



The Road to a Climate Change Agreement Runs Through Montreal

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A TALE OF TWO PROTOCOLS: MONTREAL AND KYOTO

The Montreal Protocol

The 1987 Montreal Protocol to the Vienna Convention on the Protection of the Ozone Layer was a pivotal agreement in the history of global environmental negotiations. It established a process that remains an important precedent for dealing with global environmental problems, including global warming. What made the negotiation of that agreement such an iconic event, and what useful lessons does it hold for climate change negotiators?

The Montreal Protocol and its amendments addressed the challenge of a deteriorating stratospheric ozone layer that threatened to expose life on earth to greatly increased and damaging levels of ultraviolet radiation. The protocol initially called for a 50 percent reduction by 1999 in the production of chlorofluorocarbons (CFCs), which had been identified as the

principal cause of ozone layer deterioration. The agreement also set up a procedure for regularly reviewing and revising its provisions at subsequent Conferences of the Parties (COPs). These “review and revise” meetings led over the following decade to amendments that broadened the scope of controlled ozone-depleting substances and set earlier dates for fully phasing them out. The parties also established a Montreal Protocol Fund to assist developing countries with meeting their obligations under the protocol.

Several factors were critical to the success of the Montreal Protocol. The first was the leadership role played by the United States from the beginning, well before the start of negotiations on the protocol. The United States was among the first to recognize the threat that CFCs posed to the stratospheric ozone layer. The United States, along with several Nordic countries, took early action to counter that threat to humans and other life on Earth by banning the use of CFCs in most aerosols.

Secretary of State George Shultz named a chief negotiator, Richard Benedick, in the summer of 1986, more than a year before the Montreal Protocol was concluded in September 1987. As a result, Benedick, an experienced foreign service officer, had ample time to shepherd the development of the US position through a contentious interagency process, which he also headed.

During that prenegotiation period, he had a constructive dialogue with the affected domestic industries, Congress, environmental nongovernmental organizations (NGOs), and his foreign counterparts. For example, Benedick, with strong support from the Environmental Protection Agency, used an offsite workshop in Leesburg, Virginia, to persuade skeptical representatives of concerned industries that the threat to the ozone layer was real and to gain their acceptance of pursuing an international agreement to deal with it.

Because the preparatory work was so thorough, the United States entered international talks on the Montreal Protocol with a coherent and well thought out negotiating strategy that had significant support among domestic stakeholders. US negotiators also had broad support in Congress.

Then-senators Al Gore and Tim Wirth were leaders in urging action to save the ozone layer.

Perhaps the greatest strength of the Montreal Protocol has been its built-in flexibility in accommodating new information rapidly and efficiently. The parties established panels on science, environment, technology, and economics, and they committed themselves to periodically reconsider the operative provisions of the agreement, taking into account the work of those panels. For example, a synthesis report incorporating findings of these panels formed the basis of the negotiation of amendments and adjustments to the protocol that were adopted at the London COP in June 1990. This report summarized a peer-reviewed process that involved the work of more than 500 scientists and other experts.

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At the London COP the parties also established the Montreal Protocol Fund to assist developing countries in transitioning away from CFCs and other ozone-depleting chemicals. This fund operates under an executive committee based in Montreal that was established by the parties to the protocol and reports to them at their periodic conferences. The membership of the committee consists of seven developed and seven developing countries. The participants in the London meeting estimated that a fund of slightly over \$200 million would be needed in the initial years of the transition, and the US share, based on a UN assessment formula, would be 25 percent of that amount. During 1991–2005, total pledges to the fund amounted to \$2.1 billion. The creation of the fund was critical in persuading major developing countries, particularly India and China, to become parties to the protocol.

At the London COP and subsequent conferences, which followed every couple of years, additional ozone-depleting chemicals, such as methyl chloroform and carbon tetrachloride, were identified and added to the list of controlled substances. Also, the time for bringing down the production and use of controlled substances—originally set for a 50 percent reduction by mid-1999 (2009 for developing countries)—was substantially shortened, and the total reduction was increased to a full phaseout. This “review and revise” approach has been an essential element in the protocol’s ability to make progress in achieving its goal of saving the stratospheric ozone layer.

