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THE IMPLEMENTATION OF ENVIRONMENTAL TREATIES: THE CASE OF THE MONTREAL PROTOCOL ON SUBSTANCES THAT DEPLETE THE OZONE LAYER

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Abstract

Important to the success of international law is the implementation of treaties already in force. The fact that a treaty has been ratified does not automatically mean that it is being adhered to or enforced in the best possible manner. Policy-makers and lawyers should examine the treaty implementing process as well as the treaty making process. Further, this should be done in an explicitly interdisciplinary way when facing complex environmental issues, which require us to synthesize scientific, technical, political, economic, ethical and legal questions. In this paper, I examine how the London Amendment of the Montreal Protocol on Substances that Deplete the Ozone Layer is being implemented by one of the major chlorofluorocarbon (CFC)-producing states - the United States. I examine the policies of major corporations that manufacture CFCs and other ozone depleting substances, recognizing that many of these firms are transnational companies. I shall also note that international organizations, such as the United Nations Environment Programme (UNEP), have played important roles. Further, non-governmental public interest groups are part of the global policy-making process.

Introduction

The theme of the International Space Year (ISY) is "Mission to Planet Earth," and Peter Hohenfellner, Chairman of the UN Committee on the Peaceful Uses of Outer Space (COPUOS), has noted that with the end of the Cold War, environmental issues are moving to the top of the priority list on the world agenda.[1] This priority has been realized in law by the Vienna Convention for the Protection of the Ozone Layer (1985),[2] The Montreal Protocol on Substances that Deplete the Ozone Layer (1987),[3] the London Amendment to the Montreal Protocol (1990),[4] and regulatory actions by various states.

Scientific findings continue to indicate that the problem worsens in spite of legal attempts to keep abreast of the problem. Data from the Upper Atmosphere Research Satellite (UARS), which was launched by the Shuttle Discovery on September 12, 1991, and from airplane flights, points to increased concentrations of chlorine in the stratosphere north of 50 degrees latitude. These findings led the U.S. Senate in February, 1992 to pass a resolution 96-0 calling for faster phase-out than called for in the London Amendment.[5] Several days later, President Bush called for a phase-out by the end of 1995,

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rather than the year 2000. Given previous legislation, the President could mandate this new timing.[6]

Implementation in the United States

The Environmental Protection Agency (EPA) is the regulatory unit in the Executive Branch which is responsible for implementing U.S. obligations under the Montreal Protocol. The EPA regulations are also consistent with implementing U.S. domestic or municipal legislation, in this case the Clean Air Act Amendments of 1990. Within the EPA, the unit responsible is the Stratospheric Ozone Protection Branch, Global Change Division, Office of Atmospheric and Indoor Programs, of the Office of Air and Water Radiation. The EPA notes that Section 614(b) of the Clean Air Act states that "in case of conflict between any provision of this title and any provision of the Montreal Protocol, the more stringent provision shall govern."

The most recent regulations are published in the Federal Register of July 30, 1992.[7] The title of the regulations is "Protection of Stratospheric Ozone, Final Rule." The regulations are retroactive to January 1, 1992 so that there will be no gaps in the implementation process. Proposed, not final regulations, were published in the Federal Register on September 30, 1991.[8] Interested organizations then commented on the proposals. Petitions for faster phase-outs were received from Friends of the Earth, the Environmental Defense Fund, and Natural Resources Defense Council. Corporations also offer comments on how the rules should be formulated. One might think that the firms could "capture" the regulatory agency and subvert the whole process, but if you look at the Federal Register, you can see that this is not the case. Some companies objected to "overegulation" by EPA and to "its excessive interference in business practices."[9] This objection related to the requirement for firms to keep daily production records, a regulation the EPA kept. Another corporation objected to the requirement to inform the EPA about intra-company trades, domestically and internationally, but the agency did not find that an administrative burden existed.[10] Another firm complained about EPA's rule to offset international trades by lowering domestic production, but the EPA reasserted its original position, stating that it was not a matter of regulatory discretion but a requirement under Section 616 of the Clean Air Act.[11]

Transnational Corporations

In the United States, a number of firms are being regulated by the EPA. In the Final Rule, apportionment of baseline production allowances is made for firms, such as Du Pont and Allied Signal, which are headquartered in the U.S. and also for firms like Elf Atochem, Akzo Chemicals and ICI Americas, which are subsidiaries of foreign-based transnational corporations (TNCs).[12] In truth, the chemical industry is a global industry where U.S. firms produce abroad and French, Dutch and British firms produce in the U.S. A global map of CFC production and consumption is needed in order to grasp this complex picture.[13] The boundaries of companies' markets do not correspond to the borders of states.

