



STRUGGLE TO SAVE OZONE DEPLETION IN INTERNATIONAL MILIEU: SPECIAL REFERENCE TO NEW MONTREAL PROTOCOL RULES

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Abstract

One characteristic of environmental law and policy is the central role environmental principles and policies play in the shaping of decisions, formulation of policies and governance in general. These principles are often hard to define and their application frequently varies. Such principles include the precautionary principle, the principle of prevention, the polluter pays principle and sustainable development. These principles form part of both international and domestic environmental law and policy, albeit to varying degrees. For instance, some argue for a right to sustainable development and others assert that the principles of prevention and precaution form part of customary international law. Taken together, these principles have, over the last 30 years, become an essential part of the environmental lawyer's vocabulary. More recently, the concept of environmental justice has emerged as a basis for questioning established norms of environmental law and policy in general and, in some instances, the environmental principles in particular. This research article aims to assess and report the effectiveness of Montreal Protocols and other conventions and treaties signed among countries to reduce the harmful effect of ozone depletion and progress made towards achieving targets at national and international levels.

Keywords: Ozone Layer, Montreal protocol and Environment Laws.

Introduction

International ozone regime's admirable flexibility¹ and its call for remedial action on the basis of mere evidence of a risk of harm rather than of actual damage², environmentalists have faulted the international ozone regime for not going far enough in guarding against the consequences of ozone depletion.³ The Helsinki Declaration has been the subject of similar criticism. Questions are being raised about the environmental risks of some of the substances that industry is now developing for use as substitutes for the chemicals to be banned under an amended Protocol.⁴ In addition, questions are being raised about the adequacy of the proposed amendments.⁴ Moreover, these concerns, however legitimate they may be, are surely compounded by the slowness with which the international community has been reacting to developing countries' call for concrete steps towards an equitable distribution of the costs of curbing ozone depleting substances world-wide. Redressing the threat to a globally shared natural resource such as the ozone layer inevitably raises an international equity problem. On the one hand, the benefits of ozone depleting substances have largely been limited to industrialized countries. Thus, North America, Europe and Japan presently account for more than 80% of the total consumption of the controlled chemicals. The per capita consumption in developed economies is in many cases more than ten times the per capita consumption in most developing nations.⁵ On the other hand, as the pollution-carrying capacity of the atmosphere is being exhausted, a globally effective ban on ozone depleting substances appears warranted to avoid globally distributed environmental, public health or economic detriments due to increased UV-B radiation. Costs associated with such a ban, for example those related to the development/acquisition of alternative technology or the use of often more expensive non-depleting CFCs and CFC substitutes.

Ozone Depletion- Raison de entrée for Depletion of ozone layer

Without ozone, life on Earth would not have evolved in the way it has. The first stage of single cell organism development requires an oxygen-free environment. This type of environment existed on earth over 3000 million years ago. As the primitive forms

¹ For an indication of the highly flexible process for amending Protocol regulations, see *supra* note 5. On this point see Lang, 'Luft und Ozone - (1986) 261. 278-80.

²For an indication of the acclaim that this "risk-based" regulatory approach has generally elicited, see, e.g., Benedick, 'A Landmark Global Treaty at Montreal', 2 Transboundary Resources Report (No. 2) (1988) 3.

³1 4 See, e.g., Wirth, 'Climate Chaos', 74 Foreign Policy (1989) 3, 14.

⁴For example, some have criticized industry for increasingly relying on HCFCs as substitutes for fully halogenated compounds, which are to be banned, even though HCFCs "contribute some destructive chlorine to the stratosphere"; see 'U.S. Seeks Tighter Rules on Ozone Protection', Chemical & Engineering News (1 May 1989) 8; see also "'Safe' CFCs Will Destroy Ozone, too', New Scientist (1 September 1988) 39.

