analysis that makes the job of stabilizing emissions seem harder by setting the goal farther from us.

The Energy Department, apparently afraid that the price tag on energy efficiency will be too high, offers little conservation guidance to business, school districts and homeowners—as though none is needed or wanted. In fact, corporate America has a far different view of this situation.

Progressive electric utilities are becoming enormously successful with programs that encourage customers to invest in energy efficiency as an alternative to more expensive investments in new generating capacity. For example, energy conservation and efficiency will save Pacific Gas and Electric customers \$2.4 billion over the next 10 years, money that will be available to strengthen the economy and create jobs. In the process, PG&E will reduce its carbon dioxide emissions by some 20 million tons.

■ DOE has recently ignored much of the energy analysis done by its own national laboratories. For example, researchers at Oak Ridge National Laboratory and other laboratories concluded that the nation could effectively and profitably stabilize energy use by the year 2000 and limit subsequent energy growth to less than 1 percent per year until 2010. But DOE's National Energy Strategy ignores the projection.

The fact is that we can create jobs, strengthen our economy and improve our performance in the global economy with energy efficiency and conservation technologies. The private sector is eager to respond to the stabilization challenge. Profitable energy conservation opportunities still exist in our diverse economy.

Indeed, we can create more jobs by expanding conservation than by expanding energy production. A recent study by Economic Re-

search Associates concluded that new conservation investments in Louisiana would provide more than twice as many jobs as an expansion of conventional power generation—about 12,600 new jobs over 20 years. A similar study for Virginia reached similar findings.

These efforts are moving forward with little help from the administration. The moment is at hand for the president to start truly leading on the environment—at the upcoming Earth Summit as well as here at home. If we insist on a weak treaty with no binding commitments at Rio, we destroy our capacity to lead. We cannot keep searching for excuses instead of working for solutions.

Without agreements such as the climate-change treaty, with its specific deadlines and targets, there can be no assurances that what must happen, will happen: that carbon dioxide emissions will be reduced and global warming will be confronted. The situation is far more serious than is commonly understood.

The administration is stuck between its economic analysis and its political instincts. Maybe they don't trust the economic analysis. Or maybe they don't want to commit to a stabilization treaty because they don't believe that other developed nations are bargaining in good faith—and will renege if they encounter unwelcome economic consequences of a stabilization commitment.

In fact, other nations could also enhance their economic growth from committing to carbon dioxide stabilization. If we want to be competitive in tough global markets, it is in our self-interest to work to raise energy efficiency, increase energy conservation and reduce carbon dioxide emissions. If we don't, then other nations alone will benefit from creating a more productive economy.

\$5 BILLION SOUGHT FOR POOR NATIONS

World Bank Plans New Loans to Maintain Environment — U.S. Is Receptive

By PAUL LEWIS

Special to The New York Times

RIO DE JANEIRO, June 4 — The World Bank has proposed that the United States and other aid-giving countries contribute \$5 billion to a fund that would provide virtually free grants to help the world's poorest countries protect their ecological systems, officials disclosed here today.

The plan is being pressed by the World Bank president, Lewis T. Preston, who wrote to the donor countries last week explaining his plan to add a \$5 billion "earth increment" to a World Bank subsidiary known as the International Development Agency when its funds are replenished next year.

Mr. Preston made his plan public today when he addressed delegates attending the Earth Summit.

Officials say the United States, which contributes 22 percent of the development agency's funds, has said it will consider the plan, and other donors appear to be supportive.

Reserved for the Poorest

The World Bank proposal is one of several schemes under debate for raising the estimated \$70 billion in new aid that developing countries say they will need annually to pay for an ambitious global environmental cleanup plan known as Agenda 21, which is expected to be approved at the Earth Summit.

Without a substantial increase in aid, the third world says it cannot afford to continue its development in ways that will safeguard the environment.

Officials say the World Bank fund would be earmarked for projects designed to protect the environment in countries with annual per capita incomes of up to \$740.

If donor countries agree to finance the proposal, Mr. Preston told the Earth Summit today, the World Bank will contribute a "substantial" portion of its annual profit of about \$1.5 billion, instead of using this money to subsidize loans to developing countries that are more financially stable.

Diplomatic Tug of War

Currently, about 70 countries are poor enough to qualify for development agency loans, which are intended to help countries who are excluded from the commercial loan market and who

cannot even afford the World Bank's normal lending terms. Money borrowed from the development agency is repayable over 35 to 40 years and carries a nominal interest rate that is usually suspended for the first 10 years.

Rich and poor countries are locked in a diplomatic struggle here over other ways of raising the additional aid the third world demands as its price for cooperating with Agenda 21 and the new conventions being considered at the summit meeting on stabilizing the climate and protecting the world's biological diversity.

Originally the developing countries wanted all the additional environmental aid channeled through a Green Fund under their control which would make loans with no strings attached.

But donor countries were united in opposing this. Instead, they are offering an expansion of the World Bank's Global Environment Facility, set up two years ago to back environmental projects in the third world, together

All agree to support ecology, but who will pay the costs?

with reforms designed to give recipients a greater say in how it operates.

Wariness of World Bank

"There is a consensus emerging among donors in favor of doubling or even tripling the G.E.F. from its present level of \$1.3 billion when it comes up for renewal next year," Mohammed al-Ashry, the agency's Egyptian chairman, said in an interview.

But developing countries are wary of the World Bank, which is effectively controlled by the donor countries. The compromise being offered is to create a new assembly that would set broad policy guidelines by consensus. Both

wealthy and developing countries represented would have veto power, but specific loan proposals would still require World Bank approval.

The third world countries have agreed that the Global Environment Facility should primarily finance projects designed to prevent global warming, protect endangered species, clean up international waterways and fight depletion of the ozone layer.

To find the bulk of the extra \$70 billion, the developing countries are pressing donors to make good by the end of the century on their longstanding commitment to contribute up to 0.7 per cent of their total economic output in development aid.

Currently, rich northern countries are giving about 0.45 percent of their wealth in aid, which amounts to some \$55 billion a year. Raising this contribution to 0.7 percent would bring the total close to what the developing world needs to pay for the Agenda 21 plan.

But the United States, which currently gives about 0.21 percent of its wealth in foreign aid, has always refused to accept the 0.7 percent target.

NYT 6-5-92

that ended yesterday is an example of George Bush's new world order, the president may want to rethink the whole idea." They report he was given two drafts of the speech to delegates and chose to give the more conciliatory one (6/15).

*3 FUNDING: JAPAN PLEDGES \$7B; GERMANY ALSO TAKES LEAD ROLE

As the summit wound to a close, "delegates finally hammered out an agreement Saturday on a compromise formula for funding Agenda 21" (Jane Kay, S.F. EXAMINER). The compromise deleted the target date and has most industrialized nations committing 0.7 percent of GNP to foreign aid "as soon as possible." The U.S. refused to make such a commitment. French President Francois Mitterrand said his country would meet the target by the year 2000. Also Saturday, Japan unveiled a five-year plan that will commit between \$7 billion and \$7.7 billion to developing countries for biodiversity protection or pollution reduction. The annual figure, about \$1.4 billion, is nearly twice what the U.S. proposes spending next year -- \$700 million, up from \$500 million in environmental aid this year. A Japanese spokesperson said the figure represented a 50 percent increase in aid.

"Japan's pledges ... left the United States alone among industrialized nations in making no substantial new offers at the summit" (6/14). Japanese PM Kiichi Miyazawa, in a speech circulated in Rio, said that Japan will "play a leading role" in world pollution control (N.Y. TIMES). In a "rare note of harmony between the North and South," the leaders of Pakistan and Norway "criticized what they call low levels of financial commitments made here by the seven industrialized nations" (6/14). Japanese government spokesperson Saadkai Numata, when asked whether the pledge made Japan the world's most important environmental donor nation: "I'll let you be the judge" (PHILA. INQUIRER, 6/14).

German Chancellor Helmut Kohl on Friday said his country would triple its contribution to the Global Environmental Facility to \$487 million, and called on other developed countries to follow suit and raise the GEF's budget threefold to nearly \$4 billion (Maura Dolan, L.A. TIMES). Kohl: "We are ready to assume our share, and we ask other industrial countries to do the same." The U.S. has committed \$50 million to the fund. A Malaysian delegate said a fund of \$3 billion to \$4 billion for the developing world was "rather dismal" compared to what industrialized nations are likely to give to Eastern Europe and the former Soviet Union (6/13). The Third World "almost for the first time enjoys genuine leverage," arguing they cannot curb pollution and conserve resources without significant help from the North (Paul Lewis, N.Y. TIMES, 6/14). EPA Administrator William Reilly: "What you are seeing are other countries with enormous financial capabilities beginning to acknowledge commensurate environmental responsibilities. That is something

growth, profitability and electrotechnologies, will be held in Denver, CO. Contact: 800/446-4879.

18 - 21 -- COAL: The National Coal Assn holds its annual meeting in Colorado Springs, CO. Contact: 202/463-2625.

19 - 21 -- SUSTAINABLE DEVELOPMENT: The Carrying Capacity Network sponsors a conference in Washington, DC. Issues include growth management, population, energy, sustainable agriculture and resource conservation. Contact: 202/879-3044.=====

EARTH SUMMIT BULLETIN =====

*29 HIGHLIGHTS: MAIN COMMITTEE

Published by the Island Press and the International Institute for Sustainable Development (Vol. 2, No. 10, 6/12). Prepared by: Johannah Bernstein, Pamela Chasek and Langston James Goree VI "Kimo."

JUNE 10 - 11 -- "PrepCom V" ended at 6:00 am yesterday morning when Main Committee Chair Tommy Koh brought down the final gavel, deferring remaining negotiations to the hands of the politicians. Two and a half years of work by the diplomats had come to an end. After a marathon negotiating session that began at 8:00 pm and ended at dawn, the governments sent to the Plenary three documents: Agenda 21, the Statement on Forest Principles and the Rio Declaration. While most of the text is "clean", brackets remain around several critical points that have been sent to the ministerial level to be negotiated over the next two days.

The Main Committee resumed at 8:00 pm Wednesday night, to continue to work sequentially through Agenda 21, beginning where it had left off two hours earlier. As Chapter 19, toxic chemicals, was a clean text, with the exception of the paragraphs on finance, discussion quickly turned to Chapter 20 on hazardous wastes. The one difficult paragraph was 20.23(h) on the military establishment and hazardous wastes. Sweden had undertaken consultations at the request of the Chair and announced the resulting text to the Committee. The compromise was that governments should ascertain that their military establishment conform to nationally applicable environmental norms in the treatment and disposal of hazardous waste.]

Chapter 21 on solid wastes was a clean text (except for the finance section) so Koh turned to Chapter 22 on radioactive wastes. The problematic paragraph in this chapter, 22.5(c), dealt with the storage or disposal of radioactive wastes near the marine environment. After a brief discussion, the text was adopted. The compromise text emphasizes that states, in cooperation with relevant international organizations, will determine the risk of the disposal or storage of radioactive wastes near the marine environment.

Chapters 23-32 of Agenda 21 address the role of major groups. During earlier discussions in the Main Committee, it had

been decided that Amb. Mazairac of the Netherlands would hold additional consultations on the remaining bracketed text in these chapters. Chapters 23 (preamble), 24 (women), 25 (children and youth), 28 (local authorities) and 29 (workers and trade unions) were clean texts and not discussed. Compromise text was agreed to in the remaining bracketed paragraphs in Chapters 26 (indigenous people), 27 (NGOs), 30 (business and industry), and 32 (farmers) and was quickly adopted by the Committee. It was Chapter 31 on the scientific and technological community, however, where problems arose. The Holy See questioned why the phrase "appropriate ethical principles" had been removed from the text of paragraph 31.12 on capacity building. Mazairac responded that the delegates who had consulted on this matter thought that the text should be more general as there are important principles other than ethical ones to be considered. The Holy See requested that the text be restored, while calling for the opinions of other delegates. Koh responded that the time was now 9:08 pm and it was unreasonable for one colleague to ask others to speak, as there was still much work to be done. After comments by Argentina, Koh prevailed upon the Committee to adopt the text, with due note of the Holy See's concerns.

Chapter 33, the financial resources chapter of Agenda 21, was transmitted to the Main Committee with bracketed text in three areas: on language that sets a specific date for countries to re-affirm their commitment to increasing levels of ODA to 0.7% of GNP; the exact level for the next replenishment of IDA with or without an "Earth Increment", and; conditionality within GEF. There was no resolution to these problems and brackets here, and in two other areas, remain in the text sent to the ministerial level for further negotiation.

Two new sets of brackets surround the word "including" in paragraph 10 that had been omitted from yesterday morning's earliest draft of the text. The insertion of the word "including" in a key phrase that stipulates the types of resources necessary for the implementation of Agenda 21, modified the phrase so that it reads, "will require the provision to developing countries of substantial new and additional financial resources, including on grant or concessional terms and according to sound and equitable criteria and indicators." In the Main Committee, debate ensued over the significance of the term. Countries, including India and Tanzania, argued that the word "including" changes the meaning of the phrase to mean that new and additional financial resources will not be totally grant and concessional money. The US argued that much new and additional funding will be neither grant nor concessional funds but could take the form of private investment or official debt alleviation. The phrase was sent to the Plenary in two sets of brackets.

The Main Committee then turned to the 100-plus "financial"

paragraphs scattered throughout Agenda 21 in the "Means of Implementation" section of each chapter. These paragraphs have been uniformly modified to reflect the fact that costs associated with the chapter activities are order of magnitude estimates only and the actual value depends on the strategies and programmes implemented. These paragraphs were adopted with minor amendments.

Chapter 34 on ~~technology transfer~~ and a list of paragraphs from the other chapters of Agenda 21 that address technology were easily adopted by the Committee. The only bracketed text remaining is in the phrase "environmentally [safe and] sound technology". This phrase was supposed to be resolved in the contact group on atmosphere, as the bracketed text was first introduced in the atmosphere chapter of Agenda 21.] =

Chapters 35 (science for sustainable development), 36 (education) and 37 (capacity building) were clean texts, so Koh opened discussion on Chapter 38 on international institutional arrangements. A spokesperson for ~~Amb. Ismail Razali of Malaysia~~, who coordinated the contact group, reported on the outcome of the group's work and, after a brief discussion, the chapter was easily adopted. The US was pleased with the agreement reached on this chapter and stressed that funds should be reallocated to support UNCED follow-up. Canada welcomed the establishment of the Sustainable Development Commission that will be needed to oversee Agenda 21 implementation.

Chapter 39 on international legal instruments and measures was also dealt with quickly. After the coordinator, Nabil el-Arabi, reported on the consensus achieved and stressed the delicate balance achieved, the text was quickly adopted. Chapter 40, information for decision making, is the last chapter of Agenda 21 and, as it was a clean text, no discussion was necessary.

At this point Koh returned to the Agenda 21 chapters that were still outstanding. The first of these was Chapter 9 on atmosphere. Amb. Bo Kjelle'n of Sweden introduced the text and explained that although the document was almost bracket-free, several delegations still had trouble with certain paragraphs and, thus, the whole document should remain in brackets. The list of remaining contentious paragraphs address such issues as new and renewable energy resources; improving energy efficiency; environmentally safe and sound energy sources; and the need for regional conferences on transport and the environment. Saudi Arabia then took the floor and delivered a lengthy speech setting out its concerns regarding this chapter. Despite the Saudis' insistence that its opposition was based on its concern with repetition in the text, many delegations called into question the Saudis' true motives. Only a few countries, such as Kuwait and Nigeria, delivered statements largely supportive of Saudi

Arabia's position. However, the vast majority of speakers on the interminable list supported retaining the text for several reasons: it represented a fair and balanced compromise; repetition of key concepts such as new and renewable sources of energy and safe and environmentally sound energy sources was not problematic, but rather desirable, in light of the supreme importance of these concepts; the text was supported by a large majority of states; consensus should not be interpreted as requiring unanimity; and the fact that the deletion of the entire chapter would seriously undermine not only the fate of Agenda 21, but the entire Conference. The Main Committee did manage to adopt the text, subject to the reservations maintained by the Saudis.

The Main Committee finally began discussion of both Chapter 11 on deforestation and the Statement of Forest Principles at 3:00 am. Numerous paragraphs related to the following areas were all referred to the Plenary in brackets: preamble paragraphs (a), (d) and (g) about the "right to develop", a possible future legal instrument and the role of forests; paragraphs 8(d) and (h), regarding sustainable forest management and environmental impact assessments; paragraph 11 on financial resources for sustainable forest management; paragraphs 15(b) and 17 that deal with international trade in forest products and the role of forests in the carbon cycle. Organizational problems in the reporting of the contact group slowed progress. The Russian Federation insisted, on the behalf of the Eastern European group, that language referring to countries that are undergoing transition to market economies be retained, since this document is not part of Agenda 21 and, therefore, not covered by the generic paragraph in the Preamble to Agenda 21. The Agenda 21 chapter on deforestation was dealt with next. The Main Committee was unable to resolve the remaining three bracketed paragraphs. Both of these documents were transmitted to the Plenary to be resolved at the ministerial level.

At 5:25 am, Koh began discussion of Chapter 16 on biotechnology. After Amb. Vincente Sanchez of Chile reviewed the contact group's resolution of the formerly bracketed paragraphs in this chapter, Koh brought the discussion to a close and quickly assured the Committee's approval with his now-standard quick gavel.

~~The last~~ substantive item on the agenda was the Rio Declaration. This was the only unbracketed text transmitted from the PrepCom. Koh announced that as the result of successful consultations with interested delegations, he was able to propose a package deal that would alleviate one of the problems associated with both the Rio Declaration and Agenda 21: reference to "people under occupation". This package consisted of three parts: adoption of the text of the Rio Declaration as

is; reformulating the third sentence of paragraph 1.5 of the Preamble of Agenda 21 to read, "It will be carried out by the various actors according to the different situations, capacities and priorities of countries and regions in full respect of all the principles contained in the Rio Declaration on Environment and Development"; and deleting the words "people under occupation" and "various bodies and organizations under occupation" from the text of Agenda 21. The package deal and, thus, the Rio Declaration, were quickly adopted.

The US then took the floor and expressed that it still had problems with the Declaration but, in the spirit of compromise, it was willing to lay aside its concerns. The US also reserved the right to come back to Principle 3, which addresses the right to develop, as this issue was still unresolved in the statement on forest principles. The Palestinian representative then spoke of his continued concern with the importance of including people under occupation in Agenda 21. He added that Agenda 21 is intended for the 21st century and expressed hope that by 2000 there will no longer be any occupied territories and everyone will live in peace. A number of other countries made short statements on this issue. Koh then addressed the last item of business: entrusting the Rapporteur to complete the report of the Main Committee. As the clock struck 6:00 am, Tommy Koh gavelled the Main Committee to a close amidst a prolonged standing ovation.

IN THE CORRIDORS: Celso Lafer as Vice President of the Conference has given the responsibility for coordinating ministerial level consultations on the forest issue to Klaus Topfer, Federal Minister for the Environment, Nature Conservation and Nuclear Safety of Germany. Consultations were held all day at the German delegation's office and in the conference rooms at RioCentro. An open-ended ministerial-level contact group was scheduled to begin at 10:00 pm last night. Progress on several paragraphs was reported by those close to the consultations.

Discussions at the highest ministerial level on financial resources, coordinated by Amb. Rubens Ricu'pero of Brazil and assisted by Celso Lafer and Brazilian Finance Minister Marci'lio Marques Moreira, were held Thursday.

As well, a ministerial contact group met to resolve the phrase "environmentally [safe and] sound", which is repeated throughout the Agenda 21 chapters on atmosphere and technology transfer and was the subject of heated debate in the Main Committee early Thursday morning. In fact, this issue is the only issue that the Main Committee was unable to resolve in both of these chapters. As of 6:00 pm on Thursday, the ministerial contact group had not yet reached agreement. On Wednesday, Amb. Bo Kjelln, the Chair of the contact group, attempted to resolve this issue in the atmosphere chapter by drafting language to be

inserted in the Preamble of Agenda 21, which would refer to the fact that new and renewable energy sources should always be safe and environmentally sound, as well as cost-effective. It was hoped that this general statement would obviate the need to refer to "environmentally safe and sound" energy sources throughout the text. It is possible that the Ministers' work will build upon Kjelln's proposal.

THINGS TO LOOK FOR TODAY: INSIDE THE SUMMIT: The first meeting of the Earth Summit officially starts today with 28 Heads of State or Government scheduled to deliver formal statements in the Plenary in the morning and 29 Heads of State or Government scheduled for the second meeting, to be convened in the afternoon. The third and fourth meetings of the Summit will be convened on Saturday morning and afternoon, respectively. There is much speculation as to what parallel process will be put in place to provide a forum for the continued ministerial-level negotiations surrounding those issues which the Main Committee was unable to resolve. Some suggest that forest, finance and atmosphere ministerial contact groups may in fact be convened in parallel to the actual Summit proceedings. The results of these ministerial contact groups will be tabled directly to the final session of the Plenary, which will be held on Sunday morning to formally adopt all of the Conference documents. It is likely that this final Plenary will provide little or no time for substantive discussion. All consultations are expected to be completed by Friday evening to allow sufficient time for translation and photocopying before Sunday's Plenary.

OUTSIDE THE SUMMIT: Look for increasingly limited access for NGOs and press at RioCentro today and throughout the remainder of the Earth Summit. Members of the UNCED Secretariat have indicated that yesterday's youth demonstration may lead to stricter security measures. This demonstration, which followed the youth statement in Plenary, resulted in the removal by UN Security of eight people, the revocation of many passes and a broken glass door. The demonstration had been called to draw attention to the resignation of a youth representative on the US Delegation. It was fueled by the fact that the transmission of the youth statement to monitors in RioCentro had been cut. The press, in their zeal to cover the unfolding story, only exacerbated matters according to several UN Security officers.

