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Challenges of International Environmental Cooperation

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CHALLENGES OF INTERNATIONAL ENVIRONMENTAL COOPERATION

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I. INTRODUCTION

Extrapolating from the quantum of man's interventions into nature, and the consequent grievous degradation to the environment, Martin Rees spoke seriously of the possibility of this century being our last. In his words "We, the human race, might not survive the twenty first century" (Rees 2004). The globe is indeed under threat. Climate change is real and happening. Very recent studies show that the temperatures of the oceans are rising (Enuka 2017; Ona-Maria 2015; Dryzek 2005). The ozone layer is depleting, with negative implications for food availability, freshwater supply, human health etc. Humanity seems to be heading for the limits at an ever-increasing space, as global population grows exponentially. Scarcity of essential raw materials, water and air pollution, disastrous effects of deforestation, increase in global warming and its concomitant threats to human security, are problems which require solution at the earliest if humanity is to be saved from an unexpected catastrophe. The environment has therefore, over the years remained a factor over which states' relationship in the international system has been carried out, both in cooperative manifestations and conflictive expressions. Because these challenges are *transfrontier*, travelling

across national borders, states in the international system are getting no less pressure to engage in greater international cooperation. Consequently, over the years, there have been various international efforts, starting with the convening of Stockholm Conference in 1972, and later Rio de Janeiro Conference and Johannesburg Conferences in 1992 and 2002 respectively. Through these conferences, the international community has been able to bring into existence and enforcement a plethora of international environmental laws. But notwithstanding the obvious successes that have been recorded by these cooperative efforts, international environmental cooperation is still fraught with myriad of challenges. It is to highlight these challenges and the dangers they portend on the international environmental system, that this paper is aimed.

II. INTERNATIONAL ENVIRONMENTAL PROBLEMS

This section examines the global environmental problems that have been the subject of international cooperation and treaty-making. An environmental problem becomes global or international in a political sense when it crosses national borders or affects the global commons. A case has been made that all environmental problems are international (O'Neill 2009). If they don't literally spill over national borders, they are likely to occur in many, if not all countries. The realization of these stark and dark realities by the nations of the world has elicited efforts leading to the adoption of several solemn declarations and conclusion of various multilateral treaties embodying resolve of the international community to combat the rampant global environmental degradation and deterioration that threaten the very survival of humanity on planet earth. Some of these environmental problems are:

Ozone Layer Depletion: The ozone layer acts as the world's 'sun glasses' protecting all living organisms from the sun's harmful ultraviolet radiation. Like a carpet that is divinely placed, the ozone layer protects man and his environment from being directly and harmfully hit by the sun. Worrisomely, the ozone layer has been found to be depleting and leaking. A depleted ozone layer allows increased levels of ultraviolet radiation to get through to earth. The consequence of this depletion to the environment is global, gruesome and grievous. All countries are, and will be affected, though some regions

are more exposed than others. Ozone layer depletion can harm animals and plants. Plant damage can result in lower yields and less food production. Plant plankton can also be affected and harm the ecosystem of the seas. The problem can lead to immune system deficiencies and increase the likelihood of skin cancer, infectious diseases and eye disorders, especially cataracts (Skjarseth 2012). On the damaging consequences of depletion of the ozone, Todd Sandler has this to say:

Ultraviolet radiations are absorbed into the skin of animals, and can damage essential molecules such as DNA, thereby leading to harmful effects including tumors. Of all the current global concerns, the thinning of the ozone layer could cause the greatest cataclysmal effects, resulting in the mass extinction of species (for example amphibians), the disruption to the food chain, the induction of skin cancers, impairment of the immune system, and other ailments (for example cataracts) (Sandler 1998: 107).

Loss of Biological Diversity: Biological diversity or biodiversity refers to the variety of life on Earth, including the variety of species, the genetic variability within each species, and the variety of different ecosystems. The Biodiversity Convention defines it as meaning "The diversity of ecosystems and species, as well as variation in genetic material within species" (Rosendal and Shei 2012). In any ecosystem, species exist in dynamic interaction. Some systems are simple, and others contain vast numbers of different species. "Climatic variation, differences in top soil and historic events such as ice ages, continental drift and evolutionary processes have produced a wide variety of habitats and ecosystems around the globe" (Sandler 1998: 92). Each of these worlds contains unique biological resources giving us medicines, food and many other natural provisions essential to our survival. Tropical forests house over half of the world's species of plants and animals, so that the clearing of these forests would have a significant impact on the earth's genetic diversity. In addition, the forests sequester significant amounts of carbon, which would, if released, accelerate global warming. Tropical forests yield some global public goods. They also give rise to localized public and private outputs to the host nations and their neighbours. Private or host-nation specific benefits include timber and non timber products. For the host nation and nearby states, rain forests provide local public goods in terms of watersheds, erosion control, localized climate effects, and nutrient recycling.