⁵See 'Nations Back Tougher CFC Measures but Decline to Set Up Climate Fund', BNA Environmental Rep., Current Developments (1989) 121.



of plant life multiplied and evolved, they began to release minute amounts of oxygen through the photosynthesis reaction (which converts carbon dioxide into oxygen)⁶. known as such because most ozone particles are scattered between 19 and 30 kilometers (12 to 30 miles) up in the Earth's atmosphere, in a region called the stratosphere. The concentration of ozone in the ozone layer is usually under 10 parts ozone per million.⁷ Without the ozone layer, a lot of ultraviolet (UV) radiation from the Sun would not be stopped reaching the Earth's surface, causing untold damage to most living species. In the 1970s, scientists discovered that chlorofluorocarbons (CFCs) could destroy ozone in the stratosphere. Ozone is created in the stratosphere when UV radiation from the Sun strikes molecules of oxygen (O₂) and causes the two oxygen atoms to split apart. If a freed atom bumps into another O₂, it joins up, forming ozone (O₃). This process is known as photolysis. Ozone is also naturally broken down in the stratosphere by sunlight and by a chemical reaction with various compounds containing nitrogen, hydrogen and chlorine. These chemicals all occur naturally in the atmosphere in very small amounts. In an unpolluted atmosphere there is a balance between the amount of ozone being produced and the amount of ozone being destroyed. As a result, the total concentration of ozone in the stratosphere remains relatively constant. At different temperatures and pressures (i.e. varying altitudes within the stratosphere), there are different formation and destruction rates. Thus, the amount of ozone within the stratosphere varies according to altitude. Ozone concentrations are highest between 19 and 23 km.⁸ Most of the ozone in the stratosphere is formed over the equator where the level of sunshine striking the Earth is greatest. It is transported by winds towards higher latitudes. Consequently, the amount of stratospheric ozone above a location on the Earth varies naturally with latitude, season, and from day-to-day. Under normal circumstances highest ozone values are found over the Canadian Arctic and Siberia, whilst the lowest values are found around the equator. Weather conditions can also cause considerable daily variations. If we look from Indian perspective then with so much worry about the rapid ozone depletion taking place in various parts of the earth, Indian scientists are closely monitoring the ozone layer over India for possible depletion trends. Opinions are many and varied.⁹ For the period 1956 to 1986 "ozone measurements exhibit year to year variability, but do not show any increasing or decreasing trend over India."¹⁰

Ozone depletion occurs when the natural balance between the production and destruction of stratospheric ozone is tipped in favour of destruction. Although natural phenomena can cause temporary ozone loss, chlorine and bromine released from man-made compounds such as CFCs are now accepted as the main cause of this depletion.¹¹ It was first suggested by Drs. M. Molina and S. Rowland in 1974 that a man-made group of compounds known as the chlorofluorocarbons (CFCs) were likely to be the main source of ozone depletion. However, this idea was not taken seriously until the discovery of the ozone hole over Antarctica in 1985 by the Survey. Chlorofluorocarbons are not "washed" back to Earth by rain or destroyed in reactions with other chemicals. They simply do not break down in the lower atmosphere and they can remain in the atmosphere from 20 to 120 years or more. As a consequence of their relative stability, CFCs are instead transported into the stratosphere where they are eventually broken down by ultraviolet (UV) rays from the Sun, releasing free chlorine. Emissions of CFCs have accounted for roughly 80% of total stratospheric ozone depletion.

The various causes of ozone depletion are as follows-

- a) Huge combustion of fossil fuel and organic matter.
- b) Excessive use of nitrogenous fertilizers.
- c) Supersonic rockets and space shutters.
- d) Nuclear test
- e) Excessive use of chlorofluorocarbons.

Dimensions and effect of Ozone Depletion in International Scenario

A. Effects on Human and Animal Health

Increased penetration of solar UV-B radiation is likely to have profound impact on human health with potential risks of eye diseases, skin cancer and infectious diseases. UV radiation is known to damage the cornea and lens of the eye. Chronic exposure to UV-B could lead to cataract of the cortical and posterior subcapsular forms. UV-B radiation can adversely affect the immune system causing a number of infectious diseases. In light skinned human populations, it is likely to develop nonmelanoma skin cancer (NMSC). Experiments on animals show that UV exposure decreases the immune response to skin cancers, infectious agents and other antigens.

⁶ Alternative Fluorocarbons Environmental Acceptability Study (AFEAS), Washington, DC, 1995.

⁷ Andelin and John, "Analysis of the Montreal Protocol," Staff report, U. S. Congress, Office of Technology Assessment, Jan. 13, 1988.

⁸ Morissette, Peter M. "The Evolution of Policy Responses to Stratospheric Ozone Depletion". Natural Resources Journal, vol. 29, 1995.

