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Environmental Concerns In The Present Scenario And Future Works Of Education

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Abstract
In the present era, the biggest challenge for the human species is environmental problems. Due to urbanisation and modern lifestyle, industrial development and population growth, the exploitation of natural resources has increased very rapidly. As a result of this, problems like climate change, pollution, and lack of natural resources are arising. Education can work as a powerful tool to get rid of these problems. Education is the medium through which children can be provided with environmental awareness. Only through education can the concept of sustainable development of students be encouraged (UNESCO, 2017). Environmental literacy plays an important role in fulfilling this objective. Environmental education acts as a catalyst in achieving the goal of environmental conservation and sustainable development. It awakens a sense of awareness and responsibility among citizens. Due to this, they are encouraged to find solutions to environmental problems and accept behavioural changes. Along with a detailed discussion on various issues related to the environment, this paper explains the relevance of various organisations, committees and agreements working in the field of the environment at the global level. In this paper, we will discuss the problems related to the current environment. Along with this, we will present possible solutions to those problems, which should be taught to the students at the school level. This paper also provides a detailed analysis of the role of environmental education in establishing harmony between environmental problems and sustainable development. Readers will get a deep understanding of individual and collective responsibility towards the challenges and problems related to the environment and the policy and behavioural changes required for environmental conservation from this paper, which will inspire them to take positive steps with responsibility awareness and responsibility.
Keywords *Environmental Education, Climate Change, Pollution, Sustainable Future, Environmental Literacy*

INTRODUCTIONS

The Environment is the product of all living things, including humans, and only in a clean environment can humans and other living things remain healthy. The environment means “surrounded by surroundings (Gupta, S. 2023).” In other words, the environment is all that surrounds us or the circumstances that surround us from all sides (Chiras, D. D., 2009). The terms "milieu" and "habitat," which similarly refer to the entirety of the ecosystem or the surrounding conditions, have also been substituted by some academics for the term "environment." Many academics have defined the environment. Here are a few definitions:

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"Environment is the total of the external conditions around, within which an organism or a community lives or an object is present," states the *Commission on Scientific and Technical Terminology's Geography Definition Dictionary*. Renowned ecologist *A.G. Tansley* asserts that the environment is "the total of the influencing conditions in which organisms live.According to ecologist *M. J. Herskovitz*, "The environment is the culmination of all external factors and effects that impact the life cycle of biological elements on the surface of the earth." According to sociologist *R. M. MacIver*, "The earth's surface and all of its natural conditions, including its natural resources (land, water, mountains, plains, minerals, plants, animals, etc.) and natural forces that impact human life, are categorised as the environment." According to the definitions given above, the environment is the culmination of all the circumstances or components that either directly or indirectly influence the existence and growth of living things. The environment is the atmosphere and surroundings that surround us; it is made up of all the biological and non-biological elements found in nature. In other words, the elements or components of the environment include things like water, air, land, sunlight, flora, animals, and people (Berkes, F., Colding, J., & Folke, C., 2000). Earth is most likely the only planet in the cosmos with naturally occurring conditions that support life. This explains why it has been feasible for living things to evolve here (Kasting, J. F., 2010). There are living things on land, in water, and in the atmosphere. The biosphere is the region of the Earth where living things, such as plants and animals, are found. All of the biological and physical elements of the environment are either directly or indirectly connected to the natural system. Physical elements such as soil, water, air, sunlight, and so forth offer favourable conditions for the emergence and growth of living things (Berkes, F., 2004). These fundamental components of life must be kept in a specific ratio and balance in order for life to continue on Earth.