Tropical biodiversity provides people with important benefits. For example, one quarter of all prescription drugs sold in the United States are derived from tropical plants (Sandler 1998). The biodiversity also provides genetic material useful in genetic engineering

for creating for instance, more pest-resistant crops. There is no telling what future cures could be found from these tropical plants.

Ecosystems, which took these millions of years to perfect are in danger as species population are observably declining. Ecosystems are being damaged and biological diversity lost is at an increasing disturbing rate. The extinction rate is 100 to 1000 times greater than when human beings set out on the path to global dominance. The worry has been that :

"If current rates of loss of tropical forests continue for the next 30 years, the projected number of species that the remaining forest could support would be reduced by 5 to 10 per cent relative to the forest in the absence of human disturbance. This rate of decline would represent 1,000 to 10,000 times the expected rate of extinction without deforestation by humans" (Watson et al 1998: 17).

Loss of forest biodiversity results from habitat loss, fragmentation, and over-harvesting of plant and animal species. These losses of particular species in forests may not have the immediate or dramatic effects that large-scale conversion to other uses may have. However, the loss of species richness can increase the vulnerability of forest ecosystems to other environmental stress, such as disease, pollution, wind, and flooding. If keystone species are lost, dramatic reorganizations of entire forest ecosystems can occur, changing the ecosystem services on which humans depend.

Climate Change: Climate simply defined is the characteristic weather of an area which includes temperature, rainfall, sunshine, wind, humidity etc (A to 2010). Climate change therefore, is the change in climate over time, whether due to natural variability or as a result of human activity (Oladipo 2012). Climate change is real and happening. After many years of skepticism, the reality of climate change has now assumed a global acceptance. Over the time, average temperatures in the Arctic region have increased by about seven degrees, a result of a feedback cycle that exists there (Giddens 2009). Sea levels rose over the course of the twentieth century, although there is considerable controversy among scientists about just how much. Warming is likely to intensify the risk of droughts in some parts of the world and lead to increased rainfall in others. Documented impacts of climate change also include the spread of disease vectors including malaria; the destruction of coral reefs from warmer seas and extreme weather events; and threats to low-lying island states (Eze 2010). More people will become water-stressed as hydrologic variability affects water quality and supply. In addition to altering biophysical systems, climate change will affect human health.

Population: Another major global environmental problem is overpopulation. The annual increment to the world's population in 1900 was about 10 million people. Today, it is nearly 100 million (Worldo Meters 2017). According to that same source, the population figure of the world stands seven and half billion (7.5billion) as at April 2017. From various other studies (Myers 2003, UNDP 1994, Haub 1995), it is projected that the world's every eleven years will experience the addition of another billion until 2021, from which time it will take fourteen years to reach nine billion (Sandler 2005). Population expansion places strains on the soils, the forests, the water supplies, the fisheries, and the atmosphere that degrade these natural assets permanently. Once the ecosystem's 'carrying capacity' is surpassed, stress on the system causes a permanent degradation. Prior to this capacity being reached, an ecosystem is able to absorb the pollutants without being noticeably impaired. Pressures on a host of ecosystems are predicted to exceed carrying capacity as population expands (Sandler 2005). "In many arid developing countries, quick population growth threatens to reduce per capita water availability to levels below those required to meet minimum household, industrial, and agricultural needs" (Homer-Dixon 1995: 56). Overpopulation places demand on the available livestock and food required to feed the fast teeming population. The result of this has been that in order to meet up with adequate supply that meets the need and demand of the increasing population size of most places, food had to be genetically modified. Records have it that cancer and other disease that have grievous health consequences, are resultant effects of genetically modified food.