⁹ S K Srivastava, head of the National Ozone Centre in New Delhi

¹⁰ V.Thaphyal and S M Kulshrestha of the Indian Meteorological Department

¹¹ Angell, J. K., and J. Korshover, "Quasi-biennial and Long-term Fluctuations in Total Ozone," Monthly Weather Review vol. 101, pp.426-43, 2005



B. Effects on Terrestrial Plants

It is a known fact that the physiological and developmental processes of plants are affected by UV-B radiation. Scientists believe that an increase in UV-B levels would necessitate using more UV-B tolerant cultivar and breeding new tolerant ones in agriculture. In forests and grasslands increased UV-B radiation is likely to result in changes in species composition (mutation) thus altering the biodiversity in different ecosystems. UV-B could also affect the plant community indirectly resulting in changes in plant form, secondary metabolism, etc. These changes can have important implications for plant competitive balance, plant pathogens and bio-geochemical cycles.

C. Effects on Aquatic Ecosystems

While more than 30 percent of the world's animal protein for human consumption comes from the sea alone, it is feared that increased levels of UV exposure can have adverse impacts on the productivity of aquatic systems. High levels of exposure in tropics and subtropics may affect the distribution of phytoplankton which form the foundation of aquatic food webs. Reportedly a recent study has indicated 6-12 percent reduction in phytoplankton production in the marginal ice zone due to increases in UV-B. UV-B can also cause damage to early development stages of fish, shrimp, crab, amphibians and other animals, the most severe effects being decreased reproductive capacity and impaired larval development.

D. Effects on Bio-geo-chemical Cycles

Increased solar UV radiation could affect terrestrial and aquatic bio-geo-chemical cycles thus altering both sources and sinks of greenhouse and important trace gases, e.g., carbon dioxide (CO₂), carbon monoxide (CO), carbonyl sulphide (COS), etc. These changes would contribute to biosphere-atmosphere feedbacks responsible for the atmosphere build-up of these gases. Other effects of increased UV-B radiation include: changes in the production and decomposition of plant matter; reduction of primary production changes in the uptake and release of important atmospheric gases; reduction of bacterioplankton growth in the upper ocean; increased degradation of aquatic dissolved organic matter (DOM), etc. Aquatic nitrogen cycling can be affected by enhanced UV-B through inhibition of nitrifying bacteria and photodecomposition of simple inorganic species such as nitrate.

E. Effects on Air Quality

Reduction of stratospheric ozone and increased penetration of UV-B radiation result in higher photo dissociation rates of key trace gases that control the chemical reactivity of the troposphere. This can increase both production and destruction of ozone and related oxidants such as hydrogen peroxide which are known to have adverse effects on human health, terrestrial plants and outdoor materials. Changes in the atmospheric concentrations of the hydroxyl radical (OH) may change the atmospheric lifetimes of important gases such as methane and substitutes of chlorofluoro carbons (CFCs). Increased troposphere reactivity could also lead to increased production of particulates such as cloud condensation nuclei from the oxidation and subsequent nucleation of sulphur of both anthropogenic and natural origin (e.g., COS and DMS).

F. Effects on Climate Change

Ozone depletion and climate change are linked in a number of ways, but ozone depletion is not a major cause of climate change. Atmospheric ozone has two effects on the temperature balance of the Earth. It absorbs solar ultraviolet radiation, which heats the stratosphere. It also absorbs infrared radiation emitted by the Earth's surface, effectively trapping heat in the troposphere. Therefore, the climate impact of changes in ozone concentrations varies with the altitude at which these ozone changes occur. The major ozone losses that have been observed in the lower stratosphere due to the human-produced chlorine- and bromine-containing gases have a cooling effect on surface. On the other hand, the ozone increases that are estimated to have occurred in the troposphere because of surface-pollution gases have a warming effect on the Earth's surface, thereby contributing to the "greenhouse" effect. In comparison to the effects of changes in other atmospheric gases, the effects of both of these ozone changes are difficult to calculate accurately. In the figure below, the upper ranges of possible effects for the ozone changes are indicated by the open bars, and the lower ranges are indicated by the solid bars.