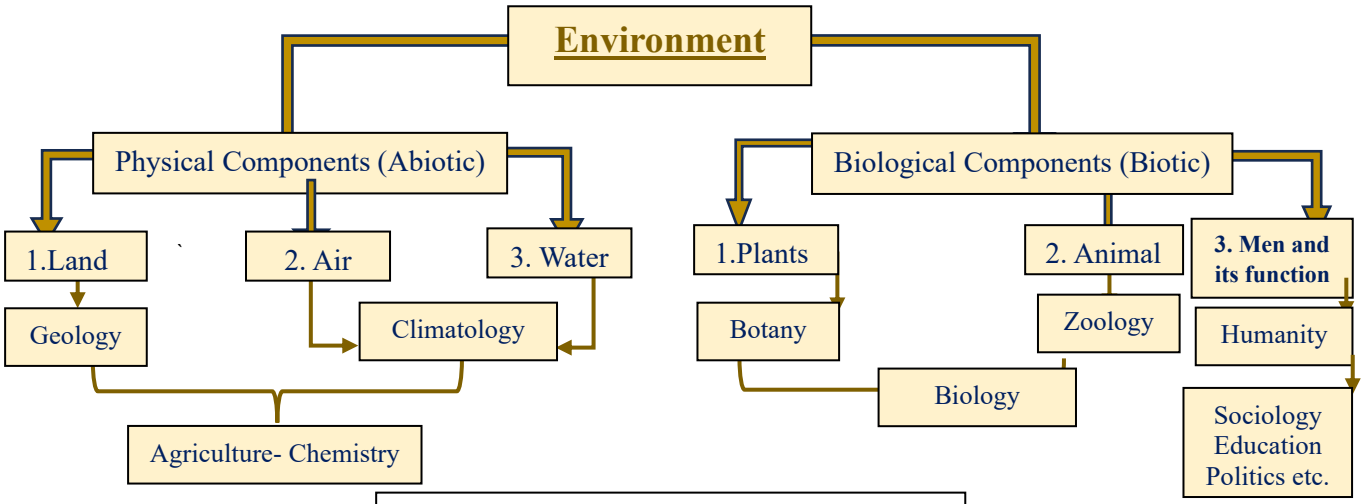


Fig.1 Various Components of Environment

Our environment is the foundation of our existence. Without it, it is impossible to envision life on Earth. The significance of environmental studies is growing daily as a result of the numerous environmental issues that are rapidly emerging on both local and global scales. The scope of the environmental problems extends beyond national borders. When an issue arises in one nation, it affects the entire world. The environment is the shared inheritance of all people on the planet. For this reason, the global community must work together to conserve it. Students become more environmentally sensitive and aware when environmental studies are taught as part of the curriculum (Liu, K. F., & Zhang, L., 2011). They have different perspectives on how natural resources should be used. As a sense of obligation to protect the environment grows, so does an ecological relationship. Through environmental studies, the student will learn about the environment's structure, its numerous components, and the environmental damage brought on by human activity (Giddings, B., Hopwood, B., & O'Brien, G., 2002). One can only contribute to environmental conservation when one is properly informed about the environment. Thus,

it is evident that by raising students' awareness of environmental issues, the inclusion of environmental studies in the curriculum will contribute significantly to environmental conservation. Raising public knowledge of the environmental problems is the most crucial aspect of environmental conservation (United Nations Environment Programme (UNEP, 2012). An essential component of environmental management is social consciousness, or public awareness. No environmental protection initiative can succeed without it. The concept of environmental consciousness is not new to our nation; it has been ingrained in our way of life and way of thinking since the Vedic era (Sharma, S., 2016). Protecting the purity, or quality, of the natural elements—such as the ground, sky, river, tree, wild animals, sun, etc.—was regarded as the highest responsibility because they were thought to be gods or godlike. However, the western style of thinking and consumerist culture brought forth by fast industrialisation and urbanisation separated us from our fundamental understanding of nature (Kaur, G., & Singh, A., 2010). Consequently, the public began to damage the environment regularly, whether they realised it or not. The world community's sleep during the twentieth century was disrupted by environmental issues such as the greenhouse effect, acid rain, ozone depletion, and steadily declining natural resources (Kates, R. W., & Parris, T. M., 2003). The heads of 119 nations, including India, voiced their serious concerns about this during the World Environment Conference, which was organised by the UN and held in Stockholm in June 1972. The first coordinated attempt to protect the environment was this conference. To raise public awareness, World Environment Day is now observed annually on June 5. Lack of public participation has emerged as the primary cause of the insufficient outcomes of environmental protection programs being undertaken at the national and international levels. The World Environment and Development Commission's 1987 study characterised the global community's lack of environmental awareness as concerning. As a result, public awareness of environmental protection is crucial. While prior studies highlight environmental education's role, few explore its practical implementation in school curricula in developing nations like India.

Research Methodology

This study employs a systematic literature review of peer-reviewed articles, policy documents, and reports published between 2010 and 2023 to analyse trends, challenges, and opportunities in environmental education. The research methodology is structured as follows:

Table 1: Research Methodology Framework

S. No.			Description	**Tools/Sources**
1.	**Data Collection**	**Sources**	Systematic search for peer-reviewed articles, policy documents, and reports.	Scopus, Web of Science, Google Scholar, UNEP, UNESCO, IPCC reports.
		Keywords	Environmental education, sustainability, climate literacy, school curriculum.	Boolean operators (AND/OR) for refined searches.
		Inclusion Criteria	• Peer-reviewed (2010–2023) • Focus on primary/secondary education. • Studies focusing on primary/secondary education and policy interventions.	Excluded non-English studies and non-academic sources.
2.	**Data Analy**	**Thematic Analysis**	Identified recurring themes such as curriculum integration, pedagogical strategies, and policy effectiveness.	NVivo (for coding), Excel (for trend visualization).

		Comparative Analysis	Examined differences in environmental education approaches across developed and developing nations.	
		Critical Evaluation	Assessed gaps in implementation, such as lack of teacher training or practical engagement in schools.	
3.	**Limitations**	**Geographical Bias**	Majority of studies reviewed were from Western contexts; fewer from South Asia/Africa. contexts; fewer from South Asia/Africa.	Mitigated by cross-referencing policy reports.
		Time Constraint	Focus on post-2010 literature may exclude foundational works.	

