

Basics of sustainable development: the example of environmental education

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Abstract. In order to preserve the resources of our planet, improve social welfare, and build a sustainable future for future generations, sustainable development is a crucial idea. An illustration of this idea is environmental education, which seeks to further these objectives by raising people's knowledge of the environment. People who get environmental education are better able to adapt to their natural surroundings. Important topics covered in this course include protecting the environment, using natural resources sustainably, and increasing public understanding of environmental concerns. Adults and children of various ages are involved in this process. Numerous initiatives funded by academic institutions, government agencies, non-governmental groups, and schools may provide environmental education. Through these activities, participants may learn how to comprehend and address environmental issues while also getting the chance to experience the natural world. One of the main tenets of sustainable development is this kind of education, since individuals who are more environmentally conscious tend to manage natural resources more effectively, become more aware of environmental issues, and build stronger foundations for a sustainable future. Consequently, attaining sustainable development objectives depends in large part on environmental education. People are better equipped to comprehend and safeguard the environment and make more thoughtful choices for a sustainable future as a result of this education. In order to protect the health of our world and future generations, this is imperative.

1 Basics of sustainable development

The need for development, which increased rapidly after the Second World War, became a multidimensional concept that included international cooperation after the 1970s. This concept also continued to be discussed under the name of "sustainable development", which aims to preserve favorable living conditions for future generations [7].

2 Sustainable development

The goal of sustainable development is to satisfy present requirements while simultaneously keeping future generations' needs in mind. Achieving balance in the areas of the economy,

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society, and environment is the goal of this discipline. A balance between social fairness, economic development, and environmental conservation is necessary for sustainability.

Research in fields like waste management, water management, air quality, and the utilization of ecologically friendly energy sources may fall under this umbrella idea. Sustainable development also depends on collaboration between industry, government, and non-governmental groups.

3 Dimensions of sustainable development

Sustainable development is designed to achieve balance in economic, social and environmental aspects. These three dimensions should be considered in relation to each other.

Economic dimension: To ensure economic growth and job opportunities for sustainable development. This may include activities such as increasing investment, increasing employment and improving economic prosperity.

Social dimension: Meeting social justice and people's needs for sustainable development. This may include healthcare, education, housing and social security.

Environmental dimension: In order to achieve sustainable development, the environmental component aims to safeguard the environment and guarantee the sustainable use of natural resources. This might include doing tasks like cutting down on pollution in the environment, boosting energy effectiveness, enhancing waste management, and safeguarding natural resources.

4 Sustainable development necessity

Today, while the world population and economic activities are increasing rapidly, environmental and social problems are also increasing. These problems include climate change, environmental pollution, lack of water, depletion of energy resources, waste management, air pollution and loss of biodiversity. All of these will directly affect future generations.

Sustainable development means making decisions by paying attention to today's economic and social needs as well as environmental needs to ensure that the needs of future generations are met. In this way, resources will be available to meet the needs of future generations. Sustainable development also aims to strike a balance between economic growth and social justice. In this way, all segments of society ensure that economic prosperity is shared.

5 What are the United Nations Sustainable Development Goals?

For sustainable development, the United Nations (UN) has established "17 Sustainable Development Goals (SDGs)" The UN General Assembly approved these objectives in 2015, with the intention of achieving them by 2030. The purpose of sustainable development objectives is to attain sustainable development from an environmental, social, and economic perspective. Goals for sustainable development include:

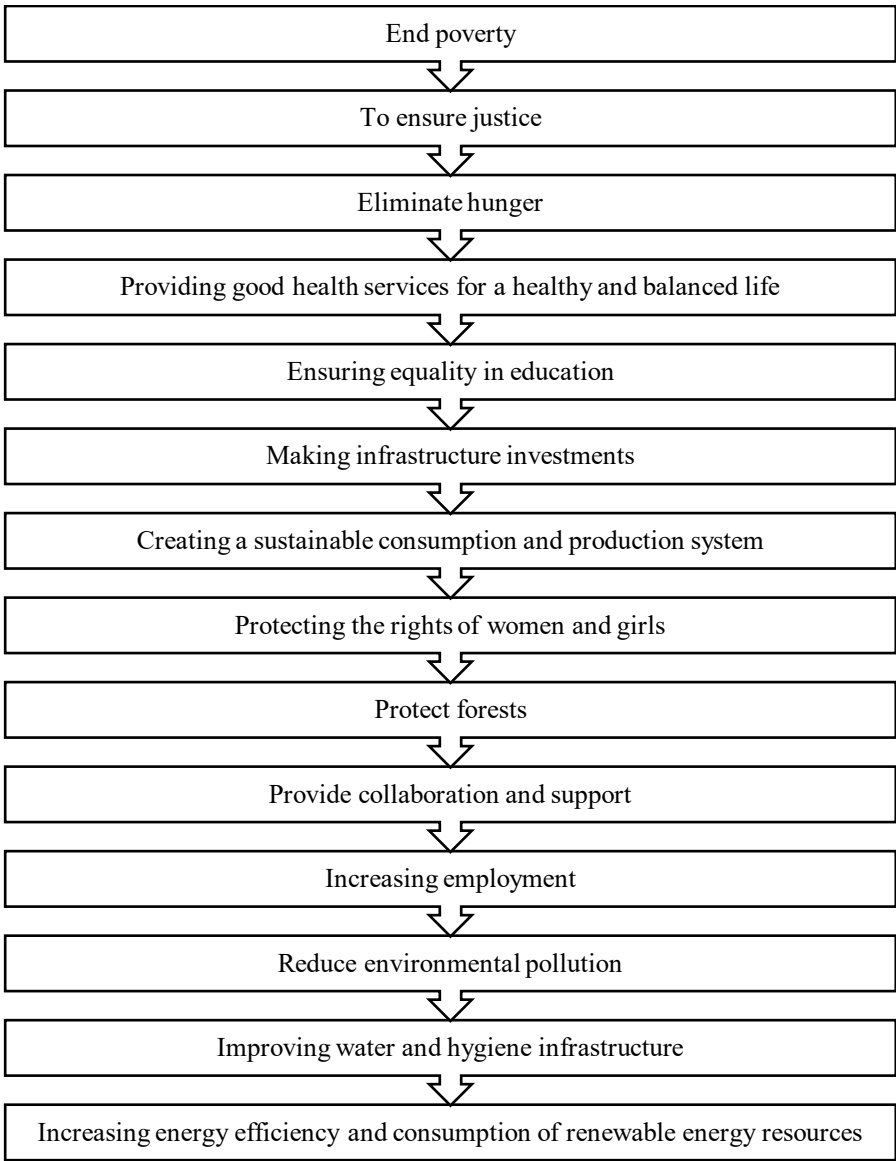


Fig. 1. Sustainable development goals. Source: [1]

The UN recommends that countries, businesses and local governments, as well as non-governmental organizations, cooperate to achieve these goals. Each goal is defined in detail with sub goals and metrics. In this regard, countries will submit annual reports to achieve the targets [1, p.24].

Countries must design and carry out comprehensive, sustainable development strategies in order to meet the Sustainable Development Goals. In order to accomplish the sustainable development objectives, the UN works to persuade nations and other interested parties to put policies and initiatives into place.

Education for Sustainable Development: Increasing Conscience and Bringing About Change Education is one of the main engines of social change and is essential to reaching

sustainable development objectives. The sustainable use of natural resources is something that every person who has the chance to learn about a sustainable lifestyle must comprehend. Long-term societal reform starts with this. [3, p.37].

