



# Importance of Environmental Education for the Students of Secondary Schools in Context of Current Environmental Crisis

DR. GIRISHKUMAR K. CHAUHAN  
Adhyapak Sahayak,  
LNK College of Education (CTE),(CPE) Patan

## 1. Introduction

For few 2-3 centuries, the human being stepped up a giant leap by the meaning of industrialization and modernization. Moreover, the globalization spread all inventions and discoveries of all luxurious things all over the world. Whether it is invention of electronic devices or automobiles, the inventions had reached at the every corner of the world. A huge use of electricity in all modern electronic gadgets and automobiles, the climate of the earth has been changing in a very drastic manner. In early decades of 21<sup>st</sup> century, the environmental education was introduced at every level of education system. But, due to drastic climate change occurs in last few years, the education of environment had raised a huge importance at every level of education system.

## 2. The environmental crisis

The Environmental Crisis is really a crisis of consciousness. Most people know the natural world is facing great challenges and degradation, but few know the true extents of the changes and deprivation the environment faces and its extended effects on human welfare and all other life on Earth. There is a great gap between the multitude of problems the environment faces on all fronts and the level of awareness most people have on these issues. During this critical period of human history, our generation has been given the urgent task of reversing the damages of industrial civilization and overcoming perhaps the greatest challenge humanity has ever faced - uniting as one conscious, sustainable force to secure the stability of our future environmentally, economically, and socially, for we cannot trash the planet, destroy its biodiversity, alter the climate, and continue living off the wealth of future generations without condemning ourselves and the basis of our civilization in the process.

## 3. Main features of environmental crisis

At this point, a very brief overview of the environmental crisis may be helpful. It is important to emphasise that a wide range of views about the nature and severity of the current environmental crisis exists, and some of the issues are highly controversial. Nevertheless, there is broad agreement that the environmental crisis encompasses the following main issues.

### 1. Climate change

Anthropogenic climate change due to pollution of the atmosphere by greenhouse gases (and other contaminants) is now regarded as one of the major global environmental issues. It occurs largely as a result of the combustion of fossil fuels, emissions from agriculture and pastoralism, and land-use changes that accompany the destruction, clearance and burning of forests.

### 2. Stratospheric ozone depletion

The depletion of stratospheric ozone due to the pollution of the atmosphere by halocarbons (such as chlorofluorocarbons, or CFCs) is another serious environmental issue. It is a significant concern because the lack of protective ozone at high altitudes results in increased levels of harmful solar ultraviolet (UV-B) radiation reaching the earth's surface, causing a range of health-related and ecological impacts.

### **3.Degraded air quality**

Other forms of air pollution are also significant, particularly at regional and local scales, as they may seriously degrade air quality; worldwide, approximately one billion people inhabit areas, mainly industrial cities where unhealthy levels of air pollution occur. Many air pollutants are responsible for the degradation of air quality, but some key pollutants include particulate matter (such as soot), tropospheric ozone, oxides of nitrogen, oxides of sulphur, lead and various aromatic compounds (such as benzene). Many air pollutants may cause or aggravate respiratory and cardiovascular illnesses; some are known carcinogens; and some can cause damage to vegetation and, in turn, produce a range of ecological effects.

### **4.Degraded water quality**

Similarly, water quality can be seriously degraded by contamination with pollutants, giving rise to a range of health-related and ecological effects (such as the degradation of coral reefs). A major source of water pollution is the terrestrial run-off to inshore waters that occurs in many coastal locations; such run-off may contain significantly elevated levels of nitrogen and phosphorus from agricultural land and from human settlements. Many other human activities lead to water pollution, including mining and industrial processes, which may create toxic effluent. Oil spills, accumulation of plastics and the bioaccumulation of persistent organic chemicals are some of the other causes of serious degradation of the marine environment.

### **5.Scarcity of fresh water**

Besides the pollution of freshwater sources, there are a variety of other reasons for the scarcity of fresh water for drinking in many parts of the world - many of which are related to poor water resource management practices. For instance, the over-abstraction of water from rivers results in water shortages and problems of salinization downstream. Irrigation practices may also be responsible for the depletion of local water sources and the salinization of irrigated land. Vast differences in water security exist at the global scale, reflecting both demand for fresh water and the scale of public and private investment in water supplies, treatment and distribution.

### **6.Land contamination**

Land contamination occurs as a result of chemical or radioactive pollution, especially by long-lived (persistent) chemical species that enter the soil. Land contamination may cause profound ecological effects and it presents severe constraints to development, since contaminated land must typically be rehabilitated before it is safe to use for agriculture, construction or recreation.

### **7.Deforestation**

It has been estimated that around half of the world's mature forests have been cleared by humans. Deforestation occurs for a variety of reasons, but the majority of deforestation now occurs when tropical forests are cleared for agriculture and pastoralism; other reasons include the destruction of trees for charcoal production and the selective logging of forests for timber.

### **8.Soil erosion and degradation**

Soil degradation and the problem of desertification have become acute. In part, these concerns are based on the historical experiences of dramatic soil erosion and transport in New World countries including the USA (during the 'Dust Bowl' of the 1930s) and Australia. Whilst analyses of the problems of soil erosion and degradation have become more sophisticated, recently, it is clear that these problems continue to have important consequences for agricultural and pastoral productivity as well as for the functioning of natural ecosystems.

