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Global environmental governance: Ozone regime and the North-South dimension

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Abstract
The interplay of several factors contributed to the emergence of global environment as one of the central themes in global politics: intensification of the process of economic globalization, new scientific evidence, role of the epistemic community, significant increase in environmental social movements, and the role played by the United Nations. The North-South dimension has been the central political context of global environmental politics since the first United Nations Conference on Human Environment held in Stockholm in 1972, and continues to be so in the new millennium. The collective position of the South aggregated and articulated by the Third World coalition (Group of 77) of 'common but differentiated responsibilities' and 'additional financial assistance' continues to inform the Southern position in negotiations for regime formation on the entire spectrum of global environmental issues. The negotiations for the ozone regime brought to the fore the North-South conflict, and the agreement on Montreal Protocol could be reached only after the North accepted the demand of the South of common and differential responsibilities, and the creation of a multilateral fund to defray the cost of switching to substitute technology. After the multilateral fund was created by the industrialized countries through the London Amendment to the Montreal Protocol that the developing countries became signatories to the protocol. The ozone regime formation suggests that the South has a political leverage in regime formation on global environmental issues.

Keywords: global environmental politics, global environmental governance, North-South conflict in global environmental politics, ozone regime formation

Introduction

The early 1960s marked the beginning of the contemporary phase of globalization as well as contemporary phase of environmentalism [1]. The intensification of the processes of globalization, particularly economic globalization and its negative impact on the environment, new scientific evidence on degradation of the global environment and the role of the epistemic community, emergence and significant increase in the environmental social movements across the world, and the role played by international organizations, particularly the United Nations, led to increasing awareness and concern about the degradation of the environment. Since the early 1970s, global environment has been increasing in salience and has now become one of the central themes in global politics. The United Nations took the lead role in raising the profile of the global environment and in bringing it to the center stage of global politics.

The contemporary phase of serious concern with global environment and the need for international cooperation began with the holding of the United Nations Conference on Human Environment (UNCHE) in 1972 in Stockholm, Sweden. The conference underscored two important aspects in relation to the global environmental degradation. First, it underlined the collective human responsibility for protecting the environment on a global scale. Second, it set forth the idea that environmental protection was necessary for human and social and economic development. It was one of the largest conferences and was attended by more than hundred states and more than four hundred nongovernmental and international organisations [2]. The outcome of the conference were the Declaration on the Human Environment and Action Plan to implement the declaration. One of the substantive aspects of the Action Plan was approved by the United Nations General Assembly and led to the creation of United Nations Environment Programme (UNEP) in Nairobi, Kenya; the first United Nations specialized agency to be located in the Third World.

The North-South conflict was apparent during the preparatory negotiations to the UNHCE. The central preoccupation of the developing countries in the 1970s, and continues even today, was economic development. Global environmental concerns were perceived by the South as primarily of Northern interest. Therefore, the Southern countries were interested in evolving an approach to environment that was in harmony with the pursuit of economic growth. Central to the strategy adopted to transform the agenda was 'the necessity to link environment to development since only through this device could the priority given to social and economic development be maintained' [3]. In addition, the developing countries also wanted that any international environmental agreement should be based on considerations of equity and justice, and the principle of sovereign equality. In sum, as the main responsibility of the global environmental degradation lies with the industrialized countries, any international environmental agreement should not place a disproportionately heavy burden on the developing countries nor should it interfere with the principle of sovereign equality of states.

The North-South conflict evident in pre-Stockholm preparatory negotiations and the search for a North-South consensus led to linking of environment and development. By linking of environment and development, the Southern and Northern concerns were accommodated. The final report of the pre-Stockholm negotiations located the origins of environmental degradation in poverty and

industrialization; thus, establishing an inextricable link between development and environment. Importantly, environmental problems came to be perceived in the broader context of human welfare and therefore making it necessary to accord priority to the problems of the developing countries. This wider definition of environmental problems was adopted at the UNCHE. Thus, the developing countries were able to redefine the environmental agenda for UNCHE to be held in 1972. This wider definition was retained in the 1970s, 1980s, 1990s, and also in the new millennium.

