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Controlling the Commons:
International Efforts to Promote Environmental Sustainability

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Senior Honors Thesis
May 2011

Controlling the Commons: International Efforts to Promote Environmental Sustainability

Natural resources are the cornerstone of all survival – they provide food, energy, and the materials needed to support the world's population. Over time natural resources have become increasingly depleted, the environment increasingly degraded. This abuse has led to a disruption of the world's environmental balance, inducing far-reaching and potentially disastrous damage. This essay posits that international organizations are the most important institutions addressing environmental problems, providing social and political impetus for environmental policy change in a global context. I begin by examining the various political, social and economic causes and consequences of environmental problems, followed by the theoretical basis for political involvement. Then I describe the different structural types of international organizations and their effect on environmental issues as well as discuss several prominent international environmental organizations. Finally I conclude with major accomplishments and criticisms of international organizations, and what needs to be done for the future.

It has become increasingly clear in recent years that environmental problems are no longer the ravings of overzealous naturalists and doomsayers, but rather grave and serious concerns for the global community. With the world population approaching seven billion people the planet is undergoing more stress than even before; centuries of exploitation culminating in numerous multilateral environmental problems. Already almost one quarter of the earth's mammals are in danger of extinction and the consummation of usable fresh water surpasses the natural replenishment (Mulrow 2009;

Fergus and Rowney 2007). About one-fifth of the world's coral reefs have already been lost or severely damaged, while global forests have decreased by forty percent in the last three hundred years (UNEP 2011). In 2008 two climate indicators, emissions of carbon dioxide (CO_2) and its concentration in Earth's atmosphere continued their upward trends (Mulrow 2009). These statistics demonstrate the severity of the situation and are only a fraction of the alarming statistics regarding the state of the planet.

The cause of this environmental crisis is rooted among various economic, social and political factors. The rise of globalization has diminished the boundaries between these factors, making them hard to separate from each other. In an increasingly interconnected world, social, environmental, political and economic components all impact each other in a cycle that grows grimmer by the day. Development has a significant impact on the environment, normally bad. Countries that are in the process of developing pose a threat to the environment because in striving to industrialize as rapidly as possible many implement unstable and unsustainable practices that ignore any negative future environmental implications, generally resulting in the depletion of precious natural resources and pollution of the air, land and water (Pease 2010). Massive amounts of pollutants and ozone depleting chemicals were released during the industrialization of the global North. Scientists agree that if the remaining countries pursue modernization in the same reckless manner, the global environmental system may not be able to recover (Agyeman and Evans 2003).

Developed states still remain great contributors to the global environmental crisis, through environmentally damaging business practices as well as the exploitation of resources found in the undeveloped world. Corporations associated with governments

and assortments of international financial institutions have dispossessed considerable numbers of the world's population of their natural resources in their search for profits. These groups consume materials to exhaustion, leaving completely depleted populations and resources in their wake to recover to whatever extent possible while they move on to repeat the process (Nonini 2007). This practice, while not only leading to the total destruction and eradication of valuable nonrenewable resources also has political and social implications for countries. The populations of developing states are generally left destitute and without means for survival after the corporations leave, since they take all the profits with them. This essentially nullifies the state's ability to develop as well, since their source of income has been destroyed.

The cycle of resource depletion describe above comes about due to comparatively luxurious lifestyle experienced in developing countries and the subsequent increased demand for energy within these populations. Increased levels of income and standards of living are followed by an increase in purchasing demand and a rise in energy consumption (Goodland 1995). Consequently, as this demand for goods rises, production must increase to keep pace, which of course leads to more environmental problems.

Poverty and rapidly growing populations are two other key components linked to the environment. Greater numbers of people equate to additional stress and demand for resources. Less developed countries, also known as LDCs, generally have this problem, containing ninety-eight percent of the world's population growth (Karns and Mingst 2004). This can be attributed to a lack of sexual education or access to birth control combined with social norms that promote the women's role as a mother. In poorer countries families have more children in order to have more bodies available to work and

earn money. Poverty affects population growth and industrial practices, as LDCs do not have the means necessary to implement anything other than the most basic practices and will almost always favor cheaper methods of production that will profit them immediately over environmentally sound ones that may benefit them in the long term (Fergus and Rowney 2005). Almost half of the jobs available worldwide depend on fisheries, forests or agriculture (UNEP 2011). Nonsustainable use of these resources threatens individual livelihoods as well as local, national and international economies.