With population growth leading to greater consumption of natural resources, and increasing climate change effect over environmental resources, an upsurge in scarcity-driven conflicts, at levels not seen in the past, has been the case. As observed by Derman, Odgaard and Sjaastad (2007), "scarcity of environmental resources arising from blowing rate of climate change and population growth, generate corresponding processes of acute conflict formation, migration and subsequent group-identity conflicts". Scarcity-induced resource capture by Moors in Mauritania helped ignite violence over water and cropland in the Senegal River basin, producing tens of thousands of refugees (Kegley and Wittkopf 2003).

Water Scarcity and Water Pollution: Of all the global environmental problems, water scarcity and the absence of clean water probably present the most immediate threat to humans in this and the next century. Water is critical for human life and for the survival of almost all ecosystems. Water is indispensable for terrestrial and human life, and non-substitutable in most domestic and productive activities. Today, scientific findings are that water is scarce, and will yet be. The issue of water

scarcity as argued by Richard Ward (2010), is acquiring a new impetus. Not too long ago, it was primarily viewed as part of the suite of issues which make up climate change, but like carbon emissions, water is fast acquiring its own identity, and demanding serious and urgent attention. Scholarships of divergent areas and political leaders over the past decades have focused broad attention on water as key resource under threat. The 2008 Goldman's 'Top Five Risks' Conference identified a catastrophic global water shortage as a great global risk during the 21st Century.

Air Pollution: Air pollution may be defined as imbalance in the quality of air so as to cause ill effects (Eugene 2005). Air is a reservoir of oxygen needed by man and other animals, and carbon dioxide essential for plants. There could be no life on earth without air. Without air there would be no clouds, no winds, no rain, no snow and no fire. Air is an insulating blanket around the world (Eugene 2005), therefore, any contamination in air may disturb the whole atmospheric system. All the major and minor components of the air are biologically important and the participation of each in the living process is, in some cases, critically sensitive to slight changes in concentration. Whenever the proportion of the components is disturbed by man, that becomes a cause of air pollution, which today, unarguably has become a major global problem. According to Ona-Maria (2015) "Our enormously accelerated abuse of the atmosphere has become a health hazard and a threat to life, damaging both plants and animals in areas polluted with poisonous fumes, dusts and smoke". Growing industrialization and transportation and the increasing use of pesticides and unwanted chemicals in the air has rendered the whole atmosphere polluted and its impact is very dangerous not only on man and other living organisms, but also on environment itself. Enuka (2017) argues that the effects of air pollution are many and multifaceted. Among other effects, the growing air pollution is a health hazard for man. Air pollution mainly affects the respiratory system. Bronchitis, emphysema, asthma and lung cancer are some of the chronic diseases caused due to exposure to polluted air. Lead emitted from automobile exhausts is a cumulative poison, dangerous particularly to children and may cause brain damage. These problems are not exclusive reserve of any particular country or region. They are global problems with threatening hazardous implications for the entire world.

Acid Rain: Acid rain is the term used to describe the deposition of acidic air pollution. Although some air pollutants fall directly back to Earth, a lot of it returns in rain, snow, sleet, hail, mist or fog (Eugene 2005). When power stations, factories, houses and cars emit pollution into the air, it contains chemicals known as sulphur dioxide and nitrogen oxide. These chemicals may either fall directly back to the earth due to gravity, or they mix



with moisture in the air to form acids. Once acids have formed, they can be transported long distances by the wind before being deposited in rain, snow or hail. This is what is commonly called acid rain. Acid rain can have harmful effects on the environment. It affects freshwater lakes and the wildlife that depend upon them. It also affects trees by harming leaves and soil, and it damages building made of limestone and marble. When acid rain falls on the buildings, it slowly dissolves away the stonework. Consequently, these buildings may need constant maintenance and reconstruction. Acid rain does affect freshwater lakes and the plants and aquatic lives which are found in them. Although lakes can withstand a certain amount of acid rain, after a while, their acidity will increase. When this happens, the water in the lake can turn a clear blue due to a loss of organic matter which is usually dissolved in the water. The range of plants and animals usually decreases. Some of the organisms affected by acidified water include snails, crayfish, salmon, trout and many other species. The many negative effects of acid rain extend also to soil. Acid deposition is known to wash essential nutrients from soils, and aluminium which is normally bound in soil may be released into ground water. That the soil is the basis of wealth upon which all land-based life depends, brings to bare the danger of the effects of acid rain on the soil.