The issue remained dormant thereafter until the mid-1980s but gained momentum in the late 1980s and emerged with increased salience in the early 1990s with the holding of the United Nations Conference on Environment and Development (UNCED) held in Rio in 1992. It was the largest international conference ever held and was also called the 'Earth Summit' as an expression of serious concern with the degradation of the global environment. The substantive outcomes of the conference were *Agenda 21*, international conventions on climate change, the preservation of biodiversity, and desertification. As a follow up to the Earth Summit, the World Summit on Sustainable Development (WSSD) was held in 2002 at Johannesburg. In the context of environment and development, the exclusive focus was on sustainable development. Eradication of poverty was clearly emphasized alongside access to provision of clean water, sanitation and improvement in agricultural practices. Another ten years later, Rio + 20 was held in Brazil. It set the sustainable development goals for the future.

Global Environmental Governance

The 1990s witnessed many systemic changes taking place in the world. Proliferation of issues as well as actors and the inadequacy of existing international organisations to deal effectively with many problems created an environment for a change in the nature of governance. The systemic changes that impelled this rethinking include globalisation, ending of the cold war, technological advances, and growth of transnationalism [4].

The intensification of the processes of globalization led to a change in the unit of analysis from international system to global system. The international system was state-centric with nation-state as the only actor of consequence. The global system has three important actors (state as well as nonstate actors): states, global social movements, and transnational corporations. Although states continue to be the most important actors in the global system, the global social movements and transnational corporations are also perceived as actors of some consequence. This shift from the international system to global system, and the complexities of the issues requiring global solutions, led to the articulation of global governance.

The Commission on Global Governance in its 1995 report defined global governance as 'the sum of many ways individuals and institutions, public and private, manage their common affairs. It is a continuing process through which conflicting or diverse interests may be accommodated and cooperative action may be taken [5].'

The global environment is one of the central themes in global politics and efforts have been on since the United Nations Conference on Human Environment was held in 1972 to evolve global environmental governance. The global environmental governance refers to that aspect of global governance which relates to global environment. One of the substantive aspects of global governance is the creation of regimes through international cooperation, and global environmental governance is the creation of regimes on environmental issues. 'Regimes are principles, norms, rules and decision-making procedures around which actor expectations converge [6].' Most of the global governance takes place through formal treaties and the institutions created to implement them. Environmental treaties are referred to as multilateral environmental agreements (MEA). MEA includes treaties, conventions and protocols.

The global environmental degradation includes a range of issues. Speth and Hass have identified ten principle global environmental threats. First, acid rain and regional-scale pollution. Second, ozone depletion by chlorofluorocarbons and industrial chemicals and methane from agriculture. Third, global warming and climate change due to increase in Green House Gases (GHGs). Fourth, deforestation, particularly in the tropics. Fifth, land degradation due to desertification, soil erosion, and salinization. Sixth, freshwater pollution and depletion. Seventh, marine threats including overfishing, sea level rise and habitat destruction, acidification, and pollution. Eight, threats to human health from urban air pollution. Nineth, loss of biodiversity and decline in ecosystem services. Tenth, excessive nitrogen production and overfertilization. These ten threats are caused by overuse as well as misuse of renewable sources and the increase in pollution. In sum, these ten threats are impacting the Earth's bearing capacity by threatening natural endowment, productivity, and habitability [7].

Ozone Regime and the North-South Dimension

Ozone layer is found in the in the lower region of the stratosphere and is about 15-35 kilometres above the Earth. It absorbs most of the Sun's ultra violet radiation, and about 97-99% of Sun's ultraviolet light. The depletion/thinning of the ozone layer due to indiscriminate production and consumption of Ozone Depleting Substances (ODS) increases ultra violet radiation to the Earth and poses health risk to humans as well as damages the ecological system. The ODS include chlorofluorocarbons (CFCs), hydro chloro fluoro carbons (HCFCs), carbon tetrachloride, methyl chloroform, methyl bromide, hydro bromo fluoro carbons, and halons [8]. Of these, CFCs constitute the dominant substance in the category of ODSs. These ODS are also powerful greenhouse gases with a long life-span.

