

Environmental Degradation and Sustainable Development



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Abstract

The wide dissemination of sustainable development has generated considered academic interest. But it is difficult to ascertain the legal nature of sustainable development. However, by laying down an objective to strive for the hundred of treaties sustainable development purports to regulate state conduct. As an objective, it lays down not an absolute but a relative obligation to achieve sustainable development. The aim of this paper is to study the environmental degradation and the necessity of sustainable development. An attempt has been made to outline the journey of various steps taken at international level in the last 40 years. The concept of Sustainable development as a means to achieve the goal of saving our planet from pollution has been discussed. The paper also discusses the scope of Precautionary principal and the principal of 'Polluter pay' as a measure to prevent the environment from pollution.

Keywords: Environmental Degradation, Sustainable Development, Precautionary Principle

Introduction

The world had not noticed any agitation about protection of environment and prevention of pollution and for a balanced ecology, prior to the year 1972. However, the awareness of these concepts alarmed the world at large when it was realized that the danger to environment had become an anathema as a result of the hectic craze for industrialization. The treasures of nature having been depleted day in and day out, apprehensions became enlarged that human life was being in degrees cut short by the filth the people were being put to inhale and ingest. This awareness finally alarmed the world at large which began to look at the environment issues from a global point of view, because the issues had cut across the racial or national, frontiers, a consensus emerged that the world must stand united to ensure that the humanity must survive.

With that afflatus in mind, the United Nations Organization held its first global conference on the Human Environment at Stockholm in June, 1972. The General Assembly of the United Nations adopted its Resolution No. 2977 (XXVII) in December 1972.¹ On December 15, 1972 the General Assembly passed a Resolution, "laying enough emphasis on the urgency of an active co-operation among the States on the subject of environment" and designated June 5 of each year to be the World Environment Day, enjoining on the Member-States and Organizations of the United Nations to undertake on that day certain activities evidencing their concern for prevention of pollution and enrichment of environment. The declaration was couched in the form of a directive stating that the natural resources must be safeguarded. The principles laid down in this declarations are considered as the Magna-Carta on environment, it declared that *Man has the fun-*

damental right of freedom, equality and adequate conditions of life in an environment of quality that permits a life of dignity and well-being and Man bears a solemn responsibility to protect and improve the environment for present and future generations.

The emphasis of the declaration was on educating the people in environmental purity in order to create an atmosphere of enlightened opinion for eliciting personal and public conduct towards the protection and improvement in all possible directions. The Stockholm Declaration, stood as a milestone in the movement for international awareness for protection of environment. It was a source of inspiration for devising further steps to be taken and further course to be devised both on international and national levels.

The Journey in Pursuance of Stockholm Declaration

The Charter of Economic Rights and Duties affirmed in 1974, provided that the protection, preservation and the enhancement of the environment for the present and future generations is the responsibility of all States. It was emphasised that all the States have the responsibility to ensure that the activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the their territorial jurisdiction. It was expected from all States that they would cooperate in evolving international norms and regulations in the field of environment.

In 1975, a Conference on Security and Cooperation in Europe, was held on August, 1975, which affirmed that protection and improvement of the environment in the interest of present and future generations was the need of immense importance not only for the well-being of the people but also for the economic progress of the countries. Thereafter, in 1976, the U.N. Habitat Conference on Human Settlement was held in Vancouver, British Columbia. In the following year World Water Conference in Mardel Plata, in Argentina, was held in 1977. The demand of these conferences was to launch a Ten-Year Programme for providing clean and uncontaminated water for all. The one-day

session of this ten-year programme was inaugurated by the United National General Assembly.

In 1977, the United Nations organized the Desertification Conference at Nairobi, which concerned itself with the increase in population recorded four births, as against two deaths, per second. Account was taken of the fact that as many as 1000 new chemicals were being put into use every year. The expansion of the deserts was noted to be at the rate of 30 kilometers each year, with the result that human energy which was 96% one century ago, presently stood only at 1%. It was realized that the aerosols and the supersonic aero planes had been responsible in breaking up the ozone layer of the earth and that the depletion of the oceans had been on the increase. In October, 1977 itself, the United National Economic, Scientific and Cultural Organization (UNESCO) in collaboration with the United Nations Environment Programme (UNEP), organized, in Soviet Georgia, an Inter-Governmental Conference on environmental education. Thereafter followed an International Conference, at Paris, in January, 1986 for measures to be taken for protection of trees and forests. Fifteen nations around the Mediterranean, had signed an agreement in the name of "Save the Mediterranean Agreement", and in pursuance thereof Tanzania had collected advice of environmental experts to advice it on the design of that country's new capital. In 1986, the United Nations General Assembly recognized the linkage between the quality of environment and the enjoyment of basic human rights.

