

Businesses, green groups and the media: the role of non-governmental organizations in the climate change debate

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Negotiators from the 170 countries gathered in The Hague in November 2000 faced a monumental task. The goal of the Sixth Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC COP-6) was to translate the provisions of the Kyoto Protocol, which commits industrialized countries to emission reduction targets of six greenhouse gases below their 1990 levels, into a detailed, enforceable treaty. The divergent perspectives of governments on how to meet these targets, and the ensuing economic costs, had resulted in hundreds of pages of complicated proposals being placed on the table which governments would need to translate into an agreement acceptable to their domestic constituencies to encourage ratification of the protocol. However, despite marathon negotiating sessions, governments could not strike a deal and left The Hague with only a profound sense of disappointment and an agreement to continue talking.

COP-6 represents the first time in the process that parties were unable to reach an agreement at a critical session. The lion's share of media and governmental commentary on COP-6 has focused on rifts between the EU and the 'Umbrella Group' of countries, including the United States, Canada and Japan, on a few key issues. Divergent and highly charged political perspectives on matters such as how to account for the role of forestry and land use practices as carbon 'sinks', the removal of carbon dioxide from the atmosphere through photosynthesis, and 'supplementarity', the extent to which parties can utilize the protocol's flexibility mechanisms to gain credits for emissions reduction activities outside their borders, precluded agreement in the final days. The entrenched nature of these positions, compounded by uncertainties stemming from changing administrations in the United States and elsewhere, led many observers to speculate that intergovernmental negotiations on climate change may have reached an irreparable end.

Limiting the focus solely to political difficulties with specific issues, however, emphasizes only part of the story and takes no account of the complex context in which the international negotiations are embedded. The failure in The Hague is attributable to many factors and, according to many government

statements, was not entirely surprising. The sheer breadth of the agenda for the meeting, which included proposals covering the full spectrum of difficult political and technical issues, as well as the difficulty inherent in negotiating a single agreement among 180 nations, complicated matters even further. Negotiations in Kyoto likewise set a dangerous precedent for delaying serious discussion until the final sessions. Most important of all, a focus on selected issues does not give sufficient credit to the growing momentum gathering outside the negotiating halls. This article will examine recent and rapid changes in attitude and awareness among non-governmental groups—including business and industry, environmental groups and the media—on the issue of global climate change, and the impact of these changes on the negotiating process and the overall climate change debate. While current disagreements are formidable, the past few years have witnessed a remarkable change in attitude in the business community, a more active role by environmental groups and an increasing intensity in media coverage of climate science and policy, all of which provide encouraging signs of a shift in public opinion—and ample proof that The Hague does not signal the end of the road.

Business perspectives: a quickly changing tune

Early in the run-up to COP-3 in Kyoto, few individual businesses or business associations could be found at the negotiating sessions. Among those few, a handful watched cautiously while others took a more active role in advising governments of the impending perils of stringent emissions limitations and assisting them in formulating tactics to delay substantive discussion. Most warned that the science was unproven, reductions could be economically ruinous, trade competitiveness could be damaged, fuel costs could skyrocket and countless jobs would be eliminated. With each passing session the number of industry representatives began to grow and, following the announcement by the United States that it would support strengthening the UNFCCC through a legally binding instrument,¹ their number, and their vehemence against internationally agreed restrictions, soon began to grow exponentially.

As COP-3 approached in December 1997, US industry groups representing oil and coal, such as the Global Climate Coalition (GCC), waged multi-million-dollar campaigns to discredit the science underlying the climate negotiations and, through advertisements in newspapers, radio and on television, as well as speeches before the US Senate and President, warned that a treaty that was not truly global would harm US citizens and lower their standard of living.² Other industry sectors, such as auto manufacturers, farming, labour groups, chemical companies,

¹ *Earth Negotiations Bulletin* 12: 38, 22 July 1996.

² 'Business groups predict havoc if global warming policies pass', *Wall Street Journal Interactive Edition*/Associated Press, 30 Sept. 1997; 'Big Three tell Clinton climate treaty could hurt US', Reuters, 2 Oct. 1997; 'US API to oppose mandated greenhouse-gas cuts at Kyoto', Dow Jones News Service, 9 Nov. 1997.

electrical and railroad industries joined in the campaign.³ While in Kyoto, a huge contingent of business lobbyists actively campaigned against adoption with governments and delivered speeches in the plenary sessions.⁴ An agreement, however, was ultimately reached; and following its adoption, oil producers, auto makers, electrical trade associations and others solidly denounced the protocol and vowed to fight its ratification,⁵ though a few provided a cautious welcome.⁶ The most adamant detractors continued their campaigns the following year, for example, arguing against the protocol before the US Congress and producing studies stating that the United States was underestimating the impact of curbing greenhouse gases on American household electricity bills, economic growth and unemployment.⁷ The GCC sponsored a study stating that implementing the Kyoto environmental protocol would cost the United States over 2.4 million jobs and reduce gross domestic product by as much as US\$300 billion annually.⁸

At this same time, however, competing signals were beginning to emerge. In May 1997, British Petroleum chief executive Sir John Browne, in a speech at Stanford University, acknowledged the role of fossil fuels in the buildup of 'greenhouse gas' emissions and the need to address the problem of global warming, and was widely viewed as breaking ranks with the industry. By September, he had announced that the BP Group would begin voluntarily measuring and seeking ways to limit the greenhouse gases as a 'constructive contribution' to halting global warming.⁹ French oil group Elf-Aquitaine pledged to cut carbon emissions by 15 per cent by the year 2010, which would mean cutting its annual carbon emissions of 42 million tonnes by 6 million tonnes.¹⁰ In 1998 a growing number of major oil company executives, from firms such as Royal Dutch/Shell Group, Texaco and Sun Oil Co., began publicly acknowledging that fossil fuels might be changing the climate and suggesting that companies begin focusing on how to reduce greenhouse gas emissions.¹¹ Some went so far as to suggest that the debate was no longer about the science, but about the actions to be taken by companies, such as examining the next generation of technologies, improving the efficiency of operations and reducing emissions from refineries.