International action and response to combat ozone depletion menace

The set of treaties governing the production and consumption of ozone-depleting substances is generally considered to have been an extremely successful response to a problem of great scientific and political complexity. Stratospheric diffusion ensures that the benefits of a thicker ozone layer will be a pure public good, and anthropogenic ozone depleting substances have long played a variety of important (and low-cost) roles in developed economies. Nonetheless, dozens of developed nations have agreed to dramatic reductions in the use of such substances, and well over 100 developing nations have agreed to a more lenient schedule of reductions. In addition, in an unprecedented example of North-South redistribution, the developed nations have as a group agreed to pay 100% of the compliance costs incurred by their poorer counterparts. National governments chose to address the problem of ozone depletion through international legal means, in the form of a series of treaties that I collectively call "the ozone-treaty regime" or "the ozone treaties." As a result, both of the default rules implicit in choosing treaties as an instrument of international legal cooperation, and as a result of the particular rules explicitly specified in the ozone treaties, the ozone-treaty regime has promoted a wide variety of repeated, formalized interactions between nations—"iterations," for short. The temporal boundaries of these interactions are clear.



The ozone-treaty regime is complex. It involves seven distinct enactments creating or modifying treaty texts in the regime. The same enactment may not only set forth a variety of substantive rules but also use a variety of procedural rules to determine which nations are partly and fully bound. The core of its approach to the preservation of the ozone layer is a complex vector of calculations that includes a factor representing the best efforts of scientists to reduce the intricacies of atmospheric chemistry to a single number for each regulated substance.

The first such enactment was the **Vienna Convention for the Protection of the Ozone Layer (Convention)**, signed in 1985 and entering into force in late 1988. This treaty set forth some vague promises of international cooperation and some concrete procedural rules to govern future enactments. Vienna Convention of Ozone Depletion In 1977 the United Nations Environment concluded a World Plan of Action called for intensive international ozone layer, and in 1981, authorized UNEP to draft a global stratospheric ozone protection concluded in 1985, is an agreement cooperate in relevant research the ozone problem, to exchange “appropriate measures” to prevent ozone layer. The obligations specific limits on chemicals that Programme (UNEP) on the Ozone Layer, which research and monitoring of the UNEP’s Governing Council framework convention on protection. The Vienna Convention, in which States agree to and scientific assessments of information, and to adopt activities that harm the are general and contain no deplete the ozone layer. The second enactment in the ozone-treaty regime was the **Montreal Protocol on Substances that Deplete the Ozone Layer (original Protocol)**, signed in 1987 and entering into force in early 1989. This treaty set forth some concrete substantive obligations based on a core regulatory approach described almost immediately below.¹² Each enactment after the Initial Enactments has been a revision to the original Protocol. Montreal The Montreal Protocol on Substances Layer is an international treaty layer by phasing out the production believed to be responsible for Ozone is a protocol to The Vienna Convention the Ozone Layer). The draft date this treaty entered into effect on had 7 different amendments. The London in 1990 and the second one in 1991. Other revisions include ones and 1999. It is believed that if the national ozone layer is expected to recover Protocol That Deplete the Ozone designed to protect the ozone of numerous substances Depletion. (When referring to an individual Revision, it is designated herein by the city in which the parties to the Protocol signed the relevant revisions, e.g., the London Revisions or Copenhagen Revisions; collectively, I refer to these subsequent enactments as the Revisions.) The Revisions have broadened and deepened the core regulatory approach of the original Protocol, and have adopted some supplemental approaches to the core regulatory approach, in a fashion that will be described in some detail in Part Two. Part One views the initial enactments as the “inputs” of the iterative process, while Part Two treats the Revisions as the “outputs” of that process. The core regulatory approach of the ozone-treaty regime involves setting yearly national quotas for the consumption or production of ozone-depleting substances. For each year, the quotas are set for each “group” of chemicals of similar molecular composition as a percentage of the consumption or production of that group compared to a baseline year.¹³ The Allowable Percentage may vary from group to group and from year to year, but the Allowable Percentage for a given group in a given year is the same for every nation.

The Convention-Protocol Approach and the Ozone-Treaty Regime

Scholars of international law have noted the development in the late twentieth century of what is in some ways a meta-treaty: the “convention-protocol” approach to a particular subject matter of international cooperation.¹⁴ The convention-protocol approach involves at least two separate enactments, one “convention” and one or more “protocols.” The convention sets forth vague substantive provisions that serve mainly to acknowledge the subject of that treaty as a matter worthy of serious further consideration. The convention includes procedurally oriented provisions that, in contrast, are quite specific. The convention contemplates one or more subsequent protocols, to be created and administered largely under the procedures set forth in the convention. The protocols provide the substantive detail of the treaty regime but does set concrete targets for reductions in greenhouse-gas emissions by developed countries and does include a market-mimicking scheme related to carbon emissions.¹⁵

¹²Vienna Convention for the Protection of the Ozone Layer, Mar. 22, 1985, 26 I.L.M. 1529 (entered into force September 22, 1988) [hereinafter Vienna Convention].