The right to a healthy environment was recognized by the Additional Protocol to the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights, 1988 which provided that "*Everyone shall have the right to live in a healthy environment and to have access to basic public services*"². It further declared that "the State Parties shall promote the protection, preservation and improvement of the environment"³ Again the African Charter of Human and People's Rights declared that "All people shall have the right to a general satisfactory environment favorable to their development".⁴ On 14th

December, 1990 the United Nations General Assembly adopted a resolution on the need to ensure a healthy environment for the well-being of the individuals. The resolution stated that men and women have the fundamental rights to adequate conditions of life in an environment of a quality that permits a life of dignity and well-being, and, that they bear a solemn responsibility to protect and improve the environment for present and future generations. To that end, the resolution called upon the United Nations Member States and inter-government and non-governmental organizations dealing with the environmental questions to enhance their efforts towards ensuring a better and healthier environment. It further welcomed the resolution of the Commission on Human Rights of March 6, 1990, in which it was decided to study the problem of environment and its relation to human rights. The United Nation carried a study in 1990, the name of the study was "Proposals for a study of the Problem of the Environment and its Relation to Human Rights" and was concerning ecological rights within the body of human rights standards, the definition of their nature, and possible methods for their implementation. Among the preliminary conclusions of the study, it was noted that the universal awareness of the scope, seriousness and the complexity of environmental problems has encouraged the adoption at national, regional and world level of a set of standards and principles that share the objectives of protecting the environment and thereby the rights deriving from it. It was further observed that the standards and principles are designed not merely to regulate the subject of environment but also to entitle individuals to ecological rights. The Rio Earth Summit in 1992 carried forward this programme and emphasized the need for sustainable development to ensure the health and productive life of the human beings and harmony with nature. The Vienna Declaration and Programme of Action, 1993 affirmed that the right to development should be fulfilled so as to meet equitably the development needs of the present and future generations.

UNESCO, in the Deceleration on the Responsibilities of the Present Generations towards Future Generations, 1997, acknowledged the importance of the right to a clean and healthy environment and emphasized that present generations should strive for sustainable development and preserve living, particularly the quality and integrity of the environment.⁵ The UN Secretary General, Kofi Annan on his UN Day message while referring to the Millennium Summit Declaration on 24.10.2000 pledged to promote democracy and the rule of law; to protect children and other vulnerable people and to meet the special needs of Africa, and they promised to make the United Nations more effective as an instrument for pursuing the aim of sustainable development.

The United Nations Millennium Declaration adopted by the Heads of State and Government on 8 September 2000, emphasised that *"We believe that the central challenges we face today is to ensure that globalization becomes a positive force for all the world's people. For while globalization offers great opportunities, at present its benefits are very unevenly shared, while its costs are unevenly distributed. We recognize that developing countries and countries with economics in transition face special difficulties in responding to this central challenge thus only through broad and sustained efforts to create a shared future, based upon our common humanity in all its diversity, can include policies and measures, at the global level, which correspond to the needs of developing countries and economics in transition and are formulated and implemented with their effective participation."*⁶

The meeting of Experts on Human Rights and Environment (14-15 January, 2002) preparatory to seminar (16th January, 2002) held at Geneva to assess the progress since 1992 Conference, concluded that the developments indicate the close linkage between the protection of human rights and environmental protection in the context of sustainable development, the growing inter-relationship between approaches to each of them, as well as the synergies that have developed between these previously distinct fields. It

was recognized that respect for human rights is broadly accepted as a precondition for sustainable development that environmental protection constitutes a precondition for the effective enjoyment of human rights protection, and that human rights and the environment are interdependent and inter-related. The experts identified poverty at the centre of human rights violations and also as a major obstacle to achieve sustainable development and environmental protection.⁷

The Millennium Declaration embodied a number of promises yet again by the Heads of State. They pledged not to spare any effort to free fellow-men, women and children from the abject and dehumanizing conditions of extreme poverty, to which more than a billion of them are currently subjected. This declaration made a commitment to make the right to development a reality for everyone and free the entire human race from want. It further committed for an open, equitable, rule-based, predictable and non-discriminatory multilateral trading and financial system for the nations. Their special programme for the least developed countries includes, debt relief, access for all exports to other countries, and development assistance. The world leaders resolved to halve, by 2015 the number of world's people whose income at that time was less than one dollar a day and those who suffer from hunger; and those without access to drinking water; those children who do not have access to primary education. They also resolved by 2015 to reduce maternal mortality by three quarters of current rates, and to reverse the spread of HIV/AIDS, by 2020 to achieve a significant improvement in the lives of at least 100 million slum dwellers, and so on.⁸

The Agenda 21 formulated to implement the Rio Declaration (1992) was expected to be carried forward after assessment of the progress made since Rio, in the World summit on Sustainable Development (WSSD) at Johannesburg on September 4, 2002. The participating governments at Johannesburg had agreed on an impressive range of concrete commitments, particularly in the five priority areas of water, energy health, agriculture and biodiversity. The Declaration reaffirmed the

commitment to Agenda 21 and the Rio Declaration emphasizing the focus on the individuality of human dignity. World leaders at the 2012 United States Conference on sustainable development (Rio + 20) reaffirmed their commitment to sustainable development which embraces economic progress social development, and environmental protection for the benefit. One of the principal outcomes of Rio + 20 were the call to develop a set of universally applicable Sustainable Development Goals.⁹ An important message was that this new set of goals should carefully consider and balance the three dimension of sustainable development- environmental social and economic. In the meantime a fourth dimension "Peace and security" has been suggested by the UN task team on the post-2015 UN Development Agenda¹⁰ and the Sustainable Development solution network.

