THE GLOBAL ENVIRONMENTAL PROBLEMS - ROLE OF INTERNATIONAL NGOs

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MASTER OF PHILOSOPHY

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CERTIFICATE

Certified that the dissertation entitled "THE GLOBAL ENVIRONMENTAL PROBLEMS - ROLE OF INTERNATIONAL NGOs" submitted by KRISHAN SINGH is in partial fulfilment for the degree of MASTER OF PHILOSOPHY of this university, is his original work. This dissertation has not been submitted for any other degree of this on any other university.

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Dedicated to the cause of Environment

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CHAPTER I INTRODUCTION

Man's use and reuse of environmental resources has not been confined to food, shelter and clothing as the basic needs of life, but encompassed limits of judicious usage and ruthless exploitation of environmental resources. There is hardly any pocket of land, island, polar region or space left virgin of imminent scars of human meddling in a bid to realize and translate man's aspirations and dreams into reality. Perhaps a vast chunk of humanity is unaware of the inadvertent damage caused to environment in the process of urbanization and industrialization has bred enormous pollution into soil, water and air, and perhaps pollution spill has grown beyond comprehension causing several environmental imbalances. ¹

Thus the increased threat of environmental catastrophe in the present century has been due to the greater utilization of the natural environment and to a considerable extent the changed nature of waste materials and effluents.

Human activity is altering the biosphere faster than our understanding of it is accumulating. Humans have spun a complex web of social, economic and political interactions across the globe which threaten the biosphere; yet even now. humanity remains dependent upon the continued viability of the biosphere. As humankind struggles to devise measures to protect the biosphere, it can be asked that, what role non-governmental organisations (NGOs) can play in these deliberations. While NGOs have been successfully in stimulating action on local and national environmental problems, what are the limits and benefits of their

Vandana Asthana; *The Politics of Environment: A Profile* (Ashish Publishing House, New Delhi, 1992).

expansion into the international arena? Given citizen power and participation that are the source of NGO energy and power, what is the appropriate role of NGOs in addressing global environmental problems? How can NGOs assist, interact with and influence policy makers on these questions? Attempt has been made in the following chapters to address the above raised issues.

For the purpose of this work, the term NGO has been used to refer to non-profit organisations, whose actions are substantially independent of governments or the private for profit sector - and whose activities are directed towards a clearly defined set of goals that they perceive to be in the interest of society as a whole. Thus, NGOs may choose to interact with private sector organisations, the state, political parties, and legislatures, reserving the right to change their agenda or their manner of interaction with these other institutions. The discussion on NGOs is further limited to those NGOs that define themselves as concerned with issues of environment and development.

NGOs have a unique role to play in addressing global environmental problems. Alone amongst the various actors on the world scene, they are relatively free from the narrow, short-term political interests within which many governments operate, and from the profit motive which drives the corporate world. Consequently, while other actors approach these issues from the stand point of what they feel to be in their particular self-interest, combined with what they feel to be politically acceptable, environment and development oriented NGOs approach global

environmental issues primarily from the perspective of their perception of the greatest social good.

Despite the relatively recent recognition of global environmental problems such as depletion of the ozone layer and global warming. NGOs have already exercised their influence on these issues.

1.1 Literature Survey

The ever increasing threat to global ecology has generated extensive literature. Role of NGOs in addressing the global environmental problems has been widely appreciated, especially since the Earth Summit 1992, which in turn has lead to various studies. There has been a great surge of interest in NGOs role in environmental problems.

Oran R. Young, in his seminal work in the field of international environmental politics, denotes himself TO NGOs, noting how regimes give use to such groups and how NGOs defend the provisions of regimes. However later, he cites the critical role of NGOs, saying that they now loom large not only in processes of regime formation but also in catalyzing and aggregating public pressure on afficals to live up to the commitments they make. The environmental movement, once concentrated almost exclusively on domestic concerns, has become a force to be reckoned with in the political dynamics surrounding international environmental governing.

Lynton K. Caldwell, was probably the first to call scholar's attention to the NGO phenomenon and to document its rise. He updates and interprets this phenomenon and states that NGOs have been 'absolutely essential to most international environmental action' and the 'nature and extent of NGO influence on international environmental policy has not received comprehensive or detailed study.

In one of the first attempts to explicitly link Global environmental issues to questions of security and political economy, Caroline Thomas goes as far as saying that 'the current diplomatic profile of environmental issues derives largely from the activities of NGOs who took advantage of the political space provided by the fortuitous ending of the cold war'.

International environmental NGOs have a wide range of interests, capabilities and perspectives. An extensive study has been directed towards building the bases for understanding the status and role of environmental NGOs in world politics, recognizing throughout the diversity of the NGO community. The studies show that the first step in this process of building the bases for understanding NGOs has been to connect the NGO phenomenon to biophysical change. Thus, the striking increase in environmental NGOs world wide and the diversity within the community signal serious trends in ecosystem decline and the concomitant social stress that results from and feeds into that decline. Mac Neill, Winsemius, and Yakushiji and characterize the crisis as follows:

"The earths signals are unmistakable. Global warming is a form of feedback from the earth's ecological system to the world's economic system. So is the ozone

hole, acid rain in Europe, soil degradation in Africa and Australia, deforestation and species loss in the Amazon. To ignore one system today is to jeopardize the others".²

It is a fact that a global environmental crisis indeed exists and is worsening. The literature documenting these trends is voluminous. For example, Lester R. Brown et al., (1992); B.L. Turner, William C. Clark, Robert W. Kates, John F. Richards, Jessica T. Mathews, and William B. Meyer (1992). Despite experience with war, famine and Pestilence, humankind has never before faced environmental problems of this sort, problems that are at once biophysical and social and that have global dimensions. As young, Demko, and Ramakrishna put it: 'These issues present complexities in environmental finding both appropriate conceptualizations of the problems to be solved and satisfactory methods of addressing the equity issues embedded in them. The scope of today's environmental problems is unprecedented'.3

Dubash and Oppenheimer (1992), trace the historical development of NGOs, and the linkages between them, in industrialized and developing countries. Using case studies of the Narmada movements in India, the Green Forum in the Philippines, and the Kenya Energy and Development Organisation, as well a specific examples from popular campaigns around environmental issues in the industrialized

Jim Mac Neill, Pieter Winse Mius, and Taizo Yakushiji, Beyond Interdependence: The Meshing of the World's Economy and the Earth's Ecology (New York: University Press, 1991).

Young, Demko and Ramakrishnan, 'Global Environmental Change'.

countries, Dubash and Oppenheimer illustrates the range of challenges faced by NGOs in different economic, political, and social milieu. They demonstrate that, the future role NGOs play in international deliberations and governance will be significant. And that the nature of their role is still evolving. Dubash and Oppenheimes believe that NGOs are especially well suited to represent easy-to-overlook aspects of environment and development issues in the twin crucibles of public attention and political policy making. These organisations can be an important force for constructive social change, helping to overcome social inertia and bureaucratic resistance of necessary reforms.

NGOs appear to be key actors in moving societies away from current trends in environmental degradation and towards sustainable economies. A good number of references to this effect are available Vij. Joy Meeker (1991), R. Mitchell et. al (1991), David C. Korten (1990), Kevin Stairs and Peter Taylor (1992), and James V. Riker (1992). Apart from the above available literature, extensive research work is available from the environmental NGOs Vij. International Union for Conservation of Natural resources (IUCN), World Wide Fund for Nature (WWF), the World Resource Institute (WRI) and the Global Tomorrow Coalition (GTC).

1.2 Objectives Of The Study

- (1) Various dimension and extent of the global environmental problems.
- (2) Emergence of NGOs and their contribution in combating environmental problems.

- (3) Evaluation of the role of NGOs in the management of environment and their future prospective role.
- (4) Remedial measures for strenchening the NGOs monitoring, planning and decision making.

1.3 Source of Information and Methodology

The sources of international includes both primary and secondary sources. Primary sources include Government documents, documents of United Nations Environment Programme (UNEP), IUCN, WWF, World Resources Institute (WRI) etc, documents and reports of Non-Governmental Organisation associated with Environment Vij Friends of the Earth, Greenpeace etc. The secondary sources include books and Journals.

No specific statistical and cartographic techniques has been used in this study.

1.4 Chapterization

Keeping in view the objectives of the study the material is organized into five chapters starting with introduction which deals with the theme of the study and main objectives apart from the literature survey. Second chapter discusses the environmental problems. Contemporary global environmental problems has been taken for discussion and its consequences on mankind highlighted.

Chapter three deals with the role of Environmental NGOs in mitigating the environmental crisis. Various issues and approaches to International environmental problems have been analyzed.

Case studies for the better insight into the role of environmental NGOs in tackling environmental issues and problems has been taken up in the fourth chapter. Three case studies of Environmental NGOs are Greenpeace, Friends of the Earth, and World Wide Fund for nature. Lastly, it is followed by conclusion in which summary of the main findings is presented along with a brief discussion on the potential and future of Environmental NGOs.

CHAPTER II

CONTEMPORARY GLOBAL ENVIRONMENTAL PROBLEMS

2.1 Introduction

The earth is a finite resource, and the current scale of economic development may reach the point that "impoverishes rather than enriches" Global warming, ozone depletion and acid rain, deforestation, and desertification are issues of global proportions posing potentially devastating effects on the world environment.

The purpose here is to highlight the above stated global environmental problems which are threatening the earth's ecosystem and hence a source of global concern. Attempt has been made to study the known repercussions of the existing global environmental damage, which even if halted at its current level, may significantly alter life on earth. Before describing and discussing the various global environmental issues, it is imperative to have a brief insight into the history of man's activities and the impact it had on the environment which perpetuated into current environmental crisis.