³ 'US farm groups fighting global climate treaty', Reuters, 9 Oct. 1997; 'Global warming treaty opposition unites industry, labour (US)', Reuters, 18 Nov. 1997; 'Automakers see harsh impact of climate deal', *ibid*; 'Campaigning against warming proposals, industrial titans disunited about what to do', Associated Press, 3 Dec. 1997.

⁴ 'Business goes on offensive at global warming meet', Reuters, 3 Dec. 1997.

⁵ 'Automakers criticize global warming pact', Reuters, 12 Dec. 1997; 'Japan industries not happy with gas cuts', UPI, 11 Dec. 1997; 'CAPP gravely concerned about Kyoto agreement', *Business Wire*, 12 Dec. 1997.

⁶ 'European oil giants give guarded welcome to Kyoto', Reuters, 11 Dec. 1997; 'CEOs support President Clinton's climate change proposal', *Business Wire*, 12 Dec. 1997.

⁷ 'US auto industry attacks global warming treaty', *Washington Times*, 16 July 1998; 'US coal industry says cost of Kyoto pact too high', Reuters, 5 Aug. 1998; 'AFL-CIO says workers ignored in climate change plan', Reuters, 5 Feb. 1998.

⁸ 'Greenhouse gases: treaty will cost us dearly', *Financial Times*, 10 June 1998.

⁹ 'BP says it will limit greenhouse gases voluntarily', AP-Dow Jones News Service, 30 Sept. 1997.

¹⁰ 'Elf to cut carbon emissions 15 pct (*Le Monde*)', Reuters, 22 Nov. 1997.

¹¹ 'Oil executives are shifting their stance', *Washington Post*, 3 March 1998, p. C01.

Shell Oil Co., following similar action by BP, withdrew from the GCC following irreconcilable differences over the ratification of the Kyoto Protocol.¹² The Pew Center on Climate Change was established with a number of major corporate participants, who promised to seek ways to reduce their own emissions and to invest in new, more efficient products and technologies.¹³ BP and Shell began work on internal emissions trading programmes.¹⁴ Companies also began to initiate forestry 'carbon sink' projects,¹⁵ set voluntary emission reduction targets,¹⁶ and undertake work on new and renewable technologies, such as solar and wind energy and fuel cells.¹⁷ Companies also began to engage in carbon trades in anticipation of future regulations;¹⁸ some were faced with stockholder resolutions that would require them to examine the impacts of their policies on global warming.¹⁹

By COP-4 in Buenos Aires in November 1998, changes in attitude had become even more apparent. Major global giants attended the conference and actively engaged participants with formal presentations on what they were doing to prepare for the transition from fossil fuels. At the end of the talks, one US representative said 'the conference reflected a changing attitude among nations and among corporations—a prime focus of any serious anti-pollution campaign—that is encouraging.' Many industry representatives reported that the economic signal needed to make the Kyoto Protocol effective was penetrating new business and industry constituencies who were responding with greater pragmatism and increasing interest in identifying business opportunities.²⁰ This trend became more marked in the following years as more corporations began to calculate greenhouse gas emissions, change business practices to achieve real cuts in emissions and, like Dupont and Motorola, announce efforts to cut emissions or set emissions reduction targets.²¹ Even though some business leaders still questioned the science, even companies like General Motors (GM) stated

¹² 'Shell Oil withdraws from powerful US energy lobby group', Dow Jones Newswires, 21 April 1998.

¹³ 'New policy center seeks to steer the debate on climate change', *New York Times*, 8 May 1998.

¹⁴ 'Global-warming debate gets no consensus in industry', *Wall Street Journal*, 16 April 1998; 'Shell mulls trade in CO₂ emission permits', Reuters, 10 Feb. 1998.

¹⁵ 'Peugeot creates the first large-scale carbon sink', company press release, 8 Oct. 1998.

¹⁶ 'Shell to cut by 10% emissions of greenhouse gases by 2002', Dow Jones Newswires, 16 Oct. 1998; 'British Petroleum sets goal of 10% cut in "greenhouse" gases', *Washington Post*, 18 Sept. 1998, p. A06; 'EU accepts car industry plan to curb CO₂ fumes', CNN, 6 Oct. 1998.

¹⁷ 'Amerada Hess launches climate-friendly gas', *The Times*, 23 Sept. 1998; 'Daimler joins Shell to study fuel cell link', *Financial Times*, 18 Aug. 1998; 'Shell sees big rise in renewable energy', Reuters, 3 April 1998.

¹⁸ 'Japan and Russia conclude landmark greenhouse gas swap', Reuters, 19 April 1998; 'Suncor Energy and Niagara Mohawk make international greenhouse gas emission reduction trade', Suncor Energy company press release, 5 March 1998; 'Australia's first long term carbon trade', Ecoscorp company press release, 19 June 1998.

¹⁹ 'Shareholders defy Exxon over global warming measure', *Washington Post*, 30 April 1998, p. D02.

²⁰ *Earth Negotiations Bulletin* 12: 97, 16 Nov. 1998.

²¹ 'Dupont sets goal to sharply cut greenhouse gases', Reuters, 14 Sept. 1999; 'Motorola to cut global warming emissions in half', *Austin Business Journal*, 26 April 1999; 'ABB, Intergy, Shell International join growing corporate effort to address climate change', US Newswire, 11 Feb. 1999; 'BP Amoco says tackling Australia greenhouse issue', *Business Journal*, 14 Feb. 1999; 'Texaco takes alternative fuel cell step', *New York Times*, 2 May 2000.

that there was enough cause for concern to warrant immediate action.²² With increasing frequency, corporations undertook forestry-based projects and experimental emissions trade deals, hired new professional staff to address environmental concerns and made substantial investments in alternative fuels.²³ In late 1999, Ford Motor Company withdrew from the GCC, followed soon after by DaimlerChrysler, GM and Texaco,²⁴ while at the annual Davos World Economic Forum in January 2000, hundreds of business and government leaders, when polled, identified climate change as the greatest challenge facing the world at the beginning of the century.²⁵

The concept of emissions trading gained considerable new ground, with the establishment of many public and private 'carbon' funds designed to provide emissions reductions to corporate or government investors. The World Bank established a Prototype Carbon Fund, with investments from private sector firms;²⁶ the European Bank for Reconstruction and Development (EBRD) and the Franco-Belgian banking group Dexia likewise launched a new private equity fund aimed at reducing energy consumption and emissions of greenhouse gases in central and eastern Europe.²⁷ Meanwhile, governments considered or established pilot emissions trading projects in cooperation with firms,²⁸ while companies such as Shell launched internal emissions trading schemes.²⁹ In November 2000 Arthur Andersen, Credit Lyonnais and Natsource, a New York-based brokerage, launched an Emissions Market Development Group to focus on developing infrastructure and services to help companies manage their carbon risks and exploit value extraction opportunities.