Fig. 2 Objective of Environment Studies

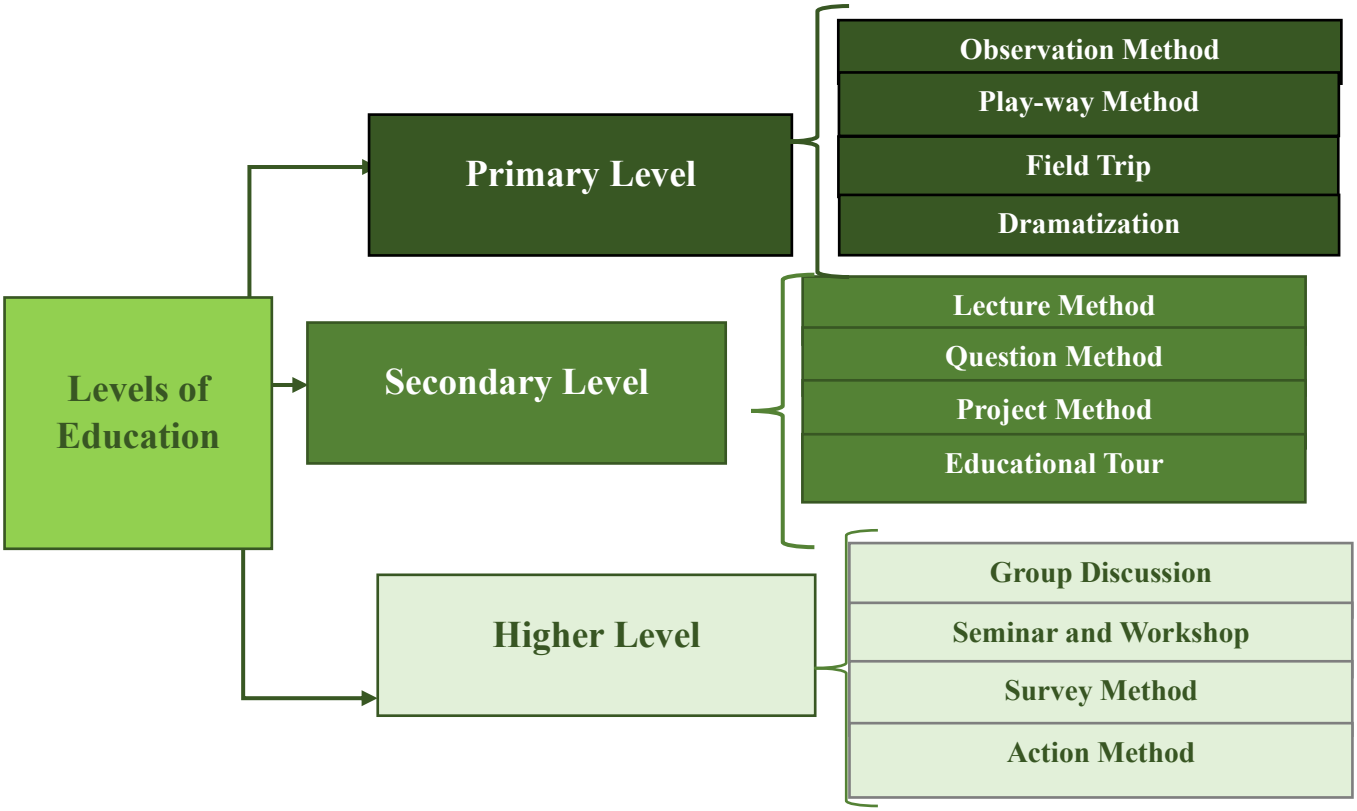
Environment and Education

Environmental studies are broad field of study. Environmental studies are now multidisciplinary due to the daily extension of the study's goal. The study of the environment is now a point of view rather than only a particular area of biology or geography (Keller, M. E., & Steg, L., 2018). Numerous fields, including science, business, social science, management, and others, are studying it extensively. The field of environmental studies touches or overlaps with many other fields of study. Every topic contributes to environmental protection by examining a certain aspect of the environment, however the research of the environment conducted in various courses such as biology, botany, ecology, sociology, etc., is not comprehensive and is restricted to certain aspects (Kates, R. W., Parris, T. M., & Leiserowitz, A. A., 2005). For the holistic study of the environment, it is necessary to use the knowledge of experts in different subjects or fields. With a myriad of spatial elements and socio-economic systems that are characterised by the quality and features of space and composed of the behaviour of physical and biological forms, the environment is a comprehensive perspective of the world as it operates at any given time (Costanza, R., & et al., 1997). The environment's biological and physical elements both influence and contribute to social and economic development. It can occasionally hurt economic and social development.

Environmental studies' primary feature is its integration with numerous other natural and social fields. As a result, it links numerous topics or subtopics (Gowdy, J. M., 2005). Regardless of whether a systematic or regional strategy is used for the study, one technique is invariably incorporated into the other. In other words, we can say that environmental studies are an integrating science.

Environmental Education

Education is a separate discipline or body of study that focuses on the teaching-learning, training, and instructing processes. It emphasises a child's overall development, which includes their physical, social, cognitive, and emotional growth (UNESCO, 2015). It is a teacher's responsibility to establish a classroom and school climate that will encourage the desired improvement in a child's behaviour. The educational atmosphere gives a child experience (Larrivee, B., 2009). With the aid of certain content to provide his students with new experiences, a teacher uses activities or instruction in the classroom to create a social and emotional environment. In order to provide pupils with a healthy physical and biological environment, the educational institutions are situated outside of the neighbourhood (Durlak, J. A., et al., 2011).The process of offering learning opportunities to acquire knowledge, comprehension, skills, and awareness to change people's attitudes toward the relationship between man and his natural and artificial surroundings—including the relationship between population, pollution, resource allocation, transportation technology, and urban and rural planning—is known as environmental education (Chawla, L., & Cushing, D. F., 2007). A wide range of educational methodologies and varied learning environments must be used in environmental education, with a proper emphasis on hands-on activities and first-hand experience (Simmons, R., 2011). It should assist students in identifying the signs and actual causes of environmental issues, fostering the growth of their critical thinking and problem-solving abilities (Sterling, S., 2001). Starting in preschool and continuing through all formal and informal phases, environmental education should be an ongoing, lifelong process that integrates disciplines to provide a comprehensive and well-rounded viewpoint. Developing a child's awareness and comprehension of the physical and social world in its whole is the goal of environmental education (McKeown, R., & Hopkins, C., 2007). A child's study and methodical examination of his natural and social surroundings are part of environmental studies, which also help him get ready to solve difficulties and improve his life.



