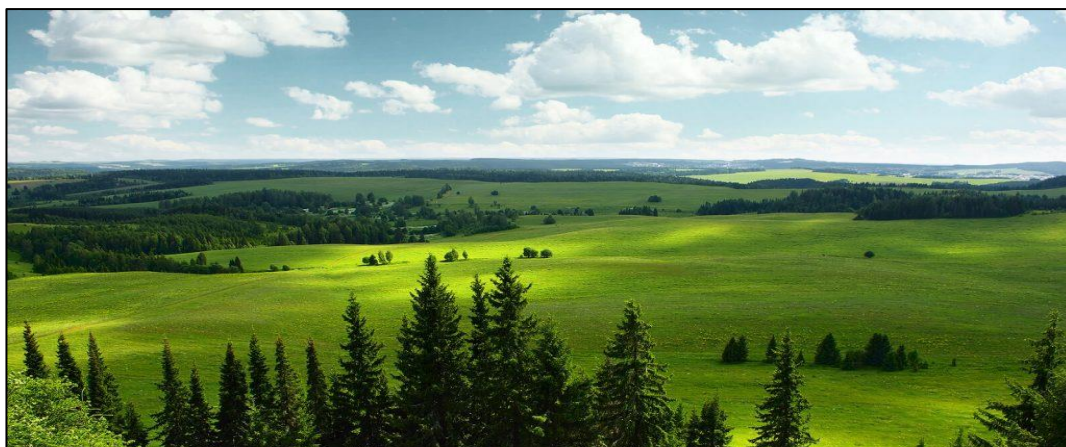

18. Environmental Education for Making a Better and Sustainable Society

S. Ravichandran

Professor in Chemistry,
School of Mechanical Engineering,
Lovely Professional University, Phagwara, Punjab, India.

R. M. Madhumitha Sri

B.Tech., Department of Pharmaceutical Technology,
Alagappa College of Technology, Anna University, Chennai.
Associate Analyst, Zifo Technologies Pvt. Ltd., Manapakkam,
Chennai, Tamil Nadu.



Abstract:

The term environment has been derived from a French word “Environner” means to surround. It refers to both Abiotic (physical or non-living) and Biotic (living) environment. Environment can be defined as a sum total of all the living and non-living elements and their effects that influence human life. The systematic knowledge about the nature and utilization of natural resources for the sustainable development progress of mankind can be achieved through environmental education. The main aim of environmental education is to impart knowledge about the conservation and utilization of natural resources for the existence of human being. The role of environmental education is important in the realization of the necessity of maintaining a balanced relationship between man and nature. Education about environment involves the study of our environment to learn about its composition and working mechanism and its usefulness. Environmental protection is needed to reduce or control environmental pollution, climate change, greenhouse effect, global warming, ozone hole effect etc. Trees are being cut, due to which the forest area is decreasing. Environmental Education is the teaching of individuals and communities about the knowledgeable of the environment and its associated problems, aware of the solutions

to these problems and motivated to solve them so that the world can be a better place. There is a deep and unbreakable relationship between humans and the environment. It is human beings who clean or pollute the environment and its effect affects humans in the same way. A clean and healthy environment is very important for human society.

Keywords:

Environment, human society, sustainable development, pollution, climate change, global warming, natural resources, healthy environment, possible solutions.

18.1 Introduction:

Environment provides basis to human life. Life on earth has become possible only due to the presence of air, water and soil. Man is the best creation of this environment. All the needs of the biological community are fulfilled by the elements of the environment. Environmental education¹⁻⁴ refers to organized efforts to teach how natural environments function, and particularly, how human beings can manage behavior and ecosystems to live sustainably⁵⁻⁷. It is a multi-disciplinary field integrating disciplines such as biology, chemistry, physics, ecology, earth science, atmospheric science, mathematics, and geography.

There are two types of environmental education: first, formal environmental education for which students, working employees and educated people with an interest in the environment are eligible. Informal environmental education is provided mainly to illiterate people. Environmental education may best be defined as a process directed at creating awareness and understanding about environmental issues that leads to responsible individual and group actions. Successful environmental education focuses on processes that promote problem solving and effective decision-making skills. Awareness and understanding of environmental issues provide the basis and rationale for commitment and meaningful action towards environmentally sound and sustainable development⁷⁻¹¹.