Other signs of changing opinion continued as COP-6 approached. For example, a poll of Fortune 5000 business executives in the United States found them split in their views of the Kyoto Protocol: 75 per cent of Fortune 5000

²² 'Dropping the fight on science, firms scramble to look greener', *Wall Street Journal*, Marketplace Section (B-1: front page), 19 Oct. 1999; 'Business slowly seeing greenhouse light', *Australian Financial Review*, 8 Nov. 1999.

²³ 'Mobil announces support for three forest projects', *Business Journal*, 7 April 1999; 'Market for pollution credits', *CBS News*, 8 July 1999; 'Fees for trees—top rate', *Australian Financial Review*, 27 Aug. 1999; 'World's largest greenhouse gas emissions trade sealed', Environmental News Service, 29 Oct. 1999; 'Ecosecurities in greenhouse deal', *Times of India*, 8 Sept. 1999; 'Industry and environmental group transact commercial GHG trade', *Business Wire*, 22 April 1999; 'Companies find clean way to lure lucre', *Economic Times*, 2 May 1999; 'Epcor buys right to emit CO₂', *Edmonton Journal*, 10 Nov. 2000; 'Texaco appears to moderate stance on the issue of global warming', *Wall Street Journal*, 15 May 2000; 'BP Amoco to spend \$50 million on solar power sites', Reuters, 13 April 1999; 'Shell to invest \$20m in sustainable energy by 2001', Dow Jones Newswires, 26 May 1999; 'Daimler-Chrysler, Nippon Mitsubishi tie up on fuel cells', *Japan Times*, 14 Oct. 1999; 'GM and Toyota to develop alternate-fuel vehicles', *Wall Street Journal*, 19 April 1999; 'BP Amoco and others plan to invest up to \$100 million in Greenmountain', *Wall Street Journal*, 3 May 2000; 'Germany's BMW puts lots of green into prototype to break fossil-fuel chain', *Los Angeles Times*, 19 May 2000.

²⁴ 'GM quits global warming lobby group', *New York Times*, 15 March 2000; 'Texaco quits global warming group', CNN, 1 March 2000.

²⁵ 'Business leaders say climate change is our greatest challenge', Davos press release, 27 Jan. 2000.

²⁶ 'World Bank tries carbon control', *Financial Times*, 19 Jan. 2000; 'Prototype carbon fund attracts global interest', *Daily Yomiuri*, 12 March 2000.

²⁷ 'Dexia launches anti-global warming equity investment fund', Reuters, 16 Feb. 2000.

²⁸ 'Denmark eyes pilot CO₂ emission quota scheme', Reuters, 12 March 1999; 'Top 25 UK companies seek emissions trading', *The Times*, 28 June 1999.

²⁹ 'Shell: oil group launches internal carbon emission market', *Financial Times*, 27 Jan. 2000.

executives believed global warming to be a serious problem.³⁰ A Ford Motors executive went as far as to predict that the reign of the polluting internal combustion engine was coming to an end, to be replaced by the hydrogen fuel cell.³¹ Renewable energy, such as wind, solar, fuel cells, and high-efficiency gas-driven 'micro-turbines' has seen renewed interest from politicians and consumers.³² The European Union, for example, wants a fifth of its power to come from 'renewable' sources by 2010.³³ Following the collapse of talks in The Hague, it was not just government officials and environmentalists who were disappointed, but some business leaders as well. As Nick Campbell, chairman of the Climate Change Working Group at the International Chamber of Commerce, stated: 'We came here expecting a decision which would have clarified the rules and guidelines of the Kyoto Protocol. We now walk away as empty-handed as everyone else and leave as confused as when we arrived about the role we might play in contributing to solutions.'³⁴

These responses do not suggest a wholesale acceptance of the Protocol or of the domestic regulations it may engender. Indeed, sceptics characterize most corporate statements supporting the Protocol as public relations 'green washing' and stress that they do not square up with the reality of industry trends. They argue that while many oil companies may have undertaken positive measures, their investments in developing alternative or renewable energy are dwarfed by the amounts spent to increase their capacity for oil exploration, particularly in environmentally sensitive areas such as the Arctic National Wildlife Refuge in Alaska. While development of hybrid automobiles may be underway in the United States, automakers have increased the manufacture and sale of gas-guzzling sport utility vehicles and pickups, which has brought the national average gasoline mileage to a 20-year low, and lobbied against improved fuel efficiency standards. Some industry groups have also lobbied heavily for voluntary measures, and against ideas such as a carbon tax. Resistance to a proposed climate change levy in the UK, for example, has provoked heated resistance and led the Conservative Party to include its abolition among its campaign promises for the 2001 general election.³⁵ The full implications of the changing attitude among businesses should therefore be considered cautiously

³⁰ The poll was conducted by American Viewpoint, a noted Republican polling firm in Washington, DC, and included 425 interviews with middle- and upper-level management at Fortune 5000 companies between 18 Oct. and 14 Nov. Thirty-four per cent of business executives polled said they supported ratification of the agreement by the US Senate, 26% opposed it and 38% had no opinion. The poll has a margin of error of $\pm 5\%$. A large majority believes it is likely that the US government will regulate emissions of carbon dioxide and other pollutants that cause global warming by 2010. Eighty-two per cent of the executives polled said they believed such a move was likely, with 47% calling it 'very likely'.