III. INTERNATIONAL ENVIRONMENTAL COOPERATION

By the beginning of the 1970s, there was a widespread sense of environmental crisis around the world. A major concern was the exploding population 'bomb' due to increasing birth rates in developing countries and decreasing mortality rates everywhere due to better health care. Growing industrialization and prosperity had led to increasing urbanization, slums, smog, traffic jams, noise, water and air pollution and waste. There were doubts about whether carrying capacity of the earth space would be able to survive. Due to profligate consumption, concern was expressed about the natural non-renewable resources of the world running out. Many countries had taken the first steps to arrest environmental degradation in their countries, but there was growing realization that the global environment and common resources of the world might not be protected if every country looked after only its national environmental interests. Advantages of international environmental cooperation to halt environmental degradation became obvious. At the time, there was no single international focal organization to promote cooperative environmental action among states and countries of the world. It was in this context that the Stockholm conference was convened. The Stockholm Conference, resulting in the adoption of Stockholm Declaration placed the issue of protection of

global environment. The Stockholm Conference, resulting in the adoption of Stockholm Declaration placed the issue of protection of global environment on the official agenda of international policy and law. Held in 1972, the Stockholm conference was the first of a series of major frameworks of interaction among states on the environment. It addressed the collective human responsibility for environmental protection on a global scale. As far as species conservation is concerned, there have been major international conferences and agreements. Among them is the Convention on International Trade in Endangered Species of Wild Flora and Fauna, 1973. Convention on International Trade in Endangered Species of Wild Flora and Fauna popularly known as CITES, is one of the most significant international environmental agreements aimed at controlling and preventing international commercial trade in endangered species or products derived from them. The Convention was adopted at Washington in 1973. It came into force on 1 July 1975. The Convention protects endangered species by restricting and regulating their international trade through export permit systems. It establishes the international legal framework and procedural mechanism for the prevention of trade in endangered species and for an effective regulation of trade in certain other species. Added to these conferences and their accompanying environmental agreements and treaties, there had been the Rio de Janeiro Conference and Johannesburg Conferences in 1992 and 2002 respectively. These had been followed with the Kyoto Protocol, the Copenhagen Conference, and Paris Conference on Climate Change etc. During these conferences, the international community has been able to bring into existence and enforcement a plethora of international environmental laws. But notwithstanding the obvious successes that have been recorded by these cooperative efforts, international environmental cooperation is still fraught with myriad of challenges. These challenges are here presented in the next section of this paper.

IV. CHALLENGES OF INTERNATIONAL ENVIRONMENTAL COOPERATION

Anarchic Nature of the International System: The first challenge is that no state can ever be compelled to join an international agreement or to undertake a particular regulation.

A prominent feature of all international cooperation is the voluntary nature of participation. It is up to the individual government to decide whether to join in. Commitments can't be forced on an unwilling government. Negotiations therefore, tend to stop at what the least enthusiastic parties are willing to accept. To put in a few words, it is one of the main barriers to achieving strong internal environmental

cooperation. (Anderson, Boasson and Honneland 2012: 190).

The international system is anarchic in that there is no overarching authority (world government) that can dictate to individual states or actors within those states, what they must do. And although there are international courts and tribunals, no state can ever be forced to appear before them, or to accept punishment from them (Desombre 2005). For the realists and neorealist theorists, international anarchy is unmitigated (Waltz 1979, Keohane 1986). States have little or no incentive to work together to solve joint problems, and their attitudes towards each other have been conditioned by a history of international conflict, not one of international cooperation. They are motivated primarily by rivalry and the pursuit of relative power, most particularly power in military or economic terms. It is this pursuit of relative gains, vis-à-vis other states, that drives interactions between them. This makes lasting cooperation extremely unlikely, except when cooperation is driven and maintained by one single, powerful state, or hegemony, for as long as it is willing and able to do so (O'Neil 2009).

Consequently, a dozen years and hundreds of climate conferences and meetings have yielded disappointing results. Kyoto Protocol has at best remained "...watered down, burdened with fuzzy math" (Meyerson 2003). To date, Kyoto has had a negligible effect on emissions and atmospheric concentrations of greenhouse gas. Only a handful of countries are on track to meet their Kyoto obligations. Many of those nations have achieved that status more as a by-product of economic problems and fortuitous circumstances than environmental policy. After weakening the Protocol, the United States by far the largest greenhouse gas emitter, essentially walked away from the agreement along with any serious effort to lower US emissions (Meyerson 2003). Reilly blamed George Bush for not coming back to table to reshape climate policy and for being widely seen as unfriendly to the environment (Reilly 2003).