¹³Montreal Protocol on Substances That Deplete the Ozone Layer, September 16, 1987, 26 I.L.M. 1550 (entered into force January 1, 1989) [hereinafter Montreal Protocol]

¹⁴See, e.g., John K. Setear, An Iterative Perspective on Treaties: A Synthesis of International Relations Theory and International Law, 37 HARV. INT'L L.J. 139, 217-223 (1996).

¹⁵Kyoto Protocol to the United Nations Framework Convention on Climate Change, Dec. 11, 1997, art. 3-5,



■ International forum for ozone depletion and its status

I. International Political Action

On March 2, 1989, the European Economic Community (EEC) took the lead in safeguarding the ozone shield when it agreed to ban, by the year 2000, production and use of chemicals which destroy the ozone layer. Entries into force of the Treaties to save ozone layer are as follow:

1. Vienna Convention (22 Sep 1988)
2. Montreal Protocol (1 Jan 1989)
3. London Amendment (8 Oct 1992)
4. Copenhagen Amendment (14 Jun 1994)
5. Montreal Amendment (10 Nov 1999)
6. Beijing Amendment (25 Feb 2002)

There is total 197 states in the United Nation website that have either acceded or given accession as on 31st August, 2012.

National And Regional Reports on Ozone Research and Monitoring

Systematic observations and data analyses in Japan and Asia according to the National Reports states:

- Ozone and UV are being monitored operationally
- Some countries that operate M-124 ozonometers need financial or technical support to replace the instruments
- JMA has been operating the QA/SAC and the RDCC under the WMO's GAW Programme
- Long-term measurements of ozone and improvements in analyses allowed long-term trends and its height resolved changes

Research topics in Japan and Asian region Stratospheric ozone and related climate changes in Asian region are characterized by large amounts and trends of emissions of HCFCs and HFCs, latitudinal differences in the stratosphere-troposphere exchange and Brewer-Dobson circulation, and latitudinal differences in the total ozone distribution. Studies on the effects of increased UV radiation on human health, ecosystems, air quality, and biogeochemical cycles are strongly recommended, especially the effects of increased UV radiation under rising temperature conditions.

In South America, there is a strong political decision to sustain ozone and UV investigations. Some projects are supported directly with national funds. Other institutions as such as universities and research institutions also participate in these research fields.

- Collaboration with international projects was also strengthened with both logistic and scientific support.
- The Regional Calibration Center at the Argentine National Weather Service accomplished the scheduled tasks with the 2010
- The prevention of sunburn-related skin diseases and skin cancer for the population has been taken as a subject of Public Health, with official annual diffusion campaigns.
- The ozone layer is both acting in response to current climate variability and change, as well as affecting climate over the Southern Hemisphere. Studies and monitoring of coupled climate change and ozone variability must be emphasized in South America and in the Antarctic Continent.

In The United States of America, CFCs controlled under the Montreal Protocol are decreasing, whereas the replacement HFCs are increasing with apparent large-scale production in developing countries. The total equivalent chlorine in the atmosphere is decreasing, with a return to pre-ozone-hole levels in the Antarctic possibly in the 2070-time frame. The U.S. agencies place high attention to focused ground-based and airborne campaigns designed to address critical questions that are highlighted in past ORM reports and the Ozone SAP reports. These campaigns serve to improve our understanding of key physical and chemical processes that control the levels of ozone.

Canada operates an eight-station Brewer Ozone Spectrophotometer Network and a tenstation ozonesonde network. The Canadian Space Agency has worked collaboratively with the atmospheric science community in both government and academia to develop a significant role in the space-based observation of stratospheric ozone and related chemical constituents.