Politics relate to environmental procedures in many ways. Studies have shown a moderate positive correlation between democratic forms of governance and sustainable environmental practices (Whitford and Wong 2009). Environmental education and awareness programs are generally the responsibility of the state. Fearful of damaging their economy by restricting industrial practices, governments may fail to implement business restrictions relating to the environment. Inter and intrastate political conflicts may also arise over the rights to certain resources. According to the 2011 Annual Report by the United Nations Environmental Program (UNEP) since 1990 at least 18 violent conflicts have been prompted by the exploitation of natural resources (UNEP 2011). Political instability and a lack of essential resources helps instigate this violence as people resort to force to attain valuable goods. Ensuing environmental instability as a result of unsound environmental practices can lead to flooding, deforestation, soil erosion and hunger, causing mass migrations of people to neighboring states, which then unduly burden these states and lead to further problems.

As a result of these interlinked economic, social and political factors the availability of environmental resources has reached a critical limit and establishing

solutions to issues such as pollution and ozone depletion is more crucial than ever. Rising awareness of the scope of environmental problems has led environmentalists across the globe to call for a push towards the establishment of international sustainable environmental practices.

Environmental policy did not appear on the public radar until the past century but within the past few decades it has become one of the top priorities for people and countries worldwide. Garret Hardin's 1968 article "The Tragedy of the Commons" jumpstarted the public concern by introducing one aspect of the environmental problem, telling the story of a collectively owned pasture where individual sheep owners could use the land to graze their sheep. Each farmer would graze as many sheep as possible, as it was more economically profitable for them to do so. However as each owner added an increasing number of sheep to the commons, the grass increasingly disappeared until none was left and the land was left permanently damaged by soil erosion. This example of overexploitation reveals what can happen when individual interests are pursued without regard for the common good. As Hardin explains, "Ruin is the destination toward which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons" (Hardin 1968). In addition to preserving renewable resources, apprehension over the use on nonrenewable resources and pollution became topics of debate for governments across the planet. This theory was based on three basic ideas; one, that people enjoyed the freedom to use environmental resources. Two, when individual benefits outweigh individual costs overuse of the commons will result. And three, that this tragedy is not avoidable because the individual desire always wins out

over the community. This begs the question is a sustainable environment possible? And what does sustainable even mean?

There are many different ideas on the characteristics necessary in environmental policies in order to qualify as sustainable. Sustainable development is essentially development a method of resource use that meets basic human needs while still preserving the same resources for future generations (Goodland 1995; Pease 2010). Some more detailed common themes include policies that satisfy basic human needs, achieve equality and social justice, provide for cultural diversity, maintain ecological integrity and biodiversity, and integrate environmental and economic considerations (Killingback, Biere and Flatt 2006). This extremely difficult and wide-ranging task requires the joint efforts of people worldwide.

That is where international organizations have the ability to contribute. They can provide necessary assistance to problem areas of the environment when governments may not be willing or able to do so. In the past few decades multitudes of international organizations have formed in an attempt to do just that. Generating transnational attention for environmental problems, they have become valuable champions for the environmental cause, as discussed below.

International organizations are useful for a number of reasons. Both intergovernmental organizations and nongovernmental organizations can serve as information providers, facilitate issue linkages and cooperation, serve as international critics of existing policies and practices and implement long-term objectives. They are not affiliated or dependent on states so can judge them without bias (Najam 2005; Pease 2010). One of the most important services international organizations perform is