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Environment, Norwegian Ministry of the Environment, The World Bank, GREENWIRE, Jenifer Altman Foundation, United Nations Development Programme, The Canadian Purple Martin Fund and World Wide Fund for Nature. This issue of Earth Summit Bulletin is prepared by Johannah Bernstein (cpcu@web.apc.org), Pamela Chasek (pchasek@cdp.apc.org) and Langston James Goree VI "Kimo" (kimo@ax.apc.org). Earth Summit Bulletin can be contacted at: RioCentro Exhibition Hall #53, phone (021) 443-1149, E-mail kimo@ax.apc.org. The opinions expressed in the Earth Summit Bulletin are those of the authors and do not necessarily reflect the views of Island Press, IISD or our sponsors. The contents of the Earth Summit Bulletin may be freely used in other publications with appropriate citation. The Earth Summit Bulletin is uploaded daily on the APC networks into the conference en.unced.news and the Earth Summit Information System (under "news bulletins".)

them." David Gergen: "The president has good arguments ...but he allowed himself for reasons I cannot understand ... to be maneuvered internationally into a posture where [the U.S.] is the odd man out [the U.S.] is the caboose at the end of the train" (6/12). "Inside Washington"'s Krauthammer: "Panama was bad luck but Rio was a fiasco, because the President temporized. He should never have gone to meet them in Rio half way. He should have done what Reagan did on the law of the seas and walked out and told them to go to hell." Tom Oliphant: "As old what's-his-name said a few years ago, this is not about ideology its about competence, and the last two Bush foreign trips have featured vomit, tear gas, muddled messages and incompetent diplomacy." Mona Charen: "Here was a chance for George Bush to take his case to the American people, show real leadership, explain why he wasn't going or why he was walking out. It could have been a brilliant moment for him but it wasn't." Juan Williams said the U.S "has abdicated leadership on environmental issues. ... We should have been able to negotiate some kind of agreement." Charen: "You cannot negotiate with thieves." Oliphant: "We insulted everybody and accomplished nothing" (6/13). Robert Novak said the impact of Bush as environmental president "was just a bunch of poll takers ... I don't think it helped him much in 1988" ("Inside Politics," CNN, 6/12).

*12 LAST NIGHT: EARTH SUMMIT ON TV

CNN "World Today" co-anchor Andrea Arceneaux led by saying delegates "to the U.N.-sponsored conference say they are focusing on the future and the task that is before them." Conference chief Maurice Strong: "The conference has clearly been a great success, but whether or not it succeeds in its purposes -- setting the planet on a new track -- remains yet to be seen." EPA head William Reilly: "My sense is that we will see something come out of this conference very like the human rights declaration in Helsinki, it will be up to the concerned environmentalists, the publics, the [NGOs] to police this process and to remind governments that this is the standard you set for yourself and against which you are going to be judged." CNN noted that in London's Trafalgar Square park, Greenpeace environmental activists protested to show their disappointment with the "lack of action" shown by world leaders at Rio. Arceneaux: "They pointed their finger at British Prime Minister John Major, calling his performance at the summit 'gutless'" (6/14).

ABC's Forest Sawyer led with the Summit's close: "Organizers in Rio called the Earth Summit a qualified success and hoped it would mark a new cooperation to save the planet from pollution, but underneath the optimistic talk was controversy, and sharp disagreement and uncertainty over just how much the conference really accomplished." Union of Concerned Scientists' Alden

7 * Daily sum
up

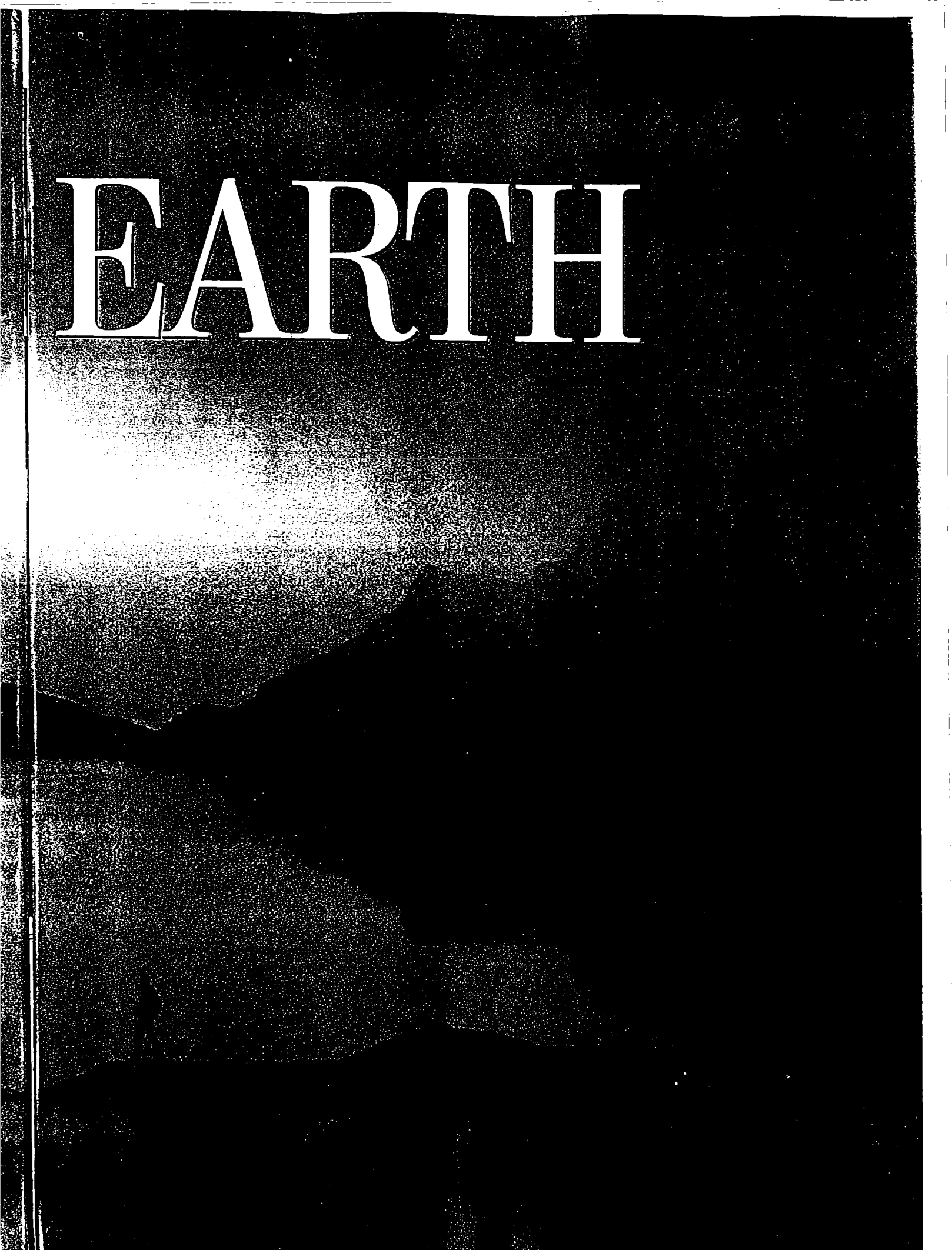
SUMMIT TO SAVE THE

WHAT KIND OF PLANET WILL
our children inherit? Will
they have room to roam?

to breathe and food to eat? Will
they ever see an eagle flying free or
enjoy the solitude of a pristine
mountain lake?

Those are among the larger
questions on the agenda of an
extraordinary meeting of more than
100 world leaders and 30,000 other
participants in Rio de Janeiro
beginning June 3. The central premise
of this unprecedented Earth Summit is
that environmental problems can no
longer be solved at the national level.
Will the countries represented in Rio—
notably the U.S.—show the courage
and vision and leadership necessary to
protect our planet for future
generations? The answer is not
certain, but there is some hope.

EARTH

The image is a high-contrast, black and white photograph. The top half of the image is dominated by a bright, hazy, and grainy area that suggests a sky or a body of water reflecting light. Below this, the landscape transitions into dark, silhouetted shapes that resemble mountains or hills. The overall texture is very grainy and noisy, giving it a vintage or artistic feel. The word "EARTH" is superimposed in a large, white, serif font across the top of the image.

SUMMIT TO SAVE THE EARTH

RICH VS I



The U.S. has
5%
of the
world's population.
It uses
25%
of the
world's energy,
emits
22%
of all
CO₂ produced
and accounts for
25%
of the
world's GNP.

EARTH ALERT

In the past decade, levels of stratospheric ozone, which shields living things from harmful ultraviolet radiation, have declined 4% to 8% in the northern and southern hemispheres.

By PHILIP ELMER-DEWITT

THE LINEUP OF WORLD LEADERS WILL include Prime Minister John Major, Chancellor Helmut Kohl, Prime Minister Kiichi Miyazawa and, now that he has finally made up his mind to go, President George Bush. The Dalai Lama will join a delegation of clerics, artists and green-minded parliamentarians. Hundreds of native leaders, from American Indians to Malaysian tribesmen, will represent the interests of the world's indigenous peoples. Tens of thousands of diplomats, scientists, ecologists, theorists, feminists, journalists, tourists and assorted hangers-on are expected to gather in dozens of auditoriums and outdoor sites for nearly 400 official and unofficial events, among them an environmental technology fair, a scientific symposium and a meeting of mayors. Peter Max's art will appear on special postage stamps. A Robert Rauschenberg poster will be slapped up on walls. Placido Domingo will headline a star-studded musical tribute to the planet. And a full-size replica of a 9th century Viking ship will sail in from Norway carrying messages of goodwill from children all over the world.

If size and ambition were the measures of success, the United Nations Conference on Environment and Development in Rio de Janeiro would take all the prizes. The so-called Earth Summit, more than two years in the making, will be the largest and most complex conference ever held—bigger than the momentous meetings at Versailles, Yalta and Potsdam.

Those summits carved up empires, drew new borders and settled world wars. The agenda for the Earth Summit is more far reaching: it sets out to confront not only the world's most pressing environmental problems—from global warming to deforestation—but poverty and underdevelopment as well. A five-week preparatory meeting in New York City that ended last month produced 24 million pages of documents. "It's a Herculean task," admits Maurice Strong, the former Canadian oil executive who organized and serves as secretary-general for the giant get-together.

But with one week to go before the opening ceremonies, the outlook for the Rio conference is far from certain. It is still possible that the Earth Summit will be one of those landmark events that change the course of history, recasting the relationship of the nations of the world not only to one another but also to their environment. Or it could end up to be a diplomatic disaster of global proportions, driving the wedge deeper between the industrial countries and developing countries and

thus setting back the cause of environmentalism.

The world has changed dramatically since the first Earth Summit, held 20 years ago in Stockholm (and also chaired by the indefatigable Strong). That event, which launched thousands of grass-roots conservation groups around the world and spawned environmental agencies and ministries in more than 115 nations, was held in the shadow of the cold war, when the planet was divided into rival East and West blocs and preoccupied with the perils of the nuclear arms race. With the collapse of the East bloc and the thawing of the cold war, a fundamental shift in the global axis of power has occurred. Today the more meaningful division—especially on environmental issues—is not between East and West but between "North" (Europe, North America and Japan) and "South" (most of Asia, Africa and Latin America). And though the immediate threat of nuclear destruction has lifted, the planet is no less at risk.

While there has been some environmental progress in individual countries, the state of the world has mostly gone downhill. Air pollution, a major issue in Stockholm, has grown significantly worse in most cities. Even more alarming, it is now overshadowed by broad atmospheric changes, such as ozone depletion and the buildup of greenhouse gases. According to the Washington-based Worldwatch Institute, one of the hundreds of environmental pressure groups advising the Earth Summit negotiators, the world has lost 200 million hectares (500 million acres) of trees since 1972, an area roughly one-third the size of the continental U.S. The world's farmers, meanwhile, have lost nearly 500 million tons of topsoil, an amount equal to the tillable soil coverage of India and France combined. Lakes, rivers, even whole seas have been turned into sewers and industrial sumps. And tens of thousands of plant and animal species that shared the planet with us in 1972 have since disappeared.

The idea behind the Earth Summit was that the relaxation of cold war tensions, combined with the heightened awareness of these growing ecological crises, offered a rare opportunity to persuade countries to look beyond their national interests and agree to some basic changes in the way they treat the environment. The broad issues are clear: the developed countries of the North have grown accustomed to life-styles that are consuming a disproportionate share of natural resources and generating the bulk of global pollution. Many of the developing countries of the South, for their part, are consuming irreplaceable global resources—eating the world's seed corn, as it were—to provide for their exploding populations. And both groups have as an object lesson the now bankrupt countries of the East bloc, whose singularly inefficient path to industrializa-

POOR

North and South will meet in Rio to confront the planet's most pressing ills. The event could change the world—or be a disaster of global proportions.

tion has produced some of the worst environmental disasters the world has ever seen.

The solution—at least in broad outline—is also fairly clear. The nations of the world must abandon those practices that are self-destructive in favor of what environmentalists like to call “sustainable development.” A sustainable society is one that manages its economic growth in such a way as to do no irreparable damage to its environment. By balancing economic requirements with ecological concerns, it satisfies the needs of its people without jeopardizing the prospects of future generations.

A major obstacle to sustainable development in many countries is a social structure that gives most of the nation's wealth to a tiny minority of its people. “A person who is worrying about his next meal is not going to listen to lectures on protecting the environment,” says R.K. Pachauri, director of New Delhi's Tata Energy Research Institute. What to Northern eyes seems like some of the worst environmental outrages—felling rain forests to make charcoal for sale as cooking fuel, for example—are often committed by people who have no other form of income. Yet if the barriers that keep those people poor have withstood wars of liberation and social revolutions, what are the chances that they will fall in the name of environmentalism?

The disparities that mark individual countries are mirrored in the planet as a whole. Most of its wealth is concentrated in the North. “The reality is that there are many worlds on this planet,” says Chee Yokling, a Malaysian representative of Friends of the Earth, “rich worlds and poor worlds.” From the South's point of view, it is the rich worlds' profligate consumption patterns—their big cars, refrigerators and climate-controlled shopping malls—that are the problem. “You can't have an environmentally healthy planet in a world that is socially unjust,” says Brazilian President Fernando Collor de Mello. Counters a U.S. representative to a presummit negotiating session: “They are trying to lay a collective guilt trip on us because we try to give our people a higher standard of living.”

It comes down to a matter of cash. The North has it. The South needs it. And the changes that must be made to achieve sustainable development will not occur unless some of that wealth finds its way from North to South. So far, the industrial nations have held pretty tightly to their purse strings. In March the U.S. did pledge \$75 million to help poor countries find ways to reduce the production of gases that may cause global warming; and at the presummit negotiations, there were hints from developed nations that as much as \$6 billion in debt relief and other financial guarantees might be forthcoming at the Rio conference itself. But that is a pittance com-

pared with the \$125 billion that Strong has said the developed nations will need to contribute annually to protect natural resources and clean up pollution. (The developing countries, he says, would have to put up an additional \$500 billion a year.) To put that in context, the annual U.S. defense budget is \$290 billion. “The bottom line is money,” says Kamal Nath, India's Minister of Environment and Forests. “If the West does not give funds, the Earth Summit will die a natural death.”

The tensions between North and South, and the financial conflicts that underlie them, run through every issue before the Rio negotiators—even to the question of whether those are the proper issues to be discussing. Among the major disagreements:

WHO TURNED UP THE HEAT?

The fact that this past winter in the northern hemisphere was one of the warmest in history may be a coincidence. But most scientists agree that all the smoke and fumes and exhaust that humans generate will eventually alter the earth's climate. Those changes could be modest. Or they could trigger coastal flooding, interior droughts, mass exoduses and pockets of starvation. What irks some developing nations—and in particular Brazil—is that many people who worry about global warming point their fingers at the release of carbon dioxide from the burning of rain forests. The bigger threats are the CO₂ and other greenhouse gases produced in the industrial countries by the burning of fossil fuels. In per capita terms, individuals in the North generate nearly 10 times as much CO₂ from energy use as their counterparts in the South.

The problem for the long term is that people in developing countries now want those consumer items that make life in the industrial world so comfortable as well as environmentally costly—those private cars, refrigerators and air conditioners. If per capita emissions of greenhouse gases in China and India were to rise to the level of those in France, for example, emissions worldwide would jump nearly 70%—making a deteriorating situation even worse.

A treaty to prevent climate change was to be the centerpiece of the Rio summit. However, poor countries didn't see why their plans for development should suffer in order to rectify a problem they did not create. Some rich nations did not want to sign on to anything that would threaten their life-styles or increase the cost of doing business. Trying to spur agreement, the European Community proposed cutting CO₂ emissions to 1990 levels by the year 2000—a relatively modest reduction. But the U.S. steadfastly refused to consider any such rigid deadlines. Skeptical about

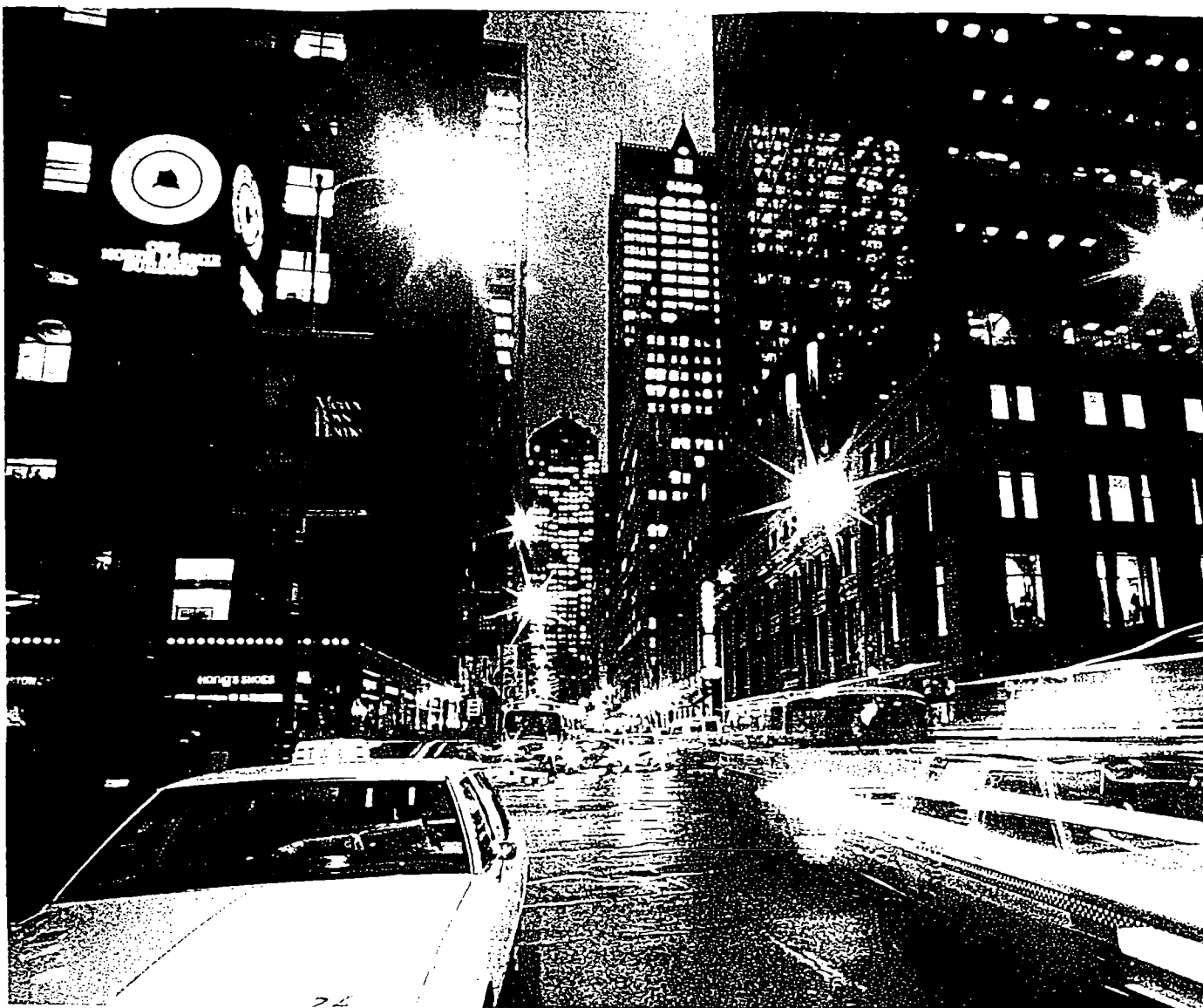


INDIA has
16%
of the
world's population.
It uses
3%
of the
world's energy,
emits
3%
of all
CO₂ produced
and accounts for
1%
of the
world's GNP.

Source: World Resources Inst.; CIA

EARTH ALERT

Because of drought, desertification, erosion and population growth, per capita grain production in Africa has dropped 28% since 1967.



The glitter of Chicago

NORTH Having reaped the comforts—and the ecological costs—of industrialization, developed nations want the South to avoid their mistakes

SUMMIT TO SAVE THE EARTH

the evidence that global warming will occur, the Bush Administration was concerned that an arbitrary reduction in the output of CO₂ would mean a decline in industrial production and a loss of jobs—a particularly unappealing prospect in an election year.