(Fig. 3 Strategies of Teaching of Environment Education)

Research Question

1. How effective is environmental education in enhancing environmental awareness among school students?
2. What impact does environmental education have on students' attitudes and behaviours toward ecological conservation?
3. How does the integration of practical activities (e.g., field trips, projects, dramatisations) influence students' interest and engagement in environmental issues?

Assumption

1. Environmental education significantly increases the level of environmental awareness among school students.
2. Students who receive environmental education exhibit more positive attitudes and environmentally responsible behaviours compared to those who do not.
3. The use of practical and experiential learning strategies in environmental education fosters higher student engagement and interest in addressing environmental problems.

Key Issue of Environment in the present scenario

Kenyan Proverb, "Treat the Earth well. It wasn't given to you by our parents. It was loaned to you by your children."

The environment and humans are inextricably linked. Man has historically relied on nature to meet his requirements, but throughout the past century, he has begun to overuse natural resources. The effect has been irreversible harm to the environment (ockström, J., et al., 2009). The environment has impacted every facet of human civilisation, culture, society, way of life, etc. The standard of human existence and the quality of the environment are closely correlated (Sachs, J. D., 2015). Therefore, it seems sensible that the quality of many facets of human life would deteriorate if environmental elements declined.

Greenhouse Effect The term "greenhouse effect" refers to the rise in temperature brought on by an increase in the atmospheric concentration of carbon dioxide and other gases. A greenhouse is a structure with a glass or plastic roof and heat-insulating walls (Ramanathan, V., & Carmichael, G., 2008). Long-wave energy from the sun cannot leave this glasshouse, but short-wave radiation can enter and raise its temperature. Its temperature rises as a result. In regions with low temperatures, these greenhouses are more often utilised to cultivate crops (Singh, B., & Dunn, R., 2012). Additionally, the Earth's atmosphere functions as a greenhouse. The greenhouse effect keeps the Earth's surface at an average temperature of 15 °C, which is essential for the development of plants and animals (Lacis, A. A., Schmidt, G. A., Rind, D., & Ruedy, R. A., 2010). The sun's rays penetrate the layer of carbon dioxide gas and heat the Earth's surface because of their short wavelength and strong penetrating strength. The absorbed energy is released as high-wavelength radiation from the Earth's heated surface (Houghton, J., 2009). These radiations have a lower penetration power because of their long wavelength. They are therefore unable to leave the atmosphere through the carbon dioxide layer. As a result, the temperature of the Earth's surface increases.The term "greenhouse effect" describes the increase in temperature brought on by carbon dioxide in the atmosphere. The amount of carbon dioxide in the atmosphere has significantly increased as a result of human activities like industrialisation and deforestation. Consequently, the Earth's temperature has also risen. The 'Manmade Greenhouse Effect' was coined in 1957 by *American scientist Roger Revelle* to describe the temperature rise brought on by human-caused increases in carbon dioxide levels.The Earth is naturally warmed by the water vapour in the atmosphere. However, because of human activity, the greenhouse effect is growing as a result of the atmospheric production of gases such as carbon dioxide, methane, nitrous oxide, and chlorofluorocarbons.

Ozone DepletionThe decrease of ozone gas (O3) in the atmosphere is a terrible consequence of pollution. A modified type of oxygen is called ozone gas (Shindell, D. T., et al., 2012). Compared to oxygen, ozone has one extra atom. It is located between 12 and 50 kilometres in the uppermost layer of the atmosphere.

The ozone layer that surrounds the planet serves as a barrier. By blocking the sun's incredibly damaging UV rays, it safeguards the ecosystem. It is also known as the ozone layer for this reason. Life on Earth will cease if this layer disappears (Solomon, S., et al., 2007). The most accountable halogenated gases are those that damage the ozone layer; these include hydrofluorocarbons, nitrous oxide, halogens, and chlorofluorocarbons (CFCs) (Arbuthnott, K. D., 2009).The production of gases that damage the ozone layer must be stopped or reduced to the bare minimum to prevent ozone depletion. Every year on September 16, Ozone Layer Protection Day is observed to raise public awareness of ozone protection.

(Table 1: Major Ozone Depleting Gases and Human Use)

S. No.	Ozone-depleting Gas	Human Use	Environment Impact
1	Chlorofluorocarbon	Solvents in refrigerators, air conditioners, plastics industries, and aerosols	High ozone depletion potential (ODP = 1.0)
2	Helens	Fire extinguishers (in ships, aircraft computer control rooms)	ODP up to 10.0
3	Hydro-Chlorofluoro Carbon	Refrigeration, foam spraying and aerosols	Moderate ODP (0.01-0.5)
4	Carbon tetrachloride	As a solvent in medicines, pesticides and paints	ODP = 1.2
5	Methyl Chloroform	As a solvent in metal refining, the electronic industry	ODP = 0.1
6	Nitrous Oxide	Supersonic aircraft, fertilisers	Long atmospheric lifetime (114 years)