³¹ 'Ford predicts end of car pollution', *Independent*, 6 Oct. 2000.

³² 'Alternative energy technology stocks soaring', Reuters, 23 Feb. 2000.

³³ 'Renewable energy's renaissance', *Financial Times*, 29 Jan. 2001; 'UK sets green targets for power suppliers', *Financial Times*, 4 Oct. 2000; 'Japan looks to cleaner sources of energy', *Japan Times*, 3 July 2000.

³⁴ 'Climate talks failure leaves businesses in the dark and disappointed', *Canadian Press*, 3 Dec. 2000.

³⁵ 'Why companies get steamed up about the climate change levy', *The Times*, 18 Jan. 2001; 'Climate change levy to cost £100m', *Independent*, 15 Jan. 2001; 'Tories would abolish levy', *Financial Times*, 25 Jan. 2001.

and in context. Frank Loy, US chief negotiator told COP-6 delegates: 'The consensus on climate change has deepened in the last three years. Nowhere is this more true than in the business community. They [companies] went to Kyoto largely to block action, but they have come to The Hague to contribute constructively.'³⁶ Others may disagree, in that many businesses in attendance generally acted in support of the proposals by the US and other Umbrella Group members that proved so contentious. Nonetheless, positive implications can be found in the fact that many corporations have felt the need to re-examine their public stances on the Protocol in light of public support and concern. They also suggest that business executives are not as monolithically opposed to the Protocol as in previous years, and that many now view limitations on carbon dioxide and other global warming pollutants as inevitable.

Environmental NGOs: inside and outside the negotiating halls

NGO involvement in the climate change negotiations has grown rapidly in the past few years. Participation in the UNFCCC process by NGOs, including environmental groups, business and industry groups, local governments and municipal authorities, has increased two-and-a-half times since the convention's inception in 1992, with the number of organizations accredited as observers increasing from 191 at COP-1 in 1995 to a total of over 530 by COP-6 in 2000. Of these, around 100 were newly accredited at COP-6.³⁷ Representatives from these groups participate in the negotiating process in a number of ways, such as making formal interventions during negotiating sessions, attending informal contact group meetings and discussing the issues with national negotiators. They also conduct special 'side events', to provide detailed presentations and discussions on specific topics, and set up exhibits, where they distribute reports, analyses and commentary papers on negotiating issues. These 'side events' have greatly expanded in number, as well as in substantive range and content.

Environmental NGOs, in particular, contribute to the negotiations through their interplay with the media representatives attending the conferences. In the run-up to COP-3, environmental NGOs invested tremendous effort in raising public awareness by organizing conferences and providing background materials to the media, helping to produce an unprecedented level of media coverage on the issue. Media reports were immediately fed back into the negotiating process, as newspaper articles were posted and distributed at the conference and delivered to government officials. This practice continued at subsequent COPs, where newspaper reports and media accounts from around the world were posted daily outside the press centre and around the conference centre.

³⁶ 'Business waits after climate pact fiasco', Reuters, 26 Nov. 2000.

³⁷ 'Climate change and Agenda 21: the role of the United Nations Framework Convention on Climate Change in implementing Agenda 21 and achieving sustainable development', note from the Executive Secretary to the UN General Assembly, Nov. 2000.

The awareness-raising efforts of environmental NGOs have continued to grow steadily as their ranks have grown in number, range of political perspective and diversity of action. The involvement of environmental NGOs at COP-6, for example, ranged from providing legal and policy advice to delegations, to publishing *ECO*, the Climate Action Network's publication on the negotiating process,³⁸ to issuing the dubious 'Fossil of the Day' award to the country deemed to be the most obstructive to the negotiations.³⁹ NGOs also staged protests, rallies and demonstrations both inside and outside the negotiating halls, such as constructing a dyke of sandbags encircling the conference centre. One participant shoved a pie in the face of the head US negotiator to display her frustration. The range of groups in attendance has also expanded beyond environmental groups from industrialized countries to include a greater number of developing-country NGOs, student groups, religious groups, local and state councils, and indigenous peoples' groups.

These efforts to share information, influence the media and build networks continue beyond the negotiating halls of high-level COPs, with numerous new climate-related websites, reports and studies emerging nearly every month. Some environmental NGOs have even joined forces with industry to promote action on climate change. For example, seven large energy and manufacturing corporations recently announced a partnership to reduce emissions of carbon dioxide and other greenhouse gases voluntarily, saying they intended to move ahead of requirements in the pending Kyoto treaty, with the results to be monitored by Environmental Defense, an environmental advocacy group.⁴⁰ Polaroid Corporation recently agreed to cut carbon dioxide emissions by 25 per cent in the next ten years, as well as to switch to cleaner fuels and more energy-efficient technology as part of the 'Climate Savers Programme', an initiative of the World Wildlife Fund that works with businesses to make it cost-effective to reduce use of carbon-based fuels.⁴¹ The World Resources Institute has also undertaken a programme with a number of business associations and corporations to develop an international protocol for measuring and reporting corporate greenhouse gas emissions.⁴²

While NGOs have always represented a formidable force in the climate change negotiations, in recent years their presence and impact has undergone a tremendous evolution. At one time NGOs in attendance came primarily from

³⁸ The Climate Action Network (CAN) is a global network of over 287 NGOs working to promote government and individual action to limit human-induced climate change to ecologically sustainable levels. CAN members work to achieve this goal through the coordination of information exchange and NGO strategy on international, regional and national climate issues. CAN has seven regional offices in Africa, South Asia, South-East Asia, Latin America, central and eastern Europe, western Europe, and the United States.

³⁹ See <<http://www.fossil-of-the-day.org/>>.

⁴⁰ 'Big firms join to share greenhouse-gas cuts', *Washington Post*, 18 Oct. 2000, p. E03.

⁴¹ 'Polaroid agrees to cut CO₂', *New York Times*, 10 Oct. 2000; 'Energy cos. join forces to cut greenhouse gas emissions', Dow Jones Newswires, 4 May 2000.