information provision. They function as part of epistemic communities, providing expertise on extremely diverse ranges of topics, especially in scientific research. Epistemic communities are defined as "networks of professionals with recognized expertise and competence in a particular domain and an authoritative claim to policy relevant knowledge within that domain or issue area" (Hass 1992, 2). Scientific research funded and carried out by these epistemic communities help to determine cause and effect relationships of complex problems, identify issues, help states determine their interests and establish strategies to deal with them (Hass 1992). These communities are important because they offer legitimacy to international organization policies by providing sound scientific backing that is independent from political bias. UNEP Scientific Advisory Group is one of the highest regarded epistemic communities in the world. They provide ongoing and current research information on conservation, climate change, marine environment protection and atomic radiation (UNEP 2011). They are extremely helpful when multiple communities are in agreement over specific issues, as this tends to lend more credibility to their findings and encourage action at the international level (Karns and Mingst 2004). Disagreements among epistemic communities however can halt action and prevent implementation of otherwise useful policies. This is too often the case in an area as multi-faceted and ubiquitous as the environment. Subjects such as global warming are still a source of debate, impeding any unified efforts to address such topics. Also, epistemic communities are only valuable so long as their information is current and accurate. As the world is constantly changing new information is constantly in flux – to be legitimate new research opportunities and new networks must constantly be developed and members must be diverse and representative

of the whole population (Karns and Mingst 2004). Intergovernmental agencies can also serve as international forums for discussing environmental ideas and policies. Since they are generally made up of a wide variety of states, these forums are relatively neutral locations to discuss various issues.

Nongovernmental organizations (NGOs) work across the world plays a significant role in affecting environmental policy. They assume monitoring roles by tracking compliance of environmental ordinances worldwide and sharing that information with others. They can even instigate legal proceedings themselves against nations that are in conflict with existing environmental laws or policies (Pease 2010). NGOs can publicize problems that are not well known and act as epistemic communities. They can provide information otherwise unavailable directly to policymakers or failing that, work with states to formulate packages that are desirable to other nations but still environmentally sound. The provide funding for various projects dedicated to environmental sustainability and preservation. One example is debt-for-nature swaps that occur when an NGO will assume a countries debt in exchange for the redemption amount to be used for conservation purposes. In 2002 Conservation International, the World Wide Fund for Nature and the Nature Conservancy contributed $1.1 million, along with the United States who contributed $5.5 million, in a debt-for-nature swap with Peru that will save it $14 million in debt payments, providing the equivalent in local currency to conservation projects. (Karns and Mingst 2004). NGOs can work jointly IGOs as well, attempting to alter their policies or structure, provide dispute settlement. They can perform on site inspection functions, or attempt to influence a state's environmental policy directly.

Four years later the Stockholm Conference in 1972 marked the first time the world's leading nations came together to discuss the environment. It promoted the creation of the United Nations Environmental Program, established transnational environmental monitoring networks and instituted the principle for the Common Heritage of Mankind. This principle attempts to define the global commons by explaining the extent to which various areas belong to all nations on the planet, such as international waters, the deep seabed and orbital space (Pease 2010, Karns and Mingst 2004).

The intent of Stockholm was to find a way to incorporate and balance environmental protection and economic development. Less developed countries of the global South worried that environmental issues detracted from concerns over the need for change in the global power configuration, while global North nations argued against the ongoing push for economic growth in light of the decreasing availability of resources (Karns and Mingst 2004). The Brundtland Commission was organized in 1973 (also known as the World Commission on Environment and Development) to help assuage both fears by establishing the principle of sustainable development, which would be "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Karns and Mingst 2004). In 1987 the Montreal Protocol was developed, outlining a program geared towards the reduction of Chlorofluorocarbon (CFC) emissions that are harmful to the ozone layer (Pease 2010).

The Rio Conference Earth Summit in 1992, also known as the United Nations Conference on Environment and Development brought global attention and support to environmental problems, drawing the participation of over 150 representatives of various countries and 1,400 accredited environmental organizations (Karns, Mingst). Several

framework conventions were instituted as well, including the Convention on Climate Change, the Convention on Biological Diversity and the Convention to Combat Desertification (Pease 2010). These framework conventions are international agreements that create general goals and principles but do not enforce any binding commitments on behalf of states. While this failure to include any mandatory rules or regulations for states to follow severely inhibited the summits effectiveness these conventions are a primary and vital step in establishing transnational environmental goals and procedures. Additionally, the conference helped to integrate environmental and development policies worldwide, empower the environmental movement, link business profitability to environmental support, and generate the impetus to establish the framework conventions (Karns and Mingst 2004).