It was decided that this sustainable development goals should address the multiple and interwined challenges of ensuring environmental sustainability, eradicating extreme poverty, and achieving economic and social well being this was also affirmed that these goals should be universally applicable to all countries while taking into account national realities, capacities and level of development. Each dimension of sustainable development requires careful thinking and analysis about the role they will play in SDGs and how they will be interlinked. Whatever has been said and contemplated on the issue of sustainable development, the fact is that environment and social economic development are closely linked and development cannot be sustainable without considering its environmental dimension. In a similar way, it is now accepted that poverty eradication and a lasting prosperity can not be achieved if eco-system services are degraded or lost. The States declared in unequivocal terms that Sustainable development is the only option of saving the planet and therefore, it was resolved that the nations would work for achieving the goal of sustainable development, then the questions is what is sustainable development, what are its implications, how can it be helpful in saving the planet from environmental degradation

and what are the problem in achieving the goal of sustainable development

The movement for sustainable development has become increasingly important both in international policy making circles and on the ground. In 1987, the World Commission on Environment And Development (the Brundtland Commission) summarized many ideas that had been coalescing among environmentalists into the idea of sustainable development, which the commission had defined as *"development that meets the needs of the present without, compromising the ability of future generations to meet their own needs through empowerment consultation, impact and risk assessment, the expansion of opportunities, and capabilities, capacities, public participation and by integrating three pillars, social justice, economic growth and environmental protection."*¹¹

Sustainable Development in International Law

As mentioned earlier the first major endorsement of sustainable development came in the 1992 Rio conference. The Rio Declaration on the Environment and Development and the Agenda 21 declaration outlined the goals of sustainable development in the following terms: *"Human beings are entitled to a healthy and productive life in harmony with nature, and that environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it. States were enjoined to 'cooperate to eradicate poverty' and to 'cooperate in a spirit of global partnership' to conserve, protect and restore the health and integrity of the Earth's ecosystem"*¹² (Rio, 1992). Ensuring sustainable development is critical, because if this development is not achieved we will not be just placing our collective welfare in danger but will be imposing an even more hopeless future on our children and grandchildren. If the preservation of mankind itself is not in danger here, then at least the preservation of the quality of life of future generations is.

It is important to understand that even though in most cases the common understanding goes against sustainable development and economic progress, it is also true that just as economic

progress is unthinkable without the preservation of natural resources and environment worthy of humanity, environmental protection requiring large investments is impossible without economic development. Thus, it is important to find balanced solutions, without resorting to extremes. The Principle of Sustainable Development can be treated in a wider context. This principle affects the deep-seated interrelationship of mankind and the environment, and ensures the continued existence of both, encompassing in doing so aspects of philosophy and policy development.¹³ The principle deals with the re-evaluation of the growth model chosen by much of mankind during the time of the Industrial Revolution in the 18th Century. The previous sustainable development growth model kept an eye primarily on economic and industrial growth and the material well-being related to it. It was the time when the rapid reconstruction of economies took place after the second world war, followed by an even more rapid population growth, which brought with it large-scale environmental exploitation. By the beginning of the 1970s, a state had been reached where there was a need for awareness of environmental problems and sustainable-development-oriented model for nature needed to be chosen. In 1971, the well-known German social researcher R. Inglehart had already published the opinion that the economic growth that took place after world war II in the economically developed countries caused a transition from "materialistic" or "liberal" values to 'postmaterialistic' values.¹³ If materialistic values encompassed, above all, economic considerations and direct personal security, then the core of post materialistic values was made up of the non-material aspects of people's quality of life. The environment undoubtedly falls within the area of concern of a value set emphasizing, non-materialistic quality of life, serving not just as the satisfier of people's material interests but also as the carrier of internal, non-material values. It goes without saying that such a shift in the scale of values in welfare states also expresses its influence in terms of which point of origin environmental values are judged from, which of them is placed in the fore-

ground, how this affects interest directed toward the environment, and how the various values are weighed during decision-making.