Acid Rain One of the damaging effects of air pollution is acid rain. Pure water has a pH of 5.6, which is theoretically slightly more acidic than milk. Pollutants cause water to become more acidic and its pH to drop (Van Dijk, T., & Wester, P., 2012). "Any form of precipitation, be it rain, snow, frost, fog, etc., which has a high amount of acid, is called acid rain," according to *Kormandi.* Acid rain also causes dry deposition. Granules of sulphur and nitrogen oxide gasses, known as sulfate and nitrate, float in the atmosphere during dry rain and gradually dry up and deposit themselves on the ground like dust particles. The largest issue in industrialized nations, such as Norway, Sweden, Britain, Germany, Canada, and the United States of America, is acid rain. Acid rain has far-reaching and highly lethal environmental repercussions (Hannah, S., 2009). Its water is bad for soil, plants, animals, and people. Aquatic life kills when acid rain falls on bodies of water. Plants cannot produce their own food because of the disruption in the process of chlorophyll production. Additionally, this negatively impacts the soil's fertility (Smith, R. M., et al., 2011). The Taj Mahal's whiteness is fading as a result of sulfur dioxide emissions from the Indian oil refinery in Mathura.

Global Warming One of the main effects of the man-made greenhouse effect is the rise in earth's temperature. On 1989 Environment Day, the United Nations Environment Program (UNEP) used the phrase 'Global Warming: Global Warning' to call attention to this issue (Hannah, S., 2009). The primary cause of global warming is the ongoing rise in greenhouse gas emissions. The temperature of the Earth has risen by 0.7 degrees Celsius since 1750. The average temperature rose by 0.6 degrees Celsius in just the 20th century (Intergovernmental Panel on Climate Change (IPCC)., (2013). *Climate Change 2013: The Physical Science Basis*. According to the most recent assessment from the environmental group WWF, there is concern that the Earth's temperature could rise to dangerously high levels by 2026. The report

warns that if collective efforts are not made to stop it in time, then the temperature will increase by 2.0 degrees Celsius between 2026 and 2060 (Intergovernmental Panel on Climate Change (IPCC), 2018). The climate will undergo significant changes as a result of the rising temperatures. 'Decade of Disasters' is the warning in a 1999 Red Cross Organisation report. According to the paper, climate change would cause disasters like droughts, storms, and floods, which have never happened before in contemporary history. Changes in climate, the pattern of rainfall will drastically alter as a result of the rise in global temperatures. The evaporation of water resources will increase as the temperature rises (UNFCCC, 2019). Temperature and precipitation will rise as a result of increased water evaporation. The seasonal cycle will be altered as a result. Summer will last longer and winter will last shorter. According to scientific estimates, by 2030, the number of days with temperatures more than 32° Celsius will increase from 36 to 87 (ESA, 2019). The melting of ice in polar regions and mountain snow peaks will cause the sea level to rise as a result of the global warming trend. The melting of ice will cause the sea level to rise by 60 cm if the Earth's temperature rises by 1° Celsius. This will result in the submersion of numerous highly populated coastal areas (Van Dijk, T., & Wester, P., 2012).

(Table 2: Impact of Warmer Global Warming)

S. No.	Sector	Observed Impacts (2020s)	Projected Impacts (2050s)
1.	Water Resources	Glacier retreat (30% loss since 1980)	50% reduction in Himalayan snowpack
2.	Agriculture	20% yield decline in tropical regions	$40B annual losses in global agriculture
3.	Biodiversity	1M species at risk (IPBES, 2019)	30-50% species extinction in hotspots
4.	Human Health	250K additional annual deaths (WHO, 2021)	500M people exposed to climate-sensitive diseases

Environmental Treaties, Conferences, and Agreements: A Global Effort for Sustainability

Various treaties, conferences and agreements have been organised at national and international levels to solve problems related to the environment. Some of the important agreements and conferences are as follows.

The Stockholm Agreement was organised on *5 June 1972* in Stockholm, the capital of *Sweden*. The Stockholm Agreement is also known as the United Nations Human Environment Conference. The main objective of the Human Environment Conference was to create a balance between humans and the environment and to increase pollution, biodiversity and sustainable use of natural resources. To fulfil this objective, 27 basic principles were brought to light. This conference is considered to be the starting point of "environmental diplomacy". The foundation day of this agreement is celebrated as Environment Day.

The Montreal Protocol was signed on *16 September 1987*. Its foundation day is celebrated today as *World Ozone Day*. The main objective of this protocol was to formulate a plan for the phased elimination of production and use of ozone-depleting substances, so that the depletion of the ozone layer can be stopped. This protocol was accepted by 197 countries. This conference is considered to be the most successful international agreement in the protection of the environment.

The Earth Agreement (Rio Conference) was organised in *1992* in the city of *Rio de Janeiro, Brazil*. It is also known as the *United Nations Environment and Development Program*. The main objective of this conference was to formulate an action plan to ensure sustainable development for the protection of the environment and the balance of socio-economic development. For which Agenda-21, 21 points and 27 basic principles related to environmental protection were presented. Various representatives, environmentalists and non-governmental groups from 172 countries participated in this conference. This

conference proved to be an important step towards building a global consensus on the issues of the global environment and development.

The **Kyoto Protocol** was accepted in the year *1997* at the *United Nations Climate Change Conference (COP-3)* held in *Kyoto, Japan*. The main objective of this protocol was to control greenhouse gas emissions by developed nations, so that global warming could be controlled. It is worth noting that no complex provisions have been made in this protocol for developing nations. The developed countries were given the target of reducing the total emissions by 5.2% between the years 2008 and the year 2012. This target was implemented as the target of 'official reduction'. The Kyoto Protocol was accepted by 192 nations. But later, countries like Canada and the United States of America abandoned their membership. This protocol was implemented in the year 2005, but after 2012, its effectiveness decreased, and in its place, the Paris Agreement was adopted in the year 2015. This protocol could not achieve complete success, but it prepares a strong road map for global climate policy and environmental diplomacy.