Agenda 21 was arguably the most noteworthy accomplishment of the Rio Conference. The four sections of the agenda addressed topics regarding social and economic development, conservation and management of resources, important sociodemographic groups and possible ways to implement Agenda 21. The agenda confirmed that deforestation, degradation of water supplies, atmospheric pollution and desertification are serious threats to global security and that states had the responsibility of exercising control over their own environment. It placed the main responsibility for attending to international environmental problems with developed countries, but also granted states the right to exploit their own resources as well as the right to develop prior to any needs of developing countries (Pease 2010). The Commission on Sustainable Development was created the same year to help implement the policies outlined in the more than 800 pages of the report by improving participation levels of important societal

groups, including NGOs, indigenous peoples, local governments, workers, businesses, women and youth (Karns and Mingst 2004). Over one thousand NGOs were involved in the Rio Conference, taking part in various stages of negotiations, offering expertise and strategy advice.

The UN World Summit on Sustainable Development, Rio plus 10, took place in Johannesburg in 2002 and was a huge disappointment in comparison with the Rio Summit. Little had been accomplished since Rio, with population growth, pollution and deforestation, among other things, still on the rise. Disagreements over basic goals and principles still persisted between the global North and South and there was an increasingly growing disenchantment with the ideals of sustainable development and its possible achievement (Karns and Mingst 2004). As a result, while participation was still strong with over one hundred heads of states, one thousand NGOs and ten thousand delegates present, states put little preparation and care into the summit. Many members attended as a mere formality with no real intent on active participation. The summit resulted in the Plan of Implementation, which was a list of assorted goals to be accomplished in the upcoming years, but did not result in a plan of exactly how to accomplish this. Once again a global conference had come up with a list of aspirations but with no method of achieving them (Pease 2010).

That is not to say that nothing has been accomplished by these conferences or their resulting institutions. International organizations continue to play a role in the battle for environmental sustainability with varying degrees of success. Their contributions are becoming more recognizable, granting validity to their existence and actions. One of the largest and possibly most effective of the global organizations is the United Nations.

Various branches of the UN have contributed to the environmental cause over the years. According to their mission statement the United Nations Environmental Program, created shortly after the Stockholm Conference of 1972, works "to provide leadership and encourage partnership in caring for the environment by inspiring, informing, and enabling nations and peoples to improve their quality of life without compromising that of future generations" (UNEP 2011). Alongside the World Meteorological Organization, they have brought attention to ozone damage, resulting in the Montreal Protocol, a treaty to reduce chemical emissions of substances that have caused the depletion of the ozone layer. Their Strategic Approach to International Chemical Management (SAICM) supports 117 projects undertaken by 97 governments and 12 civil society organizations involving activities in 95 countries, with donations of over 30 million dollars. Some of their current projects include research on regional, national, and global thematic environmental assessments, international policy setting and technical assistance (UNEP 2011). The UN Development Programme (UNDP) is another important branch, with over 170 Member States and other UN agencies. It designs and implements projects for agriculture, industry, education, and the environment, supporting more than 5,000 projects with a budget of $1.3 billion. It is the largest multilateral source of grant development assistance. The Food and Agriculture Organization (FAO) monitors marine fishery production and issues alerts to prevent damage due to over-fishing. FAO, UNDP and the World Bank, through a Tropical Forests Action Programme, have formulated and carried out forestry action plans in 90 countries to prevent deforestation of the world's rainforests (UNEP 2011). These programs are significant because they are protecting

populations of essential resources, helping to revitalize some of the degraded locations for future use.