India signed the Montreal Protocol along with its London Amendment on 17-9-1992 and also ratified the Copenhagen, Montreal and Beijing Amendments on 3rd March, 2003. Mindful of the precautionary measures needed for the protection of the Ozone Layer, otherwise its modifications would result into the amount of solar ultraviolet radiation having biological effect that reaches the earth surface and potential consequences for human health, for organisms, eco-systems and material, Government of India as a Party to the Protocol continues its action, measures and adoption of necessary regulations with the sole objective of protection of Ozone Layer. Committee on Subordinate Legislation, Rajya Sabha has examined the Ozone Depleting Substances (Regulation and



Control) Rules, 2000. In compliance with certain recommendations of the Committee in order to specify a time limit for completing the process of registration, renewal and cancellation under various provisions of these Rules, necessary amendments to the ODS Rules were notified on 27.8.2003.

It is also proposed to amend the Rules inter-alia to extend the time limit for registration of enterprises using ODS in activities specified in Ozone Depleting Substances (Regulation and Control) Rules, 2000 as the same has expired on and after 19-7-2002.

In American Lands Alliance, Et A v. Gale A. Norton, Secretary of the Department of the Interior, et al.,¹⁶ and Center for Biological Diversity, v. National Highway Traffic Safety Administration¹⁷ the court ordered respective states to take concerned action in order to save environment. The myriad directions given by the court regarding environmental concern also includes measure to curb the ozone depletion. It would be dealt extensively by the researcher in the project.

Global campaigning to solve the problem of ozone depletion along with recommendation at international forum.

Safeguarding earth's protective ozone layer became a global priority after discovery that certain compounds were found to deplete this layer, posing substantial risks to human health and the environment. The Vienna Convention for the Protection of the Ozone Layer in 1985 and the Montreal Protocol on substances that deplete the ozone layer in 1987 have eventually led to the reduction by more than 90 percent of these damaging compounds entering the atmosphere. After more than a decade of international cooperation, the concentration of some of these chemicals in the atmosphere has already started to decline. Some of the recommendations are:

- A. Phasing out ozone-depleting substances (ODS) is a highly effective means for achieving immediate, and future, global environmental benefits.
- B. The countries of Central Asia are principally targeted for activities that strengthen institutions that control ODS. Countries are expected to demonstrate a willingness to continue support for those institutions and a willingness to adopt such policies.
- C. Activities to enable compliance and reporting are also supported. Education and training activities are also a priority, including the dissemination of experiences and promotion of regional cooperation. Where possible, projects and activities will be designed to integrate with a country's framework for the sound management of chemicals. This will also help GEF partner countries ensure that any residual amounts of CFCs used or produced are phased out according to expectations.
- D. The Montreal Protocol mandates a target of 75 percent consumption phase-out of HCFCs by 2010. Although most countries are on target, some countries in the region would require assistance in meeting it. For investments to phase out HCFCs, preference will be given to low-GHG technologies and substitutes to reduce the overall emissions of halogenated gases

Conclusion

The urgency of combating ozone depletion has resulted in an unprecedented international effort to halt and reverse the problem. World leaders have acknowledged that international cooperation is imperative to protect the Earth's environment. The Montreal Protocol is just one result of this international cooperation. In the summer of 1990, as a result of further cooperation, the Protocol will be strengthened to accelerate the phase-out schedule of CFCs and halons. It is also very likely that the amended Protocol will call for regulation of carbon tetrachloride and methyl chloroform. In addition to the Protocol, other efforts also contribute significantly to the protection of the ozone layer. In the United States, Clean Air legislation containing stratospheric ozone protection provisions will be enacted in 1990. The European Economic Community has assumed a leadership role in ozone layer protection, calling for quicker phase-outs of CFCs, halons, carbon tetrachloride, and methyl chloroform. Additionally, local governments, environmental organizations, and individuals are effectively safeguarding the ozone layer for future generations. Local governments have enacted and enforced ozone protection statutes, while environmental organizations have brought lawsuits to protect the ozone layer. These organizations have also educated society regarding ways in which everyone can combat ozone depletion. Individuals have boycotted ozone depleting products and pressured their elected officials. This global effort to protect and repair the earth's stratospheric ozone layer is a forerunner to future action concerning global environmental change. Environmental deterioration does not respect national and international boundaries. Thus, international cooperation is essential to effectively confront these problems.

¹⁶ Civil Action No. 00-2339 (RBW). United States District Court, District of Columbia. Jan. 30, 2003.

¹⁷ 538 F.3d 1172, 67 ERC 1393, 08 Cal. Daily Op. Serv. 10,777, 2008 Daily Journal D.A.R. 12,954