### **9.Land use change and habitat loss**

These issues overlap with others, such as deforestation, but they are broader and include the clearance of forest for agriculture and pastoralism, the transformation of land during urban growth, the development of new infrastructure (such as roads), the drainage of wetlands, and the destruction and removal of coastal mangrove forests.

### **10.Biodiversity loss**

Many plant and animal species are threatened with extinction, due to the spread of disease, the destruction and degradation of their habitats, and direct exploitation. In 1999, UNEP (1999) estimated that one-quarter of the world's mammal species and around one-tenth of the world's bird species faced

a significant risk of total extinction. Threats to biodiversity are not confined to terrestrial ecosystems; serious concerns have been raised about the future of marine and coastal wildlife species as a result of the pollution, over-exploitation and acidification of ocean and seas.

#### **4. The cause of the environmental crisis**

The causes of the environmental crisis have been the subject of considerable debate. However, in general, its main causes are now acknowledged to be:

- Technological developments over the course of human history and particularly since the Industrial Revolution which have allowed humans to exert a greater influence over natural resources and ecosystems.
- Rapidly increasing human population which has led to significant increases in human population density in many parts of the world.
- Dramatic increases in resource and energy consumption particularly since the Industrial Revolution, and especially since around 1950 which have accompanied economic growth and rising standards of living in some parts of the world.

#### **5. Meaning of environmental education**

Environment is derived from the French word “Environner”, which means encircle or surrounding. Environment is a complex of many variables, which surrounds man as well as the living organisms. Environmental education describe the interrelationships among organisms, the environment and all the factors, which influence life on earth, including atmospheric conditions, food chains, the water cycle, etc. It is a basic science about our earth and its daily activities, and therefore, this science is important for everyone.

#### **6. Scope of environmental education**

Environmental education discipline has multiple and multilevel scopes. This study is important and necessary not only for children but also for everyone. The scopes are summarized as follows:

1. The study creates awareness among the people to know about various renewable and non-renewable resources of the region. The endowment or potential, patterns of utilization and the balance of various resources available for future use in the state of a country are analysed in the study.
2. It provides the knowledge about ecological systems and cause and effect relationships.
3. It provides necessary information about biodiversity richness and the potential dangers to the species of plants, animals and microorganisms in the environment.
4. The study enables one to understand the causes and consequences due to natural and induced disasters (flood, earthquake, landslide, cyclones etc.) and pollutions and measures to minimize the effects.
5. It enables one to evaluate alternative responses to environmental issues before deciding an alternative course of action.
6. The study enables environmentally literate citizens (by knowing the environmental acts, rights, rules, legislations, etc.) to make appropriate judgments and decisions for the protection and improvement of the earth.
7. The study exposes the problems of over population, health, hygiene, etc. and the role of arts, science and technology in eliminating/ minimizing the evils from the society.
8. The study tries to identify and develop appropriate and indigenous eco-friendly skills and technologies to various environmental issues.
9. It teaches the citizens the need for sustainable utilization of resources as these resources are inherited from our ancestors to the younger generation without deteriorating their quality.
10. The study enables theoretical knowledge into practice and the multiple uses of environment.

## 7. Importance of environmental education

Environmental study is based upon a comprehensive view of various environmental systems. It aims to make the citizens competent to do scientific work and to find out practical solutions to current environmental problems. The citizens acquire the ability to analyze the environmental parameters like the aquatic, terrestrial and atmospheric systems and their interactions with the biosphere and atmosphere.

11. World population is increasing at an alarming rate especially in developing countries.
12. The natural resources endowment in the earth is limited.
13. The methods and techniques of exploiting natural resources are advanced.
14. The resources are over-exploited and there is no foresight of leaving the resources to the future generations.
15. The unplanned exploitation of natural resources lead to pollution of all types and at all levels.
16. The pollution and degraded environment seriously affect the health of all living things on earth, including man.
17. The people should take a combined responsibility for the deteriorating environment and begin to take appropriate actions to save the earth.
18. Education and training are needed to save the biodiversity and species extinction.
19. The urban area, coupled with industries, is major sources of pollution.
20. The number and area extinct under protected area should be increased so that the wild life is protected at least in these sites.
21. The study enables the people to understand the complexities of the environment and need for the people to adapt appropriate activities and pursue sustainable development, which are harmonious with the environment.
22. The study motivates students to get involved in community action, and to participate in various environment and management projects.
23. It is a high time to reorient educational systems and curricula towards these needs.
24. Environmental education takes a multidisciplinary approach to the study of human interactions with the natural environment.
25. Environmental study is a key instrument for bringing about the changes in the knowledge, values, behaviours and lifestyles required to achieve sustainability and stability within and among countries.

## 7. Conclusion

Environmental education deals with every issue that affects an organism. It is essentially a multidisciplinary approach that brings about an appreciation of our natural world and human impacts on its integrity. It is an applied science as it seeks practical answers to making human civilization sustainable on the earth's finite resources.

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