THE PRESERVATION OF NATURE AND NATURAL RESOURCES: THE UNCERTAIN FUTURE

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Summary

Prior to the Second World War and the economic growth of the 1950s and 1960s, the protection of natural resources was generally approached on the local or municipal government level. In the "first generation" of environmental policies, problems like water and air pollution were assumed to be the responsibility of the governmental unit where the pollution took place, and inter-governmental cooperation was limited. With the advent of the environmental movements of the late 1960s and 1970s, however, policymakers became more aware of the interconnectedness of environmental problems. Despite that recognition, most resource issues were addressed at the national level, with

little attention paid to the need to address environmental issues through international cooperation. The exception was the early resource protection efforts, which focused on the world's oceans and marine resources.

By 1972 and the first United Nations Conference on the Human Environment, public awareness of environmental degradation led to the development of a second generation of environmental agreements and institutions. Policymakers began to realize that many of the world's common pool resources could only be protected through international cooperation. Over the next 20 years, dozens of agreements were developed, with specialized international environmental organizations to implement them. A second major United Nations environmental conference in Rio de Janeiro in 1992 marked a shift in natural resource policy, as the issues of environmental sustainability and economic development overshadowed concerns about pollution. But most observers believe the promise of the Rio summit has not been fulfilled. Although general agreement has been reached in on the issues of global climate change, biodiversity, and protection of marine resources, little progress has been made in slowing the pace of environmental deterioration. There is particular concern that international governmental organizations have been unsuccessful in adopting major conventions to conserve natural resources, which are being rapidly depleted as developing nations of the South seek the same living standards and consumer goods as the industrialized nations of the North. More importantly, major conventions have been adopted and ratified but no IGOs have been created or assigned the task of implementing them.

Most observers believe natural resource protection is characterized by a sizeable gap between rhetoric and reality. Sustainable development is now the dominant framework for international agreements at virtually every level. The difficulty of achieving economic growth—a goal of both industrialized and developing nations alike—without having an adverse effect on the environment, is becoming more and more apparent. The North/South split between developed and developing nations is likely to continue—a dynamic that will affect upcoming negotiations on natural resource protection. Developed countries, like the US, have recommended that developing nations do more to reduce consumption, while the US itself continues its own consumption patterns. Poor nations expect that the richer countries of the world, which are responsible for much of the current deterioration of the earth's resources, should pay for the damage from the past. In the meantime, richer developed nations look at that damage and seek to reduce any further loss of resources by expecting the poorer countries to learn from their mistakes.

Over the years, several reforms of the existing structure of global environmental governance have been suggested, emphasizing the need to increase the UNEP's limited staff, resources, and support.

The proposals have often been coupled with calls for additional reforms in the environmental mission and activities of the World Bank and the International Monetary Fund. In 1989, prior to the Earth Summit, New Zealand made an innovative proposal to the United Nations General Assembly calling for the creation of a global environmental organization, the Environmental Protection Council. Unlike existing UN bodies, the proposed organization would have a legislative structure empowered to make binding

decisions on global environmental issues. New Zealand's ambassador called upon General Assembly members to adopt the proposal, arguing that "nothing less than an institution with this status will command the necessary respect and authority to achieve what is required." The proposal was seen as preferable to granting additional powers to the UNEP or creating separate agencies to deal with specific environmental issues. However, it is clear that there remains a lack of a clear mechanism for effecting change in the approach of individual states to the protection of natural resources. While the philosophical and political debate over sustainability continues, the major international governmental organizations are failing in their efforts to stop further degradation of the planet.

1. Background and State of the World

Since 1984, the Worldwatch Institute has published an annual volume, *State of the World*, which provides a summary of some of the key issues facing the planet. The series has covered problems ranging from the promotion of sustainable fisheries, to population growth and management, to global climate change. What makes the series so remarkable is that the problems the volumes highlight are not unique to any one state or region or time—they are applicable to virtually any location on earth at any point in contemporary history.

What has been changing over time, however, is our awareness of global environmental problems, and more specifically, the preservation of nature and natural resources. From time to time, a crisis, such as the massive human-caused forest and peat fires in Indonesia in 1997, will make worldwide headline news and focus public attention on air quality and transboundary air pollution. It seems that policymakers have recognized that what happens to one part of the world's environment affects the entire planet. For example, the plume of smoke created by the Indonesian fires was estimated to be larger in size than the continental US, and its pollutants were carried through the atmosphere for more than 1000 km. The expansion of slash and burn agriculture into areas that were previously tropical forests in Borneo and Sumatra had environmental implications for people living as far away as Singapore and Malaysia.