2.2 Historical Perspective of Environmental Problems

Although the scale of man's impact on the environment has accelerated rapidly since the Industrial Revolution, man has been a factor in environmental change for at least 40,000 years, since the late stages of the Pleistocene ice age. Early man used fire, his first great tool, to drive animals while hunting, and since he had little control over this tool, the accidental effects of its use could be

Handle, Environmental protection and Development in Third World Countries: Common Destiny - Common Responsibility, 20, N.Y.U. J. INT'L L.& Pol. 603, (1988).

considerable. Later, fire was deliberately used to improve grasslands to which grazing animals could be attracted and more easily hunted. The impact of primitive peoples can be considerable, and when Europeans settlers first went to the America they did not enter a totally untouched world, since the forests and grasslands were already much modified by human activity. Even today primitive agricultural groups use fire in the system of shifting agriculture known as 'slash and burn' which is a major cause of deforestation and environmental degradation. There are only few pockets in the world that have not been affected by man.

As a consequence of human activity since the Pleistocene, and especially since A.D. 1750, it is very difficult to define the terms natural environment, because so many parts of what is generally taken to be the natural environment, such as vegetation and animal life; have been so greatly changed that they might be considered man-made. These changes have been brought about as a result of man's attempts to modify the earth to increase its capacity to support him, and to satisfy his increasingly large range of needs and desires. However, this has not been without its price, and some of the most serious problems that man faces arise from the increasing demands that he is placing on the environment.

There are three main factor, responsible for an increasing demands that is being placed on the environment and consequently environment crisis.

Population growth - The population of the world is growing exponentially, the consequences of which is clear. More land and natural resources will be needed, more waste will be created and the impact on the environment will be immense.

- Rise in aspiration It serves to multiply the impact of population growth standards of living are high and increasing in advanced economies, with a consequent high level of demand for resources.
- Advances in technology Technological change is exponential and man's power to change the environmental has increased and is still increasing rapidly. Technology affects the environment in two ways.

First, the ability of man directly to cause environmental change is increased. The development of the steel plough in the nineteenth century enabled large areas to be cultivated for the first-time. Similarly the development of steam-driven ships enabled all the species of whale to be hunted instead of just five which were slow enough to be caught by oarsmen.

Secondly, entirely new substances such as plastics, DDT and radioactive wastes have been introduced into nature.

Thus, as technology has developed, the number of ways in which man affects the environment has increased and their effects have become more widespread as is evident by the global environmental problems, which has been discussed in the following paragraphs.

2.3 Global Environmental Problems

2.3.1 Ozone Depletion

Among various ecological imbalances, depletion of ozone layer in the atmosphere, commonly termed as 'ozone hole', is causing a stir. The problem has reached to such an alarming level that the United Nations has announced September 16 as the 'World Ozone Day' under its environmental programme to encourage people to reduce the use of chemical substances which destroy ozone layer in the global atmosphere.

Ozone is a form of oxygen gas excepting that an oxygen molecule (O_2) contains two oxygen atoms where as that of ozone (O_3) contains three. Presence of this extra atom in a molecule of ozone makes all the difference. The 'life' on the earth is saved from the deadly ultra violet (UV) radiations from the sun due to the presence of this diaphanous viel of ozone and its absorbing properties. There is a constant formation, breakup and reformation of ozone using energy from the ultraviolet rays that goes on in the stratosphere, leaving a net balance of ozone gas forming the ozone layer.

The problem of ozone depletion was first identified in 1970s due to the advent of supersonic aircraft which fly in the lower stratosphere and which emit nitrogen oxides. Subsequently, it was established that the major cause of ozone depletion is the freons of chlorofluoro-carbons (CFCs). These compounds are non-toxic, non-flammable and chemically inert gases. These properties make them useful for a wide range of applications including aerosol propellants, refrigerants, cleansers for

electronic components and in the production of foamed plastics. The CFC gases do not rapidly degrade and passing through the troposphere they eventually enter into the stratosphere, where they are subject to intense ultra violet radiation - the same radiation is absorbed by ozone. Chlorine destroys ozone. In a chain reaction of oxygen destruction, each of the chlorine atoms released can over time destroys upward of 10,000 ozone molecules.

Severe thinning of ozone layer or its depletion, termed as 'ozone hole' was first detected in 1984 and by 1988 there was sufficient evidence to demonstrate that the ozone hole over Antarctica was caused by chlorine atoms derived from CFC's. Between mid August and mid October 1987 at Halley Bay, at the altitude between 14 and 23 km, the ozone depletion was found to be 95 percent, low enough to cause skin cancer and attack human immune system.

Consequences of Ozone Hole

Ozone layer acts as an umbrella against the harmful ultraviolet radiations from the sun. Most of the threat to human beings is from the biologically active UV-B rays. Though these rays get attenuated by ozone layer, some fraction of it does reach the earth's surface. Any increase in these radiations, due to the depletion of ozone layer, endangers the life of human beings in the following way:

Skin Cancer

The most harmful biological effect due to prolonged UV-B exposure is a type of skin cancer called 'melanoma' which is deadly if not diagnosed in early stages. It affects younger people and white skinned people:

Immune System Attacked

UV-B has damaging effect on human body's immune system. Therefore, Vulnerability to catch all types of infections increases. It also causes cataract in the eyes.

Retardation in Plant Growth

Higher intensities of UV-B rays retard plant growth, reduce the yield of seeds and fruits, and even affect the chemical compositions of some plants, thereby changing the basic character of the plants. Their adverse effect on the growth the forests in addition to the deforestation being caused by the civilized world would cause climatic changes and upset the delicate natural ecological balance.

Destruction of Marine life

Enhanced UV-B rays have reportedly been damaging aquatic organisms, zooplankton, larval crabs, shrimps and juvenile fishes - which are the foods for bigger creatures. Therefore with such a destruction of zooplankton etc, bigger fishes

etc would starve. In many regions of the world more than fifty percent of food protein is obtained from the sea. Sea food, in turn, is in serious danger.

Crack in the Larsen Ice Shelf

One of the factors contributing to global warming is depletion of ozone layer. The most notable aftermath of ozone depletion and global warming reportedly appeared during early 1995. The event was a development of 65 km long crack in the northern most part of the Larsen Ice shelf that runs about 1000 km up the Antarctic Peninsula. The Larsen Ice shelf is one of the several barriers that keeps the vast polar (Antarctic) ice cap insulated from warmer weather to prevent its melting. During November 1994, the scientists had predicted that warming climate in the Antarctic Peninsula would lead to the break up of the northern ice shelf in 10 years, but it happened in barely two months. The ice cap covers the continent and on an average it is 2000 meter thick. It contains 70 percent of the world's fresh water and if it melts away completely, there would be a deluge; sea levels around the world would rise by 40 to 100 meters.

There has been no change on the ozone hole since it was first detected. As per the levels recorded by a NASA instrument aboard a Russian Satellite, the ozone hole over the Antarctic region has a surface area of 23 million square km, roughly the size of North American continent. A ozone hole of this size, anywhere else, would have caused skin cancer on an epidemic scale and would have also attacked the immune system of millions of people.

2.3.2 Global Warming

The most serious threat to the civilization's existence has come as recent phenomenon of the global warming. The warming of the Earth's atmosphere caused by an excess of carbon dioxide, which acts like a blanket, preventing the natural escape of heat.

Though there are several factors responsible for this problem, the most significant cause is the 'green house effect'.

Green House Effect

The phenomenon commonly known as the 'green house effect' occurs due to the emission of certain gaseous pollutants in the air which alter the heating rates in the atmosphere, causing the average global temperature to rise. Like the glass roof of a green house, these tropospheric gases temporarily trap heat that would otherwise move rapidly into space.²

The high concentration of these gases in the atmosphere, has increased since the industrial revolution. Studies shows that a consensus has emerged in the scientific community that, the anthropogenic greenhouse gas emission of Carbondioxide, nitrous oxide, Chlorofluoro Carbons (CFCs), methane and low level ozone threatens to disrupt human societies and natural ecosystems. In the result significant global warming and climatic change is predicted. Scientists believe that there are a number

Asthana Vandana, *The Politics of Environment: A profile* (New Delhi: Ashish Publishing House, 1992).

of reasons for the increase in the gases in the lower atmosphere, that are causing the Greenhouse Effect that in turns creating global warming. Most of these result from an increase in certain kinds of human activities on Earth. The causes of the increase in these gases include:

Cutting or burning trees releases carbon dioxide into the atmosphere; Burning of fossil fuels releases carbon dioxide into the atmosphere. Increase in nitrous oxide that comes from the breakdown of nitrogen fertilizers.

A number of gases are involved in the greenhouse effect. These includes CO_2 , CH_4 , N_2O , CFCs, and O_3 . Of these, the single most important gas is carbondioxide (CO_2) which accounts for about 55% of the change in the intensity of the earth's green house effect. The contribution of the other gases are 25% for CFCs, 15% for CH_4 and 5% for N_2O . Ozone's contribution to the enhancement of greenhouse effect is still yet to be quantified.

Scientists are concerned that if there is increase in these gases, as a result of human activities, the earth's surface could warm up to a dangerous degree as more heat is trapped on the earth's surface. An example of a serious greenhouse effect is Venus where because of this planet's thick CO₂ atmosphere, the planet's cloud-covered surface is hot enough to melt lead.

Consequences of Global Warming

A global rise in temperature is likely to have many consequences. For example, parts of the polar ice sheet would melt, raising sea level, which would

result in the flooding of low-lying coastal areas throughout the world. This would cause loss of life, and in addition, the loss of farm land and food supplies, housing and industry. It would damage transport, networks and power supplies, and would pollute inland water supplies with salt water. Rising temperatures would cause the development of new areas of desert, making flood protection difficult in formerly fertile areas.