The Convention on Biological Diversity (CBD) is another troubling example. Since the CBD's birth in Rio, there have been more than fifteen major international meetings under its aegis, but little progress towards either measuring biological diversity declines or slowing down the extinction of species.

National Will: National will and capacity are obstacles, determining levels of compliance with, and effectiveness of, multilateral environmental agreements. Oftentimes states either fail to consent to international environmental agreements or will renege in implementing them. This is often because they lack the national will to do so. It is obviously not sufficient for states to agree to take action to protect the global environment if they do not then put these regulations

into practice. Some will play the game of agreeing to environmental measures but then do not implement them. This is because public pressure may decrease if people believe that the issue has been addressed. States engage in international cooperation only when they see a chance of relative gains for themselves over others in the international system. This point of view associated with the realists contrasts with the institutionalist perspective that states are interested in absolute gains for the entire international community regardless of how their relative position changes (O'Neill 2009). There are many situations in which all parties can benefit from working together to prevent or solve an environmental problem. Even in situations where all states benefit from environmental protection, some (may) benefit more than others, and most would benefit from taking no action at all and leaving environmental protection to others.

The question of why states might not comply with international environmental agreements takes us back to one of the central articles in environmental studies and the idea of the 'Tragedy of the Commons' in which Garrett Hardin (1968) observed the difficulty of achieving environmental cooperation with an analogy to medieval cow herders who all kept their cows on commonly held land. He observed that each herder gains the full positive utility of every new cow put onto the common pasture, but that the negative utility (also seen as environmental externalities) of each new cow is shared by all, with that cow's herder thus only bearing a fraction of the additional cow. Even if there is a set number of cows, the pasture can support, each individual herder, doing a cost-benefit analysis, will always find it advantageous to add another cow. Moreover, this logic remains even if a given cow herder knows that the next cow added to the pasture will push the ecosystem past its carrying capacity and thus ruin the commons for everyone. As long as one herder cannot be sure whether another herder will add the extra cow, the first herder will have an incentive to do so. Practicing restraint can lead to the worst possible outcome if you decide to forgo the benefits of adding an extra cow but someone else does not; you have thus not gained the benefits of the extra cow and you will bear the cost of the destroyed ecosystem. While some have pointed to the lack of inevitability in this formulation and the historical inaccuracy of the analogy, it is nevertheless a useful starting point for understanding the difficulties of international environmental cooperation, and incentives to cheat on the agreement made.

Complex Interplay of Different National Interests: The course and outcomes of international environmental negotiations are to a large extent driven by the complex interplay of often radically different national interests. States or more accurately, their national representatives,



come to the bargaining table with their own sets of objectives, and usually with some knowledge of what they are prepared to give up to reach a compromise, and what sources of leverage they can draw on to attain their desired outcome. Only in very rare situations do these interests coincide. More often than not, interests clash, and the bargaining process results in winners and losers (O'Neill 2009). Sometimes, national differences are wholly intractable, and negotiations fail, as in the case of the Global Forests Convention, when differences around what forests to regulate, and how to respect sovereign control over forest resources led to the collapse of multilateral talks in the run-up to the Rio Earth Summit (Davenport 2005). Moreover, states are also pluralistic entities, and within them, some actors will benefit more or be harmed more by action taken to protect the global environment.

Added to this challenge, is the challenge that many different sorts of states inhabit the international system. The international system has seen two waves of new states joining the international community since World War2, first as the European nations dismantled their colonial empires after the war, and second, following the end of the cold war, when states part of or closely allied with the Soviet Union gained their independence. The larger number of states participating in multi-lateral institutions has increased the complexity of negotiations on international environmental issues.

Domestic politics adds another dimension to the challenges of international environmental relations. It is not only what happens at the negotiating table that is important in determining interests and outcomes. Negotiators are also accountable to their domestic constituencies, be it legislatures, the voting public, or industry or other lobbying groups. There are many examples of ways in which domestic politics have shaped national interests over time, and affected the course of international environmental negotiations, whether it relates to perceptions of national vulnerability.