The Global Environmental Facility assists in financing sustainable development efforts worldwide, particularly in the lesser developed states. An independent financial organization, the GEF provides grants to developing countries and countries with economies in transition for projects related to biodiversity, climate change, international waters, land degradation, the ozone layer, and persistent organic pollutants. Since its creation in 1991 it has supplied more than nine billion dollars in grants and generated more than 40 billion dollars in cofinancing with other development organizations and is the largest funder of projects to improve the global environment (GEF 2010). It has been a part of more than 2,700 projects in more than 165 developing countries and countries with economies in transition. Through its Small Grants Programme (SGP), the GEF has also made more than 12,000 small grants directly to nongovernmental and community organizations, totaling $495 million (GEF 2010). The general assembly meets every three years with all 182 member countries to review and discuss their general policy. There are 32 seats of the governing council, with 16 from developing countries, 14 from developed countries, and two from countries with transitional economies.

Environmental policy has evolved to a great extent during the past few decades, thanks in large part to the dedicated efforts of these prominent environmental organizations as well as the thousands of others currently in operation. They are however still woefully short of attaining the goals necessary to support an environmentally sound planet. The next section addresses some of the faults inherent in the organization, focus and effectiveness of these institutions and investigates potential improvements.

Some organizational criticisms that relate to environmental international organizations are that they contain an uneven balance of power, the processes for policymaking are not representative and that many small and developing countries are excluded from involvement in larger transnational organizations. The balance of power still rests with the developed nations involved in IOs but developing countries are gaining more equal representation in these programs, increasing their ability to influence policy creation (El-Ashry 2007; Biermann 2007; Karns and Mingst 2004). There are also arguments that even some of the larger institutions such as UNEP are too understaffed and underfunded to accomplish their goals.

Limitations in effectiveness are a constant criticism of international organizations. So far environmental regimes have only succeeded in ratifying soft laws; nonbinding agreements among nations that help to set the tone for future environmental treaties and agreements (Pezzey 2003). This absence of political power and influence makes enforcement near impossible and cooperation hard to guarantee. As it stands right now the creation of global environmental agreements are an extremely time and resource consuming project. It took five years to draft the Kyoto Protocol and another ten years to receive commitments from states and then the United States refused to participate (Pease 2010). With such ambivalence on behalf of the states there is a demand for greater accountability in an international context, with binding international laws and treaties. As Simmons and de Jonge Oudraat said, "Effectiveness goes beyond formal compliance…Agreements themselves may not be ambitious enough to provide more than temporary or cosmic relief from global problems" (Karns and Mingst 2004, 33). Unless there is an authority capable of monitoring the compliance of such agreements and

imposing suitable punishments when necessary, there is little incentive for states to hold up their end of the bargain.

This free-rider problem is pertinent because even when certain groups do take steps to improve the state of the environment and observe international agreements or protocols, others may choose not to follow suit – reaping the benefits of the other's efforts at no cost to themselves. Several fisheries may form an agreement to cut back on their haul for certain breeds of fish that have been overfished and their numbers threatened as a result, hoping to give the population time to revive. It is possible for a fishery to violate their agreement by continuing to catch the maximum amount of fish possible (thereby still earning the maximum profit possible). Just one party ignoring the terms of the agreement can jeopardize the work of all the others (Poteete, Janssen, and Olstrom 2010). Guarantees are necessary if nations are going to risk profits for the sake of the environment.

There are also numbers of critics who claim that the problem with international environmental organizations is their old-fashioned attitude toward privatization or centralization as the only solutions for sustainable development. Poteete, Janssen, and Olstrom (2010) believe that the conventional attitude of collective action is too simplistic in nature. Mancur Olson's *Logic of Collective Action*, based on Hardin's the tragedy of the commons, the prisoner's dilemma game and the free-rider problem states that"…unless the number of individuals is quite small, or unless there is coercion or some other specific device to make individuals act in their common interest, *rational, self-interested individuals will not act to achieve their common or group interests*" (Olson 1971). This paints a fairly bleak outlook on policy success for environmental

organizations, partially supported by the lack of commitments by the states to various environmental projects. During their research they documented many field-based studies of cases with successful collective management of natural resources, indicating that not all communities or individuals will act selfishly and short sighted when left to govern themselves. Privatization of property or centralization is not guarantors of sustainability. Resource depletion often occurs even after state management because the state does not understand informal common-property regimes, opting instead plans that undermine the established communal rights (Poteete, Janssen, and Olstrom 2010).