The 2002 World Summit on Sustainable Development Johannesburg Declaration specifically committed to assume a collective responsibility to advance and strengthen the interdependent and mutually reinforcing pillars of sustainable development-economic development, social development and environmental protection – at the local, regional, national and global levels” (para. 5). The Johannesburg Plan of implementation mandated the UN Commission on Sustainable Development to “take into account significant legal developments in the field of sustainable development, with due regard to the role of relevant intergovernmental bodies in promoting the implementation of Agenda 21 relating to international legal instruments and mechanisms.”¹⁴

In International Law, the concept of sustainable development has gained importance over the course of the past few decades. It is not clear sustainable development has, as yet the character of a Customary norm of international law. But neither is it void of all meaning or normative value in international law. The concept of sustainable development has a dual nature in international law. It can be considered an interstitial norm, which serves to reconcile other conflicting norms related to the environment, the economy and social development (including human rights),¹⁵ and also simply the object and purpose of many international treaties and legal instruments.

International court and tribunals, the concept of sustainable development facilitates the reconciliation and integration of other norms concerning socio-economic development and protection of the environment.¹⁶ Throughout the ages, mankind has, for economic and other reasons, constantly interfered with nature. In the past, this was often done without consideration of the effects upon the environment. Owing to new scientific insights and to a growing awareness of the risks for mankind-for present and future generations of pursuit of such interventions at an unconsidered and unabated pace, new norms and standards

have been developed, set forth in a great number of instruments during the last two decades. Such norms have to be taken into consideration, and these new standards given proper weight, not only when States contemplate new activities but also when continuing with activities begun in the past. This need to reconcile economic development with protection of the environment is aptly expressed in the concept of sustainable development.¹⁷ The concept of sustainable facilitates the reconciliation and integration of other norms concerning socio economic development and protection of the environment.¹⁸

The Permanent Court of Arbitration reaffirmed this reasoning in its Arbitral Award in *Iron Rhine (Ijzeren Rijn) Railway (Belgium v. Netherlands)* (May 24, 2005). In this case, the Netherlands, which had created nature reserves along the path of the historic “Iron Rhine” railway line, sought to prevent its reactivation. Belgium argued that the upgrading of the Iron Rhine Railway was part of a shift from road to rail transportation, assisting in the reduction of greenhouse gases, in order to contribute to sustainable development. The tribunal balanced environmental protection against socio economic development, finding that the application of environmental measures by the Netherlands could not amount to a denial of Belgium’s transit right, nor could these measures render the exercise of such a right unreasonably difficult. In its reasoning, the Tribunal referred to the “notion of sustainable development” and stated that:

*“Environmental law and the law on development stand not as alternatives but as mutually reinforcing, integral concepts, which require that where development may cause significant harm to the environment, there is a duty to prevent, or at least mitigate such harm. This duty, in the opinion of the Tribunal, has now become a principle of general international law. This principle applies not only in autonomous activities but also in activities undertaken in implementation of specific treaties between the parties.”*¹⁹

The implications of these cases for the meaning of the sustainable development in general inter-

national law are clear. In instances where trade liberalization rules, as economic development norms, intersects with environmental norms, the concept of sustainable development may play a normative role in guiding a balanced, mutually supportive, integrated outcome. It may also, as is touched upon further, play a prominent role when social development norms are involved. In International Law, sustainable development is an agreed objective of many international trade treaties, both at the global and regional levels.²⁰ As such, sustainable development can be considered part of the "object and purpose" of a growing number of treaties, and therefore directly relevant in the interpretation of their provisions.²⁰

The concept appears often as an objective or preambular reference, in most international statements and declarations related to environmental, social and economic issues since the 1992 Rio de Janeiro Earth Summit. It has also featured as an object and purpose of many international economic, social and environmental treaties involving developed and developing countries,²¹ as a concept which guides the decisions of international courts and tribunals,²² and the holding of judges in national courts around the world.²³

To date only the 2002 convention for cooperation in the Protection and Sustainable Development of the Marine and Coastal Environmental of the Northeast Pacific provides a definition for sustainable development" At article 3(1)(a), the parties adopted the following statement:

*"----- Sustainable development means the process of progressive change in the quality of life of human beings which places them as the centre and primary subjects of development, by means of economic growth with social equity and transformation of production methods and consumption patterns, sustained by the ecological balance and life support systems of the region. This process implies respect for regional national and local ethnic and cultural diversity, and full public participation, peaceful coexistence in harmony with nature, without prejudice to and ensuring the quality of life of future generations."*²⁴

Thus sustainable development requires the integration of three pillars, social justice, economic growth and environmental protection sustainable development law is found at the intersection of three principal fields of law: economic law, environmental law and social law.

Sustainable development is to ensure the health and productive life of the human beings and harmony with nature. The concept of a global village transcending national boundaries to serve a common purpose became more acceptable. It was realized that the world community must view the programme for sustainable development as a joint venture transcending the national boundaries.