⁴² See the Greenhouse Gas Protocol Initiative on the World Resources Institute website at <<http://www.wri.org/climate/>>.

mainstream environmental groups in developed countries, but as the negotiations themselves increased in complexity and the potential impacts became increasingly understood, the diversity of groups has expanded to include a host of developing country NGOs, as well as religious, scientific and economic research groups. New networks of NGOs have also emerged, such as the Climate Change Knowledge Network, which includes 14 research institutes from developing, developed and transitional countries working on capacity building issues. The sophistication of statements, interventions and publications produced at sessions, from proposed textual amendments to detailed economic analysis, has likewise undergone a transformation.

However, this change has likewise led to disagreements within the NGO community. Whereas a unified voice may have been simpler years ago, such an accomplishment would now prove difficult beyond general issues. While all groups want an effective Protocol, opinions on its operation are far from agreed. For example, the controversy over the proposed role for forests as 'carbon sinks' in the Clean Development Mechanism has resulted in some support from NGOs who view it as a means of conserving forest biodiversity and ecosystem integrity, while others warn of the negative impacts of large-scale tree plantations and their possible impact on indigenous groups and rural livelihoods. Others differ strongly on the viability of emissions trading, the importance of renewable energy, the role of nuclear energy, and equity considerations between developed and developing countries, and among developing countries themselves.

Measuring the impact of NGOs on the negotiations, or attempting to characterize them as either driving or accommodating, would prove far too difficult in that they do not attend with uniform goals and priorities. To some, the lack of a unified voice may signal incoherency, and raise questions of what constitutes an 'environmental' or 'green' NGO. However, it more accurately signals that NGOs in the climate negotiations have moved well beyond a single profile and contribute to the process on many levels and with many voices. Their effectiveness, in addition to garnering media attention, is reflected in their ability to raise and promote discussion of difficult issues such as equity, lend a voice to possibly forgotten constituencies, and enrich the discussions by providing thoughtful analyses and substantive research, and alternative approaches, all of which will be necessary to achieve an effective agreement.

Media coverage: climate science, wild weather and growing public commentary

Media coverage no longer wanes in the interim between major conferences. A few short years ago, coverage of stories on climate change in the popular press was limited at best. However, over the years major media sources that once featured occasional articles have come to include stories on climate change almost on a weekly basis. In mid-1997 the International Institute for Sustainable Development (IISD) began tracking and distributing a bi-weekly summary of

media and press coverage of the issue, known as *Climate News*, to interested subscribers via e-mail. In the few years since its inception, the editor for the summary can report that the level of media and press coverage, both via the internet and in print publications, has grown exponentially, in frequency, range and type of coverage. Many major publications now devote entire sections of their website coverage to news and background information on climate change.⁴³ News-tracking services from industry groups and environmental NGOs have emerged as well.⁴⁴ Perhaps most notably, there has been a marked change in the range of topics, with frequent inclusion of scientific findings, reports of erratic weather events and commentary on the potential financial costs of inaction.⁴⁵

Arguably the strongest evidence of this growth in media coverage comes from 'sceptics', in respect of both climate science and the political soundness of the Protocol. In recent years, sceptical commentators have moved from a dismissive, wholesale disregard of the Protocol and its underlying science to an emphasis on the need for further study or voluntary approaches. As a recent letter to the editor of the *New York Times* noted, a few years ago contrarians argued that satellite measurements showed that warming was not occurring. More recently they acknowledged that warming might be occurring, but that the rate in recent decades had been slower than expected. In light of the recent US National Academy of Sciences conclusion that the observed surface warming is 'undoubtedly real' and that it has accelerated in recent years, the contrarians have shifted to arguing that the discrepancy between the surface and satellite measurements shows that climate models are inadequate.⁴⁶ With recurring frequency, sceptics raise suspicions of a conspiracy perpetuated by a 'gloom-mongering press' and call for equally extensive coverage of studies critical of accepted or mainstream climate science.⁴⁷

⁴³ See *New York Times*, 'The natural world—climate', at <<http://www.nytimes.com/library/national/science/climate-index.html>>; BBC Online, 'In-depth: climate change' at <http://news.bbc.co.uk/1/hi/english/in_depth/sci_tech/2000/climate_change/default.stm>; MSNBC, 'Surviving the greenhouse' at <<http://www.msnbc.com/news/291336.asp>>; The Guardian Unlimited, 'Special report: global warming' at <<http://www.guardianunlimited.co.uk/globalwarming/0,7368,395145,00.html>>; USA Today, 'Global climate change news' at <<http://www.usatoday.com/weather/disci/wclineews.htm>>; World News.com at <<http://www.globalwarm.com/>>.

⁴⁴ See the International Climate Change Partnership (ICCP), 'Climate change guru' at <<http://www.climateguru.com/climateguruz2/mypage/mypage.asp?UserID=2&>>; CO2e.com at <<http://www.co2e.com/News/News.asp>>; 'Climate ark' at <<http://www.climateark.org/>>; Tiempo, 'Climate cyber-library, newswatch' at <<http://www.cru.uea.ac.uk/tiempo/newswatch/xo>>.

⁴⁵ The recent actuarial study from German insurance company Munich Re predicted that the effects of global warming could cost the world more than US\$300 billion every year by 2050. See 'Climate change will cost the earth', *The Times*, 3 Feb. 2001; 'Global warming could cost world \$300 billion a year: UN', *Times of India*, 4 Feb. 2001; 'Global warming to be expensive, report says', *Toronto Star*, 2 Feb. 2001; "'Global warming may cost world \$300 b a year": UN', *Bangladesh Daily Star*, 3 Feb. 2001; 'Climate change to cost \$300 billion by 2050: UNEP', Kyodo News Online, 3 Feb. 2001.

⁴⁶ 'Countering the contrarians', *New York Times*, 7 March 2000.

⁴⁷ 'Where's the science?', *Washington Times*, 25 Jan. 2001; 'UN'S planet politics—déjà vu', *National Review*, 26 Jan. 2001. See also Steven Milloy, 'Global warming's dirty new secret', Fox News, 9 Feb. 2001. The author criticizes the 'global warming-friendly media' and notes that although the journal *Nature* issued a news release to spotlight a study finding that soot may be responsible for 15–30 per cent of global warming, none of the major media outlets, such as the Associated Press, *Washington Post* or *New York Times*, reported it.