Conservative scientific estimates, based on the likely range of temperature rise over the next few decades, expect the heat-expanded seas to rise by upto one metre, threatening islands, deltas and coasts. In the higher latitudes, Winters will tend to be shorter, wetter and warmer with longer, hotter and drier summers. In the tropics and subtropics, changes in climate patterns are also expected. Dry areas are likely to become drier producing more land degradation. Humid areas will be wetter with more frequent and intense tropical storms.

Global Warming and Agriculture

Agriculture contributes to the emission of greenhouse gases through three primary means rice cultivation, nitrogenous fertilizer use, and enteric fermentation in domestic animals. Estimates place the annual contribution of the cultivation and domestic animals at approximately 20% and 15%, respectively of global methane production.

Both, the magnitude of agricultural source emissions themselves and the potential effectiveness and costs of possible reduction measures are very uncertain.

While considerable research has been done on the agricultural activities of interests, relatively little attention has been focused on agricultural related emissions of greenhouse gases and how various changes in agricultural practices affect these emissions.

The Global Climate Change and Biological Diversity

Observations have led to believe, that, plants and animals are very sensitive to climate. Their range move when the climate pattern change, species die out in areas where they were once found and colonize new areas where the climate becomes newly suitable. It is also known from the fossil records that some species have become completely extinct because they were unable to find suitable habitat when climate change made their old homes unlivable. Previous natural climate changes have caused large-scale geographical shifts, changes in species composition and extinctions among biological communities. If the widely predicted greenhouse effect occurs, communities would respond in similar ways. Moreover, population reduction and habitat destruction due to other human activities would make it difficult for species to shift ranges in response to changing climate conditions. Human encroachment and climate change could jointly threaten many more species than either alone.

Global Warming and Sea Level Rise

A rise in sea level of one or two metre would permanently inundate wetlands and lowlands, accelerate coastal erosion, exacerbate coastal flooding, threaten coastal structures, and increase the salinity of estuaries and aquifers. The most direct impact of a rise in sea level is the inundation of areas that had been just above the water level before the sea rose. Coastal wetlands are generally found at elevations below the highest tide of the year and above mean sea level.

For the last several thousand years, sea level has risen so slowly that for most practical purposes it has been constant, As a result, people and other maritime species have had the opportunity to extensively develop the shorelines of the world. Whether one is talking about a vacation sport in Rio de Janerio, Swamps in Bangladesh, farmland in the Nile Delta, marshes along the chesapeake Bay, or the merchants of Venice, life along the coast is in a sensitive balance with the level of sea.³

This balance would be upset by the rise in Sea level that could result in global warming, which could raise sea level by one metre or more in the next century, by expanding ocean water, melting mountain glaciers, and perhaps eventually causing polar ice sheets to melt, or slide down into the oceans.⁴ Sa level rise would inundate

James G. Titus; The causes and effects of sea level rise in Dean Edwin Abrahamson. The challenge of global warming (1989), pp.161-162.

J. Hansen, A. Zacis, D. Rind. G. Russel, I. Fung., and S. Lebedeff; Evidence for future warming: How large and when; in W.E. Shands, and I.S. Hoffman, eds., CO₂, climate change and Forest Management in the United States; Conservation Foundation; Washington D.C. (1987).

low-lying areas, drown coastal marshes and swamps of rivers, bays and aquifers throughout the world.

2.3.3 Acid Rain

Acid rain is a matter of great global concern. This phenomenon of 'acid rain' was identified in Manchester, England, as long ago as 1852,⁵ and described more thoroughly in 1872, modern scientific research has been going on only since the mid 1950s.⁶ Acid precipitation is a mixture of strong mineral acids sulphuric nitric and in some locations, hydrochloric-in rain and snow, and is usually defined as having a ph of less than 5.6, the value of distilled water in equilibrium with atmospheric carbon-dioxide.⁷

Acidification of environment brings acid rain which causes fundamental change in the chemical climate, the chemistry and biology of the surface water. Dying forests in Germany, barren lakes in North America, despoiled monuments in India, degrading farmland in Brazil all point to the havoc which acid rain can create. Anthropogenic emissions of large quantities of oxides of sulphur and nitrogen are

E. Gorham; *Atmospheric pollution by Hydrochloric Acid;* Quart. J.Roy. Meterol. Soc., 84:274-276 (1958).



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R.A. Smith; On the Air and Rain of Manchester; Mem. Manchester Lit. Phil. Soc., ser.2, 10: 207-217 (1852) in Eville Garham, Acid Rain: An Overview; in Chandrakant M. Bhumralkar, ed., Meteorological Aspects of Acid Rain, 1984, p.1.

E.B.Cowling; An Historical Resume of Progress in Scientific and Public Understanding for Acid precipitation and its consequences; Research Report F. R. 18180 SNSF Project, oslo, Norway (1981), p.29.

responsible for acid rain, Automobiles, especially high temperature combustion engines, emit these gases to the environment. When it rains these gases combine with water and form acid, so when it rains, it rains acid not water.

Acid rain containing 65% sulphuric acid, 30% nitric acid and 5% hydrochloric acid. Acid rain knows no state boundaries. Canada blames its acid rain to petrochemical units in North America. Sweden is facing acid rain because of the factories in Great Britain and France. Norway states that 90% of its pollution comes from abroad i.e., one third from the United Kingdom, one third from central Europe and one third from Western Europe.⁸

Many ecologists, believe that over the long term, several decades to a few centuries - acid deposition may further impoverish forests soils, developed on sandy sub-strata poor in lime. As a consequence of accelerated leaching of nutrients, such as phosphorous, potassium, magnesium and calcium from these soils, forest productivity would eventually be reduced. Acid precipitation can also mobilize heavy metals from pipes into supplies of potable water. Some ground waters have known to become acidified in Sweden.

The effects of the acid rain are several. It is inhibiting fundamental nutrient cycle and disrupting the main biological processes of the ecosystem. Acid rain has caused 15 percent west reduction in timber growth in Scandinavian region, destroyed

Dr. B.K.Dwivedi; *Environmental Crisis and Fate of the Mother Earth*; third world impact, vol.VIII, no.88, April 1997, New Delhi.

8 percent West German and 37 Percent Czech forests. In some countries lack of Ventilation has led to acid rain concentration.

Moreover, the acid sulphate particles that contribute to acid precipitation are in the size range that penetrates deep into the lung, and they may well exacerbate lung diseases and increase mortality rates.⁹

The primary reason for concern is that acid deposition acidifies streams, and takes on coarse, sandy soils low in lime. The effect is seen particularly in headwater areas and in wet montane environments, wherever sulphate loading from anthropogenic sources is strong. In Northern England, several lakes on soils poor in lime were very acidic by the 1950s. In Southern Scandinavia thousands of lakes and streams in the Adirondacks, Maine, Ontario and Nova Scotia have likewise shown acid stress in recent years and thousands more are threatened, particularly in Canada.

The potential gravity of the effects of the acid rain on the eco-system have been attributed to a number of factors like the climatic conditions, human activities, forests and topography. The degree of acid rainfall varies according to the climate. Humidity, drier climates, wind directions and speed at a place and time determine the abundance or neutrality of atmospheric acidity. Acid precipitation may be more in hard crystalline bedrock areas with thin surface soil while conversely may be less in a thick soil region. Human activities greatly increase acid concentration.

Acid rain cause changes in the quality of public water supply. There is rise in the aluminium level because it is bleached from the soil in the water catchment

L.D. Hamilton; *Health Issues*; Canada-U.S. Law, J.5:47-50 (1982).

areas. Aluminium rich water supplies can cause 'Osteomalacia' a rare bone wasting disease and stomach cancer.

The future appears bleak. Industrialization and more automobiles on the roads, will increase sulphates and nitrates in the atmosphere leading to more acid, causing great environmental hazards. Prospect of acid rain is more of a man made calamity, and national laws and world injunctions through environmental diplomacy are stringently required to check the menace.

2.3.4 Deforestation

Forests and Forestry is not merely a natural resource to supplement multiple human requirements but is perhaps a very vital unit of the environmental system. Deforestation has been a part of human history since pre-agricultural times. In most temperate regions, forest area has stabilized to a large extent, although pollution and overcutting are taking a toll in many area. "Today, tree loss is most acute in the developing world, which hold just over half the world's forests and the rate of loss appears to be accelerating". 10/

Growing industrialization, urbanization and ruthless exploitation of forests has created chaotic conditions and severe photo-geographical and environmental imbalances. The use of forests has been linked with mankind from times immemorial basically for food, shelter and clothing but population exodus and increased stresses

J.D.Hall and A.J.Hanson; A New Kind of Sharing: Why we can't ignore global environmental change; International Development Research Centre publishing; Canada, 1992.

on forest resources created a condition where natural growth of forests and their maintenance is incapable of coping with the demand.¹¹

A 1980 estimate by the Food and Agricultural Organization of the United Nations (FAO) reported that 11.4 million hectares were disappearing each year, by 1990 the UN put the figure at 17 million hectares. The world Resources Institute (WRI) has reviewed studies done during the 1980, and suggests that as much as 20.4 million hectares of tropical forests (roughly the size of Ghana) may be cleared each year. It is, however, remarkably difficult to measure deforestation and these figures can be used only as rough guides. ¹²

The deliberate removal of forest is one of the most log standing and significant ways in which humans have modified the environment, whether achieved by fire or by cutting pollen analysis shows that temperate forests were removed in Mesolithic and Neolithic times and at an accelerating rate thereafter. 13

But it is now calculated that burning of forests, in particular tropical rain forests, is responsible for 20-25% of the CO₂ released into the atmosphere each year (UNEP 1990). Forest destruction-usually for agriculture-constitutes a double threat. Growing trees absorb and fix carbon dioxide from the atmosphere. Every destroyed

Vandana Asthana; *The Politics of Environment: A profile*; Ashish Publishing House, New Delhi, 1992.