Although this article does not attempt to provide a detailed analysis of the current state of every natural resource on Earth, it does provide an overview of the most compelling problems and some of the international attempts that have been made to solve them. It explores the evolution of a global approach to environmental protection, with a focus on the role of international governmental organizations (IGOs) and an analysis of their effectiveness, ending with a status report—a form of international environmental report card—on successes and failures in dealing with natural resource protection.

To better understand the shaping of international natural resource policy, it is useful to divide global efforts into three distinct phases. To begin with the period before the Second World War until 1972 and the development of the first environmental IGOs; followed by the two decades between 1972 and 1992, bookends for the United Nations' environmental conferences, and finally, the post-Rio period from 1992 until now.

1.1 Pre-Second World War until 1972

It is interesting to note that few international agreements or organizations addressed environmental issues in the immediate aftermath of the Second World War. The 1945 United Nations Charter does not mention the environment. The latter document, which became the platform for dozens of future environmental agreements, focused more on economic and military security than sustainability—a term that would later become the benchmark of environmental success. Immediately after the Second World War, the industrialized world focused on rebuilding and economic development, with little attention paid to the potential degradation of the Earth's resources. The two major environmental problems that did find a place on the policy agenda were air and water pollution, although it was assumed that these problems were localized, and therefore, best addressed at the local or state level. Regional approaches were rare, and there appeared to be little thought that pollution might be an issue worthy of international cooperation. Pollution control laws were the model for the world's future natural resource agreements, and the agencies and groups which implement them.

1.1.1 Air and Water Pollution

Air pollution is not a new phenomenon, although policies to control it are contemporary. There are references, in the writings of King Tikulti, to the fumes produced at the asphalt-mining town of Hit, about 100 miles west of Babylon, around 900 BCE. In 61 CE, the philosopher Seneca wrote of "the heavy air of Rome" and its "pestilential vapors and soot," and travelers to Elizabethan England were astonished at the filthy smoke produced by domestic fires and workshops.

Initially, the US took the lead in pollution control efforts, for both air and water. As the nation became more industrialized in the late nineteenth century, the City of Chicago adopted an ordinance that banned dense smoke, with a similar measure passed in Los Angeles in 1905. A 1949 study found that automobiles were a prime source of pollution, a discovery that forced the government to consider controls on mobile sources like cars, rather than on stationary sources such as factories and industry. The federal government became involved in 1955 when the US Congress appropriated $5 million for research into motor vehicle emissions; the beginning of national intervention in urban air pollution regulation. Research during the 1960s debunked the idea that pollution was a problem only in the area immediately adjacent to the source or in urban areas. Studies showed that air pollution was being transported over long distances, causing environmental damage in regions far removed from the source.

The health effects of air pollution were underscored in 1948, when a 6-day siege of pollution in Pennsylvania killed 20 people and resulted in illness for more than 6000 residents. Similar incidents in London in December 1952, and New York in 1953, lent some urgency to the problem, and raised international awareness of the irrelevance of political boundaries to pollution control. Public officials in many of the world's cities were also becoming aware that air pollution led to decreased visibility—an aesthetic consideration as well as a health concern.

The issue of water quality, rather than water scarcity, took precedence during this initial phase in the development of natural resource policy. Post Second World War pollution was largely the result of extensive industrialization and inadequate waste disposal strategies in developed countries from the mid-to-late nineteenth century. In many nations, officials were eager to build a post-war industrial base and were reluctant to antagonize industry. Most industrial wastes were simply dumped into the nearest waterway under the old theory, "The solution to pollution is dilution." Large industrial interests were able to convince policymakers that industrial dumping posed no environmental threat because "streams were nature's sewers."

By the late 1960s, environmental groups had begun to form; most prioritized air quality and the protection of natural resources such as timber over the deteriorating condition of the world's lakes, rivers, streams, and oceans. One of the world's first surface water pollution laws, the Water Pollution Control Act, was enacted by the US Congress in 1948 but it gave the national government a very limited regulatory role. Similar American laws were passed over the next two decades but had a limited impact, due in part to the lack of funding for waste water treatment plants.