Coverage of new findings in climate science has increased dramatically in recent years. Stories on scientifically oriented topics such as experiments to fertilize the oceans with iron ore, measurements of melting icebergs and ice coverage worldwide, increasing ocean temperatures and coral 'bleaching', changing migratory patterns of wildlife, the release of CO₂ by melting Arctic soils, shifts in frost seasons and plant growth, rising sea levels, and the spread of diseases such as West Nile virus to the United States and Canada could be found in newspapers worldwide.⁴⁸ One of the most notable was the widespread coverage in January 2001 of the most dramatic warning yet about the dangers of global warming, which emanated from the Intergovernmental Panel on Climate Change (IPCC) meeting in Shanghai, China that month.⁴⁹ The IPCC, a joint project of the United Nations Environment Programme and the World Meteorological Organization, issued a report that sharply increased projected climate change and warned of drought and other disasters. The report, *Climate Change 2001: The Scientific Basis*, stated that the average surface temperature of the planet will rise by 1.4–5.8° Celsius between 1990 and 2100. Earlier estimates, presented in 1995, predicted a rise of 1–3.5° Celsius. According to the report, 'there is new and stronger evidence that most of the warming observed over the last 50 years is attributable to human activities.' In its summary for policy-makers, the IPCC toughened its language, in particular on how far human activity can be blamed for soaring temperatures. Even a preliminary version of the IPCC report, 'leaked' to the press prior to the Hague talks, attracted media attention from around the world.⁵⁰

Increased media and public interest in the problem of climate change also stems from the astonishing rise in the frequency and severity of erratic weather events and catastrophic natural disasters occurring in recent years around the globe, many of which have been linked directly and indirectly by reporters, scientists and NGOs to climate change: Hurricane Mitch in Central America;

⁴⁸ 'Ocean fertilization yields hope, uncertainty for global warming', CNN, 23 Jan. 2001; 'Iron-fed plankton absorbs greenhouse gases', *New York Times*, 12 Oct. 2000; 'Huge Antarctic glacier melting', MSNBC, 1 Feb. 2001; 'Study details risk in melting glacier', *International Herald Tribune*, 2 Feb. 2001; 'Antarctic ice sheet shrinks', BBC News Online, 1 Feb. 2001; 'Scientist: Columbia glacier retreating fast', CNN, 29 Dec. 2000; 'Earth's ice cover melting in more places and at a higher rate, says report', *The Hindu*, 28 March 2000; 'Now Europe's biggest glacier falls to global warming', *Observer*, 22 Oct. 2000; 'Arctic sea ice thins by almost half', BBC News, 7 Dec. 2000; 'Oceans at hottest for 3,000 years', *The Times*, 4 May 2000; 'Global warming is blamed for first collapse of a Caribbean coral reef', *Independent*, 4 May 2000; 'Carbon levels "threaten coral"', BBC News, 17 May 2000; 'Coral reefs on the edge of disaster', *The Times*, 25 Oct. 2000; 'Equatorial waters hold undercurrent to global warming', CNN, 4 Dec. 2000; 'Waters near Equator show "alarming" warming trend', *Washington Post*, 29 July 2000; 'Global warming threat to dolphins', CNN, 9 Nov. 2000; 'Global warming ruffles wildlife, study says', CNN, 15 Feb. 2000; 'Global warming report predicts doom for many species', *New York Times*, 31 Aug. 2000; 'Malaria crosses Canada's border', *Ottawa Citizen*, 19 Sept. 2000.

⁴⁹ 'Report warns of dramatic increase in global warming', *Washington Post*, 22 Jan. 2001; 'Human effect on climate "beyond doubt"', BBC Online, 22 Jan. 2001; 'Global warming danger rises for northern hemisphere', *Japan Times*, 23 Jan. 2001; 'The weather turns wild', *US News and World Report*, cover story, 5 Feb. 2001 (the story could also be found on many other news websites, including those of the *New York Times*, *The Times*, Kyodo News Service, ExpressIndia, CNN, *The Age*, *Financial Times*, ABC News, Canadian Broadcasting and the *Ottawa Citizen*).

⁵⁰ 'Scientists now acknowledge role of humans in climate change', *New York Times*, 26 Oct. 2000; coverage could also be found in the *Washington Post*, CNN, MSNBC, CBS News, *USA Today*, *Irish Times*, *Guardian*, *International Herald Tribune*, *Time Magazine*, *US News and World Report* and others.

massive floods in Bangladesh, Mozambique and China; drought in the Horn of Africa, Sudan, Afghanistan, Pakistan and northern India; cyclones in eastern India; mudslides and floods in Venezuela, Bolivia and Argentina. Europe has witnessed melting permafrost and avalanches in the Alps, and persistent and record floods in Britain and the French Atlantic coast, while the United States has seen record forest fires, droughts and heatwaves.⁵¹ In addition to the events themselves, articles and commentaries noting the synergy of events have likewise begun to appear with increasing frequency.⁵² Rising temperatures alone led to increased levels of coverage, with temperatures setting new records seemingly every year.