Since TNCs manufacture globally, it may be said that they make global decisions and policies as well as having decisions made for them by the regulations of governments. In the case of CFC and halon production, it should be noted that several corporations have more advanced phase-out schedules than are required by the Montreal Protocol. For instance ICI has announced a 1995 deadline for ceasing CFC production. It has already halved its CFC production from 80,000 tons in 1986 to 40,000 in 1991.[14] Du Pont has announced it

will no longer sell halon-1301 by the end of 1993.[15]

Ozone Depleting Substances

The Montreal Protocol calculated the ozone depletion potential (ODP) of various CFCs and halons. In 1988, the EPA promulgated a final rule on regulations relating to production and importing allowances by firms in the United States. In order to check on industry's compliance with the limits, EPA required quarterly reports by producers and importers.[16] As successive scientific findings indicated that the problem was getting worse.[17] New restrictions have been authorized, and thus we see in the United States the Final Rule of July 30 retroactive to January 1. However, even this relates to the legal obligations under the Montreal Protocol and not to new political and policy decisions by the Senate and the President. These, as noted above, call for a 1995 phase-out. So the "Final Rule" is not really final and new regulations will be forthcoming. Nevertheless, the July 30 rule is necessary in order to keep the process going in a rational and deliberative manner.

There are two classes of ozone depleting substances. Class I substances are divided into five groups. The first group in Class I is composed of CFC-11, CFC-12, CFC-113, CFC-114 and CFC-115. These are the five most-ozone depleting chemicals. Halons are in Group II. Group III contains other CFCs. Group IV contains carbon tetrachloride (CCl_4) and Group V refers to methyl chloroform. Groups I and II have the baseline year of 1986 for the purposes of calculating reduction schedules, while the other three groups have a baseline year of 1989. Hydrochlorofluorocarbons (HCFCs) are Class II controlled substances and are subject to future reductions under domestic legislation and international treaties. HCFCs have shorter life times than CFCs and thus are viewed as substitutes in the near term, but in the long term, they may very well be phased out because of their ozone depletion potential.

The reductions in chemicals covered by the original Montreal Protocol were made as "adjustments" and became binding on Parties six months after the receipt of formal notification, while new chemicals added to the list in London 1990, i.e., methyl chloroform and carbon tetrachloride and other CFCs were put in as amendments and regulations could only take effect 90 days after 20 Protocol Parties had ratified them. The United States Senate gave its advice and consent to the London Amendment on November 26, 1991.[18]

Trade Sanctions

Trade sanctions are part of the implementation process under Article 4 of the Montreal Protocol. However, under Article 5, a developing country can delay compliance with the Protocol, if, when it joined the Protocol, its consumption of controlled substances was less than 0.3 kilograms per capita. Which countries are developing? In June, 1991 in Nairobi, a list of 43 Article 5 countries was agreed to. They are: Argentina, Bangladesh, Botswana, Brazil, Burkino Faso, Cameroon, Chile, China, Costa Rica, Cyprus, Ecuador, Egypt, Fiji, Gambia, Ghana, Guatemala, Guinea, India, Indonesia, Iran, Jordan, Kenya, Libyan Arab Jamahiriya, Malawi, Malayasia, Maldives, Mexico, Nigeria, Panama, Philippines, Republic of Korea, Sri Lanka, Syrian Arab Republic, Thailand, Togo, Trinidad and Tobago, Tunisia, Turkey, Uganda, Uruguay, Venezuela, Yugoslavia and Zambia. These countries can delay for ten years compliance with control measures. One wonders whether there will be moves to cut back this delay feature in light of the faster phase-out schedules being implemented in many of the 36 developed states that are Parties to the Montreal Protocol?

Production and Consumption

Section 604(c) of the Clean Air Act calls on EPA to promulgate regulations which will assure that U.S. consumption of CFC-11, CFC-12, CFC-113, CFC-114, and CFC-115 as well as halons 1211, 1301, and 2402 is reduced on the same schedule as production. "Section 601(b) defines consumption as production plus imports minus exports to nations which are Parties to the Montreal Protocol."[19] Reductions are made from the baseline year of 1986. In some cases, a firm can receive additional allowances through "intercompany trading, exports to Parties, and transfers of allowable production from other Parties."[20] However, trading allowances are offset. For instance, if a firm trades its allowance to manufacture CFC-12, it would have to reduce, or offset, its production by one percent in order to allow for mistaken estimates.