The **Cartagena Agreement** was adopted in the year *2000* in the city of *Cartagena, Colombia*. It is also known as the *Cartagena Biodiversity Protocol*. The main objective of this agreement is to prepare guidelines for countries to conserve biological resources and biodiversity. According to this agreement, the development taking place in the technology of biodiversity and to ensure transparency of the results of research and to enhance cooperation among nations. This protocol provides a legal basis to promote the equitable use of biological resources.

The **Paris Agreement** is a historic climate agreement of the 21st century, and it was accepted by 195 nations in the *United Nations Climate Change Conference* on *12 December 2015*. The main objective of this agreement was to keep the Earth's temperature below 2 degrees by the end of the 21st century, so that the negative effects caused by climate change can be reduced. This agreement made a provision for financial assistance to developing nations from developed nations to deal with climate change. In this agreement, a target was set to steal a 100 billion-dollar per year. This agreement ensures that all the nations of the world (developed + developing) should work towards implementing the necessary steps and measures to avoid the negative effects of climate change.

(Table 3: Various National and International Organisations and Their function)

S. No.	Agreement	Year	Signatories	Core Objective	Key Achievement	Limitations
1.	Stockholm	1972	113	Establish environmental governance	First UN environment program	No binding targets
2.	Montreal	1987	197	Phase out ozone-depleting substances	Prevented 2°C warming by 2050	Slow HFCs phase-out
3.	Kyoto	1997	192	Reduce GHG emissions (5.2% by 2012)	Established carbon markets	US non-ratification
4.	Paris	2015	195	Limit warming to <2°C	$100B/year climate finance commitment	Voluntary NDCs
NDCs = Nationally Determined Contributions						

Environment Education as a Catalyst for Sustainable Environmental Growth

Human development and progress have been based on the utilisation of natural resources. Even after constant use of natural resources, there were no environmental issues in the early stages of development because of the small population and low needs (Steffen, W., Crutzen, P. J., & McNeill, J. R., 2007).

Although nature can make up for the loss under normal circumstances through its nutrient systems, it is unable to do so when human overuse of natural resources or significant environmental harm begins (Brown, L. R., 2009). Environmental deterioration leads to a lot of issues. The rate of exploitation of nature continued to rise as a result of the growing population and advancements in technology (Jackson, T., 2009). Humans' aggressive behaviour against the environment during the chase for economic progress ultimately proved to be a deadly move for humanity. If environmental issues and damage cannot halt the course of growth, then environmental degradation's growing crisis on the entire planet cannot be disregarded either (Sachs, J. D., 2015). The only option in such a scenario is to save the environment while promoting sustainable growth. Sustainable development, life-supporting development, stable development, integrated development, sustainable development, and other terms have been used to refer to the related idea of "protection of the environment and sustainable development of humans." The phrase was initially used in the "World Conservation Strategy" in 1980. "Sustainable development is meeting the needs of the present generation without reducing the ability of future generations of humans to meet their needs," according to the *1983 United Nations Brundtland Commission on Environment and Development*. In other words, the interests of current and future generations should be taken into consideration when using natural resources (Meadows, D. H., Meadows, D. L., & Randers, J., 2004). According to this theory, minimal human interference with the natural world is acceptable." The natural environment may be utilised and ecological crises can be prevented by integrating an ecological approach into growth and development (Kates, R. W., Parris, T. M., & Leiserowitz, A. A., 2005). Development's socioeconomic and ecological facets should be considered in addition to its economic productivity. The creation of technology that harms the environment as little as possible, population management, resource consumption, recycling and conservation, and an all-encompassing strategy are all necessary for sustainable development (Meadows, D. H., et al., 2004). Environmental education has become extremely important in the current scenario. Environmental education plays a very important role in achieving the goal of the concept of sustainable development. This education not only provides information about environmental protection to society, but also helps in making people responsible and aware towards the environment (Simmons, B. A., & Simmons, R., 2007). Environmental education motivates people from every section of society to adopt environmentally friendly habits and change their behaviour. For example, minimum use of plastic, saving water and energy, tree plantation, 3R Formula (reduce, reuse, and recycle), etc (Rennie, L. J., & Jarvis, T., 2012). It motivates people to ensure active participation towards environmental problems. This participation is encouraged by including environmental science in the school curriculum, running tree plantation programs, and organising workshops and seminars (Arbuthnott, K. D., 2009). Environmental education acts as an important catalyst towards maintaining environmental balance and sustainable development (Fien, J., 2002). This education plays an active role in establishing harmony with nature as well as in making people aware of their responsibility towards the present and the future (Kollmuss, A., & Agyeman, J., 2002). The most important contribution of environmental education is that it does not limit environmental problems only to the government or experts, but it inspires every citizen of the society to ensure participation in issues related to environmental problems (McKeown, R., 2002). In today's time, when environmental problems such as deforestation, loss of biodiversity, climate change and pollution (air pollution, water pollution, soil pollution etc.) have become a cause of deep concern, environmental education can provide special help in finding possible solutions to these problems and implementing them (UNESCO, 1977). If you adopt this education in your daily life and make it a part of your lifestyle, then it is possible to achieve sustainable development and environmental stability (Gupta, S., Sharma, M., & Shukla, P. 2025).