Some argue that a deterrent to international organizations success is a too rigid policy focus that does not adapt to individual situations and circumstances. As demonstrated earlier it is nearly impossible to completely isolate cause and effect relationships regarding environmental problems. It is extremely difficult to find a conclusive combination of factors that explain a state's level of sustainability, as there is no comprehensive understanding of what factors actually support sustainability (Whitney and Wong 2009). This poses a problem for ENVIRONMENTAL policy design since there is no concrete list of steps available to ensure success. Every environment differs in regards to time and spatial variables as well as cultural and geographic factors that vary across the globe. As Poteete, Janssen, and Olstrom (2007) explain, both ecological and social systems are complex, interdependent, and constantly changing. They are characterized by causal relationships that are nonlinear, multivariate, and changing. The complexity of natural resource systems and their interaction with social, economic, and political systems can impede collective action when they obscure causation relations, especially the connection between resource use and resource condition. That is not to say

that there is no way to design a successful plan for preserving sustainable environments. These designs must simply focus on the individual characteristics of each environment. The one size fits all approach of international organization politics is not a viable method for environmental implementation and organizations must recognize that. There should also be an acceptable amount of research completed about the specific environment so that a reasonably confident plan of action can be offered. Environmental governance approaches must become knowledge based rather than institutional based, permitting flexibility and a greater range of applications.

Another body of thought also emphasizes the role of knowledge in environmental policies, specifically the role of science. No valid action is possible within environmental regimes without the assistance of science .The politicalization of science is considered a significant shift in policy focus as well (Lidskog and Goran; O'Riordan 2004). The politics behind the presentation of environmental information can influence how the public and other groups react to it. An example is the situation with global warming. There is scientific evidence that reveals the danger ahead if the world does not change. Yet very little has been accomplished in regards to this issue, with less support from the public population than one would expect. O'Riordan states that, "It is not the science of climate change that is the stumbling block, it is the politics of the science…Here the science is confounded not so much by credibility difficulties, but by a form of electoral democracy which impedes voters and consumers from supporting present day 'sacrifices' for uncertain and distant future 'gains' when the 'problem' is not clearly evident or threatening" (O'Riordan 2004). People need a clear target and specific plan of action to want to get involved or at least be afraid enough of the consequences to get involved. The

consequences of global warming are years into the future, too far ahead for justify throwing away cell phones and SUVs. In this instance Olson's theory of Collective Action holds sway, as individuals forsake the common good in favor of their own comfort.

These issues have sparked debate over whether the establishment of a centralized environmental power could achieve more progressing and binding environmental resolutions or whether reorganization of environmental regimes would just detract attention from more important problems such as policy conflicts between developed and developing countries and the decreased regard for the principles outlined in the Rio Conference (Najam 2005). There are serious concerns over whether or not such an organization would take into account the origin of environmental degradation and whether such a centralized entity would be able to properly address the variety of issues (Knigge and Meyer-Ohlendorf 2007). Others believe that a UNEO could act as an umbrella institution with more political weight due to its normative upgrade to a Specialized Agency. The European Union is a strong proponent for the revitalization of UNEP into the United Nations Environmental Organization. They believe that UNEP is not sufficient to handle the challenges ahead, but as a UNEO it would have stable, adequate and predictable resources, with the appropriate international standing that would enable the organization to fulfill its goals (Knigge and Meyer-Ohlendorf 2007).

There are valid arguments from all sides of this issue. As is true with all governing institutions there are benefits and drawbacks both to the current organization of the community of environmental groups and to the organization of a new 'leviathan' organization, one with the political clout to really enforce and monitor change among the

states. While not ideal in the past thirty years international organizations have promoted international awareness of hundreds of different environmental issues, brought nations together to collaborate on these problems and facilitated the distribution of billions of dollars to various environmental projects. With a little more financial support and cooperation from the countries of the world international organizations might be able to achieve the goal of sustainable living for future generations.

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