The climate-change talks had just about reached an impasse when committee chairman Jean Ripert of France took it upon himself to draw up a compromise text liberally sprinkled with what he calls “constructive ambiguities.” It requires nations to roll back greenhouse-gas emissions to “earlier levels” by the end of the decade and report periodically on their progress, but the target of reaching 1990 levels becomes merely a voluntary goal. That seemed to do the trick. Despite loud protests by environmentalists that the agreement was too weak, it was adopted two weeks ago and sent on for signature at Rio.

WHO'S POISONING THE OCEANS?

Anyone who has been near the seashore lately—or listened to Jacques-Yves Cousteau on TV—knows that the oceans are a mess, littered with plastic and tar balls and rapidly losing fish. But the garbage dumps, the oil spills, the sewage discharges, the drift nets and factory ships are only the most visible problems. The real threats to the oceans, accounting for 70% to 80% of all maritime pollution, are the sediment and contaminants that flow into the seas from land-based sources—topsoil, fertilizers, pesticides and all manner of industrial wastes. Coral is particularly sensitive to sediment, and the reefs that fringe Asia, Australia and the Caribbean—and provide a home to many of the world's fish species—are already starting to die.

Every country contributes to the situation roughly in proportion to its size, although countries



The gloom of Ethiopia

SOUTH Anxious to raise their populations out of poverty, developing nations feel they should not have to pay for environmental sins they did not

that are leveling their forests are making the runoff problem especially bad. Some ocean advocates called for a new global treaty that would deal specifically with land-based pollution. The U.S., on the other hand, favored strengthening existing international agreements to control this pollution, particularly at the national and regional levels. In the end, negotiators adopted the U.S. approach, agreeing that countries should commit themselves to cleaning up the seas but that it was premature to consider drafting a formal global treaty.

WHOSE WOODS ARE THESE?

Except for finances, no issue has divided North and South more sharply than the question of what to do about the world's remaining virgin forests. At the heart of the debate are the tropical rain forests—and a fundamental difference in how each side sees them. To industrial countries they are a treasure

trove of biodiversity and greenhouse-gas “sinks” that absorb CO₂ and thus help keep global warming in check. To developing nations the forests are resources ripe for exploitation: potential farmland, a free source of fuel and a storehouse of exotic kinds of wood that command high prices overseas.

The Bush Administration had hoped to make deforestation a showcase issue going into Rio. The presummit discussions opened with a U.S.-inspired proposal for an outright ban on logging in tropical forests. But the developing countries retaliated by demanding that the language cover temperate and boreal (northern) forests as well. The move was clearly aimed at the U.S., which has strenuously resisted any scrutiny of the logging practices in publicly owned ancient forests in the Pacific Northwest.

At a separate conference in Kuala Lumpur earlier this month, Malaysia's feisty Prime Minister Mahathir Mohamad reiterated the developing world's

EARTH ALERT

The smog that hangs over Athens is known to local residents as *nephos*, “the cloud.” At peak times, it contributes to an average of a dozen deaths a day.

SUMMIT TO SAVE THE EARTH

hard line on the issue. If the industrial nations think the rain forests are so important for biodiversity and CO₂ storage, says Mahathir, why don't the rich, CO₂-creating countries pay for the service of preserving those forests, instead of hectoring the poor countries not to utilize one of their few natural resources? Mahathir, of course, is not exactly a disinterested party; his country has been charged with rampant overlogging in peninsular Malaysia and Borneo.

The lines have been so sharply drawn on all the forest-protection of issues that what was originally intended to be a legally binding forestry convention was watered down months ago to a nonbinding "statement of principles" that will probably be adopted at Rio. Whether a full-fledged treaty will be negotiated later is still uncertain.

WHO NEEDS THESE SPECIES?

Not since the dinosaurs were killed off, say biologists, has the world experienced an extinction

an international agreement to conserve imperiled species and ecosystems has finally been reached.

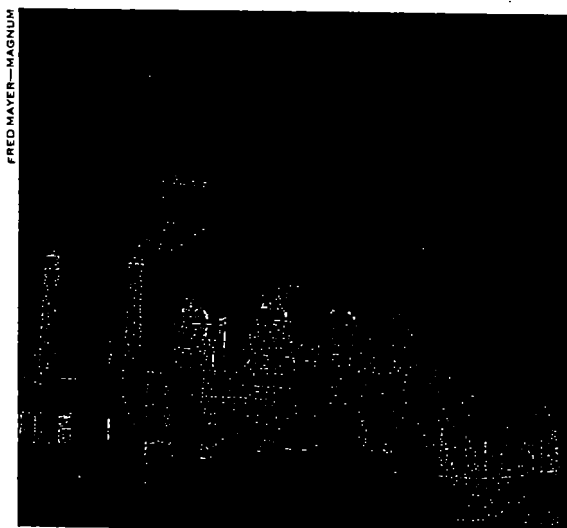
Much of the debate in presummit meetings centered on the issue of who owns and controls the genetic information stored in those species. Traditionally, the benefits that come from genetic materials—seeds, specimens or drugs derived from plants and animals—go to whoever finds a way to exploit them. Vanilla, for example, was a biological resource found only in Central America. It later became an important cash crop in Madagascar. Now a U.S. biotech company has developed a process to clone the vanilla flavor in a cell culture. If the firm sells the bioengineered version for less than natural vanilla and takes some of the market share, who will compensate the Madagascar farmers? Or the Central American Indians from whose lands the genetic material originated?

Earlier this year it was hoped that the Earth Summit treaty would include a provision making genetic materials of all kinds the sovereign resource of the originating country. Nations would have control over who had access to their genetic resources, and if someone else found a way to make money from them, the originating country would collect royalties on each sale.

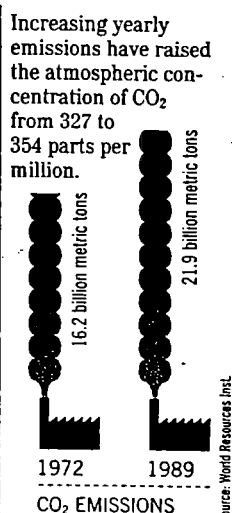
The effect of such a treaty could be striking. Rather than viewing concern about endangered species as a barrier that the industrial world is placing in the way of progress, the developing nations might see biodiversity as a resource that, if properly inventoried and managed, could generate real income. The idea, says Thomas Lovejoy, a tropical ecologist at the Smithsonian Institution, is "to start thinking about the problem as a joint venture in which both sides have property rights."

But disagreements arose in the late rounds of negotiation that weakened the final text of the treaty. The agreement now states that the North must give the South money and technology to preserve biodiversity and that communities and indigenous peoples should have a financial stake in conserving their native plants and animals. However, the treaty sets out no formula or mechanism for payments for the use of genetic materials.

There are scores of other issues—large and small—buried in the drafts of two primary Earth Summit texts: a five-page "declaration" and a 600-plus-page "blueprint for action" called Agenda 21. The shorter statement, originally called the Earth



Estonian cement plant

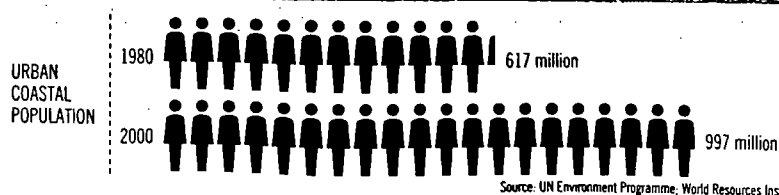


"spasm" like the man-made one that will wipe out 10% to 20% of the earth's estimated 10 million species of plants and animals by the year 2020. Since at least 50% of those species live in tropical rain forests, past efforts to save them have run into the usual lines of resistance from governments in the South, which resent any kind of meddling from the North. What makes the losses so unacceptable is that they are irreversible; once a species becomes extinct, it is gone forever. After years of negotiation,

Peruvian shoreline



Growing population in coastal areas leads to more marine pollution and destruction of coastal habitats. Some 6.5 million tons of litter finds its way into the sea each year.



Charter, was supposed to be a soaring preamble, along the lines of the U.S. Declaration of Independence. The longer agenda was supposed to specify the problems that the world will face well into the 21st century and how to pay for their solution.

Both documents will be adopted at Rio, but neither bears much resemblance to the original conception. After weeks of debate, the Earth Charter was abandoned and replaced by a woodenly written declaration filled with the kind of pious promises ("eradicating poverty," "eliminat[ing] unsustainable patterns of production and consumption") that world leaders often make but never keep. In what is perhaps the worst example of bureaucratic obfuscation, the text at one point endorses the promotion of "appropriate demographic policies"—the nearest negotiators could come to confronting the explosive issue of population control.

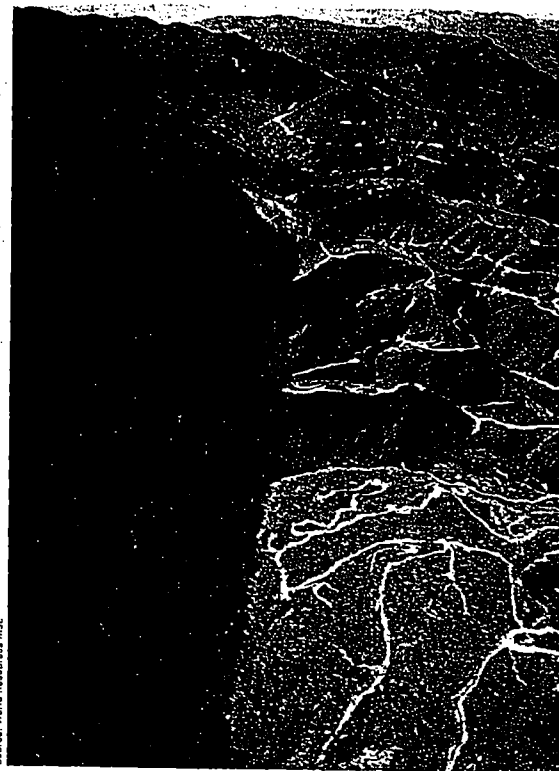
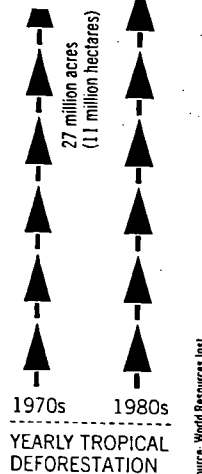
Agenda 21 became the main forum for North-South wrangling on every topic imaginable, including the spread of deserts, disposal of toxic wastes and protection of women's rights. In the end, the conferees were able to agree that some of these problems do need to be solved. What they still have not agreed on is the means to solve them. To bring about meaningful change in most of these areas would require overhauling the way the world does business—from the laws that control international trade to the financial institutions that direct the ebb and flow of capital. That is a task that the negotiators have barely even begun.

Much of the debate has centered on technology, which both sides seem to agree is crucial. The Japanese have already made it a national goal to develop the next generation of environmentally friendly machines and industrial processes—seeing this as a way that developed countries can strengthen their position in the world economy. The developing nations, still saddled with old, inefficient production techniques, insist that they will never be able to curb pollution without preferential access to new processes and equipment. Some experts fear that both sides have unrealistic expectations of technology, as if it were a magic carpet that would allow primitive societies to skip the Industrial Revolution and go straight to the environmentally friendly 21st century. But after weeks of debate, negotiators were not able to agree on whether what they wanted was technology "transfer" or technology "cooperation," never mind how to achieve them.

Nor were they able to settle how Agenda 21 would be paid for. Any aid would logically be administered by the Global Environmental Facility, a \$1.3 billion fund that is run jointly by the World Bank, the U.N. Environment Program and the U.N. Development Program. Environmentalists are suspicious of the GEF because the World Bank, the lending institution through which most international aid has been funneled in the past, has a history of investing primarily in large, ecologically damaging capital projects such as jungle highways and hydroelectric dams. Developing countries resent the GEF because it is effectively controlled by the World Bank, which in turn is dominated by the industrialized countries. They also complain that it targets problems that the developed world cares about, such as global warming and ozone depletion, rather than issues important to the developing world, including fresh-water supplies and the spread of deserts.

The developing nations want a separate "Green

In the past decade, tropical-forest area has shrunk from 4.7 to 4.2 billion acres (1.9 to 1.7 billion hectares).



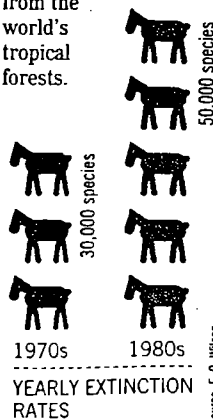
DANIEL DANCER

Clear-cutting in Washington State

Fund" that they could help manage and control. The donor nations, suspicious of corruption in the governments of the South, have so far refused to budge. And since the North controls the money, its position is likely to prevail. "That's what gets my goat," says Anil Agarwal, director of the Center for Science and Environment in New Delhi. "They are the environmental crooks, and they have all the levers of power."

Agarwal's comments reflect a new feistiness among developing countries on environmental matters. A coalition of them, called the Group of 77, has put up a remarkably united front in the Earth Summit talks. Led by Indians and Pakistanis, whose language skills and flair for bureaucratic nitpicking serve them well in parliamentary maneuverings, the G-77 nations have effectively resisted what they see as an effort to make them pay for the industrial world's environmental sins. "We may not have been able to get what we want," says India's Pachauri. "But we can draw satisfaction from the fact that we

In the past 20 years, as many as 1 million species have vanished from the world's tropical forests.



MICKY GIBSON—ANIMALS ANNUAL

An endangered lemur from Madagascar

SUMMIT TO SAVE THE EARTH

have prevented the West from ramming inequitable and unfair conventions down our throats."

The industrial nations have shown no such solidarity. European nations, pressured by powerful green movements of their own, sound quite progressive on environmental issues, but they are still not very good at enforcing their antipollution laws. Japan, stung by its image as an ecological outlaw for its whaling practices and its insatiable appetite for raw wood, seems determined to present itself in these talks as an environmental world leader.

The countries of the former East bloc have been

largely sidelined. Not only are they torn by civil strife, but they are also confronted with hundreds of desperate environmental crises, ranging from an outbreak of malignant tumors in the heavily contaminated Silesia region of southwest Poland to a rash of lung, skin and eye disorders among Bulgarian children who live near chemical plants on the Danube River. Eastern Europe's governments, barely able to keep their economies moving, have little money to clean up pollution. In presummit negotiations the main role of what used to be called the second world was to insist that any funds for the devel-

Population: The Uninvited Guest

By EUGENE LINDEN

IMAGINE AN EARTH SUMMIT AT WHICH THE DELEGATES were magically insulated from nationalist, religious and cultural pressures and then told to pick one issue that had the most impact on the quality of the environment and the cause of sustainable development. There is little doubt what this dream conference would focus on: population. By itself, controlled population growth will not solve the world's problems, but if human numbers and consumption continue to rise unabated, there is little hope for the other creatures with whom we share the earth and a high probability of catastrophe for humanity itself. After years of preparation, however, the negotiators preparing the main documents for Rio have relegated the issue to a few delicately worded phrases. In the draft of the Rio Declaration, the sole mention of population is a deliberately ambiguous reference to "appropriate demographic policies."

The problem is that the negotiators cannot operate in a world divorced from dogmas. In the case of discussions about birth control, the pressures came from the Vatican and fundamentalist Muslims. Ironically, according to summit officials, feminists led by former U.S. Congresswoman Bella Abzug may have unintentionally aided the forces aligned against family planning by pushing aggressively for a more liberal women's reproductive-rights agenda than the conservative cultures in the developing world could accept.

Unfortunately, the summit's capitulation on the population question will probably nullify whatever progress the conference makes on other issues. The United Nations Population Fund has just released new forecasts for population growth, which have been raised sharply. In 1980 the agency projected that the world's population, now at 5.4 billion, would stabilize at 10 billion people roughly 100 years from now, but the new estimates show it surpassing 11.6 billion by the year 2150.

And that prediction may be optimistic, based on the assumption that developing nations can reduce their birthrate from 3.8 children per mother to 3.3 by the year 2000. If that reduced birthrate is not reached until 2010, the population will hit 12.5 billion by the middle of the next century—unless mass starvation, disease or war

curbs the numbers. Almost all these people would live in developing countries, and it is difficult to imagine how any agreement coming out of Rio could offset the negative impact of this tide of humanity.

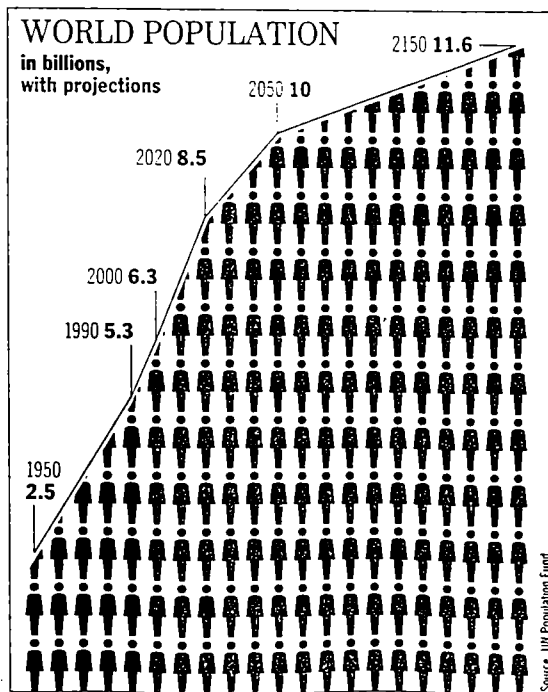
"We already have a full-occupancy planet," says Noel Brown, North American director of the U.N. Environment Program. Today 80% of deforestation results from population growth. If the numbers keep rising until 2050, the U.N. estimates, an additional 5.9 million sq km (2.3 million sq. mi.) of land will have to be turned over to farming, roads and urban uses. This is almost equivalent to the total size of protected natural areas on earth today. Most good agricultural land is already under plow, and each year desertification, improper irrigation and overuse take millions of acres out of production. Farms may increase in productivity, but it will be much harder to match the gains of the past, and whether agricultural output can keep pace with population is an open question.

Seafood will not be limitless either. Some scientists estimate that rising demand will exceed what the oceans can produce by 20% in as little as 20 years. One sign of how badly the seas have been overfished is that populations of bluefin tuna have declined 94% since 1970.

The world has already overshot the saturation point in its ability to process many wastes. For instance, a doubling of

human population would be likely to boost the concentrations of nitrates in rivers 55%. Nitrates, which get into the water from air pollution and fertilizer runoff, are among the most difficult contaminants to remove. The chemicals cause human diseases and promote water conditions that kill fish and other aquatic life.

Earth Summit enthusiasts argue that efforts to raise incomes and educational levels for the poor will have the side effect of lowering population growth. In the fastest-growing countries, however, population increases prevent development by sopping up investment capital that might otherwise improve lives. If the summit is to be more than a bureaucratic sideshow unrelated to the forces threatening the globe, it will have to do more than offer camouflaged references to the population explosion. ■



EARTH ALERT

In communities near Russia's Aral Sea widespread use of agricultural pesticides has been linked to esophageal-cancer rates seven times as great as the national average.

oping nations be matched with set-asides for the "economies in transition."

The U.S.—the world's richest nation and its single biggest polluter—has stood in the way of progress on many of the most closely watched summit issues. While senior officials held briefings painting the Bush Administration as pro-environment, U.S. delegates backed the status quo on one topic after another, insisting over and over that "the American life-style is not up for negotiation."

Hopes for a compromise lifted briefly in late March when the head of the American delegation, Assistant Secretary of State Curtis Bohlen, announced that the U.S. had reversed itself and accepted the idea that "new and additional financial resources" would be needed to pay for environmental action in poor countries. But Bohlen would not say how much the U.S. might be willing to pledge.

In the end, negotiators despaired of settling the funding questions in advance and agreed to reopen the issue in Rio. Some observers think the Group of 77 may have made a tactical blunder by pushing so hard for financial and technical aid. Sir Crispin Tickell, Britain's former ambassador to the U.N., has called it a "diplomatic mistake of the highest magnitude." Others criticize the Earth Summit organizers, who by putting so many environmental problems on the negotiating table may have inadvertently ensured that none of them get solved.

By linking environmentalism and development, the conferees have brought to the surface a fundamen-

tal conflict in the way man and nature measure progress—a conflict between economics and ecology. To an economist, weighing things like savings, investments and growth, ecological concerns are secondary considerations to be factored into the larger econometric model. Ecologists studying the complex relationships of living things to their environment know from experience that treating nature like a limitless resource leads, eventually, to irreversible collapse.

In the negotiations leading up to the Earth Summit, individual nations have acted like ecologists on external matters and economists on their own internal affairs. This is, perhaps, to be expected. Making sacrifices for the good of the planet requires negotiating away some measure of national sovereignty, something no country does with grace.

That is not likely to change when those 100 or so heads of state meet in Rio next week. If the world's environmental problems did not get solved in two years of preparatory negotiations, they can hardly be settled in 10 days dominated by banquets, receptions and photo opportunities. But it is not too late to salvage something of great value from the Earth Summit. If the leaders who go there—and the people watching them from around the world—can be convinced that the crisis facing the planet is serious enough to demand a new alliance between North and South, then there is hope that what did not get accomplished on the road to Rio may at least get started on the way home. —Reported by Andrea Dorfman/New York, Ian McCluskey/Rio de Janeiro and Anita Pratap/New Delhi

THE NEGOTIATIONS SCOREBOARD

WHAT THEY'VE DONE

AGREED, in principle, that polluters ought to bear the cost of their pollution, that poverty ought to be eradicated and that "appropriate demographic policies" (i.e., family planning) ought to be promoted.

ACKNOWLEDGED that developed countries, having put more "pressure" on the world environment, bear some responsibility for putting it right.