Figure 18.1: Environmental Education

18.2 Scope of Environmental Education:

The scope of environmental education services covers all fields of environmental science. This includes the effects of man on environment but most importantly how man can save the environment from the problems which he has caused through the misuse and over-use of the resources provided by the nature.

Environmental Education should not only focus on the effects of environmental degradation but very importantly the understanding of the causes also. Education for the environmental enables us to learn how to preserve the environment to enable us derives maximum benefit for the present generation as well as for future. This is the conservation aspect of environmental education.

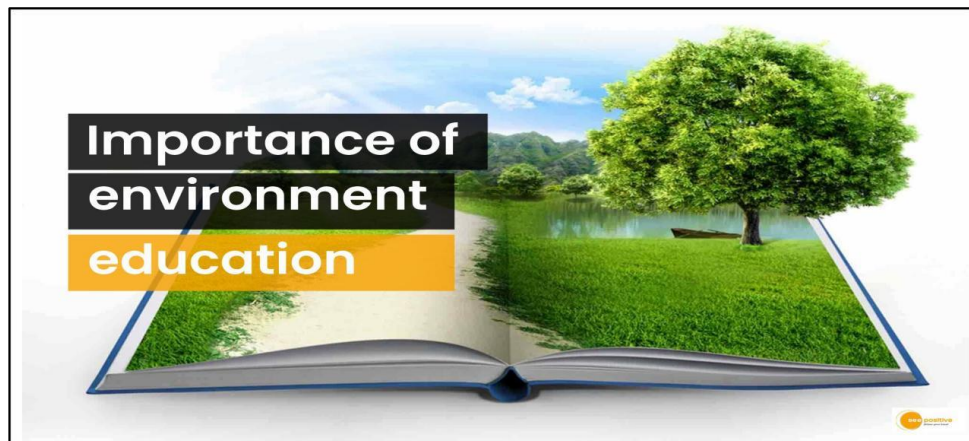


Figure 18.2: Important of Environmental Education

A. Significance of Environmental Education can be described as the following:

- Knowledge about the changes that have altered the environment.
- Land, water, forest and other mineral resources utilization is the dominant feature of economy with agriculture the driving force. Uncontrolled and improper exploitation of these resources have implications on the environment causing disruption in the living standard, starvation, displacement and human suffering. Environmental education is therefore necessary to create awareness of the causes and effects of these problems.
- Awareness of such global environmental issues is an essential component of environmental education which ordinary citizen should be aware of.
- Environment education is also very essential for our survival on earth. The natural resources need to be protected not only for this generation but also for future generation.
- To create new patterns of behaviors of individuals and society as a whole towards the improvement and protection of the environment. To ensure that World Environment Day is celebrated every year on 5 June to make people aware about environmental protection.



Figure 18.3: World Environment Day

18.3 Components of Environmental Education:

The components of environmental education are clearly to show the economic, social and ecological interdependence. Environmental education should, in this regard, help to develop a sense of responsibility among countries and regions as the foundation for conservation and improvement of the environment.



Figure 18.4: Sustainable Development

18.4 Man is Impacting the Environment in the following ways:



Figure 18.5: Human Impact on Environment

Man cut forests for his livelihood. Due to indiscriminate cutting of forests, the balance of the biosphere has deteriorated. Due to the continuous degradation of forests and the removal of vegetation from the land by humans to grow certain types of crops, the diversity of vegetation is diminishing. Due to air and water pollution, many species of trees and plants became extinct because polluted air and water are not suitable for them.

As a result of indiscriminate hunting by humans, many species of animals and birds have become completely extinct. As our population increased, fertile land and forests decreased. To meet the demand of rapidly increasing population, exploitation of natural resources has also taken place at a rapid pace. If the environmental ecosystem continues to deteriorate in the name of industrialization, then human life on earth impossible. Development of Environmental Education in 1991, the Supreme Court of India directed the government to make environmental education mandatory at all levels of education and the government included environment in the school curriculum.



