



# International Journal of Research Publication and Reviews

Journal homepage: [www.ijrpr.com](http://www.ijrpr.com) ISSN 2582-7421

## Environment and Economic Development- a Convergence Approach

*Mohammad Emdadul Haque*

Mirpur, Dhaka.

### ABSTRACT :

The relationship between environment and economic development is both intricate and critical. Economic growth often relies on the exploitation of natural resources, leading to environmental degradation such as deforestation, pollution, and climate change. However, sustainable development presents a pathway to balance economic progress with ecological preservation. This abstract explores how environmental considerations can be integrated into economic planning to ensure long-term prosperity. It emphasizes the importance of green technologies, renewable energy, and policy frameworks that encourage environmental stewardship while fostering economic growth. By aligning economic incentives with environmental sustainability, nations can achieve inclusive and resilient development that benefits both current and future generations. Environment and sustainable development recognizes their interdependence. Economic growth can lead to environmental degradation, but a healthy environment is also crucial for long-term economic prosperity. Sustainable development aims to find a balance between these two aspects, ensuring economic progress without sacrificing environmental integrity.

Keywords: Environment, Sustainable Development, Pollution, Economy, Government, Economic Growth.

### Introduction

1. Amidst the situation of dramatic revolution in technology in almost every sphere of life, humankind is probably preparing it to face the new challenges of the coming millennium. Though many challenges are yet to be identified, their number is not at all encouraging and it is difficult to set priorities. The most challenging is probably the population boom. Because, together with this problem comes many other problems of which none is less important. The problems of food, shelter, health, education, job, recreation and many other, all increasing in dimension. Again, all these problems together are giving rise to another very important challenge to be overcome that is environmental hazard. Though environment encompasses everything that surrounds us including ourselves, it is the humankind, which is mostly responsible for the changes that take place in environment. It is already established that there is a direct relation between human activities and environmental change.

It is encouraging that people have started becoming aware of the environmental situation. However, the question that remains unanswered is, "Is it too late, too little?" It is almost certain that our way of living is not sustainable. We are probably heading towards extinction of human and other races unless we adopt a simpler way of life. This paper will address the environment in the context of ecosystem and environmental resources for human development. The logic behind the economic growth will be discussed while addressing economic development. Later, it will discuss the relationship between two elements of the topic: the environment and the economic development. The effort will be directed in promoting a general awareness to the environmental threat inherent in any human activity with special emphasis on economic development activities. Some measures that may be undertaken in making the development sustainable and how to finance those measures will be discussed also.

### Environment

#### 2. Components of Environment.

The dictionary meaning of the term environment is the physical surroundings, conditions, circumstances, etc., in which a person lives. Another meaning is the totality of the physical conditions on the earth or a part of it, especially as affected by human activity. From these definitions, we see that the components of environment are actually everything that surrounds us including ourselves. Broadly, we can divide this into two components: physical and biological.

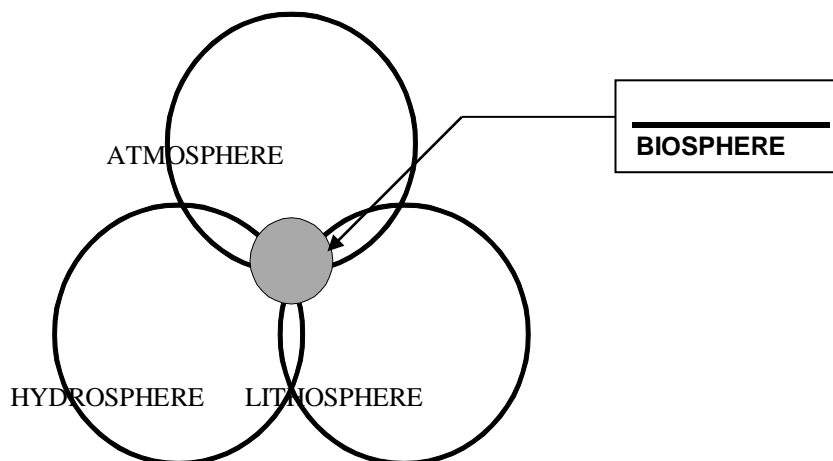
#### 3. Resources of Environment.

Resources of Environment are also components of environment, but they are more specific and help in understanding the interaction between them. They are mainly of two types: natural and human. The natural resources are land, water, natural vegetation, livestock, minerals, etc. They provide a platform from where human interact with the environment. Man is the pivot element in the entire process of resource utilisation for economic development. Besides, he also intervenes into the whole ecosystem.