AGREED to give "special priority" to the needs of the developing countries—without specifying what those priorities might be.

CAME up with a 600-plus-page "agenda" to save the planet, with a price tag of more than \$600 billion a year but not yet agreed on plans for raising the bulk of the money.

AGREED to try to roll back emissions of carbon dioxide and other greenhouse gases by the end of the decade, with the understanding that 1990 levels would be a desirable—but not mandatory—target.

EXTRACTED a \$75 million commitment from the U.S. to help developing countries with the effort to combat global warming.

WHAT THEY COULD STILL DO

FORGIVE some part of the developing nations' \$1.2 trillion debt if they set up additional nature preserves in ecologically critical areas, like the tropical rain forests.

GIVE developing nations preferential access to new, environmentally friendly technology.

EXTRACT a commitment of \$3 billion to \$6 billion in new funding from developed countries to help pay for the environmental agenda.

WHAT THEY SHOULD DO BUT WON'T

CONFER tangible value to species in biologically diverse regions by requiring payment of royalties for the use of their genetic materials.

FIND a way to put the brakes on the world's spiraling population, which will otherwise double by the year 2050.

PUT an international tax on emissions of carbon dioxide and other greenhouse gases.

PUT strict limits on the trade of timber from the earth's remaining virgin forests.

SET up a recycling plan in every major city in the world.

GIVE the United Nations broad powers to create an environmental police force for the planet.



Official summit stamps

SUMMIT TO SAVE THE EARTH

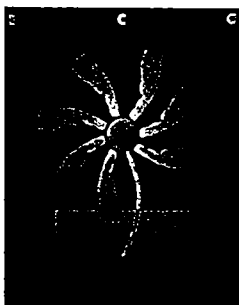
SIDESHOWS GALORE

Summiteers who find the official speeches a snooze can skip out for some rousing rhetoric, tribal wisdom and a festival of the arts. Here's a sampler.

ECO-POSTERS AT RIO'S MUSEUM OF MODERN ART



Julian Naranjo, CHILE



João Machado, PORTUGAL



Pierre Bernard, FRANCE



Jukka Veistola, FINLAND

By ANDREA DORFMAN

THE '92 GLOBAL FORUM, Flamengo Park and other city sites, Rio, June 1-14 The largest sideshow will be an ecological Woodstock for an estimated 12,000 people from "nongovernmental organizations," including environmental groups, human-rights movements, religious communities, women's caucuses, youth associations, trade unions and alliances of indigenous peoples.

Some highlights of the agenda: an Open Speakers Forum, whose guest list includes U.S. presidential candidate Jerry Brown and former Brazilian Environment Minister José Lutzenberger, and a debate on the possible creation of an International Green Cross.

"TRANSFORMING AND RE-CREATING RESIDUES: GARBAGE MADE CLEAN," Paço Imperial, Rio, May 7 to July 5 Fifteen Brazilian photographers display their views of garbage: what it is, how it has evolved, how it is disposed of, how it can be recycled. The show also features "waste decorations" by artist Antonio Manuel.



INDIGENOUS PEOPLES' CONFERENCE ON TERRITORY, ENVIRONMENT AND DEVELOPMENT, Kari-Oca Indian Village, Rio, May 25-30 Some 400 Indian leaders from Brazil's 180 indigenous nations, as well as 200 representatives from the U.S., Canada, Australia, Latin America, Scandinavia, Asia and Russia, are gathering at a specially constructed village near the Pedra Branca Forest. Besides environmental issues, the agenda includes such topics as land rights and self-government. On May 30 the tribal leaders will celebrate the "Day of the White Man" with dance and rituals.

ECOBRAZIL '92, Anhembi Park Convention Center, São Paulo, June 6-11 An environmental-technology trade fair, EcoBrazil '92 will showcase the latest in pollution-control and other green equipment from 85 Brazilian companies and dozens of foreign firms, including Mercedes-Benz, Mitsubishi and Sun Electric.

"30 POSTERS ON ENVIRONMENT AND DEVELOPMENT," Museum of Modern Art, Rio, May 29 to June 29 Leading graphic designers from 25 countries have contributed posters that portray optimistic visions of sustainable development. Organized by Design Rio, the show will open simultaneously in dozens of galleries around the world.

"AMAZON ART," Museum of Modern Art, Rio, June 5-28

This eclectic array consists of works by 26 artists from 14 countries who were deposited in far-flung corners of the Amazon and told to use local materials to depict the region's natural beauty and environmental ills.

A MIDSUMMER-NIGHT'S DREAM IN THE AMAZON FOREST, João Caetano Theater, Rio, May 15 to Dec. 15

In this elaborate production directed by German filmmaker Werner Herzog, Puck is transported to the contemporary Brazilian rain forest. The play opens with a Herzog film documentary on the ecological devastation of Kuwait.

FOREST OF THE AMAZON, Municipal Theater, Rio, June 1-21

Set to music by Brazilian composer Heitor Villa-Lobos, *Forest of the Amazon* is the story of a white goddess who falls in love with a rubber tapper, angering both the Amazon tribe that adores her and the forest itself. The ballet, described by choreographer Dalal Achcar as "a poetic fantasy," is an expanded version of one she originally created for Margot Fonteyn.

The Swatch and sweat to wear

CONCERT FOR THE LIFE OF PLANET EARTH, Rodrigo de Freitas Lagoon,

Rio, June 7 Actor Jeremy Irons is the host of this charity event, which features performances by Plácido Domingo, Wynton Marsalis and other artists, as well as a fireworks display. The nonpaying public can watch the festivities on large screens flanking the lagoon. —Reported by Ian McCluskey/Rio de Janeiro



In a TV special called *One Child—One Voice*, the TBS cable network urged children to create "leaf postcards" to show their support for the Earth Summit. Millions of leaves collected by TBS and many other organizations worldwide will be hung on the giant Tree of Life in Rio.

SUMMIT TO SAVE THE EARTH

THE BIG GREEN PAYOFF

Who says what's good for the environment is bad for the economy? From electric cars to solar cells, products that protect the planet will earn hefty profits in the future.

By MICHAEL D. LEMONICK

AT THE FRANKFURT AUTO SHOW LAST fall, BMW unveiled its vision of the future of driving. Called the E1, it is a four-seat car with a top speed of 120 km/h (75 m.p.h.) and a range of up to 250 km (155 miles). Not so swift, you say? But this car is a clean machine: it gives off no pollution that could foul the air in any way. The E1 runs on an electric motor powered by high-energy sodium-sulfur batteries. Although it takes electricity to charge the batteries, the power plants can be far from smoggy cities.

BMW is not alone. Just about all the world's major automakers, from Citroën to Chrysler, are revving up to produce electric cars. They realize that in the 21st century, consumers will increasingly favor—and governments will mandate—technology that preserves and protects the environment. The fortunes of companies and nations will rise and fall on how well they heed the call to save the planet.

The global market for environmentally friendly products is worth an estimated \$200 billion a year, and has just begun to take off. Every potential innovation, whether a new kind of windmill or biodegradable plastic made from plants, is attracting attention from companies in a host of industrial nations. The U.S.'s Du Pont is in a race with Germany's Hoechst and Britain's ICI, among others, to develop replacement chemicals for ozone-destroying chlorofluorocarbons (cfc's). Germany's Siemens is vying with such firms as Amoco in the U.S. and Sanyo in Japan to produce cheap, efficient solar electric cells.

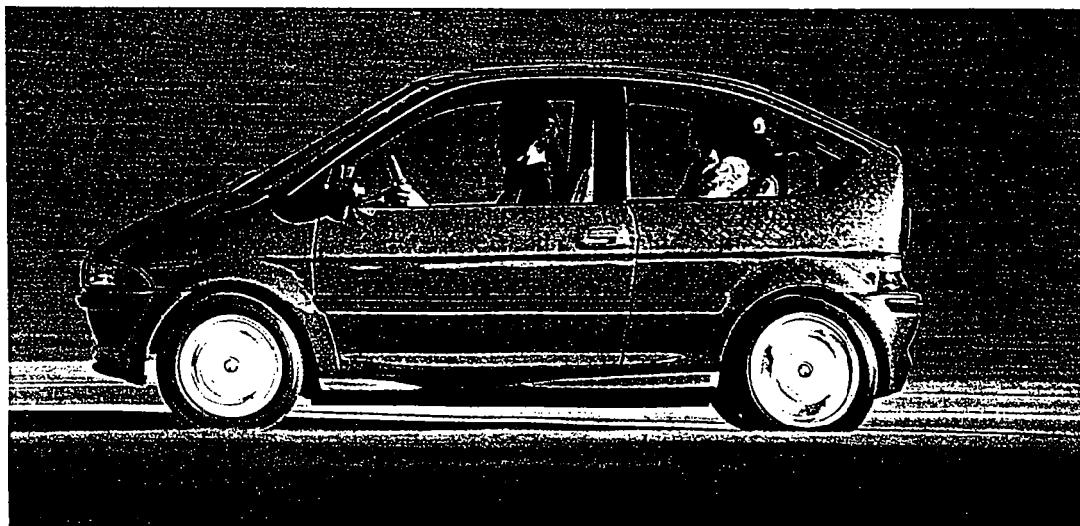
Who wins the races to perfect and sell green technologies will depend to a great extent on who has the edge in engineering and marketing skills. But equally important may be the encouragement companies get from their countries' political leaders. Governments can exert enormous influence over how aggressively businesses take the environment into account, using sticks and carrots—sticks in the form of tough standards for products and manufacturing processes, carrots consisting of tax breaks and other incentives that reward innovation.

The U.S. government has, for the most part, done a poor job of spurring business to come up with breakthroughs. In the past, federal agencies issued environmental compliance goals, like standards for the amount of pollutants coming out of smokestacks, and then mandated the acceptable methods for achieving the targets. There was no incentive to do better than the standards or to develop innovative tools for meeting the goals—tools that U.S. companies might market around the world.

The Clean Air Act of 1990 tries to change the old way of doing things; it allows companies to meet pollution goals by whatever means they can. With regard to emissions of noxious sulfur dioxide, the new law sets up a clever system in which companies and utilities will be issued permits to produce certain amounts of the gas. If a company finds ways to produce less SO₂ than it is allowed to, it can make money by selling unused pollution permits to other firms. "This is the frontier of environmental policy," says Robert Stavins, an economist at Harvard's Kennedy School of Government. "It allows a firm to go out and choose the best technology it can. And it

EARTH SAVER

If the U.S. increased average auto-fuel economy from 28 m.p.g. to 40 m.p.g., the country could ultimately save 2.4 million bbl. of oil a day (about the amount now imported) and could prevent 440 million tons of carbon dioxide (7% of current CO₂ emissions) from entering the atmosphere each year



BMW's E1 is a clean electric machine that could make it easier to breathe in the world's cities

also provides an incentive to cut pollution below government requirements."

Meanwhile, the U.S. is stepping up support for research into energy conservation and renewable power sources. Funding in these areas has risen from \$324 million in 1989 to \$540 million this year. But the President and Congress have not shown much interest in politically tough measures such as sharply higher gasoline taxes or more stringent auto-fuel-economy standards, both of which would force Detroit to design more efficient cars.

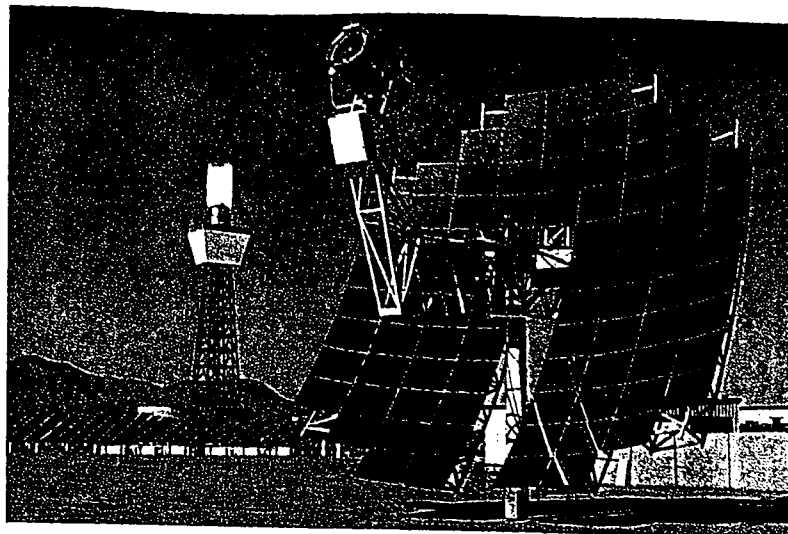
In Japan furious competition among companies is the main force behind innovation, but government policies, in the form of strict antipollution laws and encouragement of technological research, are a big help. One of the government's latest initiatives is the New Earth 21 project, which is aimed at meeting the threat of global warming. As envisioned by the Ministry of International Trade and Industry, it will promote two activities: the development of technologies designed to reduce production of carbon dioxide and other greenhouse gases, and the sharing of those methods with developing countries. MITI is financing an ambitious effort to generate clean-burning hydrogen, which would not contribute to global warming, by using genetically engineered bacteria. There are also tax breaks and low-interest loans available for environmentally sound industrial projects, and local governments can get tax relief when they purchase electric- rather than gasoline-powered vehicles.

European nations are also moving to coax, and if necessary force, their industries to see the potential profits in environmental responsibility. In France the best example of a marketable, earth-saving technology is the tgv, a 300-km/h (186-m.p.h.) train that has won passengers away from polluting planes on the Paris-Lyons run and other routes. The train, whose operations are subsidized by the government, is now being considered for several routes in the U.S.—a profitable triumph for French industry. In addition, the government is laying plans for a waste tax that will finance advanced waste-treatment plants, which could lead to an entire export industry.

In Britain, where the total market for environmental products has been estimated at \$50 billion a year by 1995, the government has set up a \$20 million fund to support innovations in recycling, environmental monitoring and reduction of waste and pollution from manufacturing processes. It is giving farmers grants of up to 50% of the cost of building new slurry and silage storage facilities to cope with fertilizer-heavy farm waste.

Britain's National Rivers Authority has been especially active. Its interest persuaded the electronics industry to come up with a briefcase-size monitor that can be used on a riverbank to measure the amount of dissolved oxygen and ammonia in the water, along with its acidity and turbidity. The authority also spurred the development of a remote-sensing water monitor, as well as an experimental technique that injects iron into stream beds to neutralize polluting phosphates. All three inventions are considered good export prospects.

Perhaps the greenest of nations is Germany, where commercial banks will grant low-interest loans for pro-environment projects and hotels urge guests to forgo daily towel changes to save water and energy. Environment Minister Klaus Töpfer has ordered the phaseout of crcs by next year—two years



SOUTHERN CALIFORNIA Edison COMPANY

Built by McDonnell Douglas, this "dish" converts light energy into electricity

earlier than most other countries—and called for a 25% to 30% reduction in carbon dioxide emissions by 2010. The government is investing heavily, having spent \$90 million since 1974 on development of recyclable, high-efficiency batteries for electric cars and planning annual outlays of \$182 million on solar-, wind- and wave-energy research. Last year a government-supported, high-speed train called ICE started whizzing between Hamburg and Munich.

There is action as well at the level of the European Community as a whole. Last January, E.C. environment commissioner Carlo Ripa di Meana got initial approval for a tax to be levied on fuels that give off carbon dioxide. He figures this will eventually push the price of natural gas up about 30% and coal 60%, increases that will spur businesses and consumers to conserve energy. The E.C. has been helping finance development of clean technologies, such as 100%-recyclable cars and low-polluting power generators, since 1987.

Many companies recognized long ago, without any nudge from governments, that respect for the environment can boost profits. In the U.S., 3M has drastically reduced pollution and waste at its manufacturing plants and, despite the conventional wisdom that says environmentalism is a luxury, has steadily increased its profits. Once industrialists think about it at all seriously, they almost inevitably see the financial advantages of investments in environmental technology, says Hugh Faulkner, executive director of the Business Council for Sustainable Development. The council was set up to advise the Earth Summit about industry's views on environmental issues. After a year's work, executives from such firms as Chevron, Mitsubishi, Royal Dutch/Shell and Volkswagen agreed on a set of business principles, including the need for sustainable management of resources, the charging of environmental costs against corporate profits, and the rule that polluters, not the public, must pay for cleanup.

Yet even with greater industrial environmental consciousness, says Faulkner, "there could clearly be no prospect for sustainable development in either the developed or the developing world without government incentives." The nations that wield those carrots and sticks most skillfully will be the leaders of the new green revolution, and their industries will eventually be the ones to profit from it.

—Reported by Helen Gibson/London, Rhea Schoenthal/Bonn and Dick Thompson/Washington

EARTH SAVER

By switching from incandescent to compact fluorescent lighting, the U.S. could conceivably conserve 147 billion kWh of energy annually (equal to the output of 37 giant power plants) and thus save about \$11 billion a year on utility bills

SUMMIT TO SAVE THE EARTH

THE WORLD'S NEXT TROUBLE SPOTS

and report cards for major countries on ...



Carbon
Emissions



Population
Growth



Safe Drinking
Water



Protected
Lands

REPORT CARD FOR NORTH AMERICA

U.S.



Canada



BELIZE

The 140-mile (220-km) coral reef off Belize is healthy now, but the country's booming tourist industry could cause irreparable harm.

Marine biologists fear that snorkelers and scuba divers are damaging the coral. Overzealous fishermen may be depleting the spiny

lobster, conch and other prized species. Sewage runoff from resorts and pesticide and fertilizer residues have also taken a toll.

ECUADOR

Oil exploration and drilling in the 1.6 million-acre (656,000-hectare) Cuyabeno National Park have turned Ecuador's largest protected ecosystem into one

of its most threatened. Cuyabeno's diverse wildlife includes pink dolphins, harpy eagles, jaguars and 10 species of primates. About

30,000 acres (12,100 hectares) has been cleared for access roads and subsistence farming, and several oil spills have been reported.

FLORIDA

The barrier reef that forms the Florida Keys—which is a U.S. marine sanctuary—is dying at a rate of 4% to 10% a year. The biggest threats are agricultural runoff, sewage, coastal erosion, pollution-related diseases and warmer water temperatures.

COSTA RICA

The government wants to dam the Pacuare River for a hydroelectric plant in order to satisfy Costa Rica's energy needs, which are rising about 10% a year. But the project, which would begin operating in 2005, would flood 3,000 acres (1,200 hectares) of forest, displace numerous Indians and destroy a world-class white-water run.

BRITISH COLUMBIA

Forty years ago, Vancouver Island's pristine temperate rain forest, one of the few left anywhere in the world, held 4.2 million acres (1.7 million

hectares) of trees. By 1990, however, loggers had clear-cut more than half the prime timberland. The rest could be gone in 25 years.

POLAND

The Dunajec valley is famous for its scenery and medieval castles. In 1976 the government began building a dam at Czorsztyn to provide cheap electricity and control flooding. Construction will end in 1995. Scientists say the dam's projected benefits are unrealistic. Two nature reserves and part of a national park have already been destroyed.

THE ALPS

They are scarred by roads, railways, 40,000 ski runs and 12,000 lifts and cable-car lines. Native plants are dying, acid rain blights the forests, the air is laden with carbon monoxide, and mudflows and avalanches are commonplace. Preparations for the Winter Olympics in Albertville made the problems even worse.

BULGARIA

The nuclear power plant at Kozloduy, called "the most dangerous in the world," has been plagued by fires, technical failures and radioactive

leaks. Renovations could cost \$1 billion, but the government cannot abandon the plant: it supplies 40% of Bulgaria's energy needs.

KEY TO REPORT CARDS

Per capita CO₂ emissions, 1989



- A Less than 1 metric ton
- B 1-5
- C 5-10
- D 10-15
- F More than 15

Population growth, 1985-95, annual averages



- A Less than 0.5%
- B 0.5%-1%
- C 1%-2%
- D 2%-3%
- F More than 3%

% of population with access to safe drinking water



- A 100%
- B 90%-100%
- C 80%-90%
- D 70%-80%
- F Less than 70%

% of total area of country that is protected, 1990*



- A 10% or more
- B 7.5%-10%
- C 5%-7.5%
- D 2.5%-5%
- F Less than 2.5%

*Grades adjusted upward for countries with more than 30% wilderness.

CHILE

Pangué, a \$470 million hydroelectric plant to be built on the Bio-Bio River, seems relatively innocuous. A mere 1,000 acres (405 hectares) of scrub and pastureland will be flooded, and the wildlife is not in danger. But Pangué is just one of five new power stations planned for the Bio-Bio, and authorities also hope to erect a massive dam that will swamp nearly 11,860 acres (4,800 hectares) of land. Environmentalists say the river could become uninhabitable, and altered water flows may cause erosion.

ARGENTINA

The Atlantic coast of Patagonia is increasingly vulnerable. Squid fishing is depleting food stocks vital to marine life. Oil leaked from tankers and fishing boats, as well as plastic netting, is wreaking havoc on penguin colonies. Last year just one spill killed at least 16,000 penguins. On land, weak hunting laws have endangered the guanaco, a cousin of the Andean llama; the Patagonian rhea, a relative of the ostrich; and the Magellanic fox.

BLACK SEA

Increasing pollution in the more than 60 rivers and streams that feed into the Black Sea is having devastating effects. The rivers flow

through some of the world's grimmest areas, picking up oil, lead and other toxic materials, as well as fertilizer residues and nuclear

fallout from Chernobyl. The sea's oxygen layer is thinning, seals and dolphins are disappearing, and algae blooms are more frequent.