The Problem in Achieving the Goal of Sustainable Development

The under-developed and developing countries are in great hurry for planning a speedy development. The developed countries want to save earth from further pollution by preaching and enforcing on the lesser developed, the need to sustained development. A holistic approach to the protection of environment and ecology from the insatiable economic greed in the name of development is necessary for all the States. The sustainable development needs to be more clearly defined, appreciated and enforced by legal as well as social sanctions. The environment problems are broadly of two categories: first, those which are the negative effects of development; and secondly, scale displacement resulting from mega projects in recent times are obvious examples, therefore proper planning of the development projects to be compatible with environment is necessary. The process of development under globalization is all about hyper-consumption of energy and natural resources leading to environmental degradation. The problem inherited by this kind of development is two-fold. One is uneven development, where only ten percent of the world population is consuming the bulk of non-replenishable natural resources for satiating the avarice of the developed world at the cost of ninety per cent of world population; and second is the way world superpowers are competing

with each other in cornering the world resources, it seems there would be no tomorrow. This means that the present generation of developed world is not only damaging nature and its environment against the interests of contemporary relatively less developed populations but also against the interests of their own future generations.²⁵

The United Nations Environmental Programme (UNEP) has made a comprehensive review of the environmental problems considered global and these problems include climate change, biodiversity loss, population growth, fresh water pollution/contamination, air pollution, greenhouse effect, deforestation, land degradation, soil contamination and desertification.²⁶ The Correlation of Globalization leading to environmental degradation has revolved around four themes.²⁷

(i) The first assumption is that the impact of any large-scale development interventions (industrialization, raw material extraction and processing, projects, timber-logging, mining, fossil energy exploration, production and processing and consumption, etc.) in the environment would influence the quality of eco-system or the environmental life-support system.

(ii) The second assumption concerns with the environmental consequences of the production of the goods and services required for the satisfaction of an increasing world population. The social scientists adhering to the club of Rome argue that if the current trends of industrialization, population growth and depletion of non-renewable natural resources remain unabated, the earth would reach *"the limits of growth within a hundred years."*²⁸ Within this theme, the Group of Lisbon argues that: *"the response to present and immediate future needs and opportunities demands a system of co-operative governance, only by linking the multitude of socio-economic networks at various territorial levels around visible targets and common objectives can one realistically hope to achieve social justice, economic efficiency, environmental sustainability, and political democracy, as well as avoid the many possible sources (economic, political, ethnic) of global implosion."*²⁹

(iii) The third assumption holds the rich North responsible for the bulk of global pollution and hence there cannot be a uniform approach towards curbing economic growth by rich and poor countries. The uniform approach is against the aspirations of rising new economies such as China, India, and Brazil. The pro-south scholars blame the North and plead for a system where the rich North pays for the remedial actions without curbing or jeopardizing the global South. The South commission argues that, *"the countries of the South are today victims of the deleterious environmental effects of policies and patterns of development in the North. These include, such global phenomena as the thinning of the ozone layer, nuclear radiation, and the green house effect, as well as such direct acts as the dumping of hazardous wastes and the location of polluting industries in the south. Attempts by the developing countries to bring the global commons- in particular the oceans and outer-space-under effective international jurisdiction have been defeated in practice by the lack of co-operation of the developed countries."*³⁰

(iv) The fourth theme is the underlying current for Agenda 21 and a variety of other UN efforts, conventions and treaties; it holds the view that global environment protection could be realized by adopting sustainable development as a global ideal. As a global imperative, sustainable development is built around six parameters:

1. reviving growth;
2. changing the quality of growth;
3. meeting essential needs for jobs, energy, water and sanitation;
4. conserving and enhancing the resource base;
5. reorienting technology and managing risks; and
6. merging environment and economics in decision-making.

The major argument of sustainable development is that economic growth should be compatible with global environmental protection. The sustainable development "hinges on the premise that global environmental institutions and governance

should manage global environmental problems. The creation of the sustainable Development Commission and Global Environmental Facility (GEF)³¹, the Global Governance initiatives after the Earth summit of 1992, are but a few pointers in the direction of creating multi-layered integration of management of global environmental change and the economic, political and technological developments responsible of this change³². This global environmental problem is ab-initio rooted in the historical reality and the imperialistic ideology of the developed North. It began in late eighteenth Century. Humankind was depending till then on "solar economy and energy was entirely derived from the sun in one form or another with a few exceptions like wind energy or mills working on harnessed energy source of flowing water streams. But after eighteenth century, the Industrial Revolution turned to "Carbon Economy" depending mainly on fossil fuels.³³ Since the early beneficiaries of the Industrial Revolution were mainly the imperialist nations colonizing other countries in the world, this industrial Revolution gave the political, economic and military strength to the nations of rich North. With this might these nations hegemonized the world's economic processes growth even if it is at the cost of poor populations or environmental hazards, meaning thereby, threatening their own future generations.