#### 4. Ecosystem.

Ecosystem concept is fundamental to the examination of human impact on environment. It provides a way of looking at the functional interaction between life and environment which helps us to understand the behaviour of ecological system, and predict their response to human or natural environmental changes. The definition of ecosystem is given by, “an energy driven complex of a community of organisms and its controlling environment”. This is the central concept in environmental science. The basic feature of all material use in ecosystem is cycling. Without cycling, ecosystem functioning would rapidly come to a halt. To understand the ecosystem certain terms are used:

- **Energy.** To run the ecosystems some form of energy is required. This energy can be of different types: solar energy; energy from photosynthesis; energy from wind, current, etc.
- **Biosphere.** Biosphere is the zone in which life is located, in a shell around the planet. It extends from at least 0.5 km below the floor of ocean into the atmosphere. Life has been detected up to 6.5 km above earth's surface. Thus, it is no more than 20 km thick. It can be shown as the following diagram



- **Ecosphere.** It is the biosphere together with abiotic (physical) environmental life support system.
- **Cycles.** Cycles that operate in the ecosystems are hydrologic cycle, nitrogen cycle, oxygen cycle, carbon cycle, phosphorus cycle, etc. Artificial resources that cannot be recycled are not environment friendly.

---

### Development

#### What do We Mean by Development?

##### *Old Theory.*

In strictly economic terms, development has traditionally meant the capacity of national economy to generate and sustain annual increases in its gross domestic product (GDP) or gross national product (GNP).

##### *.Present Theory.*

Development is about improving the wellbeing of people. Raising living standards and improving education, health, and equality of opportunity are all essential components of economic development. Ensuring political and civil rights is a broader development goal. Economic growth is an essential means for enabling development.

##### *Resources for Development.*

The physical resources for development are land, water, plantation, livestock, minerals and other raw materials. Considerations for human resources are number of people and level of their skills.

#### 7.Economic Development.

This is capitalistic approach. The pursuit of profit and capital accumulation brings forth development and change. The fundamental impulse that sets of the economic growth comes from new consumers' goods, new methods of production or transportation, new markets, and new forms of industrial organisation. As a whole, we can say that the reason of economic growth is to meet increasing demand for human comfort. However, all development processes add to the environmental changes.

## Human Influences.

There are now about 6000 million individual humans. This large population not only affects all other species with which we share biosphere, but also threatens the support systems for all of life on earth. Most intensive agricultural activity is a deliberate attempt to modify ecosystem function for the maximum benefit of humans; while nearly all pollution is accidental as few humans actually want to foul their own nests. Many impacts occur much more quickly than the ability of natural ecosystem functioning to restore the system to a similar state to that before those impacts. This time lag in system reaction means that change is hard to reverse. Thus, all human development has an environmental cost.

## Concept of Sustainable Development.

The dynamic nature of ecosystems can cope with a certain amount of impacts. The human existence depends upon the ability to utilise the resources that are part of ecosystem. The trick that humans must learn is to use the resources without compromising the ability of ecosystems to maintain their integrity. The definition of sustainable development is given by Brundtland Commission as “development, which meets the needs of the present without compromising the ability of future generations to meet their own need”. Development economists have adopted the term sustainability in an attempt to clarify the desired balance between economic growth on the one hand and environmental preservation on the other. Destroying this balance indiscriminately in the pursuit of short-term economic goals penalises both present and, especially, future generations.

## The Nature of the Future Challenges of Environmental Hazards

By the middle of the next century, almost one-third of the world’s population will live in countries with a population density of more than 400 per square kilometre. Together with economic growth, this would lead to severe environmental degradation. If the environment is not preserved then the health and productivity of future generation will suffer. The health and productivity consequences due to environmental damage are tabulated in the next page.

## Policies and Institutions.

Without technologies and policies that can be applied at reasonable cost, environmental improvement is difficult. They are also difficult for national governments to introduce. If institutional obstacles to addressing national environmental problems are large, they are even greater for international problems such as greenhouse warming and the preservation of biodiversity. It may also be difficult to reach agreement among many different countries, each of which may perceive its national interest differently.

## Water pollution.

Access to safe water remains an urgent human need in many countries. The problem is contamination. This is compounded in some places by growing water scarcity. Each year, diarrhoeas alone from contaminated water kill about 2 million children. Where industry, mining and the use of agricultural chemicals are expanding, rivers become contaminated with toxic chemicals and heavy metals. These pollutants are hard to remove from drinking water with standard purification facilities. Ground water aquifers do not have the self-cleansing capacity of rivers and, once polluted, are difficult and costly to clean.