J.D.Hall and A.J.Hanson; A New Kind of Sharing: Why we can't ignore global environmental change; International Development Research Centre publishing; Canada, 1992.

Andrew Goudie; *The Human impact on the natural environment;* Basil Blackwell Publishing; U.K. 1986.

tree not only releases carbon into the air, but leaves fewer natural "sponges" to absorb CO₂. In temperate zones, deforestation is roughly in balance with forest growth, but tropical forests are now shrinking at a rate of millions of hectares each year.

In Brazil the Amazon rain forest makes room for cattle or crops. In India deforestation is due to widening circles around cities as residents need firewood. Thirty five million hectares of forest areas is without tree cover and lies waste. In Europe air pollution and acid rain are destroying trees and South-East Asia is in the grip of foreign timber firms over cutting forests.

The world's top biologists have warned that unless something is done by governments to reverse the process of depletion all tropical forests in the world will probably disappear in the next fifty to seventyfive years. 14

Consequences of Deforestation

With deforestation is linked the problem of wildlife. Many animals are driven out of their natural abode in the absence of a kind of forest required for their living. Perhaps plant and animals are faced with extermination as a result of deforestation. Many species have become extinct and others are facing the threat of becoming extint. Problem of poaching and hunting has eliminated certain wild animals disturbing the animal life. Likewise, elimination of certain plants has created floral

Vandana Astahna, *The Politics of Environment: A Profile*, (Ashish Publishing, New Delhi, 1992).

imbalances. Each year, therefore, the earth's tree cover is becoming smaller than the year before. though the problem co-exists in the developed and developing world, it is more acute in the third world where the poor depend for their natural hearth on twigs and fuel wood. Poverty forces them to steadily denude our forest resources.

Apart from Brazil, other major countries that clear large areas of closed forest are India, Indonesia, Myanmar, and Thailand. On a percentage basis, however, the Rica, for instance, is estimated to be losing almost 8% of its forests each year. The rate of deforestation combined with the exalting growth in demand for forest products—is such that while 33 tropical countries are currently net exporters for wood products, this no way decline to fewer than 10 by the end of the century. If this trend could be halted and reversed, tropical forests could serve as a vast carbon sink, reducing CO₂ levels.

Each year another 6 million hectares of productive dry land turns into worthless desert. More than 11 million hectares of forests are destroyed annually. Acid rain kills forests and damages lakes and the artistic and architectural heritage of nations. 15

Some of the losses from deforestation are of concern to the world community. China, India, Indonesia and Malaysia are among the 12 'mega-diversity' countries in which half of the earth's plant and animal species are to be found. Much of this biological wealth and diversity are found in the region's tropical moist forests.

K.H. J. Wijayadasa; *Towards Sustainable Growth - The Sri Lanka Experience* (Ministry of Environment, Sri Lanka, 1994).

Finally, deforestation unlocks carbon whose release into the atmosphere is said to cause global warming. Asian deforestation accounts for 6 per cent of the recent increases in the atmospheric concentration of carbon dioxide.

2.4 Conclusion

Conclusively, current environmental problems raised, are few among several others likely to recoil upon life on this biosphere. If these problems are ignored longer, the result would be environmental crisis perpetuating into slow poisoning of environmental hazards and eventually a catastrophe. There is an urgent and crying need from the governments, various institutions, NGOs and also the common people to take steps for benefit of the future generation in full recognition of current environmental alarm.

The immediate task is to maintain ecological and environmental balance which calls for public awareness about the immediate and grave problems such as global warming, ozone depletion, acid rain, sea level rise, deforestation, environmental pollution, ecological imbalance, effective public relations and publicity, and inculcation of consciousness in the minds of the local people to preserve, protect and promote ecology and environment.

CHAPTER III

NGOS: ROLE AND APPROACHES TO INTERNATIONAL ENVIRONMENTAL PROBLEMS AND ISSUES

3.1 Introduction

In the fast growing literature on international environmental affairs, two phenomena regarding Environmental Non-Governmental Organization (NGOs) stand out. One is the tremendous growth in the size and numbers of environmental NGOs. The second, is the growing awareness among scholars that this phenomenon is not 'epi-phenomenal', but integral to the peculiar nature of world environmental politics itself. The role of NGOs in the international arena is not strictly analogous to the role of groups who lobby and raise public awareness in the domestic arena. Nor is their role to replace governments.

At the international level, environmental NGOs do lobby and educate governments, but their peculiar contribution is something quite different as well. The task of this chapter is to characterize the distinctive qualities of the environmental NGOs. Focus has been given on their role in addressing the global ecological crisis.

At the outset of this chapter it is imperative to define the terms 'Environmental NGOs', and 'International Environmental NGOs'. The term 'Environmental NGOs', denote those non-profit groups whose primary mission is to reverse environmental degradation or promote sustainable forms of development, not to pursue the objectives of governmental or corporate actors. 'International Environmental NGOs", refers to, those groups with bases or activities in more than one country. Because international environmental NGOs are the topic of this chapter, the term NGO has been used for the same.

3.2 Growth of NGOs

The sheer numbers of NGOs world-wide, let alone the size and scope of some individual NGOs, are striking. Significant growth in these numbers have been recorded in this century and, especially since 1980. By the early 1980s, it was estimated that there were approximately 13,000 environmental NGOs in developed countries, and an estimated 2,230 NGOs were believed to exist in developing countries.

However, international NGO coordinating bodies is one indicator of NGO growth. The World Conservation Union (IUCN) lists its NGO membership at 450.¹ Twenty-one African NGOs formed the African NGOs Environment Network (ANEN) in 1982. This number increased more than ten - fold in its six years and, by 1990, the membership was 530 NGOs, located in 45 countries.²

In-country numbers are also impressive. One study estimates that there are more than 6,000 NGOs in Latin America and the Caribbean, most of these formed since the mid-1970s.³ In Brazil, for example there were 400 NGOs in 1985 and 1,300 in 1991.⁴And a survey of 1,000 NGOs in Brazil found that 90 per cent were

Mostafa Tolba, Osama El-Kholy, E.El - Hinnawli, M.W. Holdgate, D.F. McMichael, and R.E. Munn (eds.), *The World Environment 1972-1992: Two Decades of Challenge* (London: Chapman and Hall, 1992), p.681.

Tolba, et al, The World Environment 1972-1992, p.725.

Tolba et al, The World Environment 1972-1992, p.728.

Earth Summit News, May 26, Econet, Electronic News, topic 744, San Francisco, CA: Institute for Global Communications.

started since 1970.⁵ In Kenya there are some four hundred to six hundred NGOs, of which more than one hundred are international in their operation. Asian countries probably have the largest number of NGOs in the developing world.⁶ In Indonesia, for example, WALHI, the Indonesian Environmental Forum, was formed by seventynine NGOs in 1980, had grown to over 320 NGOs by 1983 and, in 1992, had over 500 members.⁷ India has some 12,000 development NGOs and probably hundreds of thousands of local groups.⁸ Bangladesh has more than 10,000 environment related NGOs, of which about 250 receive funds from foreign source.⁹ The Philippines has some 18,000 NGOs, mostly rural and small, but some internationally prominent. In the former Soviet Union, one study listed 331 environmental groups in 1990 during the glasnost period, of which 235 were in the Russian Federation and 52 in the Ukraine.¹⁰

Tolba et.al., The World Environment 1972-1992, p.729.

Tolba, et al, *The World Environment*, 1972-1992, p.725.

James V. Riker, Linking Development from Below to the International Environmental Movement: Sustainable Development and State - NGO Relations in Indonesia', paper presented at annual meeting of Northwest Regional Consortium for Southeast Asian Studies on 'Development, Environment, Community and the Role of the State', 16-18 october 1992 (University of British Columbia, Vancouver, Canada), 12,14.

World Resources Institute, World Resources, 1992-93, 218.

World Resources Institute, World Resources, 1992-93, 218.

Philip R. Pryde, *Environmental Management in the Soviet Union* (Cambridge: Cambridge University Press, 1991), 253.

3.3 Types of Environmental NGOs

Three types of NGOs can be identified in global environmental politics:

The first type of NGOs are large, general membership organisation, with broad environmental interests but focused primarily on domestic environmental issues. For example, major United States environmental organizations, the National Wild Life Federation (NWF), Audubon Society, and the Sierra club.

The second type of environmental NGO is an international NGO, whose primary orientation is towards international issues and is part of a larger international network of affiliated organizations.

Greenpeace, the fastest growing of the organizations, doubling its membership and budget every two or three years during the 1980s, is part of such an international organization. Greenpeace had only five foreign affiliates in 1979, but it now has more than 3.3 million member in twenty countries, including the Soviet Union. It is a loose global federation held together primarily by an annual meeting that agrees on a common set of priorities and strategies. World wide Fund for Nature (WWF) has twenty-three national organizations with a total of 3 million members. Friends of the Earth International is a loose coalition of 38 national affiliates, which is unique in having no single source of authority. Three-fourths of the affiliates were already linked by fax, telex, or electronic mail by early 1990, and the rest were expected to be included in the network by 1992.

The third type of NGO has little or no membership. Instead such groups rely on their technical and legal expertise and on their research and publishing programs.

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Some, like the World Resources Institute (WRI) in Washington, D.C. and the International Institute for Environment and Development (IIED) in London and Buenos Aires, publish studied that tend to have greater impact than those coming from activist membership Organizations. WRI is unique in that, it some times acts more like an international organization than an NGO. It has co-sponsored two major global environmental programme with IOs. The Tropical Forest Action Plan (TFAP) with the United Nations Development Programme (UNDP), Food and Agricultural Organisation of United Nations (FAO), and the World Bank in 1985 and the Biodiversity Conservation Strategy Program with IUCN and UNEP in 1989.