Table 4. Ways to Restore Environment

Ways to Restore	**Environmental Advocacy**	Get involved in local environmental initiatives, volunteer for conservation projects, and support policies that promote sustainability and protect natural habitats.

	Eco-Friendly Products	Select environmentally friendly products made from renewable resources, biodegradable materials, or recycled content.
	Plant Trees	Support reforestation efforts by planting trees in your community or participating in tree-planting initiatives
	Reduce, Reuse, Recycle	Adopting the mantra of reducing waste, reusing items, and recycling materials helps conserve natural resources, reduce pollution, and minimise the energy required for manufacturing new products.
	Reduce Chemical Usage	To minimise the use of harmful chemicals in cleaning products, pesticides, and fertilisers to protect water quality, wildlife, and ecosystems

CONCLUSION

Along with being helpful in the protection of the environment, environmental education also contributes significantly to bringing about sustainability and stability in social and economic development (Letcher, T. M., 2011). It encourages us to balance our lives with natural resources and give a clean, safe and healthy environment to future generations. It helps to ensure skill development and active participation with a positive attitude towards environmental problems (Chawla, L., 2007). Environmental education inspires judicious use of natural resources and environmental conservation. It is indispensable for the protection of the environment as well as the sustainable development of society and the economy (Hawkes, D., 2001). Environmental education works to raise awareness among every citizen of the society towards conservation of natural resources, conservation of biodiversity and promotion of green technology (solar energy, wind energy, and energy recycling, etc.) (Hungerford, H. R., & Volk, T. L., 1990). However, various criticisms have been coming up on the effectiveness of its effects. For example, it can create obstacles in the path of economic development and industrialisation, or this education can become more boring or complex (Sterling, S., 2001). In the blind race of materialism, modern man has knowingly or unknowingly caused serious environmental damage, as evidenced by ozone depletion, global warming, acid rain, and an increase in natural disasters. Environmental pollution and ecological imbalance are no longer just local or national issues (Beaumont, J., & Sorensen, K., 2009); they now affect the entire world. Organisms can adapt to a limited degree if these changes are partial, but large-scale changes may jeopardise an organism's ability to survive. Therefore, preserving the ecosystem is essential to ensuring our safety in the future (Miller, G. T., & Spoolman, S. E., 2013). At present, environmental education is being taught as an optional subject in most institutions, due to which it is not getting enough importance and for this reason (Gupta, S., et. al., 2024), this subject is limited to mere awareness, and no attention is being paid to practical aspects and problem solving (Kagawa, F., 2007). Therefore, the need of the hour is that it should be included as a compulsory subject at the primary and secondary level, and along with theoretical knowledge, practical place should also be given (Tilbury, D., 2004). Looking at the effects of environmental education, every citizen of the society is inspired to make small changes in daily life with more awareness and responsibility, which can give long-term results (Gupta, S., & Singh, V., 2024). Finally, it would be right to say that if environmental education is implemented in the right direction, then it plays a major role in solving environmental problems as well as achieving the goal of sustainable development. Hence, it is our responsibility to adopt it and ensure our participation in creating a safe, healthy and clean environment for future generations.

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Key elements this covers:

1. Transparency about AI use
2. Scope of AI assistance (non-substantive vs. substantive)
3. Your oversight as author
4. Conformance with academic integrity standards

Conflict of Interest Statement

The authors declare that there are no conflicts of interest, financial or otherwise, related to the research, authorship, or publication of this manuscript. No external funding was received for this study, and no competing interests exist that could influence the objectivity of the findings presented.

REFERENCES

1. Arbuthnott, K. D. (2009). *Education for Sustainable Development: A Contribution to the Debate. Environmental Education Research, 15*(2), 168-187. 10.1080/13504620802706569
2. Berkes, F. (2004). *Rethinking Community-Based Conservation. Conservation Biology, 18*(3), 621-630.
3. Chawla, L., & Cushing, D. F. (2007). *Education for Sustainability: Perspectives and Practices across Higher Education. International Journal of Sustainability in Higher Education, 8*(3), 233-247.
4. Chawla, L. (2007). *Learning to Love the Earth: A Review of the Role of Environmental Education in Sustainability. Environmental Education Research, 13*(3), 231-249. 10.1080/13504620701426451.
5. Chiras, D. D. (2009). *Environmental Science: Creating a Sustainable Future.* Jones & Bartlett Learning.
6. Durlak, J. A., et al. (2011). *The Impact of Enhancing Students' Social and Emotional Learning: A Meta-Analysis of School-Based Universal Interventions. Child Development, 82*(1), 405-432.
7. Folke, C., et al. (2011). *Reconnecting to the Biosphere. Science, 331*(6022), 1309–1312.
8. Giddings, B., Hopwood, B., & O'Brien, G. (2002). *Environment, economy and society: Fitting them together.* Sustainable Development, 10(4), 187-196. https://doi.org/10.1002/sd.199
9. Gupta, S. (2023). Choice-based credit system in India. *International Journal of Research and Analytical Review*, 7(4), 262–268.
10. Gupta, S., Sharma, M., & Shukla, P. (2025). From happiness curriculum to skill development: A critical evaluation of Delhi's NEEEV programme. International Journal for Multidisciplinary Research (IJFMR), 7(3), 1–12. http://dx.doi.org/10.36948/ijfmr.2025.v07i03.47674
11. Gupta, S., & Singh, V. (2024). Examine the **NEP's initiatives** for improving the quality of education in India. *Navigating NEP 2020 Strategic Implementation and Future Challenges* (pp. 153–162). Luit and Pine. ISBN: 978-81-9740-99-8.
12. Gupta, S., Deepak, D., Gore, R., Mishra, B. N., & Singh, V. (2024). Tracing challenges in the pathway of CBCS: A status study. *Library Progress International*, *44*(3), 10300–10309. s
13. Gowdy, J. M. (2005). *The Value of Ecosystem Services: Some Applications and Implications. Ecological Economics*, 53(3), 323-332.
14. **Intergovernmental Panel on Climate Change (IPCC). (2013).** *Climate Change 2013: The Physical Science Basis.* Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press.
15. Jensen, B. B., & Schnack, K. (1997). *The action competence approach in environmental education.* Environmental Education Research, 3(2), 163-178. https://doi.org/10.1080/1350462970030204
16. Jensen, B. B., & Schnack, K. (1997). *The action competence approach in environmental education.* Environmental Education Research, 3(2), 163-178. https://doi.org/10.1080/1350462970030204
17. Kagawa, F. (2007). *Difficulties in Integrating Education for Sustainable Development into Schools: An International Comparative Analysis. International Journal of Educational Development, 27*(4), 289-303.
18. Kaur, G., & Singh, A. (2010). *Philosophical Foundations of Environmental Ethics in India: A Historical Perspective.* International Journal of Indian Philosophy, 18(3), 255-269.
19. Kasting, J. F. (2010). *How to Find a Habitable Planet.* Princeton University Press.