A few short years ago, statements from public officials on links between climate change and weather events were made alongside ample cautionary and limiting language, and frequently couched in terms of possible long-term effects. However, stronger public statements from government leaders and, notably, a stronger linking of unusual weather to climate change, have become increasingly common. In 1998, both US President Bill Clinton and Vice President Al Gore warned that the United States would have to deal with more record high temperatures, droughts and other natural disasters, like the raging wildfires that consumed much of Florida in 1998.⁵³ In his State of the Union address for 1999, Clinton stated that 'our most fateful new challenge is the threat of global warming' and that '1998 was the warmest year ever recorded. Last year's heat waves, floods and storms are but a hint of what future generations may endure if we do not act now.'⁵⁴ In 2000, UK environment minister Michael Meacher said the floods that ravaged Britain in the autumn of that year could be attributed to global warming, while Deputy Prime Minister John Prescott signalled that massive government investment should be undertaken to cope with extreme weather conditions caused by global warming. UK Prime Minister Tony Blair said in a speech in March 2001 that it was 'irresponsible' not to treat seriously the IPCC predictions that climate change could mean more rainfall, flooding and severe weather storms and noted there was now an 'intense sense of urgency' about global warming, evidenced by the reaction to flooding and the heaviest snowfall

⁵¹ The following articles are intended as a sample of the numerous stories of recent unusual weather-related events: 'Africa's flood misery', BBC News, 11 Feb. 2000; 'Alps may crumble as permafrost melts', *Daily Telegraph*, 4 Jan. 2000; 'Europe's warm weather chaos', BBC News, 7 Jan. 2001; 'Mekong flood death toll rises', BBC News, 14 Sept. 2000; 'UN says Iran faces critical situation from drought', CNN, 4 Aug. 2000; 'Drought puts economy in dire straits', *Panafrican News*, 13 Oct. 2000; 'Bangladesh floods toll seen to exceed \$500 million', CNN, 16 Oct. 2000; 'Floods cause chaos', BBC News, 12 Oct. 2000; 'Rains lead to floods, mudslides in Europe', ABC News, 16 Oct. 2000; 'Drought bites harder in West Asia', *New York Times*, 2 Nov. 2000; 'US had unusually warm year, NOAA says', *Washington Post*, 19 Dec. 2000, p. A15; 'Millions marooned, scores dead after floods in India, Southeast Asia', CNN, 22 Sept. 2000; 'Deadly floods force thousands from their homes in Argentina', CNN, 10 March 2000; 'Eastern Bolivian floods wipe out homes and crops', CNN, 17 March 2000.

⁵² 'Stormy weather', *Time* (Europe), 13 Nov. 2000; 'The weather turns wild', *US News and World Report* (cover story), 5 Feb. 2001; 'Word for weather this summer is definitely "weird"', *USA Today*, 3 Aug. 2000.

⁵³ 'Clinton links fires, global warming', *Washington Post*, 10 July 1998, p. A02; 'Gore ties record heat to global warming', *Washington Post*, 15 July 1998, p. A03.

⁵⁴ 'President Clinton's State of the Union address', *New York Times*, 20 Jan. 1999.

in Scotland in 40 years.⁵⁵ Even the Prince of Wales publicly blamed ‘mankind’s arrogance’ for the violent storms and floods, and said that humans needed to learn the lesson of the phenomenon so that ‘advances in technology do not just become the agents of our own destruction.’⁵⁶ Governments are making public their efforts to prepare for the possible implications of climate change in their strategic plans regarding agricultural production and food supplies, and becoming notably bolder in issuing studies publicly linking unusual weather with climate change.⁵⁷ Even within the negotiations themselves, once-cautious ministerial statements in plenary now frequently cite weather events and natural disasters as current manifestations of climate change.

Conclusion: what should happen next

The failure to reach agreement in The Hague led many commentators and observers to speculate that intergovernmental efforts to reach an international agreement had come to a bitter and unsatisfactory end. Changes in the United States since then have provoked even more uncertainty, in light of the accession to the presidency of former oilman George W. Bush, whose position on global warming has been less than clear in past statements,⁵⁸ and whose most notable priorities on coming into office have included oil exploration in Alaska and lowering of emissions standards for companies in California. Compounding the situation are uncertainties surrounding his subsequent political appointees, such as Attorney General John Ashcroft, who led the charge against the Kyoto Protocol in the Senate, and Secretary of Energy Spencer Abraham, a former Michigan Senator who fought to protect Detroit auto makers from stricter fuel-efficiency standards. Perhaps fearing that the worst-case scenario is imminent, many governments have further entrenched their long-standing positions, based on their public statements. Changes in negotiating teams are not limited to the United States: significant turnover is expected in other major negotiating countries, including Russia, Japan, the UK and Canada.

Some positive signals have emerged recently, as Parties have agreed to resume discussion in July 2001 and G-8 environment ministers issued a declaration

⁵⁵ ‘Blair pledge of £100m boosts green projects’, *Irish Times*, 7 March 2001; ‘Blair pledges £100m for renewable energy’, *Financial Times*, 6 March 2001; ‘Alternative energy to get £100m from Blair’, *The Times*, 6 March 2001.

⁵⁶ ‘Yes, global warming did cause the floods’, *Daily Express*, 22 Oct. 2000; ‘Prescott says floods are “wake-up call” for emergency planning—global warming’, *Independent*, 1 Nov. 2000; ‘Overhaul of crisis planning pledged in wake of storm’, *Financial Times*, 31 Oct. 2000; ‘Prescott rides out storm of criticism’, *The Times*, 1 Nov. 2000; ‘Prince blames floods on arrogance’, *The Times*, 7 Nov. 2000.

⁵⁷ ‘State manual outlines food-crisis scenarios’, *Japan Times*, 3 Jan. 2001; ‘Ministers test the water for canal supplies’, *Scotsman*, 5 Jan. 2001; ‘India says water, energy key foreign policy issues’, Reuters, 27 Dec. 2000; ‘Global warming may dry up farm supplies, agency warns’, *Yomiuri Shimbun*, 15 March 2000; ‘Mild Tokyo winters reflect global warming’, *Japan Times*, 25 Dec. 2000; ‘Rise in winter temperatures blamed on global warming’, *Korea Herald*, 1 Jan. 2001; ‘Freaky 2000 weather hints at global fever’, *Globe and Mail*, 2 Jan. 2001; ‘Floods will double in our children’s lifetime’, *The Times*, 14 Dec. 2000; ‘Faster global warming predicted’, *Financial Times*, 8 Nov. 2000. Coverage could also be found in the *Independent*, *Guardian*, BBC News Online, MSNBC and elsewhere.