There were few national counterparts to the US' pollution control laws prior to 1972, except in Great Britain, where environmental activism had begun in the mid-nineteenth century. Among the earliest groups to address environmental protection was the Commons, Open Spaces, and Footpaths Preservation Society, which was established in Britain in 1865. But the Great Depression of 1880 brought with it a spirit of pessimism and disillusionment with progress, and an accompanying call for the preservation of monuments and relics. The British have tended to enact environmental protection laws in conjunction with business cycles, and as a result, the economic prosperity of the late 1960s and early 1970s brought about a series of air and water quality laws roughly parallel to those of the US. But for the most part, other nations did not enact comparable pollution statutes until well into the 1970s and 1980s.

1.1.2 Natural Resource and Wildlife Protection

While the US and Britain led the way in enacting pollution control statutes and developing national environmental agencies to enforce them, much of the rest of the world focused on natural resource and wildlife protection prior to the mid-1970s. The International Union for the Protection of Nature was created in 1947 as the first group to examine issues on a global level, later renamed the International Union for the Conservation of Nature in 1956. National groups, focusing on state-level or local issues, followed. In India, for example, massive destruction of forest resources prior to independence in 1947, made deforestation the most critical environmental issue. In 1964 a logging public awareness campaign began that led to the Chipko Andalan movement. Chipko, which means "to cling to," are literally India's tree huggers, Himalayan Indians who launched protests over logging. Similarly, Japan's fledgling environmental movement focused on wildlife protection. In Latin and Central America, natural resource protection coalesced around deforestation, while in Africa, the prime issue was wildlife protection. But the movements in developing countries were rarely sufficiently powerful to result in the formation of regional or IGOs until much later in the twentieth century.

1.1.3 International Governmental Organization Responses

Early IGOs. Prior to the Second World War, there were fewer than 40 international agreements concerning shared natural resources; the majority of them among riparian states. Regional bodies were sometimes, but not always, established to monitor the agreements. In 1909, the US and Canada formed the International Joint Commission (IJC) to deal with transboundary issues, along the two countries' 3000-mile border. Its primary function is to monitor air and water pollution and to make policy recommendations. The Commission has six members, three appointed by each country, and over 20 technical advisory boards. In Europe, the International Commission for the Protection of the Rhine was adopted in 1963 with responsibility for research into the nature, importance, and sources of pollution and to propose measures to protect the river. The Commission, which produces an annual research report, is made up of representatives of the five riparian signatory states: France, Germany, Luxembourg, the Netherlands, and Switzerland, where its secretariat is located in Berne. A similar body was later established to protect the Danube River.

Among the first IGOs to deal with environmental protection on a global scale, was the International Meteorological Organization (IMO), established in 1872 to standardize data and improve weather forecasts. In 1947, the World Meteorological Convention, meeting in Washington, DC, created the World Meteorological Organization (WMO) as a successor to the IMO. In 1951, a year after the World Meteorological Convention came into force, the WMO was established as a specialized agency of the United Nations, based in Geneva. Growing concern over pollution came under the mantle of the World Health Organization in 1950 as one of its many directives to protect human health.

International Whaling Commission. Several of the initial efforts at natural resource protection involved the earth's largest environment—the oceans—and the species, which inhabit it. Among the earliest was the 1911 Convention for the Preservation and Protection of Fur Seals, an agreement among the US, Japan, Russia, and the UK to curb the slaughter of the species. However, like many of the early international natural resource agreements, no support structure was established to implement and enforce the convention. In contrast, the 1946 International Convention on the Regulation of Whaling is particularly significant, since it was one of the few maritime agreements to be supported by an IGO—the International Whaling Commission (IWC)—one of the most controversial IGOs involved in environmental protection.

The IWC's primary mission is to provide for the conservation of whale stocks and thus make possible the orderly development of the whaling industry. The Commission encourages, coordinates, and funds whale research, and also designates specific areas as whale sanctuaries, setting limits on the numbers and size of whales which may be taken. Membership in the IWC is open to any country that formally adheres to the 1946 Convention. Member countries are represented by a Commissioner; a Chairman and Vice-Chairman are elected from among the Commissioners and usually serve for 3 years. The IWC has a full-time Secretariat with headquarters in Cambridge, England. Meetings are usually held annually, with the IWC's three main committees—Scientific, Technical, and Finance and Administration—holding meetings on an *ad hoc* basis. The

regulations adopted by the Commission are implemented through the national legislation of the member states that appoint inspectors to monitor whaling operations.