Threat to ozone was first revealed in 1974 through the research of Molina and Rowland [9]. Their research showed that chlorofluorocarbons could release chlorine in stratosphere. Chlorine would then set off a chain reaction in stratosphere that would deplete ozone layer there. This pioneering research led scientists, mainly in the developed countries, to conduct intensive scientific research on CFCs and their impact on ozone layer. The environmental groups, media and the epistemic community raised the profile of the issue. The increasing salience accorded to the issue of ozone layer led the United States, Canada, and Nordic countries in 1977 to approach the United Nations Environment Programme (UNEP) to commence a fact-finding and issue-definition study. Thus, the issue of ozone depletion was brought on to the international environmental agenda.

The political process of defining the issue began with the adoption of the World Plan of Action by the UNEP experts' conference held in 1977. The definition and the proposed

policy that emerged from the conference was based on scientific uncertainty relating to the causes and consequently the seriousness of the issue of depletion of ozone layer. Nonetheless, the UNEP initiated multilateral negotiations for a convention for the protection of the ozone layer. The lead states in the negotiations and bargaining process for a Framework Convention for the Protection of the Ozone Layer were the five major CFC producing states: the United States of America, Great Britain, France, Germany and Italy. These countries accounted for 75% of the world-wide production of CFCs [10]. the conflict of interests amongst the developed countries, particularly between the United States and the European Community, led to slowing down of the political process of arriving at a collective decision. The impasse in negotiations persisted until the new scientific evidence emerged that there was a possibility that the ozone layer could collapse. As the conflict of interests persisted, the only compromise that could be arrived at in 1985 was a non-specific generalized agreement known as the Vienna Convention for the protection of Ozone Layer. The convention did not impose obligations on the signatory states to reduce production of ozone depleting substances. It was limited to exchange of scientific information. Nonetheless, the positive outcome of the convention was to resume negotiations on a binding protocol on ozone layer depletion.

When the international diplomatic process of ozone regime formation began in 1977, the Southern countries were able to aggregate and articulate their collective position on the issue through the Third World coalition, the Group of 77. Their position clearly underlined that the main responsibility of ozone depletion lies with the industrialized countries because, historically, they have dominated the production and consumption of CFCs, the main source of destruction of ozone layer. Therefore, the developing countries should not be pressured to circumscribe their development process by restricting the use of CFCs or spend their limited financial resources on importing substitute technology from the industrialized countries. In addition, the South argued that the industrialized countries should either provide low-cost access to substitute technologies or additional financial assistance to buy substitute technology.

During the phase of ozone regime formation diplomacy, the use of CFCs was increasing in the developing countries as it was an important ingredient in industrialization. The production of CFCs in the developing countries was also increasing because the higher level of industrialization requires higher consumption of CFCs. Since the developing countries had not reached the levels of industrialization that produce significant CFCs emissions, they hardly had any interest in the ozone diplomacy.

The international negotiations for a binding protocol on ozone depletion began in 1986. The conflict of interests persisted between the developed countries during the initial phase of negotiations. However, the protracted negotiations were successful in forging a compromise between the developed countries. The Montreal Protocol on Substances that Deplete the Ozone Layer was signed by twenty-four states and the European Community in 1987 and it came into force on 1 January 1989 after eleven states accounting for two-thirds of the world consumption of CFCs and halons ratified it. In contrast to the Vienna Convention, the Montreal Protocol set specific targets for the industrialized countries for reducing CFC production and a freeze on the production of halons. The industrialized countries were required to reduce their production of CFCs to 50% of the 1986 level by 1999. Because of the pressure generated by the Third World coalition, the developing countries were able to bargain for a special provision in the protocol. The production ceiling for the production CFCs and halons could be exceeded by the developing countries to cover their domestic requirements. In addition, the developing countries were allowed a grace period of ten years to comply with all the measures if their annual per capita consumption of CFCs and halons was less than 0.3 Kg [11].

The Montreal Protocol mandated a four-yearly review conference. The first review conference was held in London with the twin objectives of amending the targets of CFCs, and to achieve a wider adherence to the protocol by the developing countries. On the issue of amending the Montreal Protocol to achieve faster phasing out of CFCs, the conflicts of interests between the industrialized countries surfaced again. After hard negotiations between two group of industrialized countries, the final outcome of the conference was a compromise to amend the protocol to phase-out CFCs by the year 2000 in two phases: 50% of the 1986 level by 1995, and 85% by 1997.