REPORT CARD FOR LATIN AMERICA

Argentina



Brazil



Mexico



Venezuela



BOTSWANA

The vast Okavango River delta shelters some of Africa's last free-roaming herds of elephant, Cape buffalo and zebra. But the fragile ecosystem could be hurt by a plan to dredge more than 23 miles (37 km) of river at the delta's southern end. Officials claim that the water is needed for the town of Maun. But critics say the project is really aimed at expanding Botswana's diamond mines.

SIBERIA

Nearly twice the size of the Amazon jungle, Siberia's coniferous forests contain about 25% of the world's wood. Government planners hope to expand logging through joint ventures with foreign timber com-

panies. Environmentalists, on the other hand, fear that clear-cutting will inhibit the forest's ability to regenerate itself and increase soil erosion, sending cascades of silt into fish-filled rivers.

PERSIAN GULF

About 8 million bbl. of oil was dumped into the gulf during last year's war. Long stretches of Kuwait's coastline are still suffering from the assault. In some areas, the number of sand-dwelling animals has plummeted from hundreds of thousands to less than a hundred. Self-sealing oil lakes still blanket the desert, smothering vegetation, birds and insects and releasing clouds of toxic fumes.

INDIA

The \$10 billion Narmada Valley Development Plan is an irrigation and hydroelectricity scheme along the Narmada River. If completed, it will include more than 3,000 dams, displace as many as 100,000 people, submerge forests and farms, and increase the river's salinity and sediment load.

MADAGASCAR

A virtual laboratory of evolution, Madagascar is populated by at least 150,000 species found nowhere else in the world. The island is home to 25% of Africa's plant species. Shy primates called lemurs live deep in the forests; new species are still being discovered. About 80% of Madagascar's rain forests have already been cut to make charcoal and clear land for farming and ranching. If the current rate of deforestation continues, Madagascar will be stripped bare in 35 years.

ETHIOPIA

Since 1900, Ethiopia's burgeoning population has stripped more than 90% of the country's forests for firewood and farmland, allowing 1 billion tons of topsoil to wash away every year. Some 8,000 acres (3,200 hectares) of the once fertile highlands can no longer bear crops, and an area the size of Switzerland may be bare rock by 2010. Destruction of the watershed may also have contributed to floods in the Sudan.

CHINA

The Three Gorges Dam on the Yangtze River was approved last month. It will take up to 18 years to build and could provide China with 17,680 megawatts of power. But the dam could cost \$20 billion, and its reservoir will probably uproot more than 1 million people. Critics say the dam will also trap silt, flood a scenic valley and possibly cause upriver flooding.

NEPAL

Foreign trekkers have long discarded trash along Himalayan trails. The route from Lukla to the Mount Everest base camp is so littered with multi-colored toilet paper that it seems ablaze with flowers. The base camp is strewn with plastic containers, cans and batteries. The government cannot afford to do much to control the litter. Several international groups recently launched a \$1 million cleanup of Mount Everest.

REPORT CARD FOR EUROPE

Britain	▼C	▲A	←A	☹A
France	▼C	▲A	←A	☹B
Germany	▼D	▲A	←A	☹A
Netherlands	▼C	▲B	←A	☹B
Poland	▼D	▲B	←C	☹C
Romania	▼C	▲A	←B	☹F
Russia	▼D	▲B	←A	☹D
Spain	▼C	▲A	←A	☹C
Sweden	▼C	▲A	←A	☹C

JOHNSTON ATOLL

A tiny coral island 700 miles (1,125 km) west of Hawaii, Johnston Atoll is a U.S. national wildlife refuge. It is also the site of the \$240 million Johnston Atoll Chemical Agent Disposal System, designed to burn America's aging

stockpile of chemical weapons. The facility has been closed more than 45 times in the past two years because of faulty operations. The burning will continue at least until August 1994.

INDONESIA

Although Indonesia still has 10% of the world's tropical forests, more than 2.2 million acres (890,000 hectares) are cut every year for wood pulp and plywood. In Kalimantan, a province on Borneo, logging, fires and coal mining have devastated so much forest that local environmentalists call it a lost cause. Now at risk: the extensive forests in Irian Jaya, the western half of New Guinea.

MALAYSIA

Sarawak provided a third of the world's tropical timber in 1989. At current logging rates, its virgin forests could vanish by the year 2000. About 8 million indigenous people have had their lives disrupted by floods and mudslides triggered by the logging. The erosion has also dumped silt and pollutants into two-thirds of Sarawak's rivers.

AUSTRALIA

Tasmania's Tarkine Wilderness is Australia's largest remaining tract of temperate rain forest. But miners and loggers have infiltrated the area, and vacationers in four-wheel-drive vehicles have carved up the sand dunes. The Australian Conservation Foundation hopes to make the area a national park.

Years of overgrazing by cattle and sheep, as well as growing numbers of rabbits and feral horses, is causing central Australia's arid zone to expand toward the coast. At least half the region's mammals, including the desert bandicoot and the lesser bilby, are already extinct, and the rest are threatened.

REPORT CARD FOR ASIA AND OCEANIA

Australia

▼F	▲C	←NA	☹B
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China

▼B	▲C	←D	☹F
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India

▼A	▲D	←D	☹D
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Indonesia

▼A	▲C	←F	☹B
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Iran

▼B	▲D	←C	☹D
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Israel

▼C	▲C	←B	☹A
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Japan

▼C	▲A	←NA	☹C
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Malaysia

▼B	▲D	←D	☹D
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Philippines

▼A	▲D	←C	☹F
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Thailand

▼B	▲C	←C	☹B
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Turkey

▼B	▲C	←C	☹F
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REPORT CARD FOR AFRICA

Angola

▼A	▲D	←F	☹F
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Egypt

▼B	▲D	←C	☹F
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Ethiopia

▼A	▲D	←F	☹C
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Kenya

▼A	▲F	←F	☹C
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South Africa

▼C	▲D	←NA	☹C
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TIME Graphics by Nigel Holmes
Text by Andrea Dorfman
Report-card research by Deborah Wells
Sources: U.N. Development Programme,
U.N. Population Fund; World Resources Institute

Newsweek

The Future i

NORTH AMERICA

Wealthy and profligate, its slow-growing population takes the lion's share of world resources.

SOUTH AMERICA

Custodian of world's largest rain forest. Trying to escape poverty with rapid industrialization.

AUSTRALIA

Heartland threatened by overcultivation. Ambitious goal of 1 billion new trees by 2000.

ANTARCTICA

Suffers an ozone hole each summer, a result of industrial pollution. The few humans there leave piles of garbage.

Poo
g
bab
will



is Here

AFRICA

Poorest and fastest-growing. 9.9% of babies die. Population will double in 23 years.

EUROPE

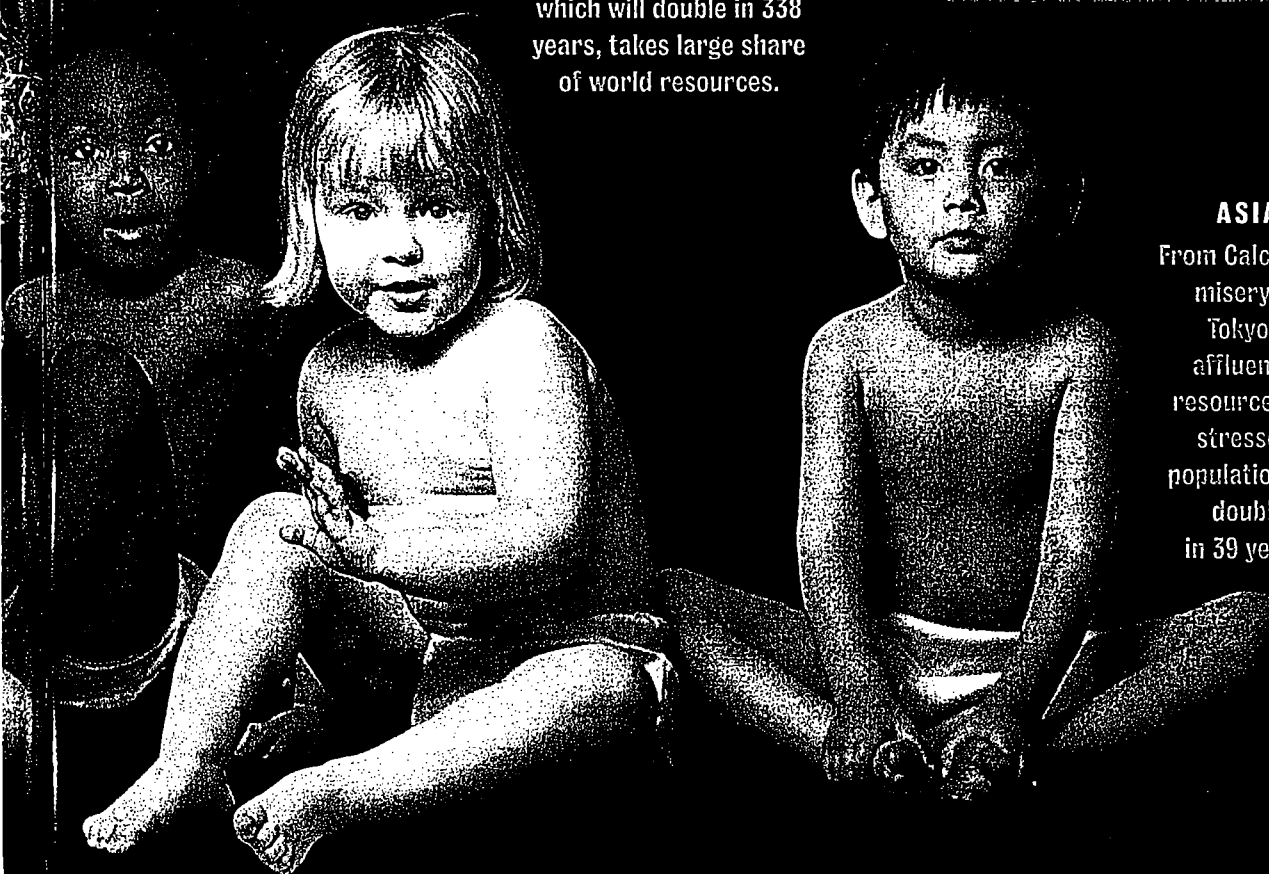
Affluent population, which will double in 338 years, takes large share of world resources.

ASIA

From Calcutta's misery to Tokyo's affluence, resources are stressed; population will double in 39 years.



The world's leaders meet in Rome to leave no child behind. Their mission is to end the global divide. But the world is not a simple place. It is a complex of rich and poor, of life and death. The world's leaders are trying to find a way to make the world a better place. They are trying to find a way to make the world a more just place. They are trying to find a way to make the world a more peaceful place. They are trying to find a way to make the world a more hopeful place. They are trying to find a way to make the world a more beautiful place. They are trying to find a way to make the world a more loving place. They are trying to find a way to make the world a more caring place. They are trying to find a way to make the world a more compassionate place. They are trying to find a way to make the world a more merciful place. They are trying to find a way to make the world a more gracious place. They are trying to find a way to make the world a more kind place. They are trying to find a way to make the world a more gentle place. They are trying to find a way to make the world a more patient place. They are trying to find a way to make the world a more humble place. They are trying to find a way to make the world a more meek place. They are trying to find a way to make the world a more lowly place. They are trying to find a way to make the world a more modest place. They are trying to find a way to make the world a more simple place. They are trying to find a way to make the world a more plain place. They are trying to find a way to make the world a more unadorned place. They are trying to find a way to make the world a more undecorated place. They are trying to find a way to make the world a more unembellished place. They are trying to find a way to make the world a more unadorned place. They are trying to find a way to make the world a more undecorated place. They are trying to find a way to make the world a more unembellished place.



Earth at the Summit

Live from Rio, next week's global gathering will be part carnival, part propaganda-fest and a real test for the new world order

The future of the global ecosystem: it's the most important issue in the world today, so naturally it merits the world's biggest meeting. The world is awash in special-interest catastrophes, but the environment is bigger than any of them, because no matter what your cause—Kurdish independence or national health care or the underclass—it won't matter if the environment collapses, taking the world's economy with it. Which is why for the first time in this century, a summit conference will convene next week in Rio de Janeiro to discuss an issue other than war or the economy, and it will attract leaders of virtually every nation on earth. There are countries without armies, but none without land; and there are people with no money, but none who don't eat.

The Rio meeting (officially, the United Nations Conference on Environment and Development) will be bigger than any ordinary summit, in part because it will also have rock concerts. It will have T-shirts, a poster by Robert Rauschenberg and souvenir personal ultraviolet-exposure monitors. It will have a whole parallel conference for nongovernmental organizations, a category including environmental groups, human-rights groups and groups of people temporarily out of power in their own homelands, such as Kurds, Tibetans and Democrats. The Earth Summit even includes "indigenous people," who will assemble for the first-ever world conference of hunters

and gatherers, housed in their own village constructed by Amazon tribe members. Even before it's been held, Sen. Al Gore, Democrat of Tennessee, proclaims Rio "a success simply because it has focused the attention of world leaders on the nexus between development and environmental protection and the new dimensions of the global environmental crisis." In short, it will produce enough portentousness to fill every installment of "Nightline" between now and the Democratic convention. Who could be against that? Not Jay Leno.

The United States alone will be sending an official delegation of around 300, expected to be headed by Environmental Protection Administrator William Reilly. That counts the congressional "observers," led by Gore and Rep. Dante Fascell, Democrat

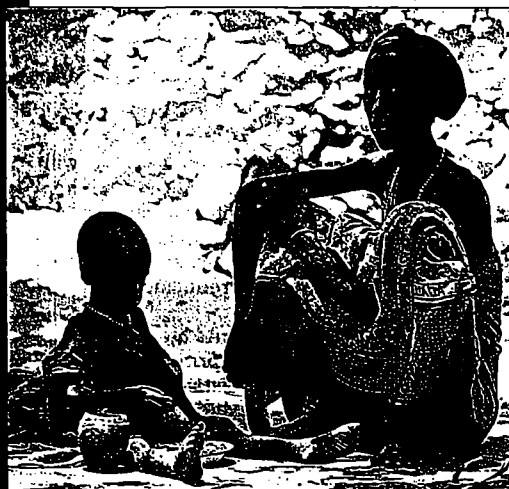
What's on the Table

■ **Global warming:** A treaty intended to curb emissions of "greenhouse gases"—principally carbon dioxide—100 years without specific targets or timetables.

■ **Agenda 21:** A plan for the industrial nations to help poor countries develop their economies without polluting their environments—or the planet's. Estimated cost: \$200 billion a year.

■ **Biodiversity:** A treaty to protect the world's endangered species and habitats, and to encourage countries to develop sustainable agriculture and industry that protect the environment and its plants and animals.

While the global poor go to bed hungry, the excesses of the wealthy go up in smoke. Can the planet continue to support such a dichotomy? And should it?



BILL WILCOX—GAMMA-LIAISON (LEFT), RAINER UNKEL—SABA

of Florida, but not the visit by President Bush himself, plus however many aides it takes to push him on the airplane and make him go. For a long time the Environment President seemed unable to make himself attend the environmental summit. His director of the Office of Management and Budget, Richard Darman, treated the invitation to Rio the way people react to a postcard urging them to call a 900 number and find out which of three prizes they've already won. Almost alone among major nations, the United States retains a substantial constituency that is indifferent if not hostile toward environmental regulation—an attitude oddly shared by the GOP right wing and the leaders of the former communist bloc. But this is increasingly a fringe position even among many of the business executives it is supposed to benefit. The Business Council for Sustainable Development, which will play a prominent role in Rio, includes the heads of global corporations like Dow Chemical, Du Pont, Chevron and 3M, and is chaired by Swiss industrialist Stephan Schmidheiny, heir to a substantial fortune made in the asbestos trade. Dow CEO Frank Popoff's rallying cry—"There can be no economic development without environmental responsibility"—wouldn't fit on a T shirt, but it expresses the view of many economists. In the end, Bush sided with EPA chief William Reilly and national-security adviser Brent Scowcroft, who argued that it would be a major embarrassment for the leader of a new world order to skip the meeting at which that very thing will actually be shaped.

As Gore observed, the Earth Summit is imbued with a powerful sense of destiny. The leaders of more than 120 nations are not gathering merely to codify regulations about air pollution and toxic dumps. You don't need a summit conference for that; the Montreal treaty of 1987, which phased out the future production of chlorofluorocarbons, set a model for efficient interna-

Six Who Can Make a Difference



LARRY DOWNING

GEORGE BUSH

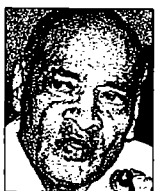
By holding out, he will probably get what he wanted: a treaty on greenhouse gases without any specific targets for reducing them.



A. T.—SYGMA

NAWAZ SHARIF

The prime minister of Pakistan speaks for the developing nations, which are demanding help from the West as the price of conservation.



PAONI—SABA

NARASIMHA RAO

India's prime minister will seek advanced technology, but resist "arm-twisting" from the West, which has yet to clean its own house.



JOHN ABBOTT

MAURICE STRONG

The organizer of the Earth Summit, a Canadian-born oil millionaire, says Rio will show whether the world is "ready to make the tough choices."



ATLAN—SYGMA

NOBORU TAKESHITA

Japan's former prime minister believes industrial countries have an obligation to help the Third World develop in responsible ways.



REUTER

STEPHAN SCHMIDHEINY

The Swiss industrialist, who heads the business delegation at Rio, believes that economic and environmental concerns "cannot be separated."

separate the future habitability of the planet from the current distribution of wealth."

Speaking for many poor countries, "the Chinese have made the choice that if there is a decision to be made between development and environment, they'll go for development," says a Western diplomat in Beijing. "If the West wants a better environment, they'll have to pay." If the West doesn't want China to burn its coal, the West can pay for the alternatives. If the alternatives involve technology that the Chinese don't have—more efficient electrical generating plants, say—the West should provide it. That is the proposal at the heart of "Agenda 21," the other substantive document that may (or may not) be adopted at Rio. It calls, in 800 sober pages, for an ambitious program of aid intended to fix the Third World's sewers, clean its dumps and replant its forests—all well within the reach of current technology. The lives of

tional cooperation in this area. There is one substantive regulatory treaty on the table at Rio, dealing with action to head off global warming (page 24), but delegates are still tinkering with some of the details. Many feel that to have much effect, the treaty should incorporate specific targets for reducing emissions of greenhouse gases, but the United States, which leads the world in the production of carbon dioxide, is opposed. The outlook is bleaker for proposed treaties on preserving forests and "biodiversity"—a wide range of species—which are hung up on issues of national sovereignty. Countries without much industry don't like outsiders telling them what to do with their own trees, or, for that matter, fungi. At the same time, though, they want to share in the profits that come from exploiting these resources. Should Madagascar, say, get royalties on a drug made from a plant that is found only in its forests? What if the drug is then synthesized abroad?

But this doesn't mean that nothing important will go on in Rio. It just will go on at a higher plane of generality. The overlooked word in the conference title is "Development." The Third World has its own agenda for the Earth Summit, which is contained in part in a document called the

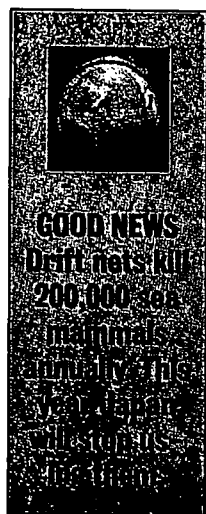
Rio Declaration. This began as a visionary statement about stewardship and environmental responsibility. Maurice Strong, secretary-general of the conference, wanted a short and inspirational document, something that could be hung in a child's bedroom. A Third World delegate responded that most of the children in his part of the world didn't have bedrooms. So the declaration evolved into a lengthy charter spelling out the "rights" of poor countries to develop in responsible ways. This, of course, is one of the things Darman warned Bush about: it's ecospeak for "foreign aid."

Essentially, the Third World wants the West to save it from the consequences of industrialization. The corollary is that otherwise the trees of Peru and Indonesia will go the way of the ones of Woodside, Queens. Nobody was thinking about these questions when the West had its Industrial Revolution—that's how it got so rich. Now it wants the rest of the world to follow different, more stringent, rules. This is the global application of the well-known phenomenon that one's willingness to make "sacrifices" for the environment goes up in proportion to the number of Volvos one already owns. Rio, says American environmentalist Lester Brown of World-Watch Institute, will demonstrate that "we can no longer

millions of children who now die of simple intestinal infections would be spared. From the environmental point of view this may seem at first like a mixed blessing, but the experience in developed countries is that once people assume that their babies will grow up, they don't have so many of them. And the world will enjoy the presumed benefits of higher standards of living: the people of developing countries might someday look at a tree the way people do in Marin County, as the handiwork of God, rather than a big piece of firewood stuck in the ground.

Can we afford to do it? The estimated cost is \$125 billion a year, which is three times the combined foreign-aid budgets of the Group of Seven. But, to look at it another way, it is only 1 percent of the same countries' gross national products. To ask the question is to hear Al Gore respond, well, Bryant, can we afford *not* to do it? There are all sorts of sound, common-sense reasons for investing in the environment. "Efficiency [in using natural resources] keeps companies competitive," says the Business Council. "There are substantial [economic] costs to ignoring the environment," chimes in EPA chief Reilly. But there are sound, common-sense reasons for doing a lot of things that the country never gets around to doing. So we should set above them the other reason for doing everything we can to preserve the global ecosystem, which is that the lives of billions of people, our own included, may depend on it.

JERRY ADLER with MARY HAGER in Washington



Green, Greener, Greenest

Countries vary markedly in their stewardship of the environment—their own and the world's. **NEWSWEEK** rates 30 on three measures that strongly affect the planet's health. A ✓ is good; an X is bad.