3.4 Nature and Diversity of Environmental NGOs

The term 'NGO' has many uses and many connotations. The difficulty of characterizing the entire phenomenon results in large part from the tremendous diversity found in the global NGO community. That diversity derives from differences in size, duration, range and scope of activities, ideology, cultural background, organizational culture and legal status.

NGOs vary considerably in terms of the size of their budgets, staffs, and offices. As noted, many northern groups have multimillion dollar operations and thousands of staff spread around the world. One of the largest NGOs in the world

is in the South, however: the Bangladesh Rural Advancement Committee (BRAC), with a staff of 2,000.¹¹

The range of international NGO activities varies considerably. Some NGOs seem to be everywhere. Greenpeace chases waters in every ocean, as well as ships carrying plutonium from Europe to Japan. Other NGOs work across borders but on a highly recognized, even localized, scale. Great Lakes United (GLU) Crosses the US - Canada border, but confined its operations to the 'Great Lakes basin. The coalition for justice in the Maquiladoras has over eighty NGO members on both sides of the US-Mexico border and deals with issues local to Mexican and US Communities affected by border industries. ¹² The scope of activities ranges from wild life conservation to pollution abatement to source reduction to poverty alleviation to human rights and from research to education to lobbying to project implementation.

NGOs also very in their ideological orientations. In Europe, especially in Germany the controversies between so-called 'realist' and 'fundamentalist' greens highlights the ideological differences among the various factions of the green movement, one faction is more compromising with the political system, while the other is politically more radical. Other ideological differences within the NGO

World Resources Institute in collaboration with the UNEP and the UNDP, World Resources 1992-93: A Guide to the Global Environment (New York: Oxford University Press, 1992).

Sergio Guillen, 'The role of US-Mexico Border Communities as Actors in Transboundary Environmental Policy', paper (University of Michigan, 1991).

community are inspired by feminism, deep ecology, spiritual ecology, social ecology and bio-regionalism. 13

Cultural differences distinguish, NGOs as well. Many southern NGO, trace their roots to political and human rights challenges. In the Philippine, for example, the rapid rise in NGOs and their increasing prominence at all levels of Philippine society derive largely from the overturning of the Marcos regime and from the encouragement given by the aguino administration to non-governmental activism. In Latin America, much of the NGO activity grew out of the catholic church in the 1970s and, especially, 'Vatican II', which called for greater social justice. In the 1980s a broader set of interests including environmental and public health concerns have stimulated the formation of NGOs. 14 In post-colonial African countries, local NGOs have been involved in environmental, development, and basic services delivery, largely as a result of the inability of governments to provide such services. Throughout the south, woman have been ignored in the development process and, partly as a result, many NGOs exclusively for women have been started. 15 In Europe, many prominent NGOs such as Greenpeace or Friends of the Earth trace their roots to the anti-nuclear movement of the 1970s. One result that carries over into the environmental realm is a penchant for scientific and technological solutions.

Carolyn Merchant, Radical Ecology: The search for a Livable World (London; Routledge, 1992).

World Resources Institute, World Resources 1992-93, 14.

Paul Ekins, A New World Order: Grassroots Movement for Global Change (London: Routledge, 1992), pp.151-2.

Differences in organizational culture set NGOs apart as well. Many Northern NGOs have undergone processes of considerable institutionalization and bureaucratization. They have developed organizational structures comparable to business organizations, with corresponding marketing, fund-raising and development departments. The headquarters of Washington, Tokyo, or Brussels based NGOs, look more like corporate headquarters than the grass-roots, social activist groups from which many evolved and that characterize the vast majority of NGOs. ¹⁶ Salaries are also distinguishing. The president of the National Wild Life Federation in the US is reported to take home \$220,000 per year. ¹⁷

Just as Northern NGOs are becoming more institutionalized, Southern NGOs are building organization skills and financial independence and as a result, increasingly demanding greater autonomy and less dependence on Northern supporters. ¹⁸ In the multilateral development bank campaign, for example, Souther NGOs have been taking more of the responsibility for setting NGO strategy. In doing

W. Puck Brecher 'CMs (Citizen Movements) and NGO: Grassroots Perspective on the Japanese Environmental Gridlock', masters thesis, Asian Studies, University of Michigan, August 31, 1992.

John Lancasten, 'Jay Hair's Environmental Impact: Playing Hardball at the National Wild Life Federation', *The Washington Post National Weekly Edition*, September 9-15, 1991, pp.12-13.

World Resources Institute, World Resources, 1992-93, p.218.

so, they have taken up some of the tougher issues of international debt and trade, and even the question of whether the banks should be abolished.¹⁹

As Southern NGOs are becoming more independent and setting the international agenda, North NOGs are looking to the South for ideas, as well as to establish their own international credibility. Thus, although among governments the trend in financial and technology flows has been from the North to the South, the 'technology' of sustainable development is increasing flowing from South to North.²⁰

Finally, NGOs vary in the legal status and recognition held in their home countries. In the United Stats and Europe, citizens take for granted their rights to organize, lobby and protest. ²¹ In more closed societies, this has not been the case. Nevertheless, as evidenced in Eastern Europe and the former Soviet Union, environmental activism, especially to the extent NGOs stress public health or economic development concerns, serves as one of the few means of political

Barbara J. Bramble and Gareth Porter, 'Non-Governmental Organizations and the Making of US International Environment Policy', in Andrew Hurrell and Benedict Kingsbury (eds.), *The International Politics of the Environment: Actors Interests, and Institutions* (Oxford: Oxford University Press, 1992), p.349.

Penna, David R., "Regulation of the Environment in Traditional Society as a Basis for the Right to a Satisfactory Environment'. Paper presented at the annual meeting of the International Studies Association, Mexico, 1993.

John McCormick, 'British Environmental Policy and the European Community', paper presented at 1991 annual meeting of the International Studies Association, Vancouver, BC, Canada.

expression and opposition to the state system.²² In Indonesia, environmental and development groups are tolerated by an other-wise oppressive regime, as long as they do not challenge state prerogatives. Thus, when some NGOs became too prominent in international lending meetings in Europe, Indonesia clamped down restricting NGO members travel rights.²³

In many countries of Africa and to a lesser extent, Latin America and Asia, NGOs are largely government organized and funded. At United Nations Conference on Environment and Development (UNCED) and the parallel Global Forum these groups had to be wary of acting as, or associating with, NGOs which enjoyed greater freedom and were protesting against state policies. In Japan, while NGOs are legal as protest or opposition groups, they are not widely accepted by society at large. Moreover, most cannot get tax-emempt status because the government's size and budget requirements exceed those of most environmental NGOs. In sum, international environmental NGOs have a wide range of interests, capabilities, and perspectives.

Barbara Jancar - Webstern, 'Chaos as an Explanation of the Role of Environmental Groups in East Europe Politics' (paper presented at the annual meeting of the International Studies Association, London, March 1989).

Riker, James V., 'Linking Development from Below to the International Environmental Movement: Sustainable Development and State-NGO Relations in Indonesia', paper presented at annual meeting of Northwest Regional Consortium for Southeast Asian Studies on 'Development, Environment, Community and the Role of the State', University of British Columbia, Vancouver, 16-18, October 1992.

3.5 Role of Environmental NGO's

First, NGOs are increasingly prominent forces in framing environmental issues. They help establish a common language and, sometimes, common world-views. Indeed, the history of international environmental politics shows that new ideas have not come from governments or even designated international organizations, but from environmental lobbies and activist groups. It was the International Union for the conservation of Nature (IUCN), for example, that coined the term 'sustainable development' in its 1980 world conservation strategy, which eventually became the conceptual basis of the Brundtland Report and the entire United Nations Conference on Environment and Development (UNCED) process. ²⁴ It was Greenpeace and the Sierra Club that introduced the concepts of zero discharge and pollution prevention in the Great Lakes area. It was Greenpeace in the case of Antarctica that was instrumental in making the idea of a world park acceptable. It was Southern NGOs, in particular the Third World Network, that, in the UNCED process, put environment and development questions in terms of South-North Equity.

Second, international environmental NGOs contribute to societal transformation through community development. Some NGOs organize communities at a local level, where they involve citizens in concrete projects. Others build coalitions among communities and across regions and nations to strengthen those communities and to make them more autonomous vis-a-vis existing political

International Union for the Conservation of Nature; The World Conservation Strategy (Gland: International Union for the Conservation of Nature, 1980).

structures. Such community focused efforts represent a proactive approach to social transformation. They develop community capacity to design self-reliant economies and to resist intrusive political and economic forces. This approach replaces the traditional political approach which sees the community as a mobilizable constituency for state - defined political and economic purposes.

An example of the community building function can be found in the Great Lakes case. NGOs such as the National wild life Federation or pollution probe Canada work directly with local communities to devise pollution control strategies.

The Third way in which international environmental NGOs contribute to societal transformation is by setting examples and substituting for governmental action. Instead of calling for action or mobilizing citizens to put pressure on governments, NGOs often just do the work themselves. In the case of Antarctica, Greepeace had its own research station where it demonstrated by example how such a station can be run in an environmentally benign way. In wildlife trade, Trade Record Analysis of Flora and Fauna in Commerce (TRAFFIC) and other NGOs assume a significant share of what would otherwise be a primary state or intergovernmental function in trade management - monitoring. in the UNCED process, Environmental Liaison Centre International, Friends of the Earth, and others unhappy with the way NGOs were fed into the UNCED process, set up an NGO process parallel to both UNCED and the Global Forum in Rio. In sum, by substituting for governmental action and setting examples with concrete activities,

environmental NGOs engage in creative and innovative learning processes whose result come to affect society as a whole.

NGOs must find means of demonstrating their claim in a manner which is recognizable by other international actors. It is not enough to cite public opinion polls that purport to show that NGOs are more trusted than governments or corporations.