Some of these approaches are [5, p.413]:

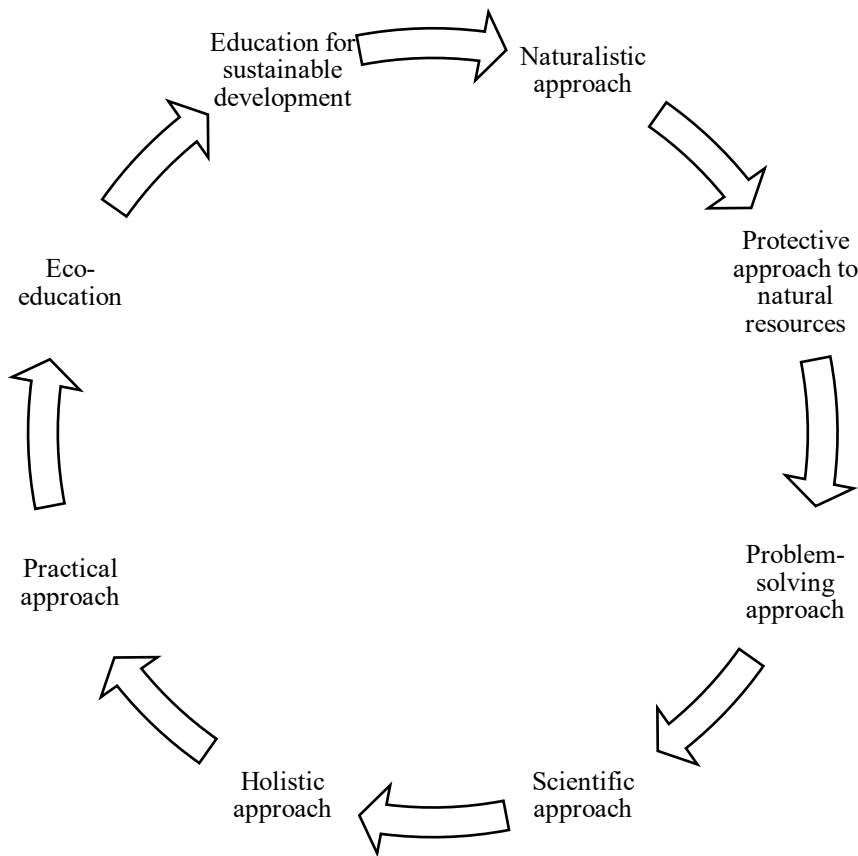


Fig. 2. Some of these approaches. Source: [5, p.413]

1. *Naturalistic approach*: Emphasizes the natural world and encourages people's efforts to understand natural resources.
2. *Protective approach to natural resources*: Teaches the sustainable use of natural resources.
3. *Problem-solving approach*: Provides students with the skills to identify and solve environmental problems.
4. *Scientific approach*: Encourages the study of environmental problems using scientific methods.
5. *Holistic approach*: Considers environmental issues in an overall context and enables people to understand how they interact with the natural world.
6. *Practical approach*: Emphasizes applying theoretical knowledge in practical life.
7. *Eco-education*: Focuses on understanding the complexity of ecosystems and protecting these ecosystems.

8. Education for sustainable development: Encourages future generations to become conscious and active participants in sustainability.

Especially in recent years, training in nature and training for individuals to find solutions to their own problems have become increasingly common. Such training increases individuals' sensitivity to environmental problems and helps them adopt the basic principles of sustainable development [4, p.6].

As a result of the "Evaluating effectiveness of environmental education programming" study conducted on January 23, 2019, Rayelynn Brandl, Arlene Alvarado and Abigail Peltomaa developed a method to evaluate the effectiveness of environmental education programs. The study's findings highlight the critical role that environmental education plays in the communities that make up the Clark Fork Watershed and other comparable areas that deal with difficult environmental issues. Solastalgia is a disorder brought on by local environmental factors and economic losses. It may have a number of detrimental outcomes, such as drug usage and physical and mental sickness. These symptoms may be lessened if they take an active role in resolving environmental problems in their communities [6].

As an example of how to handle environmental issues, the Clark Fork Watershed special program is situated on a Superfund site with a harmed ecology. In order to preserve a sustainable environment for future generations, the concept of sustainable development emphasizes how crucial it is to find a balance between social advancement, economic growth, and environmental conservation.

Achieving the objectives of sustainable development and creating a population knowledgeable about science and the environment depend heavily on environmental education. To make sure that the targeted levels of environmental literacy are reached, it is crucial to set up organized procedures for evaluating the results of environmental education initiatives.