| Environmental Problem              | Effect on Health   | Effect on Productivity  |
|------------------------------------|--|---|
| Water pollution and water scarcity | More than 2 million deaths and billions of illness a year attributable to pollution; poor household hygiene and added health risks caused by water scarcity  | Declining fisheries; rural household time and municipal costs of providing safe water; aquifer depletion leading to irreversible compaction; constraint on economic activity because of water shortages |
| Air pollution                      | Many acute and chronic health impacts: excessive urban particulate matter levels are responsible for 300,000 - 700,000 premature deaths annually and for half of childhood chronic coughing; 400 million - 700 million people, mainly women and children in poor rural areas, affected by smoky indoor air | Restrictions on vehicle and industrial activity during critical episodes; effect of acid rain on forests and water bodies   |
| Solid and hazardous                | Diseases spread by rotting garbage and blocked drains; risks from hazardous wastes typically local   | Pollution of groundwater resources  |

| wastes               | but often acute  |   |
|----------------------|--|---|
| Soil degradation     | Reduced nutrition for poor farmers on depleted soils; greater susceptibility to drought  | Field productivity losses in range of 0.5 – 1.5% of GNP common on tropical soils; offsite siltation of reservoirs, river-transport channels, and other hydrologic investments |
| Deforestation        | Localised flooding, leading to death and disease   | Loss of sustainable logging potential and of erosion prevention, watershed stability, and carbon sequestration provided by forests  |
| Loss of biodiversity | Potential loss of new drugs  | Reduction of ecosystem adaptability and loss of genetic resources   |
| Atmospheric changes  | Possible shifts in vector-borne diseases; risk from climatic natural disasters; diseases attributable to ozone depletion (perhaps 300,000 additional cases of skin cancer a year world-wide; 1.7 million cases of cataracts) | Sea-rise damage to coastal investments; regional changes in agricultural productivity; disruption of marine food chain  |

Table:Principal Health and Productivity Consequences of Environmental Mismanagement.

### Air pollution.

The most serious health risks arise from exposure to suspended particle matter, indoor air pollution, and lead. Air pollution has 3 principal manmade sources: energy use, vehicular emissions and industrial production. All of these tend to expand with economic development unless adequate pollution abatement measures are taken.

### *Solid and Hazardous Wastes.*

Many cities generate more solid wastes than they can collect or dispose of. The volume increases with income. Uncollected refuse dumped in public areas or into waterways contributes to the spread of disease.

### *Land and Habitat.*

Estimates of land damaged or lost are increasing due to soil degradation induced by human activities. Deforestation causes productivity loss (often grossly underestimated) in individual countries, and leads to loss of biodiversity and ecosystems. "Biodiversity is the variety of life forms within an ecosystem". Some 'key' species are essential for the existence of other species.

### *Atmospheric Changes.*

Two examples of adverse atmospheric changes are greenhouse effect and ozone depletion. The consequences of greenhouse effect are a substantial rise in sea level and tropical storms will be more frequent. On the other hand, the consequence of ozone depletion is an increase in received solar ultraviolet radiation. The effect of this will be more skin cancer, eye damage and reduced productivity of vegetative plankton.

### *The Cost of a Better Environment*

The cost of protecting and improving the environment appears at first sight to be large. Yet such investments must and can be afforded. Failing to accept the present cost will be costlier in future. The expenditures would cover pollution control in energy, industry, and transport, expanded programmes of sanitation and water supply, soil conservation, agricultural extension and research, forest protection, family planning, and female education, etc.

### Financing the Programme.

The customers will pay for the bulk of these investments. In addition, governments will have to spend more on monitoring and enforcement, on research and development, on education, training and extension, and on protection of natural habitats.

---

***International Finance for Local Problems.***

Local environmental challenges deserve additional development assistance. Assistance should come not only in terms of money but also in terms of technology transfer for combating environmental challenges.

***Financing Global Challenges.***

Industrial countries must bear the most of the costs of addressing global problems. As a global response to a global challenge, the allocation of such funds should be based on effectiveness in raising global welfare, rather than on meeting national needs.

***Ways to Achieve Environmentally Sustainable Development***

A United Nations Earth Summit was held at Rio de Janeiro, Brazil from 03 to 14 June 1992 on Environment and Development. The primary document discussed in that summit was known as 'Agenda 21'. The agenda outlined the areas for international co-operation in promoting environmentally sustainable growth and development. Some of the measures that should be undertaken to achieve sustainable development are discussed in the subsequent paragraphs.

---

**Integration.**

Environmental protection should constitute an integral part of the development process and should not be considered in isolation from it.

***International Co-operation.***

All states and people should co-operate in a global spirit to eradicating poverty as an indispensable requirement for sustainable development. Priorities should be given to least developed and environmentally vulnerable countries. Free exchange of technology, trade liberalisation, debt relief and financial assistance etc should be provided to the developing countries by the industrialised countries. All should effectively co-operate to discourage or prevent the relocation and transfer to other states of any activities or substance that cause severe environmental degradation.