The earth and its environment have been accepted as a common heritage of mankind. Devastation of ecology and environmental degradation raises serious issues of human rights. The needs of conspicuous consumption are taking precedence over the needs of base subsistence. Where more than half of the world citizens are suffering from serious crisis of food and drinking water, the affluent nations are splurging precious natural resources on non-essential needs. This whole scenario raises questions regarding human rights in two ways; one, the basic human right of the world population on the natural environment and its resources and secondly, violation of human rights through wars being forced on third world under various disguises with a hid-

den agenda of monopoly over world's precious energy and natural resources.³⁴ The mainspring of economic growth is new technology, and while this technology offers the potential for slowing the dangerously rapid consumption of finite resources, it also entails high risks, including new forms of pollution and the introduction to the planet of new variations of life forms that could change evolutionary pathways. Meanwhile, the industries most heavily reliant on environmental resources and most heavily polluting are growing most rapidly in the developing world, where there is both more urgency for growth and less capacity to minimize damaging side-effect.³⁵

This exponential development poses a serious threat to long-term human survival in a healthy environment and transforms the daily struggles for survival to struggles over progress. This is leading to a disastrous situation, leading to global implosion as summed up by Ulrich Beck.³⁶ The gravity of this problem has been reflected in "Our Common Future", a report by World Commission on Environment and Development in the following words³⁷:

"International economic relationships pose a particular problem for environmental management in many developing countries. Agriculture, forestry, energy production, and mining generate at least half the gross national product of many developing countries and account for even larger shares of livelihoods and employment. Exports of natural resources remain a large factor in their economics, especially for the least developed. Most of these countries face enormous economic pressures, both international and domestic, to over-exploit their environmental resource base."

A majority of developing countries now have lower per capital income than when the decade began, rising poverty and unemployment have increased pressure on environmental resources as more people have been forced to rely more directly upon them. Many governments have cut back efforts to protect the environment and to bring ecological considerations into development planning. Many present efforts to guard and maintain human progress, to meet human needs,

and to realize human ambitions are simply unsustainable- in both the rich and poor nations. They draw too heavily, too quickly, on already overdrawn environmental resource accounts to be affordable far into the future without bankrupting those accounts. They may show profits on the balance sheets of our generation, but our children will inherit the losses. We borrow environmental capital from future generations with no intention or prospect of repaying. They may damn us for our spendthrift ways, but they can never collect on our debt to them. We act as we do because we can get away with it: future generations do not vote; they have no political or financial power; they cannot challenge our decisions. But the results of the present profligacy are rapidly closing the options for future generations. Most of today's decision makers will be dead before the planet feels the heavier effects of acid precipitation, global warming, ozone depletion, or widespread desertification and species loss.³⁸

The new processes of trade liberalization and globalization have been based on free-floating capital, transnational investments, search for markets and cheap labour. These trends have eroded the power of nation-states in controlling the economic activities, processes and forces of production, environmental damage and natural resources. Thus, now state can no more prevent world economic forces from degrading environment. Since globalization is driven by the logic of capital accumulation, therefore, it exerts enormous strain on the environment, only caring for the profit motive. Therefore, any attempt to curb production, extraction of natural resources and entrepreneurial activities would not be permitted by the global economic forces. All the environmentalists, civil society and human rights activists tend to fight a losing battle.³⁹

This is the reason for failure of reaching consensus on the impact of the liberalization of trade and free market globalization on environment. The pro-environmentalists groups insist on the harmful impact of trade liberalization and argue for stricter legal codes and policies to ensure environmental protection. On the other hand, the

pro-liberalization and globalization lobby now epitomized by World Trade Organization (WTO) aims to liberalize four areas of economic activity previously belonging to the exclusive domain of legislative powers of the nation-states. These are:

- (a) trade in services;
- (b) intellectual property rights;
- (c) international investment flows, and
- (d) agriculture

Welford argues that trade and economic liberalization have greatly expanded the opportunities for the developed rich nations to pass on their environmental burdens to the poor nations by exporting both waste and polluting industries. Few years back, a French ship was exported to the ship-breaking yard of Alang in Gujarat. The big hue and cry raised by environmentalists could only stop this ship which was full of carcinogenic materials and hazardous substances. Often due to lax environmental laws in the developing nations and economic strength of developed nations results in relocation of environmentally hazardous industries to poor nations. Trade has a secondary impact on issues of equity as it results in positive or negative impacts on poverty, health, employment, human rights, democracy and labour laws.⁴⁰