Bangladesh: No primary rain forest left, causing killer floods. 97% of rural dwellers have no sanitation.

Brazil: Sixth highest per capita greenhouse emissions. Dropped some deforestation subsidies.

Canada: Poor energy efficiency. Concerned over acid rain, but continues to burn coal without stack control.

China: Third highest greenhouse emissions, 9.1% of world total. Heavy forest loss, choking urban pollution.

Congo: Little safe drinking water. 68% of rain forest scheduled for clearing. 5.8 children per woman.

Costa Rica: Pioneer in protecting biodiversity and forests. 3.3 children per woman.

Czechoslovakia: Highly polluted cities and water: 90% of all wells in the countryside are contaminated.

Egypt: Hefty pesticide subsidies cause chemical-related deaths and pollution. 4.4 children per woman.

Ethiopia: Loses 1 billion tons of topsoil per year to overcultivation. Little clean water. 7.5 children per woman.

France: Reliance on nuclear power cuts greenhouse emissions (1.5% of world total). 1.8 children per woman.

Germany: Acid rain decimating forests. 35,000 abandoned toxic-waste sites. High energy efficiency.

India: Fifth highest greenhouse emissions. Almost all primary rain forest gone. 3.9 children per woman.

Indonesia: 10,000 miles of coral reef being destroyed. Pilot project to protect species-rich wetlands.

Israel: Pioneered solar energy and desert agriculture. 2.9 children per woman.

Italy: Severe pollution of Adriatic. Energy efficient. 1.3 children per woman. Dumped toxics in Nigeria.

Japan: Fourth highest greenhouse emissions. Traffics in endangered wildlife. Energy efficient.

Kenya: Little safe drinking water outside cities. Trying to save wildlife. 6.7 children per woman.

Madagascar: Huge deforestation rate. Little safe drinking water. 6.6 children per woman.

Malaysia: Huge deforestation rate, mostly for export to Japan. Has lost half its wetlands in last century.

Mexico: Horrible air and water pollution. Clears 1.5% of fast-disappearing forests per year.

Nigeria: Complete deforestation expected by 2000. Little safe water outside cities. 6.5 children per woman.

Norway: Waterways and forests harmed by acid rain. Poor commercial energy efficiency.

Philippines: Severe deforestation causes killer floods and will leave no virgin forest by 2010.

Poland: Extremely polluted. Dumps 20 million tons of toxic waste every year into unregulated sites.

Saudi Arabia: A leading opponent of climate treaty. 7.1 children per woman.

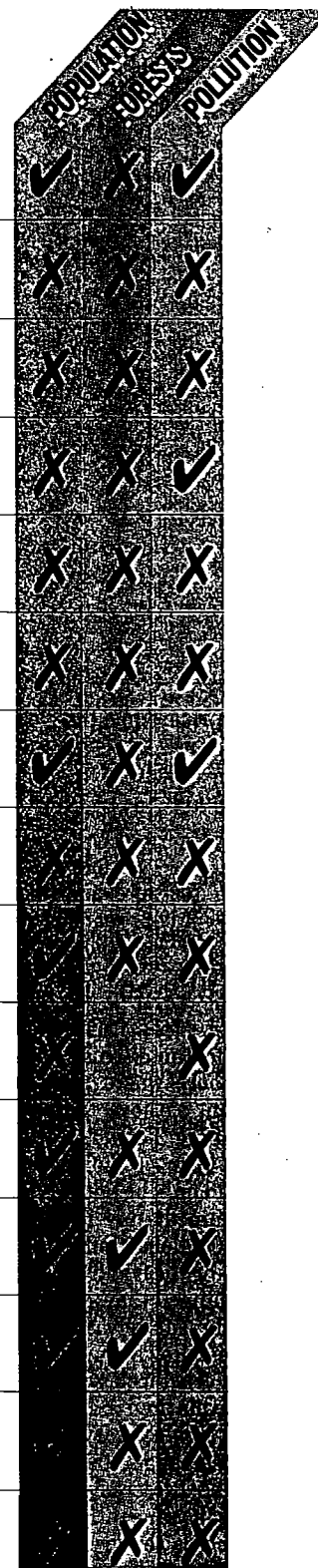
Thailand: Lost 45% of forest from 1961 to 1985. Lead poisoning rampant in Bangkok's children.

(ex-)U.S.S.R.: Second highest greenhouse emissions, 13.6% of total. Tons of toxics dumped on land and sea.

United Kingdom: Has led fight for climate treaty. Improved energy efficiency 30% since 1970.

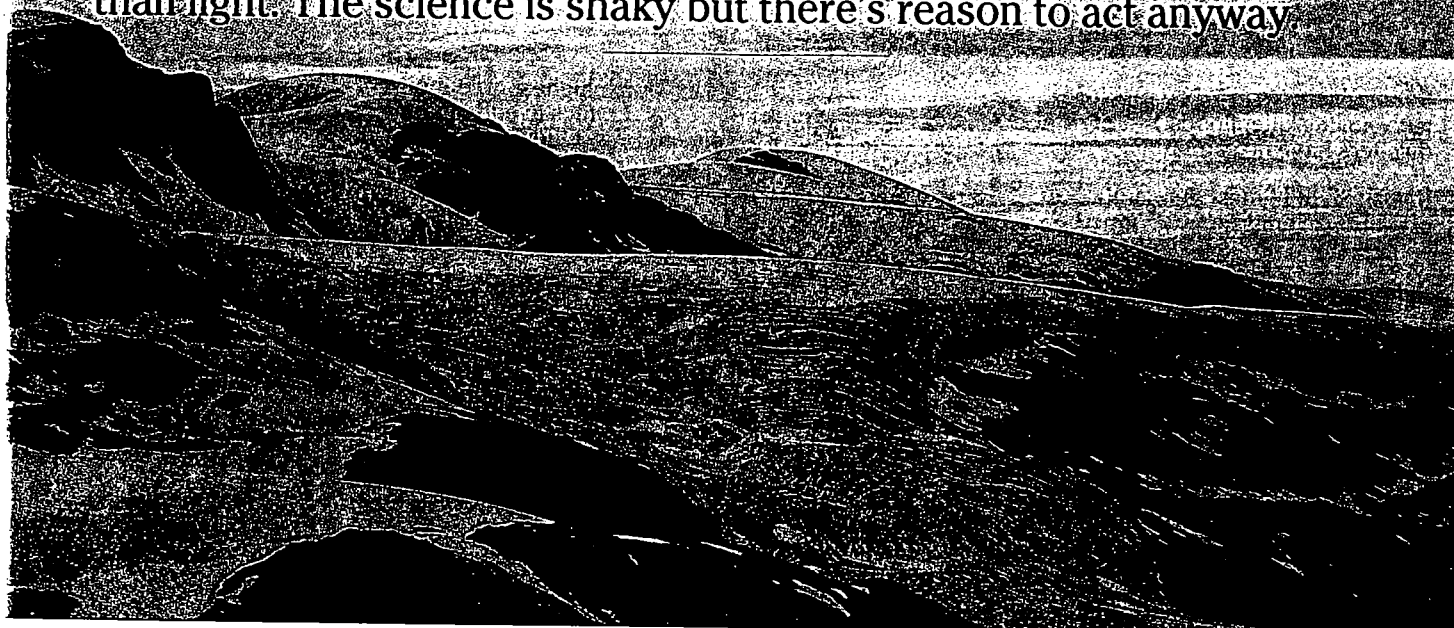
United States: Highest greenhouse emissions, 17.8% of world total. Subsidizes deforestation.

Zaire: Among 25 worst nations in providing safe drinking water. 6.1 children per woman.



A House of Cards

Bitter and confusing, the debate over the greenhouse sheds more heat than light. The science is shaky but there's reason to act anyway



TOM STEWART—STOCK MARKET

Surprise: While the globe warmed, icy glaciers on Greenland also expanded, confounding assumptions about the planet's climate

BY GREGG EASTERBROOK

No more, it seemed, would winter be punctuated by the crunch of snow underfoot. Global temperatures had reached record highs. The worst seemed confirmed when an expert at England's staid Royal Meteorological Society declared that a greenhouse effect had begun. The earth would heat irreversibly.

Disaster scenario for the 21st century? No, historical footnote. This happened 50 years ago.

There was a global-warming scare in the 1930s. Then, as now, temperatures rose for several years running. Then, as now, scientists speculated that artificial carbon dioxide was the culprit; that the future could only be hotter.

Immediately it got cold. From 1940 through the 1970s global temperatures declined, hitting bottom during the frigid winter of 1976-77. Environmentalists declaimed that an ice age was beginning.

Immediately it got hot. Through the 1980s one warm year followed another. Some of the same voices that had cried ice age began to proclaim global warming, and this time the idea stuck. In Rio, the world's leaders will sign a treaty which formally certifies the notion that a dangerous global warming is in progress.

The Rio treaty is an important step, though for reasons tangential to the current warming scare. For much as the greenhouse effect exists in the popular imagination, there is little evidence it has manifested in "the laboratory of nature." Consider:

■ "The year 1990 was, of course, just the latest 'warmest year on record,'" says Sen. Al Gore (Democrat of Tennessee) in his book "Earth in the Balance," which calls the greenhouse effect "the most serious threat that we have ever faced."

Hot compared to what? The "record" greenhouse proponents cite goes back only to 1880, when systematic preservation of weather data began. It turns out that 1880 was a cold year. Earth could experience "record" warmth and still remain cool compared with most of its past. Even after the 1980s warming, global temperatures still run 2 to 4 degrees Fahrenheit lower than through most of the period of civilization.

■ Starting around 1500, temperatures declined in an event called the Little Ice Age. For three centuries winters were harsh and harvests uncertain; the canals of Holland froze. Around 1850 temperatures began to rise again. Thus when dawned this century of industrial sprawl, the climate was already warming on its own.

■ About 1950, emissions of greenhouse gases took off. The warming rate, which should have escalated, promptly slowed. Pat Michaels, a climatologist at the University of Virginia, says, "Every annual high since 1950 falls below the trend of the natural increase" happening anyway when the big emissions began.

■ A net advance of about one third of 1 degree is what made the 1980s the hottest decade "on record." Some researchers believe that amount is within the standard deviation, or natural variability, of the weather. In other words the warm 1980s might be an omen. Or mean nothing whatsoever.

Despite these conflicting signals, global warming is



not an incomprehensible realm. Sense can be made of the subject by examining its three components: greenhouse science, greenhouse economics and greenhouse politics.

True Believers and Other Scientists

Global warming has already arrived, in disastrous ways, in the foothills of the Rocky Mountains. At the National Center for Atmospheric Research (NCAR) in idyllic Boulder, Colo., the greenhouse effect has struck hundreds of times.

The center operates one of the world's leading General Circulation Models (GCMs), computers that simulate the human trespass on the atmosphere. When technicians run the GCM, they get bad news. Computers predict that a doubling of atmospheric carbon dioxide—likely for the next century, without advances in energy efficiency—will warm the earth from 3 to 9 degrees. The long end of the prediction would be calamitous. Most scientists who work with GCMs are greenhouse true believers.

When news reports say there is a scientific consensus that the earth will warm, what they mean is there is agreement that computers predict a warming. This is different from saying that experts believe global warming will happen. On the question of what will happen, the only scientific consensus is that the sky will remain blue.

The most important documents in the greenhouse debate, a series of statements from the U.N.-affiliated Intergovernmental Panel on Climate Change, rely on computer models. IPCC reports were the centerpiece of negotiations on the Rio climate treaty. Within the technical sections can be found many arguments against a greenhouse emergency. But the IPCC "policy-maker's summary," the only section political leaders ever glance at, concentrates on the gloomy predictions of the GCMs. So what are the chances the models are right?

The most basic distinction in greenhouse science is between weather and climate. Weather is what happens today; climate is what happens over the next century. Last winter was the warmest in a century in North America. It also snowed in Israel. These facts reveal nothing other than that the weather is changeable, something known to Ben Franklin.

Most weather variations are essentially meaningless minor oscillations of a vast, complex system whose basic parameters are still only crudely understood. Weather-forecasting computers cannot project what the temperature will be next week; imagine trying to predict temperatures for the next century.

Because the biosphere is vast and complex, even advanced computers can deal with it only in approximations. When the climate model at NCAR prints out an image of the globe, Japan and the United Kingdom are absent. These nations are too small to fit under the model's "resolution limit."

Another problem is that even the best temperature records are fuzzy by a few shades of a degree, plus or minus. That is a tenuous basis on which to analyze a greenhouse effect which so far is, at worst, only slightly larger than the margin of error in the numbers. Stephen Schneider of NCAR acknowledges, "It's possible that everything in the last 30 years of temperature records is no more than noise." Noise is statistician's slang for little numerical fluctuations that don't add up to a hill of beans.

Because of such limitations, when global climate models are run in reverse, they fail to "predict" the present. Researchers who have set GCMs to the conditions of 1880 find the models say global temperatures should by now have risen as much as 5 degrees. But the actual increase over the last century is at most 1 degree.

Climate modelers know about such problems, and "tune" their computers to compensate. James Hansen, director of a NASA-affiliated GCM project, reports that his model is sufficiently tuned that, run in reverse, it now predicts only twice as much warming as has actually been observed. This may still sound worthless; in fact it's a significant step toward a climate model that can be trusted.

Hansen put his reputation on the line by doing something modelers dread—making a testable prediction. His computer thinks global temperatures will decline about 1 degree during 1992, because the eruption of Mount Pinatubo pumped enough pollutants into the air to interfere with sunlight reaching earth. When last winter was warm, modelers braced for embarrassment; but a late spring followed, so the prediction may rally. The bottom line on 1992 will help determine whether GCMs can align with reality.

Computer models must contain assumptions about how earth's climate operates. But the level of all ecological knowledge is primitive, and climate is no exception.

Till recently researchers assumed that water in the air behaves the same whether it is suspended as vapor or ice crystals. Then experiments showed there is a big difference between the two states. When the British Meteorological Office adjusted its GCM to take this into account, the predicted greenhouse bad news declined from about 10 degrees to about 3.

Most scientists assumed that sulfur dioxide, which causes acid rain, is also a greenhouse gas. But new research shows it is actually a coolant. Sulfur forms what

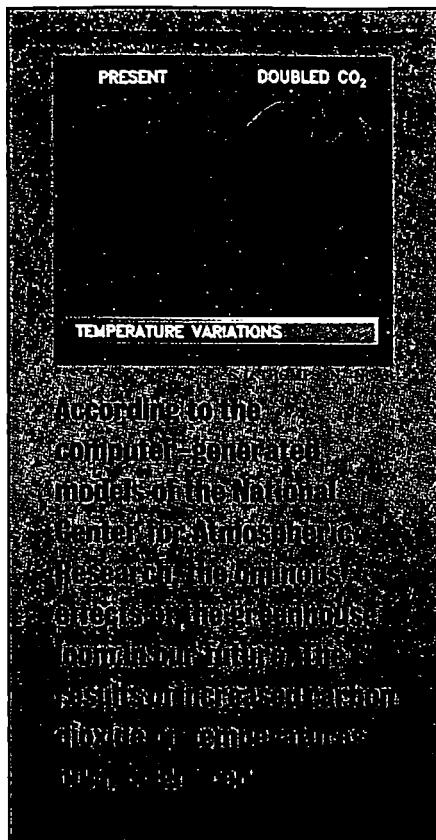
might be called a smog mirror, increasing the sunlight reflected back into space.

As recently as last summer the chemicals that deplete the ozone layer, CFCs, were considered potent global-warming agents. Scientists were "certain" of this. Then researchers discovered that CFCs cool the air just as much as they warm it.

Science traditionally thought the energy output of the sun—the driving force of climate—absolutely invariant. Satellite measurements begun about a decade ago show this is not the case. The sun's production varies slightly from year to year, according to Judith Lean, an astronomer at the Naval Research Laboratory.

Shortly after George Bush took office two credentialed scientists, Robert Jastrow and William Nierenberg, began to argue that the newly discovered solar variations explain recent temperature trends. They had considerable influence on the White House, particularly on former chief of staff John Sununu, a greenhouse agnostic. Hansen of NASA then demonstrated that a temporary cooling greater than has been observed in our sun or any similar star may be necessary to counter the temperature increases which GCMs predict. Besides, what if the sun's output goes up? That little complication caused solar variation to fall out of favor with the White House as a global-warming counterbalance.

Still other questions concern the seas and glaciers. Oceanographers long assumed that ocean currents are relatively stable. But

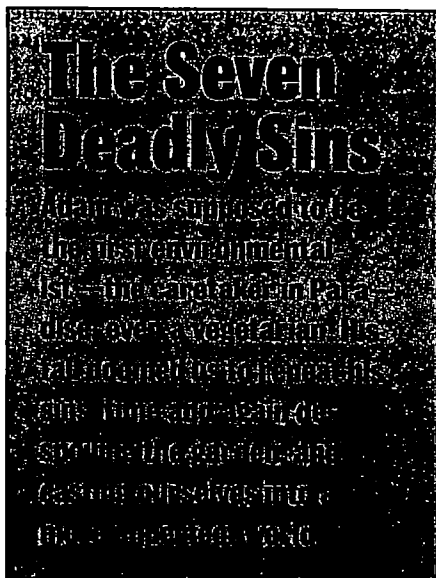


developments like the persistent El Niño fluctuations now suggest that sudden shifts in the circulation of ocean water may be grem-lins in climate malfunctions. Scott Lehman of the Woods Hole Oceanographic Institution recently published evidence that past shifts in ocean currents have caused sea surface temperatures to plummet 11 degrees in 40 years, an unheard-of rate.

It is an article of faith in the greenhouse community that natural temperature movements are extremely gradual. Rapid movements must be artificial and therefore pernicious because they will confront the biosphere with unnatural pressure. If it turns out, instead, that rapid temperature swings do occur naturally, all greenhouse arguments may go back to the drawing board.

Greenhouse theory posits that a warmer world would hold dire elevations of sea levels, as glaciers melt and return their water to the oceans. A decade ago, 10-foot increases were commonly projected for the 21st century; this amount would swamp coastal cities and several island nations. Now the estimates are down to one to seven feet. The highest claimed actual number for sea-level increase during the last 100 years is 11 inches, and most researchers think the real figure is much smaller.

Why isn't the sea rising? Because many glaciers are growing, not melting. Researchers have identified places where ice is in retreat: most are tropical or relatively small glaciers that may have been melting since the end of the Little Ice Age. In the arctic and



DESPAIR

For the poor, worrying about the environment can seem a luxury. In recent decades, Brazil, like many developing countries, has seen a population boom in its cities, making it more difficult to provide basic necessities like running water and sewers. Surveying scenes like this one from Rocinha, Rio's largest slum, officials might reasonably ask whether it makes sense to discuss expensive antipollution devices and the greenhouse effect when families go without food and medicine. If there is an answer, it's that despair can only make the trouble worse.



JOHN MAIER Jr.—PICTURE GROUP



KEITH DANNE MILLER—SABA

TEMPTATION

Polluters will dump on the site that offers the least resistance. In one U.S. government survey, four of five American companies operating plants across the border in Mexico admitted they were there to take advantage of weak environmental laws. Nearly half of the 2,000 American-owned plants generate hazardous waste, including PCBs. These wastes and raw sewage befoul underground aquifers and waterways like the one above, near Mexicali. Officials fear the wastes may have led to an increase in birth defects on both sides of the border.

GLUTTONY

Americans can devour anything. Since Europeans first arrived in the New World, all but 5 percent of the virgin forests have been cut down. Modern timber companies typically clear-cut wide swaths through the primeval growth. In Washington state's Olympic National Forest, loggers have razed about half the original fir, spruce and pine trees, including specimens 1,000 years old. Though clearings are replanted, new forests lack the variety many animals need to survive. By 1990 dwindling habitat threatened to kill off the spotted owl, so the federal government suspended logging on many public lands. But last month Bush administration officials proposed opening huge tracts to cutting. Environmentalists attacked the idea as "an extinction plan" for the owl—not to mention the virgin forests.

CHARLES MAUZY—ALLSTOCK



antarctic locations where the major ice masses reside, net glaciation may be increasing. A researcher named Jay Zwally surprised the climate business two years ago by showing that the central glaciers of Greenland have grown in the very years that global temperatures got higher.

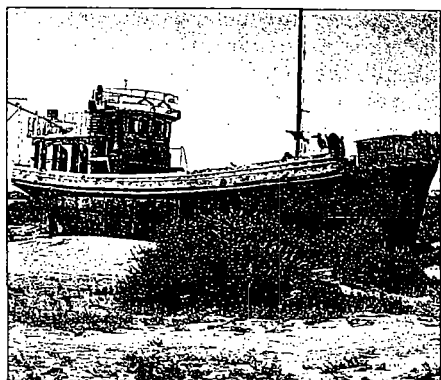
Glaciers get bigger while temperatures get higher: impossible? No, perhaps inevitable. In the zones that adjoin the North and South poles it's so cold that snow, the raw material of glaciers, rarely falls. Increasing temperatures might cause more precipitation, but not enough additional melting to counter the buildup. This could mean more of the world's water locked up in ice.

For his part Schneider believes there is a more straightforward

explanation for the expanding Greenland glacier—that it's simply gotten colder in Greenland. Indeed, some data suggest that it has.

It's colder in Greenland? Isn't the earth supposed to be warming? Climate shifts are not uniform. There's nothing strange, except to our sensibilities, about a mild winter in Minneapolis while a blizzard shuts down Jerusalem. But this seems a strike against greenhouse theory, which holds that warming would center in the high latitudes of the Northern Hemisphere. Researchers generally concur that warming has favored the Southern Hemisphere.