Role of Powerful States: Another serious challenge of international environmental cooperation is the role of powerful states, and the difficulty of negotiation. As the most powerful state in the international system, the United States of America's participation in international environmental negotiations is often considered critical, yet over the years it became more of a laggard state, reluctant to participate in international environmental diplomacy. The lead states in international environmental politics are the Scandinavian nations for instance, often taking strong positions on the global environment, encouraging others to join negotiations, and often taking unilateral measures above and beyond their basic commitments (O'Neill 2009).

Given the understanding that while climate change is the common problem of all, but had been produced as a consequence of the development of the

industrialized nations and it is their (Developed Nations) responsibility to take the lead in cutting emissions, the Kyoto Convention held in 1997 in Japan. The 1997 Kyoto Protocol to the United Nations Framework Convention on Climate Change therefore, committed the developed countries to make an average of a 5.2 per cent cut in their green house gas emissions from a 1990 baseline (Vogler 2008). Within this, different national targets were negotiated. For example 7 per cent cut of emission was to be made by the United States and 8 per cent by the European Union (Vogler 2008). These were to be achieved by the first commitment period: 2008-2012. Contrarily, the United States evidently did not ratify the Kyoto agreement/arrangement, and the administration of George W. Bush actually denounced United States' signature of the Protocol, claiming it to be "Fatally flawed" and that the emissions cuts required would be impossibly damaging to the US economy. Australia also refused to ratify the Kyoto protocol change. This way, the climate regime and international environmental cooperation have been afflicted by the roles, albeit negative, of powerful states.

Again, the United States is one of a tiny handful of countries that have not rectified the Convention on Biological Diversity, yet it routinely sends large delegations to meetings and tries hard to influence their outcome through direct or indirect means. At a certain CBD meeting, the United States opposed many aspects of the agreement that would actually protect biodiversity or set standards, apparently out of concern that the CBD might impede the sovereignty and economic free range of America. Meyerson strongly argues that "it is difficult to discern any compass other than economic self-interest guiding U.S policy towards climate and biodiversity" (Meyerson 2003: 6). A related paralysis and malaise affected international population policy. The 1994 Programme of Action at the United Nations International Conference on Population and Development in Cairo, known as Cairo + 10, set forth bold goals for universal access to reproductive health by 2015 (Meyerson 2003). The American delegation announced that the United States would not affirm its support for Cairo + 10, unless the terms "reproductive health services" and "reproductive rights" (which the United States construes as including abortion) were removed from the text (Dao 2002).

Proceeding in the cooperation against the global environmental challenges by states without the United States of America has been very difficult, not only because it produces around one quarter of global carbon dioxide emissions, but also because its failure to be involved affects the willingness of others to participate and particularly the fast developing countries of the South.

North-South Ecopolitics: Indisputably, one of the most important challenges facing international environmental

cooperation has been the ongoing debate/politics between countries of the developing South and the developed North. As Vogler (2008: 363) will say "At the heart of the international politics of climate change as a global environmental problem is the divide between North and South". In international environmental relation there is considerable discussion about North-South conflicts, or conflicts between wealthier, economically developed nations and poorer, economically developing countries over global environmental priorities, negotiating practices, and the distribution of treaty obligation and their associated costs. In an international system that has taken great powers as the determinants of international politics, Third World have often been marginalized. Susskind (1994) argues that differences in interests and priorities between rich and poor countries have been a major obstacle to reaching environmental agreements.

Many developed nations (North) have more stringent environmental standards and believe developing countries should raise their national standards to these more stringent levels. According to the North, the South should learn from the North's mistakes and avoid the environmental and economic consequences of unsustainable development. Many developing countries (South), however, contend that this requirement is unfair. The developing world often uses two main arguments to justify its opposition to this upward harmonization of environmental standards. First, much of the developed world's wealth was derived from the cheap and unsustainable extraction of natural resources. Although the North may now favor greater environmental protection, the South is quick to point out the tremendous wealth derived from unregulated development. Developing countries argue that it is hypocritical for the North to deny less affluent countries the same development opportunities. Second, there is widespread suspicion among developing countries that environmental standards are being used by the North to keep the South at a competitive disadvantage. These suspicions have led some to label global environmental protection efforts as "eco-imperialism" (Enuka 2017).

A final argument often raised by less developed countries (LDCs) is that if the developed nations wish to enforce stringent standards upon the LDCs, the developed nations have a corresponding duty to transfer enabling technology and to offer financial assistance at concessionary rates. This argument often surfaces in debates surrounding technology transfers. Frequent North-South arguments since Rio about the levels of aid and technology transfer that would allow developing countries to achieve sustainable development have seen many disappointments and unfulfilled pledges (Baylis, Smith and Owens 2008).