Despite the IWC's efforts to develop appropriate management strategies to preserve whale stocks at sustainable levels, the IGO has encountered resistance from member nations. Any government can "object" to any decision which it considers will seriously affect its national interest, and the government is then not bound by that particular decision. This mechanism has been strongly criticized as rendering the Commission "toothless," but without the provision, the Convention would probably never have been signed. Other criticisms have been levied against members that have been granted special permits under the terms of the Convention, to harvest whales for scientific research. Critics believe there is sufficient scientific uncertainty over the actual numbers of whales to make any harvesting potentially dangerous to the species.

Another IGO, the International Maritime Organization, founded in 1948, was initially charged with maintaining the highest practicable standards of maritime safety and navigation, but its effectiveness was limited as US, Japanese, and Norwegian oil tanker interests achieved a major role in its decision-making processes. Business interests dominated the maritime pollution debate, and prevented the development of a global marine dumping agreement. It was not until the mid-1950s that the IMO's mandate was expanded and the group began sponsoring a series of agreements related to the marine environment.

UN Programs The United Nations increasingly began to serve as the world's dominant environmental IGO between 1945 and 1972, exemplified by its first environmental conference in 1949 on the Conservation and Utilization of Resources. It established the UN as a forum for global discussion at a time when there appeared to be few alternative approaches to dealing with natural resource issues on a large scale. It was followed in 1954 by the Conference on Conservation of Living Resources of the Sea and the creation of the International Convention for the Prevention of Pollution of the Sea by Oil. The Second World War had significantly expanded various nations' claims of sovereignty over the oceans, a process of "creeping jurisdiction" that began to lead to more and more international disputes between coastal states and fishing nations. Only the UN was in a position to bring the parties to the negotiation table.

Effective ocean management has been complicated by the fact that many marine species are highly migratory. These "straddling stocks" are often fished by more than one nation, or are fished by nations that refuse to abide by international agreements to regulate commercial species. Over harvesting and uncontrolled fishing practices are almost impossible to enforce, so trade measures (or the threat of such measures) are sometimes enacted as a way of halting the decline of fish stocks. One example of this approach is the creation in 1966 of the International Commission for the Conservation of Atlantic Tunas. The 21-member body was specifically directed to seek ways to increase the numbers of the western Atlantic bluefin tuna and tuna-like species. The member nations, which include the US, Japan, and Canada, have pledged to continue to work with the Commission and to monitor and restrict trade in the species to avoid more restrictive covenants. A similar approach was taken to protect anadromous species such as salmon. In 1952, the International North Pacific Fisheries Convention was signed to protect these species which are vulnerable to the kind of high seas drift net fishing

conducted by Japan, South Korea, and Taiwan. The convention established a commission charged with negotiating drift net fisheries, one of the most contentious issues on the global environmental agenda.

It could easily be argued that international environmental law did not really have an impact on natural resource protection until the 1960s, when environmental organizations had become more entrenched and their issues became an established element of international discourse. Earth Day was observed on an international basis on April 22, 1970—a hallmark event that further substantiated the importance of the environment. But despite the number of international agreements enacted in the first generation of environmental issues, there were few IGOs created to support them.

1.2 1972–1992, The Second Generation of Environmental Issues

The period between 1972 and 1992 is marked on either end by the convening of two United Nations'-sponsored conferences on the environment. The first, in Stockholm in 1972, was the United Nations Conference on Human Environment. The second, in Rio de Janeiro in 1992, was the United Nations Conference on Environment and Development. Although both conferences were designed to develop a global approach to environmental management, their focus, participants, and outcomes were extremely different. The two events are especially crucial because they not only resulted in broad environmental protection agreements, but also served as the catalyst for the creation of more enduring IGOs that monitor and protect natural resources.

This period is also characterized by a second generation of environmental issues. The costs of environmental security were climbing, ranging from 5 to 15 percent of each country's yearly national income, with the industrialized nations paying the most for environmental cleanup and natural resource protection. During this 20-year period, there was also a realization of the globalized nature of environmental problems, with a focus on desertification, scarcity, sustainability, transboundary pollution, and common pool resources.

The latter term is based on the idea of common-property resources, which share two characteristics. The first is that the physical nature of the resource is such that controlled access by potential users is costly, and in some cases, virtually impossible. The second characteristic is that each user is capable of subtracting from the welfare of other users. Common pool resources, such as the oceans and the atmosphere, require policymakers to consider how human activities affect the entire planet, rather than only what is happening in their own backyard.

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Biographical Sketch

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