Recently Thomas Karl of the National Climatic Data Center demonstrated that summer and daytime highs have changed little



VICTORIA IVLEVA—AGENTUR-FOCUS

HUBRIS

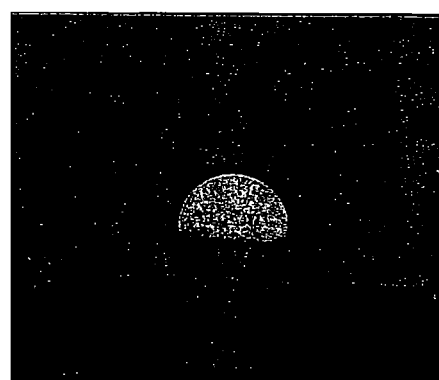
The Kremlin thought it could boss Mother Nature. In the 1960s it diverted two rivers that fed the Aral Sea in order to make cotton fields bloom on the arid lands of Central Asia. Since then, the water volume of the Aral has been reduced by two thirds, stranding boats and towns. Deprived of a moderating sea, local weather is tilting to extremes. Storms blow salt from the exposed sea bottom across the region, causing health problems and killing the cotton fields.



KAISER—GREENPEACE LONDON

NEGLECT

No nation is innocent of neglect, but East-bloc states were particularly guilty. Czechoslovakia and East Germany allowed virtually unchecked dumping into the Elbe River, making it one of Europe's filthiest waterways, as bottled samples attest (above). The Elbe washed thousands of tons of heavy metals and other pollutants into the North Sea yearly. A cleanup began in 1990, but the damage is huge. Once used as fertilizer, Elbe mud is now a hazardous waste.



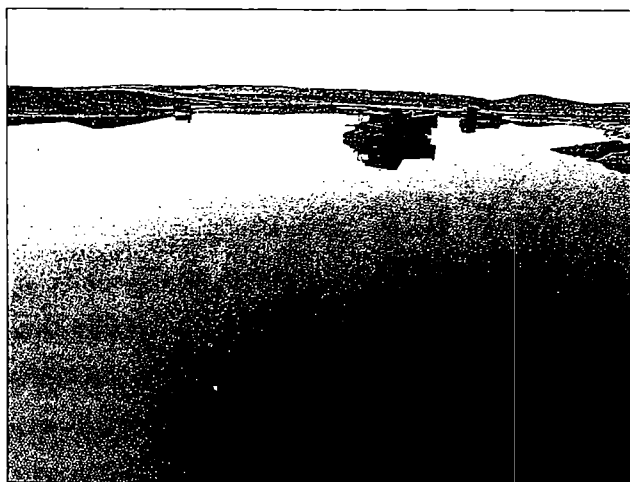
ADRIAN BRADSHAW—SABA

ENVY

In China's rush to catch up to the West, growth was often the only thing that mattered. Benxi, a city near the Korean border, has been particularly single-minded. More than 200 factories spew out more than 87 million cubic meters of gases each year, magnifying the color of sunsets and at one time earning Benxi the title of the world's most polluted city. Beijing has launched a cleanup campaign, but the city is still so smoggy that it occasionally vanishes from satellite photos.

HATRED

In the heat of battle, no one stops to worry about the environment. But Saddam Hussein took spiteful destruction to new lows during the gulf war. With Iraqi troops in full retreat, Saddam had nothing to gain but revenge when he ordered his soldiers to blow up more than 700 oil wells. Wellhead fires that coated the region in black smoke were doused within a year—faster than anticipated. But millions of gallons of oil spilled into the gulf, where it still threatens marine life, and spread out in huge lakes covering thousands of square miles of desert. Black muck is sinking into the sand, but some 30 large lakes remain. The oil is killing birds and insects and causing respiratory diseases among people living nearby. It will take years to tally the full extent of the damage—including contamination of underground water supplies, says Ibrahim Hadi, president of Kuwait's Environmental Protection Agency. The overall cleanup bill—including pumping the lakes dry—could total \$20 billion, and Kuwait plans to send the bill to Saddam.



THOMAS HARTWELL—SYGMA

during recent decades. But winters have indeed been mild, and nighttime lows have been less low.

This esoteric finding contained something to offend everybody in the climate debate. Greenhouse theory suggests that warming should peak on summer afternoons: the worst time, because daytime highs kill crops and push up energy demand. Karl's work suggests nature is doing the opposite.

But the study may also lend greenhouse theory new impetus. Perhaps the gases that humans put into the atmosphere are warming the earth, but that effect is "masked." During the day, carbon dioxide may trap heat while the smog mirror of sulfur pollution reflects sunlight, netting no change. At night the heat trapping continues but the reflections stop; temperatures edge upward. Perhaps greenhouse theory should be adjusted to predict warming at night, exactly what Karl has found.

Underlying all climate uncertainties is an ultimate question: does the greenhouse concept make sense?

There's the matter of the missing carbon. Human mischief puts 7 billion tons of carbon into the air annually. Yet atmospheric monitors detect only half that amount. Where does the rest go? One possibility: though deforestation is proceeding in some places, forestation is happening in others. Between the fast-growth "managed forests" for timber and the expansion of forest acres in many developed countries, there may be an unprecedented number of young trees on earth inhaling extra carbon.

And there's the little mystery of the "feedbacks." Over the long term, earth's climate is remarkably self-regulating. How? Maybe if the climate warms, the air becomes more moist, which causes more clouds, which bounces more sunlight back to space. If the climate cools, the air becomes dry, reducing cloud cover and allowing more solar energy in. Natural feedbacks may work in this benevolent fashion. Or they may backfire. Michael Oppenheimer of the Environmental Defense Fund suggests warming will create a diabolical feedback in which plant decay accelerates the addition of natural carbon to the atmosphere, pushing the system over the brink.

The inability of the science community to agree on issues as basic as whether feedbacks will be negative or positive makes Richard Lindzen, a climatologist at MIT, suspect there is a fundamental flaw in the global-warming concept. Lindzen calculates that in nature, CO₂ exhibits only about one quarter of the power it seems to possess under lab conditions. Why?

Greenhouse theory presumes that warmth vents away from earth's surface mainly as radiant heat—the wavy lines rising from a parking lot. The notion "is simply untrue," Lindzen says.

Most warmth, he believes, rises through convection in blocks of air. While radiant heat encountering greenhouse gases may be trapped, convective currents blocked in one place will move elsewhere, blown on the wind, till they find an "open vent" that allows them to release energy upward, above the greenhouse barriers.

Lindzen's idea has an appealing ability to answer some puzzles about greenhouse theory; it also has drawbacks. Neither Lindzen nor anybody else can yet say exactly why the climate is what it is. That is an argument against greenhouse panic, but not for inaction. A principle of wisdom holds: we don't know what we don't know. Until such time as humanity really knows what makes climate tick, we would be fools to take unnecessary risks. And as the economics of the greenhouse show, insurance is affordable.

Think of the Greenhouse as a Profit Center

Here's an aspect of the controversy that drives environmentalists to distraction: is global warming bad? The high range of predictions for a warmer earth would be awful. But mild warming is in society's interest, particularly its economic interest.

No one contends that the mild warming so far has done harm. Warmth, after all, is essential to life; as the tropical forests show, nature adores warmth. Cities like London and New York may be less likely to have a white Christmas, which is sad for sentimental reasons. (One reason mild winters spook many Americans is that the baby boom was born into the 1950s and 1960s, a period of unusual cold and snow. Recent winters don't conform to childhood memories.) But the prime results of warming are pluses.

Here's the bottom line on the 1980s, the "hottest years on record": food production was strong. Energy consumption was soft, winter peak demand being a key variable in power needs. In turn, energy prices declined. In real terms gasoline now costs less than during the 1950s, a period enshrined in our collective nostalgia as Energy Heaven. "I have a hard time following why longer growing seasons, lower energy prices and fewer subzero days in North Dakota are the new apocalypse," says Michaels.

If it were certain that current temperature trends were natural, we might now be reading stories about the wonderful global warming. But the idea that clumsy human tinkering with the atmosphere may inadvertently have done something useful—that we benefit from pollution!—is almost too peculiar for polite discourse. In a sense, humanity flatters itself by believing it has acquired the power to disrupt nature on a global scale. We like to view ourselves as so mighty the very planet quakes before our inventions. It's almost annoying to hear that with all our imposing power stations and gleaming cars and soaring aircraft, artificial-carbon emissions are only 4 percent of the natural level.

Warming, of course, may not stay mild: the best reason for greenhouse controls. During the early Bush administration, estimates batted around for greenhouse reductions ran from \$100 billion to a mind-bending \$3.6 trillion. Such calculations contained an astonishing omission. The way to control carbon emission is to make energy use more efficient. The big numbers took into account the capital costs of new conservation technology, but not the value of the fuel saved.

Factor in the energy savings, the analysts Amory and Hunter Lovins showed in a landmark 1991 study, and the cost of global-warming control not only falls—it becomes possible to imagine cutting greenhouse gases at a profit. Even the National Academy of Sciences, often grumpy about environmental reforms, says that the first 25 percent of greenhouse pollutants could be controlled at a price equivalent to just 11 cents per gallon of gasoline.

Savings from greenhouse controls would not be confined to the specific fossil-fuel reductions at any factory, office or automobile that became more efficient. They would spread broadly to all energy prices, by reducing demand.

The central reason world energy prices remain low is that fuel use has become more efficient. The U.S. economy now requires 28 percent less energy per dollar of output than two decades ago. Somehow the economic payoff goes unappreciated. Everyone is



keenly aware from the 1974 and 1979 energy crunches that fuel pricing responds faithfully to changes in supply. Constantly overlooked is that fuel prices also follow the second half of the supply-and-demand equation, responding faithfully to demand. When demand for energy moderates, prices go down.

After Iraq invaded Kuwait, oil prices spiked on the expectation that supply would be disrupted or demand would rise through panic buying. Neither happened; prices rapidly fell. There was extensive public reaction to the increase and hardly any notice of the decline, though the latter was far more significant. No panic buying occurred because, through efficiency gains, society was less obsessed about oil supplies than the last time around. Cheap energy used efficiently is a best-of-both-worlds situation for everyone except a few desert princes.

Currently the White House is pushing its National Energy Strategy. It contains worthwhile provisions, yet lacks an important insight: that resource conservation, pollution control, lower energy prices and a hedge against global warming might be achieved simultaneously by a comprehensive commitment to improved fuel efficiency. A new program to pursue all these objectives at once would seem one of those rare public-policy areas where the light at the end of the tunnel is bright and beckoning. Through the last decade greenhouse emissions have either been flat or declined slightly, from the effects of conservation pursued with little encouragement from Washington. Greater gains might be had with modest incentives.

Finally, inexorably, there are the efficiency requirements obliged by population growth. Consider an example offered by William Lee, CEO of Duke Power, a North Carolina utility. Suppose that the world population stabilizes at the low end of the United Nations estimate: 5.4 billion souls today, it expands to 9 billion. Next, suppose that a majority of the world's residents reach a standard of living equal to one half that enjoyed by Americans. Finally suppose that all energy uses, from factories to sports cars, grow twice as efficient. Under these optimistic assumptions, the world will need to generate *three times* as much power.

Seen in that light, significant improvements in energy efficiency are imperative whether the thermometer is going up, down or sideways.

The Real Problem

For two years, negotiations have progressed at the highest levels of government over the climate treaty to be signed in Rio. There has been personal lobbying between heads of state, Helmut Kohl taking a full hour with George Bush to urge that the United States embrace the treaty. The European Commission staked its nascent prestige on its ability to make the treaty happen. The Japanese, normally circumspect about diplomacy, trumpet themselves as greener-than-thou on the subject.

The proposed treaty has inspired wild verbiage. It's anything from a last-ditch attempt to save a dying planet to a cynical plot to impose a socialist industrial order in the guise of climate protection. Global warming can engender such polar positions because the actuality of the subject is so pleasingly nebulous. Crime, welfare, health care: most issues are anchored in the muck of the real. The greenhouse effect is a blank slate onto which partisans may project whatever they wish to behold.

Now Bush will go to Rio. The treaty he will sign obligates nations to cut greenhouse emissions, but, at Bush's insistence, does not specify by how much or when cuts must occur. Some have declared the compromise a hollow outrage. It's not.

First, any action on pollution control should always be welcomed. Second, getting on paper the need for global energy efficiency is a vital step. Progress may be agonizing, but most nations usually do respond to treaty commitments: pressure for new energy-conservation initiatives will grow.

Third, the Rio climate agreement will slip into international law the premise that nations must consider global environmental consequences when making internal economic decisions. This is a powerful, progressive concept whose codification will pay important environmental dividends in years to come.

But before you start to feel good . . .

This March the World Health Organization published a thick volume on global environmental damage. The book contains paragraphs here and there about issues that concern the affluent in the industrial North: the greenhouse effect, trace pesticide residues, skin cancer from sunbathing. And it goes on for hundreds of pages about the environmental issues that matter to the majority of the world's population, such as 3.2 million children dead last year from diarrheal disease. Most of the deaths could have been avoided by safe drinking water and decent sanitation.

Three million children dead, versus maybe, someday, another degree Fahrenheit. On the run up to Rio, the world's attention has focused on the hypothetical threat of global warming, to the exclusion of environmental menaces that are palpable and awful right now—but which only affect the abstract legions of the brown, distant poor.

Among Third World intellectuals there is growing suspicion that developed countries suddenly care about the greenhouse effect for selfish reasons. Global warming might affect property values on Cape Hatteras; unsafe water in Bangladesh will not. Energy efficiency, supposedly a terrible sacrifice for the indus-

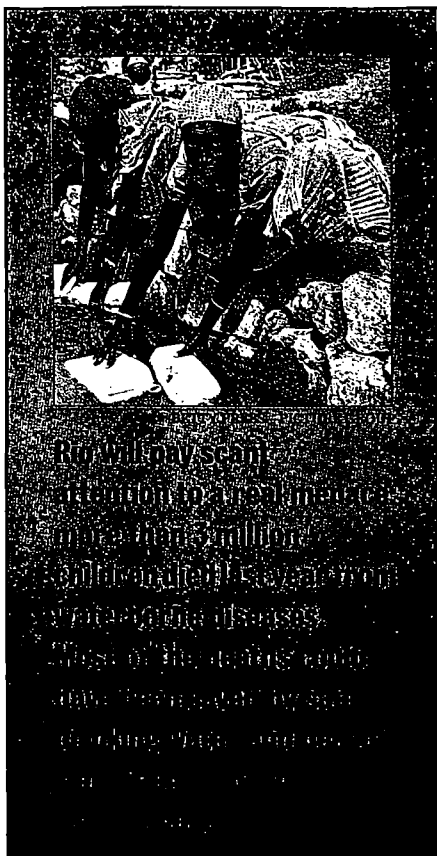
tries of wealthy nations, will improve their competitiveness in the emerging global economy.

And the capital required for greenhouse controls? The North will invest this on itself, rather than sharing resources with the South for, say, sewage abatement. Hasn't anybody wondered why a delegation of corporate CEOs met with Bush to ask him to back the climate treaty? Because they've realized greenhouse control is in their own self-interest.

Ultimately all environmental protection is in everybody's self-interest. The dawning of this consciousness, once complete, will drive great reforms yet to come. Till that day, the First World can recover some of its moral perspective on global warming by recognizing a link between greenhouse emissions and international aid.

Right now the developed nations are the big greenhouse offenders. But early in the next century the Third World will pass the First for this dubious distinction.

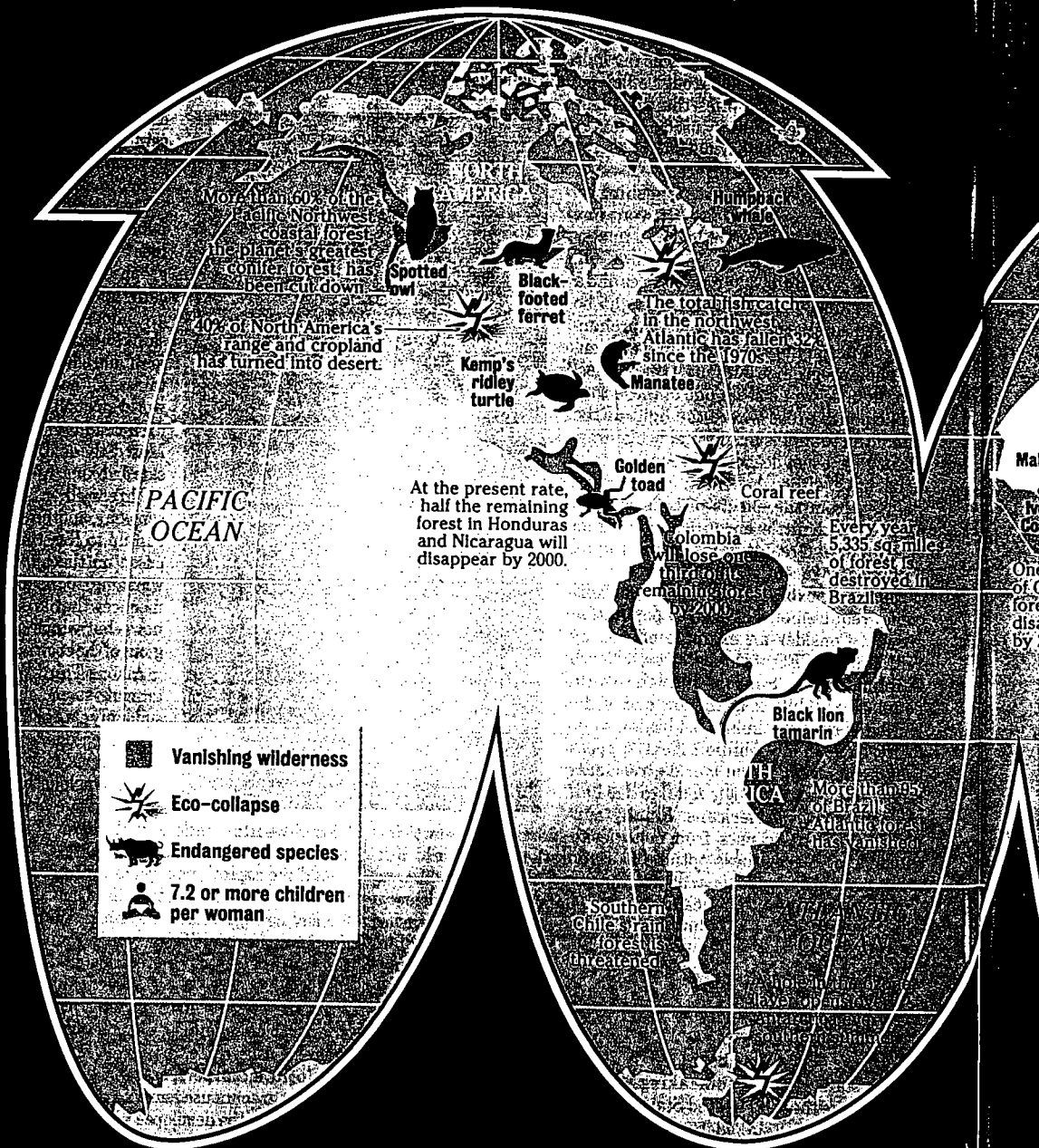
Once the next level of energy-efficiency improvements are accomplished in the North, affluent nations will approach the point of diminishing returns, after which huge investments are required for small conservation gains. The rest of the world will, however, be burdened for decades to come by inefficient energy systems: ones where relatively small amounts of capital can create large benefits both for the Third World poor and for the global biosphere. Where should that money come from? Us.