Systematic environmental education is essential given the environmental issues that the children of the Clark Fork Watershed and the surrounding areas will confront, including the consequences of climate change, destroyed ecosystems, and hazardous waste sites. Since these young people will be the future custodians of their local watersheds, their attitudes and expertise are crucial.

According to the National Environmental Education Advisory Council, environmental education is a process of learning that increases people's knowledge, awareness, skills, attitudes, motivations, and commitments to enable them to make informed choices and take responsible action in the process of resolving environmental challenges.

The US government understands that environmental education may raise public awareness of environmental concerns, help people understand them better, and provide them the knowledge they need to take action and make wise choices.

The study conducted by CFWEP, which has been gathering information on student outcomes since 2008, demonstrates the efficacy of its initiatives. Due to the method's alignment with constructivist theory, which encourages hands-on, active learning, students have produced new knowledge via their experiences. Place-based learning, face-to-face encounters with scientists, an inquiry-based approach, data collecting and analysis, talks about doable actions, and first-hand experiences in the local environment are all crucial elements of best practices in environmental education. These findings highlight the potential benefits of environmental education in reducing solastalgia and strengthening the bond between people and their surroundings.

Education is thus the cornerstone of social awareness and change for sustainable development. To protect the planet and the health of future generations, it is imperative that each individual adopt a sustainable lifestyle and raise awareness of environmental issues.

Solving the major problems the world is now facing is the aim of sustainable development. Many problems, such those concerning society, the environment, and

economic injustice are too complex to be handled locally or nationally on their own. Thus, "sustainable development" refers to a process in which all parties involved need cooperation and common solutions.

With today's efforts alone, global issues like greenhouse gas emissions could not be resolved. Because of gases that have already been released into the atmosphere, Earth's temperature may rise more. This indicates that time is of the essence.

These days, environmental issues transcend national boundaries and impact the whole planet. Regardless of wealth or poverty, these issues impact everyone. For instance, the nation in which a child is born affects the environmental harm done to the planet. Ecological issues disproportionately affect nations that use resources without cognizance.

A viewpoint that contends wealthy nations need to aid developing nations is reflected in the sustainable development process. The United Nations and its associated organizations offer the process's leadership [5, p.416].

Environmental issues are not isolated incidents that impact just one nation. Environmental catastrophes like Chernobyl, for instance, have global effects. International collaboration is thus essential.

Turkey, Russia, and the UK, for instance, have made significant progress toward achieving sustainable development objectives. Through initiatives including environmental projects, education, and legal reforms, it aims to achieve environmental sustainability.

Sustainable development is thus a crucial objective for the whole planet. To do this, efforts at environmental preservation, education, and international collaboration are required. To ensure that there is a sustainable earth for future generations, everyone must take responsibility.

6 Conclusion

In summary, the notion of sustainable development is diverse and dates back to the post-World War II period. Since the 1970s, it has placed special emphasis on international collaboration. It seeks to protect the welfare of future generations while also addressing the requirements of the current generation. A careful balance between the economic, social, and environmental aspects is necessary for sustainable development. Maintaining social fairness, economic progress, and environmental conservation all depend on this equilibrium.

In order to achieve sustainable development in terms of the economy, society, and environment by 2030, the United Nations has created 17 Sustainable Development Goals, or SDGs. These objectives provide as a global framework, and the achievement of them depends on collaboration between nations, corporations, local governments, and non-governmental organizations.

Education is crucial to raising awareness and promoting a sustainable way of life. The goal of environmental education is to increase people's awareness and comprehension of environmental issues with the assistance of several stakeholders. Numerous approaches are used, including scientific, naturalistic, holistic, eco-education, problem-solving, and education for sustainable development. The cornerstone of social transformation is education, which encourages environmentally conscious human behavior and sustainable lives.

Global issues like environmental deterioration and climate change need international collaboration and shared solutions. The UN is at the forefront of this effort, and the sustainable development process highlights the significance of rich nations aiding developing ones. Environmental issues are global in scope and impact all nations, irrespective of their economic standing. Therefore, tackling these issues, ensuring a planet that is habitable for

future generations, and achieving the objectives of sustainable development need a team effort.

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