A key principle of the climate change regime written into the 1992 United Nations Framework Convention on Climate Change (UNFCCC), was the

notion of "Common but differential responsibilities". This, in effect, meant that although all nations had to accept responsibility for the world's changing climate, it is the developed nations that are immediately responsible because they had benefited from industrialization which was generally regarded as the source of the excess carbon dioxide emission that had caused temperature increase. The USA emits around 25 per cent of the global total, but has only 4.5 per cent of global population. The Chinese figures are 14 per cent and over 20 per cent of the world's population. The least developed nations emit below 1 per cent and account for over 10 per cent of the world's population (Baylis, Smith and Owens 2008). Accordingly, the developed countries were listed in Annex 1 of the Convention and it was agreed that they (the developed countries of the North) rather than the developing countries would have to lead the way in making emissions reductions. But major countries of the North had passed resolutions in their home countries making it clear that they would not ratify any agreement where developing nations (South), who were new economic competitors of the North did not also have to make emissions reductions (Haslam, Schafer and Beauder 2009). From some countries of the North publications began to emanate and circulate, projecting that with the formidable forces of globalization which is radically changing the pattern of energy-related carbon dioxide emissions, that developing world emissions would overtake those of the developed North (Sick 2009).

Rich and industrialized nations of the North point out that developing countries in the South, while responsible for just 25 per cent of carbon emissions since 1950, are quickly becoming major emitters in their own right...industrial countries emphasize (that) booming population and economic growth is fueling an explosive increase in carbon emissions in the South. (Dunn 2001: 440).

And as the United States Department of Energy projected,

...carbon output from developing countries will, in the absence of any new policies, outgrow that of their neighbours as early as 2020... (Kegley and Wittkopf 2001).

Therefore, to have any chance of success, climate regime will have to include emissions reductions by the countries of the South. This will be very unlikely to be accepted by the South, going by their understanding of carbon emissions reality. Developed countries' arguments are seen by the South as an attempt by the rich industrialized North to evade responsibilities, and to avoid changes in their wasteful energy habits by shifting responsibility to the poor. India and China for instance argue that "every person should be granted equal entitlement to pollute the atmosphere" (Vogler 2008).



Indian negotiators stress that their people should not be limited to a few 'survival emissions' while those supporting above-average standards of living in the North are consuming luxury emissions (Dunn 2001). As Chinese delegate told an American in Japan during the Kyoto Conference, in the developed world "only two persons ride in a car, and yet you want us to give up riding on a bus" (Dunn 2001: 441). Prior to the Kyoto Conference, in Montreal meeting on environment (ozone layer depletion), industrial nations alone took on specific goals for reducing CFC use, while developing countries argued for the right to use as many ozone-depleting technologies as they wished, and for as long as possible (Choucri 1995).

Implicit in all these, is that the divide between the North and the South on what should constitute their responsibilities towards the common problems of climate change and carbon emission impedes and frustrates to no mean level, international environmental cooperation.

V. CONCLUSION

The global environment is without doubt challenged by myriad of problems. This is to the extent that many entertain the feeling that this century will be our last. The human race might not survive the twenty first century. Among several of these environmental challenges are population explosion; loss of biodiversity; climate change; ozone layer depletion; air and water pollution etc. Because these challenges are *transfrontier*, travelling across national borders, states in the international system began to engage in serious international cooperation in the bid to find solution to these disturbing environmental challenges. Consequently, over the years, there have been various international efforts, starting with the convening of Stockholm Conference in 1972, and later Rio de Janeiro Conference and Johannesburg Conferences in 1992 and 2002 respectively. During these conferences, the international community has been able to bring into existence and enforcement a plethora of international environmental laws. But notwithstanding the obvious successes that have been recorded by these cooperative efforts, international environmental cooperation is still fraught with myriad of challenges. The teething problems of North-South ecopolitics, the negative influence and roles of big and powerful states, the troubling problems of sheer inability to compel states to obedience over international environmental agreements, etc, combine as formidable force that hamper the expected effectiveness of international environmental cooperation. This paper *the sisizes* that unless these obvious challenges of international environmental cooperation is surmounted, this century, as Rees posited, will be our last.

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