***Formation of Policies and Legislation.***

Each state should make policies regarding environmental issues. They should reduce and eliminate unsustainable patterns of production and consumption by promoting appropriate policies. All countries should enact effective environmental legislation. There should be national law regarding liability and compensation for the victims of pollution and other environmental damage.

***Community Involvement.***

Programmes to improve environmental conditions are likely to be most effective when they work in tandem with community networks. This ensures that programme design is consistent with both local and national objectives.

***Government Programmes.***

By providing rural economic opportunities outside the home, government can create many alternative employment opportunities. They may alleviate population pressure on ecologically sensitive land, stimulate rural development, and reduce the flow of rural-to-urban migration. Future programmes should undertake environmental impact assessment as compulsory measures.

***Raising the Economic Status of Women.***

Raised economic status of women may lead to decreases in family size. It is important that community based environmental programmes work closely with women because their own day-to-day activities may largely determine the pattern of resource use.

---

**Conclusion**

Environment is the surroundings wherein we live. This can be addressed in two ways, physical and biological. Environmental resources are categorised into two types, natural and human. Humans interact with natural resources to cause most of the environmental changes. Ecosystem is the central concept to understand these environmental changes and it functions basing on recycling of its resources. Presently the development is seen as the total improvement in each sphere of the life system. Economic development is initiated and continues to grow to achieve this development. Since only human undertakes this development process, his influence is most profound in bringing environmental changes. However, the rate of environmental changes is faster than the ecosystem recycling time. Thus, there is a gradual degradation in environment. To forestall this degradation the concept of sustainable development has come up. It says that development must be environment friendly so that future generation can continue with the

development. To start with the sustainable development process, future environmental challenges are identified. The development will increase in volume with the population growth. So, the main difficulties will be faced in formulating and implementing policies to safeguard the environment. Water and air pollution will cause serious health risks. Volume of solid and hazardous waste will be unmanageable. Agricultural land loss will create food deficit. Habitat loss will lead to loss of biodiversity. Atmospheric change will make the greenhouse and ozone effects more profound. Although the cost of environment improvement will be large, yet it should start now. Otherwise, it will go on increasing. It is evident that people have to buy costlier items in order to share the additional cost of environmental protection that will be incorporated in the production processes. However, the government expenditure will also increase. In this regard, the developed countries will have to help the poorer countries. According to the Rio Summit, the environment protection must be integrated into the development process. All countries and men should act together in a global spirit. Countries should not only make policies and legislation to protect the environment but also ensure strict implementation of them. The legislation should also be protective of environmental rights and make provisions for compensation. Women must be given proper education and their economic status should be raised, because they can contribute maximum in making household activities environment friendly. We should not wait for the government to start the actions. In this regard, community involvement will be most effective. There should be many government programmes to generate alternative employment opportunities. The generation of employment opportunities will reduce population pressure in urban areas and thus make the environment handling easier. However all these actions can be implemented with ease if the public awareness towards sustainable development methods is promoted first.

#### REFERENCES:

1. Agrawal, A.N. & Kundan Lal, Economics of Development & Planning. New Delhi: Vikas Publishing House, 1989.
2. Billings, W. D. Plants and Ecosystem, third edition. Wadsworth, Belmont, CA. 1978.
3. Brown, J. Environmental Threats: Perception, Analysis and Management. New Delhi: CBS Publishers and Distributors, 1992.
4. Chakravarty, C. Environment for Everyone. Augustan Publishers and Distributors. New Delhi, India. 1996.
5. Dhar, B. B. and Sexena, N.C. Socio-Economic Impacts of Environment. New Delhi: Ashish Publishing House, 1994.
6. Dickinson, G. and Murphy, K. Ecosystems. Routledge, London. 1998.
7. Environmental Management Training Series. An ILO/UNEP Programme. New Delhi: Sterling Publishers, 1993.
8. Ercal, D. Environment Management in Developing Countries. Paris: OECD, 1991.
9. Johnson, R. J. Environmental Problems: Nature, Economy and State. New Delhi: CBS Publishers and Distributors, 1992.
10. Todaro, M. P. Economic Development, fifth edition. New York: Longman Publishing, 1994.
11. Rio Earth Summit, "Agenda 21". New York: United Nations Department of Public Information, 1992.
12. World Development Report, "Development and the Environment". New York: Oxford University Press, 1992.
13. World Development Report, "Knowledge for Development". New York: Oxford University Press, 1998/99. P-99.
14. World Commission on Environment and Development (Brundtland Commission), "Our Common Future". New York: Oxford University Press, 1987.
15. Begum, S. A. The Daily Star, "Towards Establishing Green Courts". 06 June, 1999.
16. Colonel A. H. M. Shahidullah. Mirpur Papers, "Environment and the Military Planning", Issue -5. Mirpur Cantonment, Bangladesh: Defence Services Command and Staff College, April, 1998.