So, for example, to make a claim on environmental values in the Antarctic, Greenpeace did not merely hang another banner at an Antarctic Treaty System (ATS) meeting. It came as close to being an ATS member as a non-state actor could, by establishing a bonafide research base (something many states are unable to do). Moreover, it set the example for environmentally sound research by generating much of its own energy, disposing of its wastes properly, and performing its own environmental impact statements. Similarly, in the endangered species trade regime, WWF and others offer something that many states cannot provide themselves, rules and procedures for wildlife trade, monitoring beyond one's own borders, and some degree of enforcement.

3.6 Conclusion

In short, NGOs are effective agents of change to the extent that they operate independently of states and do what states tend not to do. By performing such functions, rather than lobbying others to perform them, NGOs can make a credible

claim on legitimate environmental representation, and they can do so in ways governments and corporations cannot.

It is to conclude that international environmental NGOs make their most distinctive contribution by going beyond traditional politics, that is, beyond state oriented practices designed to ameliorate the side effects of industrial development. NGOs make their contribution when they translate biophysical change under conditions of global ecological crisis into political change and do so at both the local and global levels.

Various studies suggests that NGOs are most effective at the international level to the extent they exploit transnational opportunities. And, whereas NGOs of all kinds- human rights, women's, public health and so forth- also exploit transnational linkages, environmental NGOs inject scientific and earth -centred concerns into political and economic situations which would otherwise relegate such concerns to the margins. In this translational mode, environmental NGOs transform politics by redefining what constitutes its subject matter.

CHAPTER IV NGOs ACHIEVEMENT: CASE STUDIES

4.1 Introduction

Earth Day 1970 marked the beginning of the modern environmental movement. In the past, environmental concern revolved mainly around establishing and protecting wilderness areas for aesthetic and recreational purposes. On Earth Day, it involved safeguarding the biophysical quality of life. Wide spread concern for oil spills, urban smog, toxic dumping and dwindling resources were noted. People protested the use of pesticides, the Killing of whales, and the production of radioactive wastes. They complained, in short, about the increasingly degraded quality of air, water, and soil, and worried out loud about its impact on human life.

Although Earth Day was a predominantly American experience, it spurred recognition that environmental problems were not limited to the United States. Throughout the late 1960s and early 1970s, environmentalists emphasized that air, water, shifting soils and migratory animals - to say nothing of the stratospheric ozone layer or the global carbon cycle-transcend national boundaries. In short, environmentalism went global.

Over the next two decades, environmental activists increasingly worked across national boundaries. Groups opened offices in many countries, directing their efforts to global environmental protection. Today, environmental NGOs are active in more than 100 countries, working on a broad range of issues affecting human health, natural ecosystems, and sustainable development. They concern themselves, for example, with toxic wastes, pesticides, water quality, air pollution, and the environmental impacts of energy supply and use.

However, they differ widely in style and strategy, but most share a common orientation toward sustainable development. The increased incidence of transnational and trans-regional coalitions and alliances of Non-governmental organisations (NGOs) on global issues has increased the influence of both developed and developing countries NGOs.

One global transnational organization through which NGOs influence environmental politics is the International Union for the conservation of Nature (IUCN). It includes 60 countries, 120 individual government agencies, and 350 NGOs, and it can draw on the work of six inter-national commissions composed of over 3,000 volunteer scientists. Governed by a general assembly of delegates from its member organizations that meets every three years, the IUCN has had a major influence on global agreements regarding wildlife conservation and species loss.

However the largest of organisations are Greenpeace, Friends of the Earth, World wide Fund for Nature. In this chapter case study of the above three has been taken to highlight their new type of politics and strategies of lobbying in the global environmental problems.

4.2 Greenpeace

Greenpeace is an independent, Campaigning organization which uses non-violent, creative confrontation to expose global environmental problems, and to force solutions which are essential to a green and peaceful future.

Greenpeace's goal is to ensure the ability of Earth to nurture life in all its diversity. Therefore, Greenpeace seeks to:

- protect biodiversity in all its forms.
- prevent pollution and abuse of the Earth's oceans, land, air and fresh water
- ► End all nuclear threats.
- promote peace, global disarmament and non-violence

when it started out in 1971 as a group of concerned persons calling themselves 'Make a Wave' and protesting the testing of United States (U.S.) nuclear weapons in Alaska, Greenpeace had barely a handful of members. Over the next couple of decades it established itself in its present position of pre-eminence, with over five million members world wide. And, the initially impoverished organisation undertakes extensive research activity and funding of "friendly" NGOs, courtesy a budget which is touching \$30 millions annually because of generous donations to the cause.

Though at the outset Greenpeace's agenda was essentially directed towards nuclear matters, it soon expanded its scope gradually including ocean ecology, toxic trade, protection of rainforests and work on energy conservation and the atmosphere in its roster. But, It still concentrates on anti-nuclear activism.

It has also directed its energies towards specific "Polluting" processes like the chloride industry. Of late, Greenpeace has also resorted to another tactic in an attempt to move away from its overtly anti-industry image: pushing environment-friendly products like the Greenfreeze in Germany. With its headquarters in

Amsterdam (the Netherlands), Greenpeace is governed by the stichting Greenpeace Council(SGC) and its board of directors,

Over the years it has spread itself over the globe covering over 30 countries, including a base in Antarctica. Its base in the South Pole is the result of Greenpeace's concern with the issue of global warming, it has played a prominent role in lobbying for the gradual elimination of Chlorofluorocarbons (CFCs).

Greenpeace chiefly wages its campaigns in world civic politics through "direct actions". These include positioning activists between harpooners and whales, plugging up industrial discharge pipes, parachuting from smokestacks and floating hot-air balloon into a nuclear test site. None of these activities involves lobbying a government *per se* or calling for a particular policy change on the part of specific countries. Instead, the aim is to instill a sense of outrage among the largest audience possible.

Greenpeace's direct actions are based on the notion of "bearing witness". This type of political action, originating with the Quakers, links moral sensitivities with political responsibility. Having observed a morally objectionable act, one cannot turn away in avoidance. One must either take action to prevent further injustice or stand by and attest to its occurrence. When Greenpeace confronts whalers on the high seas or blocks railway cars carrying toxic substances or plugs up discharge pipes, it bears witness, in the most public way possible, to ecological insjustice. The idea is to invite the public to bear witness as well, to enable people throughout the world to

become informed about ecological dangers, pique their sense of outrage, and spur them to action.

Greenpeace, with over 4,500,000 supporters worldwide, six ships and a presence in 30 countries, is a truly international organisation putting green and peace on the global agenda. Defending the Southern ocean from commercial whaling; demonstrating against clear-cutting of ancient forests in canada; protesting at trade in toxic waste to Latin America; or blocking discharge pipes to draw attention to those companies illegally polluting Britain's rivers and coastal waters.¹

In 1992 Greenpeace commissioned a domestic fridge to replace the traditional design which damages the ozone layer. 'Greenfreeze' successfully uses ozone and climate-friendly technology and is now being widely produced in Europe. In China, the second largest supplier of domestic fridges in the world, two of the largest refrigeration manufacturing sites have recently converted to 'greenfreeze' technology.²

Greenpeace has won the following successes and battles over the last two decades:

- 1. Restored Antarctica to its status as the last Wilderness continent after an eight year campaign which consumed half of its funds.
- 2. Helped establish a whale sanctuary in the southern ocean, protecting the great whales from commercial whaling all round Antarctica.

Greepeace pamphlet.

² Greenpeace pamphlet.

- 3. Revolutionalised the refrigeration industry with the introduction of climate and ozone friendly 'green freeze' technology.
- 4. Ended large scale driftnetting which once stripped our oceans bare.
- 5. Stopped the killing of baby seals for commercial gains.
- 6. Alerted governments to the alarming rise in children's asthma caused by car exhaust emissions.
- 7. Persuaded the European Community to reduce pollution in the North Sea including a ban on the UK dumping of industrial waste.
- 8. Campaigned internationally for a ban on ozone destroying chemicals winning an agreement to phase-out CFCs in Europe.

Twenty-five years after it was founded, Greenpeace has become a global organization with its international headquarters in Amsterdam, the Netherlands, and has more than 60 offices in more than 30 countries worldwide. It has established a presence in Latin America, Asia, North Africa and Eastern Europe. In 1987, Greenpeace became the first and only non-governmental organization to establish a base on Antarctica dedicated to preserving the environment. Founded in 1975, Greenpeace in the USA now has offices in 13 cities and maintains a headquarters in Washington, D.C.

Greenpeace allies itself with no political party and takes no political stance except for the protection of the environment. Greenpeace is funded almost entirely by the contributions of its approximately 3 million supporters from 160 countries. It is independent of the influence of governments, groups, and individuals and

maintains a strict policy of soliciting no government or corporate funding.

Greenpeace adheres to a principle of non-violence, rejecting attacks on people and property.

Established in 1979, Greenpeace international united the many separate Greenpeace organizations around the world, then only loosely coordinated. Today, Greenpeace is a closely-knit network of interdependent national and regional offices working together with Greenpeace International. The role of Greenpeace International is to initiate and coordinate campaign activities and programs.

4.3 Friends of the Earth International

In 1969, Brower founded FOE, USA, a group with a broader outlook which fought for 'the preservation, the restoration and the rational use of the ecosphere'. For friends of the Earth, nature and humankind would be dealt with on the same footing.

David Brower, who had friends and admirers in many countries, immediately saw that an international movement was needed. In 1970, Friends of the Earth (FOE) and Les Amis de la Terre were founded in London and in Paris, respectively. Jordens Vanner in Sweden soon followed, as did groups in Germany, the Netherlands, Yugoslavia, South Africa and Australia. It was soon decided that a meeting of all FOE groups should take place every year, thus creating Friends of the Earth International 1971.