Figure 18.6: Human Impact on Land, Air and Water

By understanding our relationship with the environment, we can make better choices and work together to protect our planet for ourselves.

- **Dependence on the Environment:** Humans rely on the environment for everything like clean air to breathe, water to drink, food to eat and a place to live. The environment provides us with these necessities.
- **Impact of Human Actions:** The things we do, like using cars, creating pollution, cutting down forests and throwing trash can harm the environment. These actions affect not only us but also plants, animals, and the earth itself.
- **Balancing Act:** Environmental education teaches us to find a balance. We must use resources wisely without harming the environment.
- **Respect for Nature:** We learn to respect all living beings. Each plant, animal and even the insect plays a role in the ecosystem and disturbing this balance can cause problems.
- **Conservation and Preservation:** Environmental education encourages us to conserve resources like water and energy.

- **Sustainable Living:** Sustainable living means living in a way that doesn't exhaust resources or harm the environment. It's about making choices that keep the earth healthy for future generations.
- **Taking Responsibility:** We learn that we are responsible for the environment. Our actions, no matter how small, can add up and make a big difference.



Figure 18.7: The Interdependence Between Humans and Environment

18.5 Conclusion:

The interdependence between humans and the environment is profound and inseparable. Human life relies fundamentally on the environment, encompassing the air we breathe, the water we drink, the food we consume, and the habitat we inhabit.

However, despite this crucial human actions often harm the environment. Environmental education is a dynamic process.

The priority of such education is to develop to solve various problems of our environment systematically.

In order to enable people to enjoy good health and a high quality of life, it is vital to prevent harmful effects to human health or damage to the environment caused by pollution of air, water and soil, noise etc.

Environmental Education is a methodology in which people pick up familiarity with their surroundings and secure learning, values, experiences to take care of present and future environmental issues.

Environmental education needed to play a productive role towards improving life and protecting the environment with due regard given to ethical values. To ensure a harmonious coexistence, environmental education plays a pivotal role. It empowers individuals with knowledge about their environment.



Figure 18.8: Protecting Environment

18.6 References:

1. Cyranoski D (2005), "Climate Change: The Long-Range Forecast", *Nature*, 438, pp. 275-276.
2. Dash S K and Hunt J C R (2007), "Variability of Climate Change in India", *CurrentScience*, Vol. 93, No. 6, pp. 782-788.
3. Mall R K, Singh R, Gupta A *et al.* (2006), "Impact of Climate Change on Indian Agriculture: A Review", *Climate Change*, Vol. 78, pp. 445-478.
4. Ravichandran, S. (2018). Environmental pollution control through Green Chemistry, S.Ravichandran, *Int.J. Chem.Tech.*,11(10),293-297.
5. Ravichandran, S. and Tripura Sundari, C.U. (2020) Sustainable development through less carbon emission, S.Ravichandran and C.U., *Int.J. Green Chem.*, 6(1), 30-35.
6. Kaygusuz, K. (2012). Energy for sustainable development: A case of developing countries. *Renewable and Sustainable Energy Reviews*, 16(2), 1116-1126.
7. Kaygusuz, K. (2012). Energy for sustainable development: A case of developing countries. *Renewable and Sustainable Energy Reviews*, 16(2), 1116-1126.
8. MadhumithaSri,R.M., Mekrukh Mehraj, Chundru Sowmya and S. Ravichandran, S. (2021). Future of Renewable Energy in India for Sustainable Development, *Int. J Clinical Biochem. Res.*8(4), 242-244.
9. RaviKrishnan, S.Ravichandran and Dr.Leena Singh. (2016) Environmental Studies, Sri Krishna HiTech Publishing Company, Hyderabad, (ISBN 978-93-85364-77-8).
10. S.Suresh, S.Ravichandran and Bhagyashree Keshewani. (2022) Environmental Science, Kripa Drishti Publications,Pune (ISBN: 978-93-94570-38-2).
11. S.Ravichandran (2024) Sustainable solutions for Green Environment, Kripa Drishti Publications, Pune (ISBN: 978-81-191499-7-1).