Another critical factor was that from the outset all countries that were parties to the agreement made commitments to

reduce the production and use of ozone-depleting substances.¹ The developing countries were given an additional ten years to meet those commitments, but there was no invidious distinction between some countries’ undertakings being voluntary, while others were making mandatory commitments. As a result, the tension between developing and developed countries was minimized. A negotiating climate was created in which the threat to the ozone layer was seen as a challenge to all, requiring every party to contribute to resolving the problem.

The negotiators of the Montreal Protocol faced the same argument from developing countries that climate change negotiators are encountering: Why shouldn’t developing countries have the same opportunities for development using CFCs or carbon-emitting fuels that developed countries had? If not, shouldn’t developed countries, which caused the problem, pay the cost of the transition to a more sustainable development path? The establishment of the Montreal Protocol Fund and the provision of a longer timeframe for meeting their commitments were essential elements in responding to this argument and overcoming developing-country reluctance to participate.

The Kyoto Protocol

The negotiation of the 1997 Kyoto Protocol to the 1992 UN Framework Convention on Climate Change (UNFCCC) was handled differently and resulted in a much less satisfactory agreement. The chief US negotiator, Undersecretary of State Stuart Eizenstat, was not named until a couple of months before the meeting in Kyoto. There was no time for adequate interagency preparation for the meeting or for sufficient consultation with domestic stakeholders or with Congress. The US delegation arrived in Kyoto without clear guidance on what, if any, reduction in US carbon emissions it could accept.

The carbon emissions reduction commitments in the protocol were negotiated in Kyoto among the representatives of the developed countries. These commitments, which differed from country to country, were made more on the basis of political bargaining than on an evaluation of what would be required to deal effectively with the threat of global warming. Nor did these commitments adequately take into account the ability of all of the countries involved to carry out those undertakings. The European Union, for example, could offset likely shortfalls by some member states with anticipated overcompliance by others in order to meet an overall goal for carbon emissions reductions. In the case of Russia, its post-Soviet economic collapse in the 1990s had already reduced

1. Some significant users of CFCs, such as India and China, did not become parties until 1990, when the Montreal Protocol Fund was established.

its carbon emissions to a point where overcompliance with its targeted emissions reductions was assured. Others, like the United States and Canada, which had greatly increased their carbon emissions since 1990, had little or no prospect of achieving the emissions reductions that would be necessary for them to meet their targets under the protocol.

Once it has been established on a worldwide basis that carbon emissions come at a cost, and that the cost will be increasing, the world will be on a path to a much less carbon-intensive future and will have begun to address global warming in a meaningful way.

The protocol included no specific commitments by developing countries to reduce greenhouse gas emissions. Six months before the meeting, in July 1997, the US Senate had put down a marker in the Byrd-Hagel Resolution, passed by a vote of 95-0, that any agreement without such commitments by developing countries would be unacceptable. Therefore, it was clear from the time the deal was struck that there was virtually no chance that the United States would ratify the agreement and become a party to the protocol.

COPENHAGEN ACCORD

At the UNFCCC Conference of Parties held in Copenhagen in December 2009, climate change negotiators avoided the worst result: another Kyoto-like agreement to unrealistic, politically determined, “mandatory” carbon emissions reduction commitments undertaken only by developed countries. Rather, the Copenhagen Accord, which was brokered in the closing hours of a chaotic meeting, with the direct involvement of President Barack Obama, moved away from the approach of the discredited Kyoto Protocol. Many observers have expressed disappointment with this result, but I am convinced that it has put us on a much more promising track.

The countries that account for the vast majority of the world’s carbon emissions were included in the agreement to develop their own plans for controlling those emissions. Importantly, they agreed that those plans would be transparent and that they would be subject to review by the other parties to the agreement. For the first time, both developed countries and the major emerging economies, including India

and China, joined together in a commitment to deal with global warming in a serious and sustained way.

The emissions reduction plans envisioned under the Copenhagen Accord would not be legally binding, which bothers some people. These plans will, however, represent strong political commitments, and the countries that make them can be expected to exert every effort to avoid falling short on such commitments. I believe that an insistence on the need for so-called mandatory agreements is misplaced.