Founded in 1971, Friends of the Earth International has grown over the last 25 years to include more than 50 national member organisations in as many countries, thereby uniting nearly 5,000 local grassroots activist groups worldwide. Friends of the Earth International (FOEI) is a unique, decentralised federation of Non-Governmental Organisations (NGOs) from all over the world. FOEI is basically a campaigning organisation. Its members campaign on the most urgent environmental and social issues of our day, while simultaneously catalysing a shift towards sustainable societies. FOEI's strength is its synthesis of the local with the global. With members in every corner of the world, co-operation is possible between groups in East, North and South on critical issues.

The Friends of the Earth International is a worldwide federation of a national environmental organisations. This federation aims to:

- Protect the earth against further deterioration and restore damage inflicted upon the environment by human activities and negligence.
- ▶ Preserve the earth's ecological, cultural and ethnic diversity.
- Increase public participation and democratic decision-making. Greater democracy is both an end in itself and is vital to the protection of the environment and sound management of natural resources.
- Achieve social, economic and political justice and equal access to resources and opportunities for men and women on the local, national, regional and international level.

Promote environmentally sustainable development on the local, national, regional and global levels.

Friends of the Earth member groups are united by a common conviction that these aims require both strong grassroots activism and effective national and international campaigning and co-ordination. The FOEI as a unique and diverse forum to pursue international initiatives, taking advantage of the variety of backgrounds and perspectives of its members.

The philosophy of FOEI can be found in the slogan "Think Globally, act Locally". The members of FOEI from the first day, were convinced that the environmental problems were becoming more and more a threat to earth as a whole, and to the possibilities for human kind to survive on it. But also the respect towards other species played an important part. They international character of the pollution, the extinction of species, the irresponsible waste of natural resources stressed the need for an international, non-governmental response.

Despite the global level of the problems, the founders of FOEI felt the need to "act locally". Local action as the best way to inform and mobilize the public, local action as a base to influence authorities and industries. And as centralisation of economy and society was seen as an important part of the problem, acting locally also was meant to develop the alternative of a local based economics, sustainable and friendly to human-kind and environment.

Friends of the Earth International is a network of independent, free thinking and varied sister groups from different cultures, each sharing a common name and purpose, its aim was no less than to conserve this planet and its living things.

FOEI has a strong presence in several southern countries and succeeded in encouraging their member groups in both the North and South to work on global climate change issues. One of their more interesting innovations has been to involve local groups in public awareness and information dissemination. This has helped to develop workable solutions to global climate change from grass roots sources. Another such initiative is the Alliance for climate and cities which established linkages and partnership between cities of the North and South. The alliance works at local levels to develop concrete, practical responses to the risks of rapid climate change.

Friends of the Earth's initial contribution to environmental activism was to address a number of issues on which other organisations had yet to focus. FOE began the first serious study of alternative energy polices (pushing a soft-energy path relying on non-nuclear renewables), it was the first group to work against acid rain, and it was one of the first to define the threat of nuclear war as an environmental issue. The group's most important strength, however, has been and continues to be its global reach. Through its offices in fifty-one countries, the organization monitors developments world-wide.

In 1989, FOE and thirteen other environmental organizations formed the coalition for Environmentally Responsible Economics (CERES). CERES produced

a ten-point environmental code of conduct for corporations. This code includes commitments to waste reduction, damage compensation, and disclosure of environmentally harmful practices. These commitments have become known as the valdez principles, inspired by the Exxon Valdez oil spill.

FOEI is one of the largest federations of organisations committed to the preservation, restoration and rational use of environment. FOE has been trying to repair the ozone hole for over a decade. Following the adoption of the 1986 Montreal protocol, which should lead to the phase-out of most ozone-depleting chemicals by 2000, FOE groups used their international network to press for the ratification of the treaty world-wide. However, the protocol's minimal cuts and relaxed timelines do not mean the end of our ozone worries, and FOE groups have continued to lobby for deeper, faster cuts and the ban of specific ozone - depleting substances such as methyl bromide. FOE Canada has even received the UNEP award for its "outstanding contribution to ozone layer protection".

Over the twenty-five years history, Friends of the Earth has:-

- Struggled fiercely and successfully against ill-considered nuclear projects in many countries.
- ► Helped put a stop on large-scale whaling operations.
- Helped protect tropical forests and the rights of indigenous communities dependent on them. Today, FOEI remains at the forefront of promoting sustainable forest use in the Amazon region, in Southeast Asia and elsewhere.

- Fought for global action on crucial issues such as climate change and the protection of the ozone layer.
- Campaigned for reform of the various international financial institutions, and helped cancel or improve specific socially and environmentally damaging policies and projects.
- Promoted a vision impossible to ignore through its research on sustainable production and consumption, within the framework of the sustainable societies programme.
- Acted in thousands of communities all over the world for the direct benefit of the environment on the local and global levels.

FOEI has also strengthened civil society in many countries struggling to end dictatorship and oppression.

4.4 World Wide Fund for Nature (WWF)

The World Wide Fund Nature (WWF) was founded in 1961. Since its establishment, it has grown from a small grant-making organization concerned merely with conservation to a full-fledged transnational environmental activist group with offices in twenty-three countries. Many of these are in the developing world. Activities range from the simple task of building fences around a forest preserve to the more complex one of creating opportunities for sustainable development in environmentally fragile areas. WWF works on a whole host of international and

global environmental problems including desertification, climate change and ozone depletion.

WWF's aims to conserve Nature and Ecological processes by:

- Preserving genetic, species, and ecosystem diversity.
- Ensuring that the use of renewable natural resources is sustainable now and in the longer term, for the benefit of all life on Earth.
- Promoting actions to reduce to a minimum pollution and the wasteful exploitation and consumption of resources and energy.

WWF's ultimate goals is to stop, and eventually reverse, the accelerating degradation of our planet's natural environment, and to help build a future in which humans live in harmony with nature.

In pursuing its aims of establishing, strengthening, or changing international treaties and agreements, WWF works with such bodies as the European Union, IUCN, the United Nations Environment programme (UNEP), UNICEF, and the World Bank, as well as other international NGOs.

Initially, WWF, like other international conservation groups, saw its work as a matter of saving specific species. It was concerned, for example, with protecting the great panda bear, the Bengal tiger and the African elephant, now known as "charismatic species". Despite significant efforts to track, study and research these animals, however, WWF found that their numbers still diminished. What WWF had failed to realize was that individual species cannot be saved without ensuring their habitat. The existence of certain plants, access to water, a predictable climate, and

the presence of other animals are still significant to preserving species. With the understanding, WWF began to work for the protection of habitats. It sought to establish wildlife preserves that would protect animals from ecologically detrimental human activity.

Since the late 1980s, for example, WWF has been working in Zambia to set up a game management system involving local residents in antipoaching and conservation efforts. It is proving successful because it links wildlife protection with the economic well-being of local residents. Game management areas draw tourist and safari hunters. Through WWF's efforts, local people staff these areas and receive the revenues from permits and programs associated with the preserve.

WWF has also been working in cameroon to protect a biologically rich area that cannot be designated as a protected region. Here WWF has been working with local residents to develop tree nurseries for reforestation, reintroduce indigenous crops into the area and share information on the long-term effects of ecologically insensitive practices. It aims to enable local people to be agriculturally productive without harming the ecological integrity of the area. Finally, WWF has been working in St. Lucia to protect the coastal region from environmental damage. This involves lending technical assistance for communal waste disposal, improving the ability of people to market their fish catch to reduce overfishing, and planting fast growing fuelwood trees to protect mangroves that have traditionally served as fire wood.

In each of these projects, WWF has been working with local people and, for the most part, bypassing governments. WWF recognizes that wildlife protection depends foremost on local communities empowered to undertake their own sustainable development. Although local inhabitants of biologically stressed areas may know little about ozone depletion, the greenhouse effect or worldwide deforestation, they know all, too well, the direct human consequences of ecological destruction. Working directly with them rather than through governments is critical to protecting some of the most ecologically important regions in the world.

WWF's priorities

WWF's overriding concern is the preservation of the world's biological diversity. To achieve this, the organization focuses its six conservation strategies on three priority areas of the world:

- ▶ forests
- oceans and coasts
- freshwater ecosystems

These are home to the majority of the world's biological diversity and are vital to the continuation of the planet's natural systems, on which all life depends.

WWF aims to concentrate 80 per cent of its conservation efforts and resources in these three priority areas, and to work diligently to reduce the threat of climate change which could affect all life on Earth.

Forests

WWF's overall forest goal is to halt the loss and degradation of forests and all kinds of woodlands, particularly old growth forests, by the year 2000.

"WWF calls for a shift in forest management". Instead of thinking of timber production first and then trying to reconcile it with conservation, foresters should put the preservation of biological diversity first and only allow timber production where it is compatible".

In pursuit of this, WWF supports the Forest Stewardship Council (FSC), a body established by foresters, timber traders, forest certification agencies, indigenous people's groups, and environmental institutions to promote good forestry practice. The FSC has developed a set of principles, defining sustainability as forest management that is environmentally appropriate, socially beneficial, and economically viable.

The FSC acts as a master accreditation agency for monitoring, evaluating, and accrediting timber certifiers around the world. In less than two years it has accredited four agencies, who in turn have certified 19 forests totalling 4 million hectares. The WWF network is promoting recognition of the FSC logo, so that traders and consumers alike will demand to see it on all wood and paper products.

Oceans and Coasts

According to WWF's Endangered Sea Campaign Unsustainable and indiscriminate fishing practices, more than any other single factor, are the greatest immediate threat to the biological diversity of the oceans.

The story of the world's whales is both symptomatic of the threats to the biological diversity of oceans and a demonstration of what can be done. Concerted WWF campaigns and the organization's powerful influence within the International whaling commission played a crucial part, first in enacting the worldwide moratorium on commercial whaling and then in establishing the Southern Ocean whale Sanctuary in 1994.