20. Kates, R. W., Parris, T. M., & Leiserowitz, A. A. (2005). *What is Sustainable Development? Goals, Indicators, Values, and Practice. Environment: Science and Policy for Sustainable Development*, 47(3), 8-21.
21. Kates, R. W., & Parris, T. M. (2003). *Long-term trends and sustainability: A global perspective. Science*, 302(5652), 634-640.
22. Kates, R. W., Parris, T. M., & Leiserowitz, A. A. (2005). *What is Sustainable Development? Goals, Indicators, Values, and Practice. Environment: Science and Policy for Sustainable Development*, 47(3), 8-21.
23. Kollmuss, A., & Agyeman, J. (2002). *Mind the Gap: Why Do People Act Environmentally and What Are the Barriers to Pro-environmental Behavior? Environmental Education Research, 8*(3), 239-260. DOI: 10.1080/13504620220145401
24. Larrivee, B. (2009). *Cultivating Reflective Practice: A Framework for Exploring the Role of Teachers in Classroom Management. Educational Leadership,* 67(1), 72-77.
25. Lacis, A. A., Schmidt, G. A., Rind, D., & Ruedy, R. A. (2010). *Atmospheric CO2: Principal control knob governing Earth's temperature.* Science, 330(6002), 356-359.
26. Liu, K. F., & Zhang, L. (2011). *The role of education in sustainable development.* Journal of Education for Sustainable Development, 5(2), 175-186. https://doi.org/10.1177/097340821100500215
27. McBride, B. B., Brewer, C. A., Berkowitz, A. R., & Borrie, W. T. (2013). *Environmental literacy, ecological literacy, ecoliteracy: What do we mean and how did we get here? Ecosphere, 4*(5), 1-20.
28. Ramanathan, V., & Carmichael, G. (2008). *Global and Regional Climate Changes Due to Black Carbon. Nature Geoscience, 1*(4), 221-227.
29. Rennie, L. J., & Jarvis, T. (2012). *The Role of Schools in Environmental Education and Sustainability. International Journal of Environmental & Science Education,* 7(2), 139-158.
30. Rennie, L. J., & Jarvis, T. (2012). *The Role of Schools in Environmental Education and*
31. Rockström, J., Steffen, W., Noone, K., et al. (2009). *A safe operating space for humanity. Nature, 461*(7263), 472-475.
32. Sharma, S. (2016). *Environmental Education and Awareness in India: Status and Challenges.* International Journal of Environmental Science and Technology, 13(5), 1175-1186. https://doi.org/10.1007/s13762-016-1080-3
33. Shindell, D. T., et al. (2012). *Simultaneously Mitigating Near-Term Climate Change and Improving Human Health and Ecosystem Quality. Science, 335*(6065), 183-189.
34. Simmons, B. A., & Simmons, R. (2007). "Environmental education: A tool for sustainable development." *International Journal of Environmental Studies, 64*(4), 485-494.
35. Smith, R. M., et al. (2011). *Effects of Acid Rain on Soil and Plant Health. Environmental Pollution, 159*(9), 2392-2402.
36. Tilbury, D. (1995). *Environmental education for sustainability: Defining the new focus of environmental education in the 1990s. Environmental Education Research, 1*(2), 195-212.
37. UNESCO. (2015). *Education 2030: Incheon Declaration and Framework for Action.*
38. UNESCO (2017). *Education for Sustainable Development Goals: Learning Objectives.* UNESCO.
39. United Nations Environment Programme (UNEP). (2012). *Global Environment Outlook 5: Environment for the Future We Want.* UNEP.
40. Van Dijk, T., & Wester, P. (2012). *Environmental Impacts of Acid Rain and Dry Deposition in the Netherlands. Environmental Pollution, 171*, 152-160.