⁵⁸ ‘Mining global warming for votes’, *Washington Times*, 17 Oct. 2000.

committing themselves to strive to reach agreement on outstanding political issues.⁵⁹ The United States Environmental Protection Agency administrator, while noting that the Bush administration would completely review its stance on global warming before re-entering international talks, also publicly stated that 'there's no question but that global warming is a real phenomenon, that it is occurring', and noted that the administration was considering imposing limits on carbon dioxide emissions from the nation's power plants.⁶⁰ However, days later, under strong pressure from conservative Republicans and industry groups, President Bush said he would not seek to regulate emissions of carbon dioxide, leaving environmental groups and some Congressional Democrats angry and 'betrayed'.⁶¹ Characterized as his first broken campaign promise, this move sparked a wave of criticism in the United States and internationally,⁶² and elicited serious concern from other negotiating partners.⁶³ It also prompted the introduction of a bill in the United States, sponsored by both Democrats and Republicans, that seeks to set uniform limits on power plant emissions and cut carbon dioxide emissions to 1990 levels.⁶⁴

The steps necessary to move the process towards a global agreement are numerous and difficult. Among the most obvious is the need to build a better understanding of the positions and domestic circumstances among the range of governments at the table, from both developed and developing countries. In their final session in The Hague, many governments alluded to 'cultural' differences, perhaps signalling an acknowledgement that while all parties are reading the same protocol, they have very different perspectives on what it means and what should be stressed when discussing its implementation. The EU takes as its starting point the need to effect widespread and immediate behavioural changes to address the problem, while the United States, Canada, Australia, Japan and others focus on short-term, cost-effective actions, coupled with an effort to develop and deliver the technologies that will be needed for the long term. Developing nations tend to focus primarily on development aspects, such as adaptation funding and capacity-building.

⁵⁹ 'G8 nations renew pledge to tackle global warming', *New York Times*, 4 March 2001; 'G8 pledge to seek climate deal', *Financial Times*, 5 March 2001; 'EU, G-8 ministers vow to implement Kyoto Protocol', *Japan Times*, 5 March 2001.

⁶⁰ 'EPA mulls limits for power plant emissions', *Washington Post*, 28 February 2001; 'US says scrap Clinton stance on climate change', Reuters, 2 March 2001.

⁶¹ 'Bush reverses vow to curb gas tied to global warming', *New York Times*, 14 March 2001; 'Bush drops a call for emissions cuts', *Washington Post*, 14 March 2001, p. A01; 'Republicans ditch pledge to limit greenhouse gases', *The Times*, 15 March 2001.

⁶² Coverage of this story could be found in the *Financial Times*, *The Guardian*, *Sydney Morning Herald*, *Irish Times*, *International Herald Tribune*, *Pan African News*, *Lateline News China*, *Vancouver Sun*, *Los Angeles Times*, *BBC News*, *Chicago Tribune*, *Boston Globe*, *CBS News*, *USA Today*, *CNN*, *ABC News*, *Wall Street Journal* and others.

⁶³ 'EU concerned over Bush's CO₂ and climate stance', *New York Times*, 14 March 2001; 'Japan regrets bush stance on pollution', Reuters, 15 March 2001; 'Kyoto accord may be ratified without US-Germany', Reuters, 15 March 2001. The BBC's European Press Review for 15 March 2001 included critical comments from Switzerland's *Le Temps*, France's *Le Nouvel Observateur*, and Germany's *Frankfurter Rundschau*.

⁶⁴ 'US lawmakers move to reverse bush decision on CO₂ emissions', *Agence France-Presse*, 16 March 2001; 'GOP moderates defy Bush with bill to cap CO₂', *MSNBC*, 15 March 2001.

Efforts to improve the level of understanding of the complex technical aspects of proposed actions will also be critical for the future success of climate negotiations. Apart from the politically difficult issues at stake and the formalities of the UN forum, the uneven level of knowledge among developed and developing country negotiators has also helped perpetuate the stall-and-start process of meetings, where genuine concerns regarding positions or possible compromises are seldom discussed in depth until the final days of final sessions. For example, a stronger commitment to capacity-building for developing-country negotiators, many of whom lack resources for adequate preparation and training, as well as the means to hold regional consultations, could greatly facilitate progress. A truly 'global' agreement, a priority for some developed countries, is unlikely ever to be reached until all parties fully understand the implications of proposals on the table.

A reexamination of the negotiating process and the expectations placed on the COP sessions may also be in order. Past sessions have pursued ambitious timetables for reaching agreement on myriad politically and technically difficult issues, and held intersessional discussions every few months, where little genuine progress is made on key issues, new proposals continually enter to the fray, and much time is spent re-stating well known positions. As a result, tremendous pressure builds to resolve all issues in the final negotiating sessions of hectic, high profile COPs. The Hague, despite its disappointing outcome, may ultimately prove beneficial by demonstrating that the issue of climate change may be too complex for a traditional approach. An alternative may be to pursue more sophisticated agreements among groups of players, and possibly include regional arrangements. This may allow delegates to build towards COP-7 via smaller, linked steps rather than attempting to resolve all outstanding differences in final sessions.

Perhaps most important will be a stronger commitment by developed country governments to domestic action. Discussions in The Hague demonstrated the limitations of pushing an issue internationally beyond countries' domestic agendas. Steps towards domestic action would not only help demonstrate that developed countries take their leadership role in mitigating GHG emissions seriously, but would contribute towards alleviating much of the present uncertainty surrounding the hopes for future talks. They would also help to build upon the promising signs emerging in recent years from the non-governmental sectors—the business community, environmental groups and the media—and augment the political pressure necessary to continue the talks and reach a convergence of opinion.

Part of this action should include a focus on improving public awareness and understanding in all sectors of the implications of the looming impacts of climate change and the response measures necessary to combat them. The most profound enemies of progress on global climate change are not scientific sceptics or well-funded industry opponents, but general misunderstanding and apathy regarding the issues and policies at stake. Public opinion and concern on

an issue as complex and far-reaching as global climate change is difficult to quantify or measure, and lack of understanding 'on the street' has always been, and always will be, the primary obstacle. However, there are positive signals of change emerging in the past few years, and a growing synergy between media coverage of climate-related events, the initiation of national and environmental NGOs programmes, and statements from governmental leaders indicate a rapidly increasing public awareness of climate change and the serious nature of the threat, which can have a tremendous political impact both inside and outside the negotiating halls.