The second objective was a contentious one. The negotiations focussed on the two key demands of the Third World coalition, the Group of 77: first, technology transfer from the industrialized countries to the developing countries, and second, establishment of a multilateral fund to finance the developing countries' transition to environmentally-friendly substitutes for CFCs. The establishment of a multilateral fund was indeed a very contentious issue and the United States, Japan, and the European Community opposed it. The active participation of the developing countries, particularly the large developing countries, and the unity displayed by them led to the reversal in the policy of the United States, Japan and the European Community, and the establishment of a new multilateral fund for the implementation of the Montreal Protocol [12]. It was the cohesiveness of the Third World coalition, Group of 77, and the sustained pressure generated by it that led to the first ever Multilateral Fund under an international environmental agreement to address the demands of the developing countries, particularly that of large developing countries such as India, China and Indonesia. Once the decision to establish a multilateral fund was taken by the conference, the large developing countries, and influential members of the Third World coalition, became early signatories to the London Amendment to the Montreal Protocol [13]. Importantly, the Montreal Protocol included the clause that 'developing countries have equal but differentiated responsibilities.' This clause continued to inform the subsequent amendments to the protocol.

The Montreal Protocol continues to be amended in the light of new scientific evidence, and technical and economic developments. There are two significant amendments that haven been made to the protocol. The first is the 'Phase out of HCFCs-the Montreal Amendments' in September 2007. Hydro chloro fluoro carbons (HCFCs) gases deplete the ozone layer and therefore were being phased out under the Montreal Protocol. However, in the light of new scientific evidence, HCFCs were found to be both ODS and powerful greenhouse gases; commonly used HCFC is nearly 2000 times more potent than carbon dioxide in relation to its global warming potential (GWP). Therefore, in the light of

increasing global mean temperature, the parties to the protocol decided to accelerate their schedule to phase out HCFCs based on the principle that 'developing countries have equal and differentiated responsibilities'. Although developed countries had been reducing their consumption of HCFCs, under the amendment they were required to completely phased them out by 2020. The developing countries agreed to start their phase out process in 2013 and the complete phase-out by 2030 [14].

The second important amendment to the Montreal Protocol was the 'Phase Down of HFCs-the Kigali Amendment' in October 2016. It entered into force on 1 January, 2019. The issue had been under negotiations between the parties to the Montreal Protocol since 2009. The hydro fluoro carbons (HFCs) were introduced as non-ozone depleting alternatives to promote the timely phase out of CFCs and HCFCs. Although HFCs do not deplete the stratospheric ozone layer, some of them have a high Global Warming Potential (GWP). The uncontrolled growth of HFC emissions was posing a challenge to keep the global mean temperature below 2^0C in this century. As the production and consumption of HFCs as a substitute for CFCs and HCFCs was increasing, the amendment added HFCs to the list of controlled substances, and set a timeline for the gradual reduction of up to 80-85% by the late 2040s. The industrialized countries were expected to complete the first set of reductions by 2019. The developing countries were to follow with a freeze of HFCs consumption levels by 2024, and some developing countries by 2028 [15]. The reduction of HFCs was considered as a 'climate co-benefit'.

Until now, the ozone regime represents perhaps the most robust and effective environmental regime as most of the countries party to it continue to meet their commitments to reduce or eliminate production and consumption of ozone depleting substances. If the trend continues, it is expected that the ozone layer may be able to recover in the twenty-first century.

According to the UNEP 'Ozonaction' report [16], without the Montreal Protocol, ozone depletion would have increased tenfold by 2050 compared to the current levels. And the consequences would have been millions of cases of cancers and eye cataracts. Because of the Montreal Protocol, an estimated two million people are being saved each year from skin cancer.

Conclusion

The forgoing discussion on global environmental governance and related regime formation on the global environmental issue of ozone depletion suggests the presence of a strong North-South dimension in global environmental politics. In fact, the North-South dimension is present over the entire spectrum of environmental issues and has been acknowledged by many analysts [17]. According to Marc Williams, 'North-South issues are inscribed in the international environmental agenda at two structural levels: in the equality of responsibility for environmental degradation and in the relative capabilities to cope with this' [18]. Therefore, for a successful regime formation on any environmental issue, the industrialized countries have to include the collective position of the Third World coalition which clearly states that any regime formation on global environmental issues should be guided by the principle of equity and common but differentiated responsibilities and respective capabilities, in the light of different national capabilities.

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