Environmental agreements have withdrawal provisions, and countries that are pressed to take actions they believe are not in their interest have an option to use these provisions. The effectiveness of trade sanctions and other punitive measures to enforce compliance is questionable and, in any case, would in my view be nonnegotiable as part of a climate change agreement.²

It is also important that the signers of the Copenhagen Accord agreed to a common goal of keeping the global temperature increase to less than 2 degrees Celsius. What they are prepared to do initially may not be enough, but they are committed to taking significant first steps in the right direction.³

LESSONS FROM THE MONTREAL PROTOCOL FOR CLIMATE CHANGE NEGOTIATORS

The negotiators of the Montreal Protocol faced formidable difficulties in dealing with a problem whose effects, while not immediate, were likely to be catastrophic over time in a “business as usual” scenario and whose solution would impose great transitional costs. Also, as is the case with climate change, they had to deal with some degree of scientific uncertainty. In fact, at the time that the Montreal Protocol was negotiated, the evidence for anthropogenic ozone layer depletion was, if anything, less compelling than the current case for global warming.

Clearly, climate change negotiators face a more complex and far-reaching challenge. The phaseout of ozone-depleting

2. The Montreal Protocol contains a provision prohibiting trade in controlled substances with nonparties that are not taking comparable steps to limit emissions of those substances, but it does not include trade sanctions aimed at enforcing compliance by parties to the protocol. The existence of this provision may or may not have acted as a deterrent to nonparties, but it has never been invoked.

3. As of March 2, 2010, the United Nations listed 106 countries, accounting for 81 percent of global carbon emissions, as having signed up to the Copenhagen Accord, and 72 of them have submitted specific national emissions reduction plans. See Trevor Houser, *Copenhagen, the Accord, and the Way Forward*, Policy Briefs in International Economics 10-5 (Washington: Peterson Institute for International Economics, March 2010, 11).

chemicals and related infrastructure involved major industries such as refrigeration, electronics, fire fighting, and aerosols and cost billions of dollars. But dealing with global warming will require fundamentally rethinking our carbon-based societies and taking steps that will affect virtually every aspect of economic activity. Despite this significant difference in the impact on the economic structure of the countries concerned, however, there are similarities between the two challenges, and climate change negotiators would be well advised to reflect on the Montreal Protocol and the lessons that can be learned from it.

In that regard, it is encouraging that the Obama administration moved early to name a capable and experienced chief negotiator, Todd Stern, who can assert US leadership and ensure that the United States enters future climate change negotiations with a clear negotiating strategy that has adequate support domestically. It usually does not work for a US administration to lead the development of domestic policy through international negotiations, as was tried in the case of the Kyoto Protocol.

As with the Montreal Protocol, we need to reach an agreement on climate change that creates a process that would move us to a desired result. Only 24 countries and the European Commission signed the Montreal Protocol in September 1987. These initial signatories to the Montreal Protocol did include virtually all the developed countries, which accounted for the vast majority of global production of CFCs. However, they did not include many of the major developing countries with rapidly emerging economies, such as India and China. Although it is important to bring the emerging-economy countries into such global agreements without undue delay, a lesson for climate change negotiators is that everyone does not need to be on board in the first instance in order for a global agreement to ultimately achieve its goals.

The provisions of the Montreal Protocol for reducing the production and use of ozone-depleting substances, as negotiated in 1987, did not go nearly far enough. It was only after repeatedly returning to the table over the following decade to reconsider those provisions, taking into account developments in science and other new information, that the parties were able to do what was necessary to begin to arrest and eventually reverse the deterioration of the ozone layer. During that period, the parties to the protocol increased by several times over the original number of signatories. The Montreal Protocol now has over 190 parties and includes all the members of the United Nations.

Because of the extremely long persistence of CFCs in the atmosphere, it is estimated that it may take until about 2070 for the ozone layer to be fully restored and for the seasonal ozone hole over the Antarctic to be repaired. However, commitments under the protocol for ending the production of CFCs and other ozone-depleting chemicals have been met or exceeded, and some rebuilding of the stratospheric ozone layer has been detected.

Thus, it was the process that the Montreal Protocol set in motion—not the initial commitments to reduce the use of ozone-depleting chemicals in the agreement itself—that enabled us to achieve this remarkably successful result. This is one of the central lessons that climate change negotiators can learn from the Montreal Protocol.

We won't get it right the first time. However, we do need to get started, with all parties to an agreement, developed and developing alike, making specific contributions to the effort to limit carbon emissions. Once it has been established on a worldwide basis that carbon emissions come at a cost, and that the cost will be increasing, the world will be on a path to a much less carbon-intensive future and will have begun to address global warming in a meaningful way.

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