Too Much, Too Fast

Multiplying

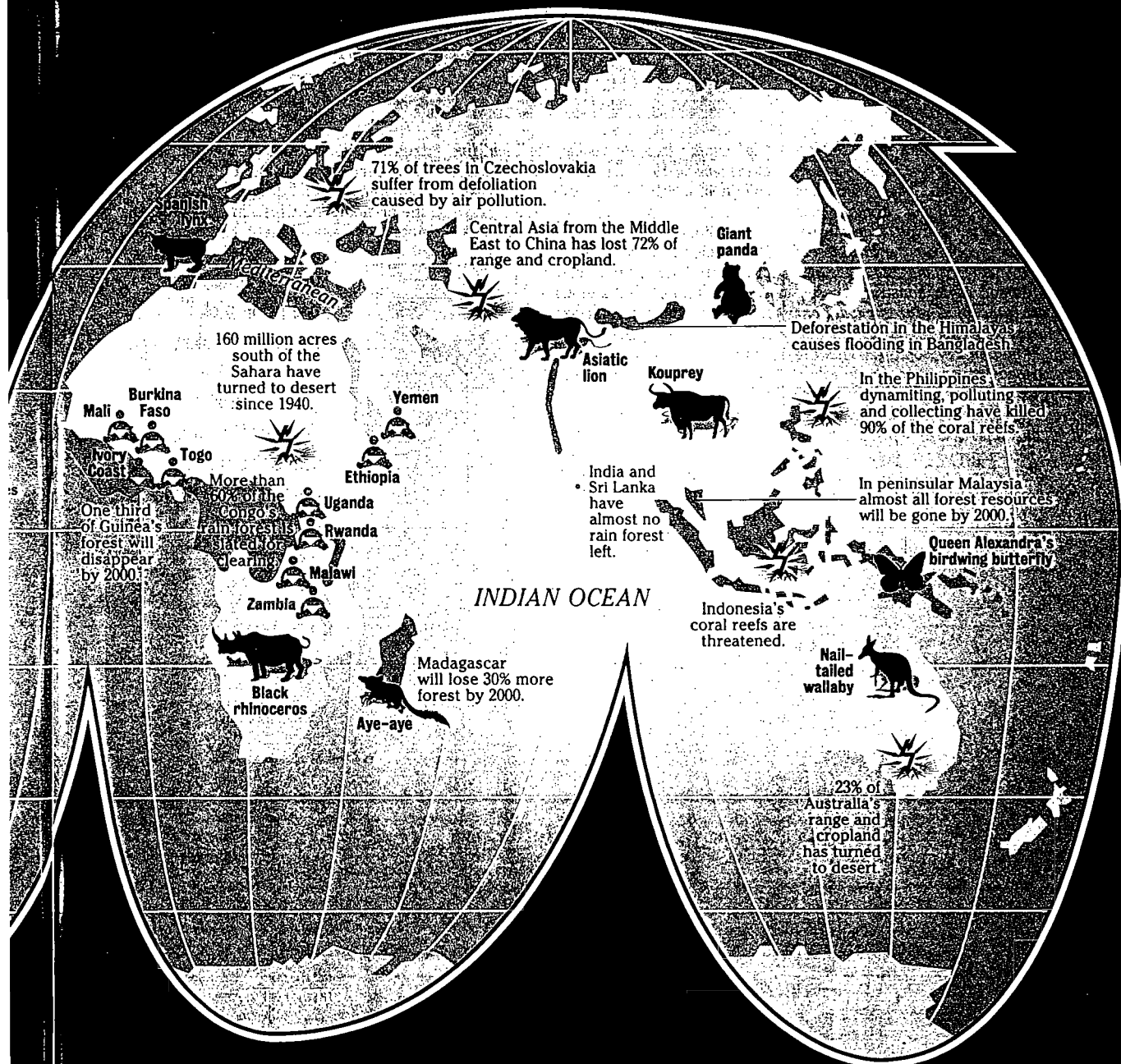
Human population stayed almost constant at nearly 500 million from the year 0 to 1500. Then it began rising exponentially. It doubled between 1850 and 1950, doubled again between 1950 and 1990, and now United Nations' projections say that it will double again to 10 billion by 2050. Either nations with burgeoning populations will take steps to limit their numbers, or Malthusian misery—starvation and epidemic—will accomplish the same goal.



DIXON ROHR—NEWSWEEK
 SOURCES: MULTIPLYING: POPULATION REFERENCE BUREAU, INC.; VANISHING: SPECIES SURVIVAL COMMISSION OF IUCN; THE WORLD CONSERVATION UNION; WORLD WILDLIFE FUND; CONSERVATION INTERNATIONAL; U.S. FISH & WILDLIFE SERVICE; COLLAPSING: WORLD WILDLIFE FUND, IUCN

Vanishing

Roughly 1.4 million species have been identified on earth. Scientists suspect there are probably 10 million to 80 million more, mostly in little-explored places such as the rain forest. But before science can find them, they're gone, destroyed with the one acre of tropical forest that disappears every second: nearly 4 million acres, an area bigger than Connecticut, vanish every year. With every acre go 50 to 100 species every day. Why worry? Time after time, species thought useless have proven essential to the ecological systems that support man.



Collapsing

The natural systems that support life on earth are reeling under the assault of human activity. The atmosphere is losing the ozone layer, which screens out cancer-causing ultraviolet sun rays. Once fertile soils, assaulted by overcultivation, overgrazing and overcutting, are turned to desert: 15 million acres of productive land disappear every year. Forests are clear-cut faster than they can grow back. Runoff from deforested land chokes coral reefs, home to one third of all fish species. Fleets that strip-mine the seas have depleted fisheries.

Is It Apocalypse Now?

Computer models warn of doom within a century unless mankind mends its ways. Pshaw, say the skeptics. But they, too, see a need for change.

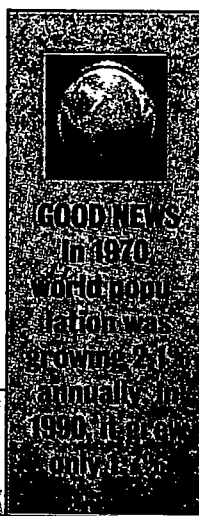
Slip the floppy disk into your Macintosh. Your mission: explore how the future of the world can unfold, without bringing the planet to the brink of apocalypse. The screen shows a rat's nest of loops describing 225 measures, from fertility to soil loss to industrial capacity. Hidden deep in the software are the equations relating them. Now choose your poison. Cut the same 42 million acres of forests that are being taken today; your world has no forests in 47 years. Click. Make your hungry people work the soil more intensely; land fertility, which fell only 5 percent from 1970 to 2000, plunges 12 percent per year in 2040. Click. By the year 2020 reserves of minerals and other resources have shrunk to just 30 years' worth. Crop yields plummet; billions starve. Indus-

trial output per capita crashes; the "rich" live at the level of 1900. By 2100 your world has collapsed.

It's not a very jolly video game. More like Malthusian Nintendo, it is a sophisticated simulation called World3 whose dire scenarios have spurred dozens of scientific meetings and international symposiums over the past year. Now the warnings of World3 have become the specter that haunts the Rio summit. Neither a brainless extrapolation of current trends nor a prediction, World3 lays out possible futures and how they'd change if factors such as pollution con-

trol, fertility rate or crop yields changed. Its sobering conclusion: humankind is using resources and dumping waste at rates the planet cannot sustain. "If changes are not made," says Donella Meadows of Dart-

In the Philippines, the poor pick through Smokey Mountain. On a global scale, such desperation may make life on earth a Malthusian hell.



MELVYN CALDERON—JB PICTURES



mouth College, one of the authors of the book "Beyond the Limits,"* describing World3, "then our computer model foresees collapse within 50 years."

If this sounds familiar, that's because the three authors of "Beyond the Limits" also helped produce the notorious 1972 report "Limits to Growth." Its warning that population and growth might tip the world's economic or biological life-support systems into collapse within 100 years was greeted with as much ridicule as reflection. Few thought its doomsday scenario possible. Few took it seriously. But then a funny thing happened. From fisheries in the North Atlantic to crop yields in Africa to timber harvests in Asia, exactly the sort of collapses foreseen in "Limits" came about. These harsh facts of life have made for some strange bedfellows. From the private sector, the Business Council for Sustainable Development—48 CEOs from firms such as Du Pont, Chevron, Nissan and Mitsubishi, led by multimillionaire Swiss industrialist Stephan Schmidheiny—declared that the world must "change course" or face a collapse of the systems that sustain life. From government, an anxious Robert McNamara, former head of the World Bank and secretary of defense, warned in December that the earth cannot tolerate its rising population and increasing pressure on resources. And from the developing nations, Shridath Ramphal, former secretary-general of the Commonwealth, predicted that "unless we bring ourselves to accept the need for global and far-reaching change, we are headed for catastrophe."

Can that be? Economists, who know all about wrong forecasts, criticize World3 for its hubris in plotting the 21st century's population, industrial capacity, pollution and other indicators. Some argue that technology will stave off apocalypse: once scientists invented fiber optics, for instance, a single ultrathin fiber could replace 625 copper wires and it didn't matter a whit to telecommunications if earth ran out of copper. What invention can't cure, argue economists, markets can. If governments would only scrap policies that encourage ecostupidity—subsidies for cutting virgin forest

*By Donella H. Meadows, Dennis L. Meadows, Jorgen Randers. 300 pages. Chelsea Green. \$19.95.



ALAIN BUU—GAMMA-LIAISON

For generations Nepalese chopped the wood they needed and lugged the fuel back to their villages. The denuded slopes of the Himalayas sent floodwaters pouring over countries downstream. Now villagers are using solar water heaters to provide hot showers for trekkers. Some villages have mini-hydropower generators that exploit small falls—no dams needed—to light their huts. And local conservation committees preserve the land that attracts tourists, using the foreign currency to finance health clinics for women and children.

in Oregon and Brazil, for growing rice in California, for raising cattle in Amazonia—the planet might be saved. But World3 does assume perfect markets. It also allows for pollution abatement, crop improvement and resource substitution. The outcome is the same. "As long as there's continued pressure for growth, and delays in reacting to limits, the system tends to [collapse]," says systems analyst John Sterman of the Massachusetts Institute of Technology. "It doesn't depend on the numbers."

But it's not just a matter of numbers. World3's scenarios depend on the mathematical equations containing the numbers. The outcome will be different if, say, soil loss is proportional to crop yield rather than proportional to crop yield times 100. "The scenarios are spun out of a mathematical model that has little to recommend it," says MIT's Robert Solow, a Nobel laureate in economics. Economists who build scenarios "spend most of their time trying to verify that A is connected to B in the way the model says. There isn't any reason to believe this model has done that. My view is that it's bad science."

Rather than arguing about cyberland, those who take World3 seriously prefer to make their case in the real world, where natural systems are already collapsing. Between 1985 and 1989 (the last available figures), food production per capita fell in 94 countries. In parts of the United States and elsewhere, crop yields per acre are declining because of air pollution and the buildup of salt and chemicals. The global fish catch fell (by 4 million tons) in 1990, for the first time in two decades. Oysters in Chesapeake Bay, once so plentiful that they could filter all the bay's water in three days, now number a mere 1 percent of their 1870 population; it takes the survivors one year to filter the bay. Thailand had to ban commercial logging in 1989 when its forest cover fell from 29 percent in 1985 to 19 percent in 1988 and landslides from the denuded hills cost 40,000 people their homes; the Philippines has suspended logging in most provinces. Canada predicts that within 16 years all the old-growth forests of British Columbia will be gone; its wheat belt has lost half its organic material and is eroding badly, costing farmers \$500 million to \$900 million in lost crops. "For the first time," says James Gustave Speth of the World Resources Institute, "human numbers and impacts have grown so large [that] they are eroding on a global scale the natural systems that support life."

Give your world twice the natural resources you thought it had. Assume that technology decreases pollution-per-unit-of-GNP; assume that crop yields increase sevenfold in a century. Pollution stays lower than before. Industry grows 20 years longer than in your first run; so does population, topping 9 billion by 2050. But the incredible agricultural intensity causes galloping soil erosion. Agriculture and pollution control draw so much capital that industrial output peaks in 2035. Billions starve. The economy collapses.

Although averting doomsday is not explicitly on the Rio agenda, it informs everything that is. That's because the numbers are so scary. Population, according to the United Nations, will increase 2.4-fold (to 13 billion) by 2100. If consumption grows at just two thirds the rate of the past 25 years, it would quadruple in 70 years. In 2100, the world economy, by these modest projections, would be producing 20 times—20 times—as much as it is today. Can that be sustained? Says McNamara, "The answer is almost certainly no."

The easy solution—let Malthus, the Grim Reaper, take care of the poor—won't work. Desperate people chop down forests for firewood, leaving so few trees that local and perhaps even global weather patterns change. They overcultivate land until it gives out, permanently lowering the planet's ability to feed its passengers. Helping the poor to escape their misery through

development has only a little to do with charity and everything to do with self-interest. "Poor people can be stopped at borders," Mahbubul Haq, an adviser to the United Nations, told *The Wall Street Journal*. "But poverty can't be stopped. Poverty travels in the form of drugs, terrorism, global warming and AIDS." The solution, according to the Business Council, is to put "the developing regions of the world, where 90 percent of future population growth is expected to occur... on a sustainable path. [Otherwise], their problems will affect the more prosperous areas of the globe."

As gloomy as this sounds, the apocalyptic vision is, like Scrooge's visit from the Ghost of Christmas Yet to Come, not a glimpse of what the future will be, but only of what it might be. The authors of "Beyond the Limits" are surprisingly upbeat. "We think the human race is up to the challenge," they write. "We think that a better world is possible and that the acceptance of physical limits is the first step toward getting there." The prescription:

■ **Stabilize population.** The bomb is still ticking: in the time it takes you to read this sentence, 18 babies will have been born around the world. But it's ticking considerably more slowly. In 1970, world population was growing 2.1 percent annually; in 1990, it grew only 1.7 percent and is now 5.4 billion. By almost all accounts, population must stabilize at around 8 billion. China, Thailand, Singapore and Costa Rica have all gotten a grip on their once skyrocketing populations. Will other high-fertility countries do the same? Maybe, but they're angry about being expected to shoulder the burden. The have-nots point out that the North, which has 25 percent of the world population, consumes 70 percent of the planet's energy, 75 percent of its metals, 85 percent of its wood. "One child in the West consumes as much as 125 in the East," says Maneka Gandhi, India's firebrand environmentalist. As a result, she says, "nearly all the environmental degradation in the East is due to consumption in the West." There will be no real brake on population growth as long as despair—over astronomical infant-mortality rates that make each birth a crapshoot, over eking out a living from garbage heaps and the unforgiving land—drives women to bear five, six, seven and eight children.

Eliminating that despair, especially by



WILL & DENT MCMINTYRE—PHOTORESEARCHERS

Rather than chopping down its jungle, Costa Rica is making \$1 million by preserving it. That's what Merck Sharp & Dohme, the pharmaceutical giant, will pay in exchange for rights to 'chemically prospect' for plants that may have pharmaceutical value. If any products are actually developed, Merck will share royalties with a nonprofit corporation in Costa Rica that trains conservation scientists. The deal has enabled Costa Rica to set aside one quarter of its land, thought to contain half a million species, for conservation.

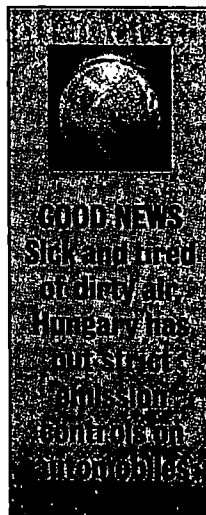
lowering infant-mortality rates and raising the status of women, is how Europe, America, Canada, Japan and other nations managed to cap family size. It's called the demographic transition. If history is any guide, it will take a few generations for lower death rates to dampen birthrates. Demographers say we don't have that much time: the developing world must slash its population growth within the next 20 years. One model is China's draconian one-child policy; couples who have more children are fined as much as \$2,000 and can be fired from their jobs (although controls are more lax in rural areas). Another is Costa Rica's more benign approach. The Caribbean nation provides near-universal access to birth control (in a nation where 90 percent of the population is Roman Catholic and local church officials regularly denounce contraception), boasts a literacy rate of 93 percent and produces billboards and condom packages advising, "Have only the number of children that you can

make happy." As a result, Costa Rica slashed its fertility rate from 7 to 3.5 children per woman in just 25 years.

■ **Adopt green tech.** "The most daunting environmental challenge," says Michael Deland, chairman of the White House Council on Environmental Quality, is meeting the needs of those 8 billion without running the planet into the ground. That requires avoiding the mistakes of the past. It requires developing with different technologies from those that got America and Europe where they are today. If the technologies that brought acid rain and ozone holes along with sports cars and food processors are applied throughout the developing world, they will cause "truly catastrophic impacts on global climate, human health and the productivity of natural systems," says WRI's Speth.

The only way to fuel development is to wean industry from nonrenewable resources such as minerals and fossil fuels, improve farm methods so soil isn't washed away and depleted, and slash pollution-per-unit-of-production within 20 years. Technology exists, or can be imagined, for all this. Japan already uses just half the energy that the United States does to produce one unit of GNP. The U.S. Office of Technology Assessment estimates that half of all industrial pollutants could be eliminated with existing technology. The Department of Energy says that hydropower, biomass, solar and geothermal power could meet 28 percent of the nation's energy needs. There are already prototype solar electric and hydrogen cars. "Developing countries need to learn that they don't have to grow the way the industrialized nations did," says Mohamed El-Ashry of the World Bank.

Can poor nations afford green tech? One of the most contentious issues at Rio will be the feeling of developing countries that "they are suffering for our growth," says Maurice Strong, secretary-general of the Earth Summit. "They have the attitude that they didn't create these problems." America and Europe burned so much coal and oil to fuel their industries that the atmosphere may be reaching the limit of its capacity to absorb the emitted carbon dioxide without falling into a disastrous greenhouse effect; the rich chopped down so many trees to feed their furnaces and build their houses that those remaining are but a fragile fire wall between the world and disastrous weather patterns. So the poor are demanding that the rich ante up. India will argue in Rio that the industrial nations must pay the difference



between the cost of development under the proposed new accords and development without. The price tag may be \$70 billion a year, on top of the current \$54 billion in foreign aid. (The developing nations themselves have pledged to kick in at least \$280 billion, says Strong.) That's one twelfth the world's \$900 billion-a-year military spending. Alternatively, it's 140 percent of the \$50 billion net flow from poor to rich countries because of debt.

Such numbers have led the Republican right to fume that Rio will produce the Marshall Plan From Hell, with billions going down a Third World hole. In fact, the rich may find a silver lining. "Sustainable development" aid should line the coffers of multinationals that have something environmentally benign to sell. Also, developing nations account for just over one third of the U.S. export market. If they grow out of abject poverty, business could boom.

And there are greenbacks to be earned on the green market. The White House's Deland estimates that the market in environmental goods and services—everything from smokestack scrubbers to waste disposal—comes to \$200 billion a year. While the United States balks at contributing a few million dollars to a sustainable-development fund, and thus alienates countries that might buy such goods, former Japanese prime minister Noboru Takeshita is reportedly pushing Japan to kick in one quarter of the total requested—as much as \$25 billion a year. "Japan will take the initiative in this cause," says Takeshita.

There is no lack of ideas for how to spend the money. A \$180,000 solar-energy project in Argentina, sponsored by the Argentine and German governments, will supply energy and running water to rural dwellers who would otherwise burn polluting gas. "Solar energy," says German engineer Helmut Geipel, "is a step from the last century right into the next." Farther south in Patagonia, the World Wildlife Fund is helping ranchers replace their 22 million sheep with guanaco, relatives of the Andean llama. The sheep uproot so much grass that they turn 1,200 to 1,900 square miles into desert every year. The guanaco, whose wool is more valuable, don't tear out their lunch by the roots.

In Peru, another WWF project helps the Yanesha Indians cut strips of forest. Re-

seeded by birds, bats and wind, the strips grow back and yield 60 times as much wood per acre as conventional logging. Sustainable-development money has also brought solar water heaters to Nepal, so villagers no longer have to cut the Himalayan forests for fuel wood (box, page 37). It can also buy refrigerators that do not use ozone-destroying gases, such as the 300 million units destined for China (box, below).

If the developing nations don't get what they want in Rio, there's talk of environmental blackmail. The Third World can opt to grow any way it pleases. If that means spewing out gases that destroy the ozone

What's needed is wisdom. That's where insatiable, or at least unsated, consumption comes in. Meadows calculates that the planet can support 8 billion people with about the standard of living of Western Europe in 1990. But no higher. That means no aspiring to ever more—cars, gadgets, the toys of affluence. No more—and more—*stuff*. To a society that equates growth with all that is good, this vision is wrong, impossible to achieve, cruel or naive. What happens to a business that does not grow? How does an economy absorb new workers, be they immigrants or fresh college graduates? "The notion that we can or should put some kind of a limit on economic growth seems to me neither necessary nor practical," says MIT's Solow.

Those who take seriously the threat that growth poses to humankind's life on earth naturally disagree, arguing that a sense of "enough" is crucial. But more than that, they argue that it won't be such a bad life at that. Their vision is perhaps best captured in a cartoon. In it, two men stand on a street corner in a haze of fumes as cars whiz by and wall-to-wall people jostle them; they say how glad they are for their high standard of living—without which they could not enjoy such a high quality of life. Says the Business Council, "[there must be] changes in the measurements of progress to include indicators of quality as well as quantity." Life can get better as people get more education and healthier. Meadows calls it "smart development rather than dumb growth." It is the path away from the world of World3. Ours may be the last generation that can choose it.

"If we fail to pull off the environmental revolution, to reverse the environmental trends undermining our future," says Lester Brown of the WorldWatch Institute, "future generations may not have the chance." It's getting later, but it's not too late yet.

Give couples no more than two children. Rein in demand so industrial output per capita is about equal to South Korea's in 1990. Invent technologies that cut pollution 90 percent over a century. Population levels off at 7.7 billion, average life expectancy is 80 years, services per capita are twice what they were in 1990. Pollution falls after 2040. Congratulations: you have saved your world.

SHARON BEGLEY with bureau reports



TOM HALEY—SIPA

Markets in China still feature open-air butchers, but the government is determined to give people a cool place to store their purchases. China intends to triple its number of refrigerators to 300 million. If they use chlorofluorocarbons (CFCs), the ozone shield against cancer-causing sun rays would thin further. So the U.S. has given technical advice and contributed to a \$20 million aid package to build environmentally safe refrigerators. Chinese researchers are testing several non-CFC models and plan full production soon.

layer over the Riviera and Malibu, tough luck. If it means burning all their coal, and thus altering the climate patterns that keep wheat growing in Kansas and Saskatchewan and Australia, too bad. There is ample precedent. India and China dragged their feet over phasing out chemicals that destroy the ozone layer until they got cash—\$50 million in 1991—to help them meet the new standards. "Those who make \$200 a year should not pay so that those who make \$10,000 a year can breathe clean air," says Edward Kufuor of Ghana, former chairman of the Group of 77 developing nations.

■ **Limit affluence.** Green tech requires cleverness. Cleverness is not enough.

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LOS ANGELES TIMES ■ TUESDAY, MAY 26, 1992

A Day in the Life of Mother Earth

A SPECIAL EARTH SUMMIT ISSUE OF WORLD REPORT

World leaders will gather for a global environmental summit
in Rio de Janeiro on June 3. If it's a typical day . . .

250,000 people will be added
to the world's population

☛ Up to 140 species

on the road ☛ Forest cover-
ing an area more than

one-third the size