To demonstrate how profit motive is the only driving force either to sustain a particular environment friendly policy or to thwart an environment protective effort, one could compare the case of banning ozone layer damaging substances and the case of global warming. In the first case, the chlorofluorocarbons (CFCs) were found to be the culprits for depletion of ozone layer in the atmosphere leading to various hazards. This caused a big furor and demanded a ban on CFCs used in refrigeration, air-conditioning and aerosols. The multinational corporations saw a lucrative opportunity to develop alternatives to CFCs and market them world over consequently very soon Montréal Protocol was signed in 1987 to reduce CFC production to 50 per cent of 1986 levels by 1999 and in 1990 London Amendment, a total ban on ozone-depleting chemicals by 2000

was agreed. It is demonstrated by the fact that within one year of the Montreal Protocol Du-pont (a large multinational corporation) invested forty million dollars to develop CFC substitutes.⁴¹ On the contrary, in case of global warming, the USA is refusing to ratify Kyoto Protocol of 1997, USA, Which is responsible for twenty five percent of greenhouse emissions, has refused to ratify, in 2001, in Marrakech (Morocco), USA even did not join the original thirty-nine nations who signed Kyoto protocol, Despite the fact that the US population which is five per cent of the world's population contributes eleven times more than China's population and twenty times more than India's population and three hundred times more than Mozambique's population to the green house effect. USA proclaims that the Kyoto Protocol is "unfair" as it exempts developing countries and is against USA's best economic interests.⁴²

Thus the problem of dealing with environmental degradation involves the issues of equity, human rights and who should pay for the pollution, should it be paid by the polluter in direct proportion to the damage cause or should it be paid by the global population irrespective of the fact who has polluted or who has benefited most?

In order to ensure success of global environmental protection following factors are of crucial significance.⁴³

- (i) Scientific consensus;
- (ii) Political acceptance of the science;
- (iii) Comparative economic advantage cost associated with change; and
- (iv) Issue of global equity

The environmentalists argue that trade liberalization is harmful to the environment because it puts more emphasis on growth and development at the expense of global environmental protection. They also argue for greater decentralization of economic and political activities to empower people and enable them to care for their local environments. Trade liberalization without proper environmental protection policies, legal instruments and economic incentives (or liabilities) often results in land degradation

and environmental disasters in the marginal and fragile global commons. This will hold globalization responsible for the dangers that threaten our global future.⁴⁴ In view of the strong correlation between environment and development, the Earth Summit in 1992 in Rio de Janeiro has come to the conclusion that global governance and inter governmental co-ordination has to be enforced for ensuring global environmental policies. These global environmental policies have evolved the premise that global environmental management can work. The project as it emerged out of Rio has two principal approaches – a growing body of international environmental treaties among nation-states and increased foreign aid for environmental protection and management as well as poverty alleviation, channeled and managed mainly through the Global Environmental Facility (GEF) and other financing arms of the World Bank.⁴⁵

Sustainable development has to meet free market environmentalisms. According to Eckersley, free market environmentalism asserts that bureaucratic regulations are inefficient and vulnerable to corruption in many third world countries in case of management of forests, water rights and public lands. It also argues for the removal of governmental subsidies and intervention in the form of externality taxes correct market failures.⁴⁶

The World Bank has developed a four-fold environmental agenda that calls for:

- (a) Assisting member countries in setting priorities, building institutions, and implementing programmes for sound environmental stewardship;
- (b) Ensuring that potential adverse environmental impact from bank financed projects are addressed;
- (c) Assisting member countries in building on the synergies among poverty reduction, economic efficiency, and environmental protection; and
- (d) Addressing global environmental challenges through participation in the Global Environmental Facility (GEF).⁴⁷

However, more than anything, the global environmental protection will depend on the capacity of strong States to implement economic policy instrument capable of harnessing/mitigating or abating the consequences of economic growth on the environment. Legal instruments or command and control policies, howsoever significant, will not be in a position to achieve the objectives unless strongly supported by socio-economic incentives. Opschoor and Turner have summarized the current environmental policy principles developed for OECD countries and applied in the developing countries as follows.⁴⁸

- (i) The 'polluter pays' principle, i.e., the polluters pay the cost of meeting socially acceptable environmental quality standards.
- (ii) The prevention or precautionary principle: this explicitly recognizes the existence of uncertainty, (environmental and social) and seeks to avoid irreversible damages in relations to the imposition of a safety margin into policy; it also seeks to prevent waste generation at source as well as retaining some end-of-pipe measures.
- (iii) The economic efficiency/cost effectiveness principles: this applies both to the setting of standards and the design of the policy instruments for attaining them.
- (iv) The decentralization principle: to assign environmental decisions and enforcement to the lowest level of government capable of handling it, without significant residual externalities.
- (v) The legal efficiency principle: this seeks to preclude the passage of regulations that cannot be realistically enforced.