The full power of WWF's network is now focusing on a different marine issue. Their is little doubt as to the devastated state of world fisheries. The overall catch has fallen since 1989 and the Food and Agriculture organization of the United Nations reports that 70 per cent of the world's marine fish populations are either overexploited or very slowly recovering from overfishing.

WWF has launched a new, international campaign to promote the conservation and sustainable use of marine fish.

During the past year, WWF developed strategies to:

Establish recovery plans for key species of threatened marine fish by the year 2000

WWF is promoting the recovery of key species, particularly shares, bluefin tuna, swordfish, and other deep sea fish. WWF will work to strengthen regional

fishery agreements, which hold the key to effective management of many species.

WWF will also focus attention on the pressing need to improve fishery management and control trade in fish products.

Create social and economic incentives for sustainable fishing and eliminate subsidies by the year 2000

WWF will lobby governments and international organizations to eliminate powerful existing incentives for unsustainable fishing. Currently, governments around the world pay more than US\$ 54 billion in subsidies to support an industry in which too many boats are chasing fewer and fewer fish. Subsidized fleets first fish out their home waters and then risk "fish wars" as they seek catches further and further afield. WWF will also explore the potential for working with industry to establish a Marine Fisheries Stewardship council to help ensure sustainable use of world fisheries.

Reduce or eliminate destructive fishing practices and the bycatch of selected non-target species by at least 50 per cent in each region by the year 2005

Explosives, poisons, gillnets longlines, and bottom trawls are among the most destructive fishing methods and gear types. Indiscriminate fishing kills and wastes more than 27 million tonnes of fish, seabirds, sea turtles, marine mammals, corals, and other ocean life every year. WWF will identify and target the most destructive fishing-methods and fishing gear types, such as well-of-death driftnets - and promote environmentally sound alternatives, including protected areas closed to fishing, while lobbying for changes to domestic and international legislation.

Freshwater Ecosystems

According to WWF International, "Only about 0.01 per cent of the world's water is easily available to the terrestrial life the depends on it. It is essential that we conserve not jut the resource itself, but also the ecological systems that support it."

It is possible to restore damaged environments, for the benefit of both nature and humankind. WWF's pioneering "Living Rivers" campaign proves it, and also demonstrates the strength of the WWF Network.

It all began with a small area of pasture land along the Waal River and WWF-Netherlands's vision of increasing the country's natural areas over 10 years. Today, Millingerwaard is a wild wetland, recolonized by hundreds of plant species, wild horses, beavers, and Galloway cattle.

WWF's conservation solutions comes from practical experience:

- WWF's fieldwork is based on the best scientific information available
- ▶ WWF understands the need to involve local communities in every aspect of its work
- WWF appreciates the constraints of national and international governance.
- WWF is well versed in the techniques of communicating conservation messages around the world.
- ► WWF is experienced in providing environmental education and training at every level.

In all its, WWF aims to engage in dialogue and avoid unnecessary confrontation. This means that the organization listens carefully to all those affected

by conservation actions, respects their positions, and endeavours to meet their needs.

However, WWF never abandons its role as a principal advocate for the environment.

Much has already been achieved, but there remains much to be done - after all, conservation is about life itself. For example:

- Protected areas must be maintained.
- Species rescued from the brink of extinction must be nurtured.
- International agreements must be monitored or strengthened.
- **Education and training must continue with every new generation.**

So WWF's ultimate goal is to stop, and eventually reverse, the accelerating degradation of our planet's natural environment, and to help build a future in which humans live in harmony with nature.

4.5 Conclusion

In conclusion, one can say that these organizations are fashioning a new type of politics. They rely on familiar strategies of lobbying and pressuring governments. But they also invest themselves in the social, economic and cultural dimensions of global life that lie outside the realm of governmental affairs.

CHAPTER V CONCLUSION

Earth is the only known planet to support life. The environment of this biosphere has been supporting life for millions of years the evolution of modern man in the pleistocene epoch of the geological time scale marks the beginning of mannature interaction. Early modern man was in awe with the environment. Gradually, with progressive development, he was able to gain access to the vast resources of the However, with the advent of civilization, followed by agricultural, nature. industrial, technological and medical revolutions, came a change in man's nature of relationship with his environment. The harmony and equilibrium of the environment vis-a-vis man underwent a drastic change. He became a factor in the environmental The change in the natural environment has been accentuated with the twentieth century population explosion which has been instrumental in creating havoc in the ecological balance of the earth. To feed to burgeoning population, the environment has been exploited so vigorously that natural recovery could not keep pace with the destruction process. This phenomenon has resulted in environmental problems.

Environmental problems can be divided into two categories:

- (1) those that are mainly amenalye to community management; and,
- (2) those that are mainly amenalye to global management.

Within the first category problems lies, such as, soil erosion, desertification, deforestation, water pollution, air pollution, and protection of nature parks, sanctuaries and areas of bio diversity.

The second category includes the pollution of global commons, like the oceans, atmosphere and Antarctica, international trade in toxic wastes and hazardous substances etc. The action framework for solving these problems will have to be evolved at the global level, though national and community action will play an important role in implementing the proposed global solutions. Thus the global environmental problems which have become a cause of serious concern, are ozone depletion, global warming, deforestation and acid rain.

The UN Stockholm Conference of 1972 was major event in the environment dialogue and gave considerable boost to the environment movement. The club of Rome in 1972 recommended a "transition from growth to global equilibrium" and emphasized the need to "establish a condition of ecological and economic stability that is sustainable far into the future". A general trend was a change in developing countries towards environment, and there was general recognition that this resistance was not lack of interest but lack of resources.

In the growth of the NGO movement in environment field in the 1970s, one can distinguish between environmental NGOs and development NGOs. The actions of environmental NGOs were initially linked to visible cases of environmental pollution caused by some industrial activities and energy production in OECD member countries. Although the environment movement did have a considerable impact on the thinking of development NGOs in terms of alternative approaches and lifestyles, environment did not become a significant part of their development agendas until the end of the 1970s.

It was the 1980s which saw the globalization of the environment movement. The scientific progress made in the previous decades underlined the fact that though the world may be divided by national boundaries, we are all a part of one biosphere and environmental degradation in even one country has serious negative consequences for the rest of the world. It was acknowledged that the environmental costs of development could not be ignored. The question was thus not one of choosing between environment and development but of finding practical ways of achieving both goals. The report of the World Commission of Environment and Development (also referred to as the Brundtland Report) entitled "Our Common Future", published in 1987, introduced the concept of "sustainable development" and showed how environmental quality and economic development were not only compatible but "inexorablylinked".

This report played a very significant role in popularizing the concept of sustainable development and in convincing people that a process of economic development which impoverishes the environmental resource base is not sustainable.

The NGO environment also began to develop a more global outlook. Two NGO movements, i.e. environment and development, came closer. The 1990s represent a new era international relations largely as a result of the end of the Cold War. The focus of today's environmental discussions has now shifted to the integration of economics and environment in decision making.

The importance of the NGO role in the environment movement has been firmly established as clearly demonstrated by the Bergen Conference on

Environment, held at Norway in May 1990. The NGO Agenda, entitled "Bridging in Gap" produced at the Conference was perhaps the first document which adequately represented the views of citizens groups from several countries in the world.

Another significant event in the NGO environment movement, was the global NGO conference, "Roots for the Future" held at Paris in December 1991, in preparation for the Earth Summit in Rio-de Janeiro in 1992. At the conference, where representatives from over 850 NGOs were present.

The study of the role of International NGOs reveals a rapidly emerging and changing global NGO phenomenon, for example, the NGO phenomena can be seen when 30,000 NGO representatives converge at the Global Forum in Rio, or when global donor agencies turn to NGOs for the implementation of their environment and development programmes or when representatives of environment and development NGOs sit down with business leaders negotiate acceptable pollution levels. It reflects the nature of the growing role that environmental NGOs have come to play in transforming world environmental politics.

Thus, The ability of various NGOs to have an impact on negotiations and international processes is growing. Battles are being fought and won, and precedents set on the extent to which NGOs are able to observe and influence international processes - such as the preparatory committees for the United Nations Conference on Environment and Development. More significantly, NGOs, particularly those with an academic and research bent are being requested to contribute to, and comment on, the preparation of government positions. As NGOs strengthen their

technical and policy capabilities, they are granted greater access, to the decision-making levels of international processes, redressing, in part, the dominant influence industry experts have had on these processes in the past.

Increasing NGO strength and influence at the national level also has ramifications for the international negotiations - as researchers and policy experts begin to evaluate the role NGOs can play in the functioning of international agreements. As an example, one proposed mechanism to limit emissions of greenhouse gases suggests that enforcement for Northern countries would be based on ensuring full and open access to information, with the expectation that NGOs would enforce country commitments through domestic political processes. This represents a significant shift from the traditional role of NGOs acting to make a system work more effectively to NGOs acting as an integral part of an enforcement system, and is a potent illustration of the expanding impact of NGOs.

International environmental NGOs make their most distinctive contribution by going beyond traditional politics, that is, beyond state-oriented practices designed to ameliorate the side effects of industrial development. NGOs make their contribution when they translate biophysical change under conditions of global ecological crisis into political change and do so at both the local and global levels.

NGOs are most effective at the international level to the extent they exploit transnational opportunities. For example, Greenpeace, friends of the Earth, World Wide Fund for Nature, whereas NGOs of all kinds - human rights, women's public health, and so forth - also exploit transnational linkages, environmental NGOs inject

scientific and earth-centred concern into political and economic situations which would otherwise relegate such concerns to the margins. Thus, environmental NGOs transform politics by redefining what constitutes its subject matter.

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