Destruction Technologies

It is well known that manufacturers of CFCs are looking for substitutes and that several are on the market already.[21] The Montreal Protocol also contemplates technologies which can destroy the harmful chemicals that have already been produced, but none as yet has been approved.[22] This is cause for concern for the ozone hole over Antarctica will be an annual catastrophe until at least the middle of the 21st Century, and it is estimated that the loss over the Arctic will be with us for at last several decades.

Taxation

Another part of the implementation process is taxation. Production is being curtailed in the United States due to an Internal Revenue Service (IRS) excise tax. Tax rates for ozone-depleting chemicals are being increased in the 102nd Congress. As currently projected in legislation passed by the House of Representatives and in the Senate's Finance Committee, there will be increases in the tax to $1.85/lb in 1992 (after July 1), $2.75/lb in 1993, $3.65/lb in 1994, and $4.55/lb in 1995, escalating 45 cents a pound each year thereafter.[23] The burden of taxation encourages manufacturers to find substitutes earlier than they might otherwise and without explicitly telling them to do so.

Roles of International Organizations

The role of UNEP in implementing the Montreal Protocol and the London Amendment has been highlighted before.[24] Attention should also be placed on the activities of the World Bank and the United Nations Development Programme (UNDP). On March 14, 1991, the Executive Directors of the World Bank passed a resolution establishing a Global Environmental Facility (GEF).[25] The GEF is "a pilot program under which grants or concessional loans will be provided to developing countries to help them implement programs that protect the global environment."[26] Four areas fall under the purview of GEF: protection of the ozone layer, limiting emissions of greenhouse gases, protection of biodiversity, and protecting international waters.

The GEF implementation process will be coordinated with the Financial Mechanism of the Montreal Protocol. UNEP, UNDP and the World Bank will develop annual work programs for an Ozone Projects Trust Fund, which will support programs only in countries which are signatories to the Montreal Protocol. UNEP's role will be strategic planning. "UNDP will play a key role in ensuring that the strategic planning maximizes the complementarity between developmental and environmental concerns."[27] The World Bank will serve as the Trust Fund Administrator. It is envisaged that GDF will be established at SDR 1 billion "so as to be a credible size to sus-

tain programs in a large number of developing countries.[28]

Regulatory Impact Analysis

The regulatory process in the United States is somewhat politicized. The sheer number of regulations in the U.S. economy may be a drain on competitiveness. On the other hand, regulations are necessary to preserve public goods such as the ozone layer. The administrator of the EPA, William Reilly, has said, "We have come out with 58 percent of all government regulations in this Administration,"[29] an amazing statistic as one thinks about it. Nevertheless, both Reilly and President Bush are very proud of the record of the Administration in terms of controlling ozone depleting substances.[30] For each rule, the EPA prepares a regulatory impact analysis (RIA). The RIA for the Montreal Protocol is based on a 1988 study which has been reviewed by the Science Advisory Board. The RIA factors in the cost of increased UV-B radiation on human health. For instance, the estimated increase in eye cataracts is roughly 0.5 percent for each percent increase in UV-B.[31] Other negative externalities are increased cancer deaths, estimated at 200,000 over the next fifty years and damage to crop yields. The RIA also estimates the health benefits should the ozone layer return to its normal density during the next century. Benefits to persons born before the year 2075 exceed control costs using discount rates of two, four, and ten percent.[32]

Conclusions

The implementation process for the Montreal Protocol and the London Amendment in the United States is thorough and stringent. it goes beyond U.S. obligations under international law. Current U.S. production is more than 40 percent below treaty levels and more than "20 percent ahead of Europe's nonaerosol production phasedown."[33] It is clear that law, policy and regulation are proceeding in a speedy, coordinated manner in this issue area which is so important to the health of humankind and other species. It cannot proceed as rapidly a it should because CFCs and other ozone depleting substances are so long-lived in the stratosphere. Nonetheless, from a legal and political perspective, this is a great success story. Policy is not symbolic politics and the implementation stage has not been corrupted by foot dragging and bureaucratic politics. What we see are quite rational and logical laws and policies at both the global and national levels.

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