Often, economic policy instruments, such as, taxes on emissions and tradable emission permits and resource use-permits are misused by business and international trading community. Salih argues that economic policy instruments can succeed only when strictly enforced strong legal instruments provide sufficient safeguards for effective environment quality control. His reasons are given as follows.⁴⁹

- (i) Environmental taxes keep down the cost of compliance since the market determines that those who can most afford to act do so, and they deal with the total amount and distribution of the problem.
- (ii) Environmental taxes act as a continuous irritant to the polluters, who therefore have a continuing incentive to avoid the financial cost and taxes by introducing cleaner technology.
- (iii) The price of polluting products will tend to be higher than the price of clean products, and thereby the consumer will encourage producers to choose the latter.
- (iv) Environmental taxes can be used in a fiscally neutral manner to reduce other distorting taxes in the economy.
- (v) Reinforcement of environmental standards and the "polluter pays" Principle

Sustainable Development and the Precautionary Principle

One of the most widely recognized German scholars of the precautionary principle. S. Boechmer-Christiansen has treated the precautionary principle as one of the most important methods used in creating the principle of sustainable development which places the responsibility for the protection of the natural foundation of life for current and future generations with the government and gives government the right to intervene in the structure of the liberal consumption society with its short-term perspective. In Germany the precautionary principle was recognized above all else as the state's legal basis for an active environmental policy.⁵⁰ The precautionary principle is indeed one of the more important cornerstones in the implementation of the sustainable development model. The precautionary principle has developed into the conceptual core of environmental law, and its most substantive feature is the creation of a safety coefficient for the preservation of the natural foundation of life.⁵¹ The goal of the precautionary principle is different when compared to other legislation or principles protecting the lives of people. The difference

stems from the highest good protected by the precautionary principle (the habitability of the Earth's surface), which is, in the most direct and broadest sense, existential.⁵²

The primary reason for the precautionary principle coming to the forefront was a loss of faith in the environmental theory of the 'assimilative capacity approach'. The cited theory is supported by three prerequisites. Firstly, a certain level of pollution-causing agents in the environment does not cause any noticeable damage to the environment, including the various ways in which it is used. Secondly, the environment has a high level of resistance and regenerative ability. Third of all, the environment's regenerative ability can be quantitatively determined and knowledgeably used. Therefore, in the case of application of this theory, the ability of science to adequately predict and determine risks to the environment and to develop technical solutions to eliminate the risks, including the environment's ability to resist pollution, is monitored and utilized. If this approach is successful there is always sufficient time remaining for action. Unfortunately, practice has shown that too late. It often takes scientists years to process actual conditions and to explain and debate their causative mechanisms. The precautionary principle is a method for acting in situations where science is uncertain where in objective appraisal of the situation and reasonable suspicion are applied. The principle takes into consideration the fact that a lack of evidence regarding the cause of damage does not mean in any way that the occurrence of damage has been averted.⁵³

The precautionary principle and sustainable development are also related in the language of several international policy documents. In the Bergen Ministerial Declaration for sustainable Development in the ECE Region (1990) it is written: In order to achievement sustainable development policies must be based on the precautionary principle. Environmental measures must anticipate, prevent and attack the cause of environmental degradation. Where there are threats of serious or irreversible environmental

damage, lack of full scientific certainty cannot be a reason for postponing measures.⁵⁴ The Ministerial Declaration of the Second World Climate Conference (1990) draws attention to the fact that "in order to achieve sustainable development in every country and to meet the needs of present and future generations, precautionary measures to control climate change must be applied. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent....." ⁵⁵

The sustainable development triangle is very clearly presented here. This consists of the fact that in making and implementing various types of policy-influencing decisions, economic and social considerations, as well as the high standard required for environment protection, should be addressed. There must be balance among the three. Economic development and the resolution of social problems cannot occur at the expense of significant damage to the environment, and, damage to environment can be obviated by adopting Sustainable Development. The idea of sustainable development has not, however, ended controversies over the relationship between economic growth and environmental protection. In fact, in many ways the World Conference on Sustainable Development in August 2002, intended to review progress since the Rio Summit, demonstrated the continuing divisions in the international community, but the summit is being criticized both by those who had high hopes for its success, such as Greenpeace, and by those who had been skeptical all along for not having achieved much. Although participants at the summit agreed on two key documents, a political declaration and an action plan, similar to the Rio documents, it remains to be seen whether the continuing disputes in the international community can be overcome to lead to real progress on eliminating poverty and simultaneously protecting the environment.

Conclusion

In the almost 50 years since the 1972 Stockholm conference, dozens of international conferences, national laws, local initiatives, government pro-

grams and non-governmental campaigns have not resolved the fundamental tensions that underlie the relationship between globalization and the environment. Instead, all these efforts have challenged countries to manage those tensions in ways that are politically feasible within their domestic political context and their financial resources. The results of this process for the environment and for human development are still unfolding. Sustainable development comprises of a large array of factors which consist of Peace and Political Stability, Good Governance, Social Dialogue, Respect For Universal Human Rights, Entrepreneurial Cultural, Trade and Sustainable Economic Integration enabling Legal and Regularity environment. It is essential that to protect the environment from further degradation the respect for environment should be inculcated in the nations. The nations should work for creating better environment and balancing the development by considering environment as Intergenerational Treaty and also adhere to Precautionary Principle which stipulates that in case of scientific uncertainty about hazardous effects on an industry upon environment it is better to be on the side of environmental protection, it can only save the Earth from further environmental degradation.

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