

Annexe 1. Education for sustainable development – introduction

The increase in human needs and demands day by day is introducing new environmental problems to the world. At present, environmental issues are being discussed on a global scale. Reaching the limitations of our natural resources and the rapid increase in the world population which is occurring in parallel with this is causing a decrease in the level of our natural resources, a shrinkage of our living spaces and pollution. The rapid development of industrialization and urbanization, the modernization of agriculture, and the development of technology and the economy have disturbed our critical resource-needs balance, also the efforts to achieve social welfare have mortgaged the future of humanity. This situation necessitates the concept of “sustainable development”.

The fact that all societies, especially those found in developed countries, have become consumer societies and that this process is intensifying at an increasing rate, threatens the future of natural ecosystems and the living things that live in these ecosystems. In determining new development goals, it is important to realize that the destruction of natural assets is not only occurring in producing or developing countries. It is necessary to consider the fact that developed countries do not only consume their own natural resources for their development and welfare but also the resources of underdeveloped countries. Despite numerous conferences and agreements to protect biological wealth and natural assets, the production-consumption system that has the potential to turn our world into a garbage dump is growing rapidly.

Although the concept of sustainable development, which is at the forefront of the issues that frequently occupy the global agenda, seems like a simple concept, it has actually emerged as a particularly deep concept when examined in all of its dimensions. Sustainable development can be defined as a form of development in which all resources are used to meet the needs of future generations and a development strategy that manages natural resources for long-term welfare and humanity.

The most commonly used definition of sustainable development was made by the World Commission on the Environment and Development in 1987. According to this definition, sustainable development is meeting the needs of the present generation without compromising the ability of future generations to meet their own needs. Sustainable development has various dimensions (economic, social, spatial, cultural and environmental) and each of them mutually affects the others. The point where the definitions for the concept of sustainable development converge is that the concept has three dimensions. Although the environmental dimension comes to the fore more in sustainable development, it is necessary to perceive the concept of

sustainability as being composed of "economic, environmental and social" dimensions.

Another concept that comes to the fore with the concept of sustainable development is that of the ecological footprint. While we live our lives, we also consume our natural resources rapidly, and as a result, we produce a lot of waste. Each substance consumed and each type of waste produced requires a certain amount of fertile soil and water. The ecological footprint is the area of biologically productive land and the volume of water required to produce the resources we consume and absorb the waste that we create. In other words, an ecological footprint is an ecologically productive area (irrigable land, woodland, grassland) with certain boundaries, where the resources required by the person or ecological community with a certain quality of life and consumption habits are produced and the resulting wastes are rendered harmless, carbon dioxide is absorbed. The ecological footprint is an ideal indicator for environmental sustainability, a planning tool for strategic management, a complementary educational tool to enable our children to observe the big picture of sustainability from afar, an ideal platform for the organization of knowledge concerning sustainable development, a tool for the creation of individual decisions for the purposes of making a lifestyle change. It is a concept suitable for the content of programmes such as eco school, a suitable example for the purpose of increasing ecological awareness at the social level, and a useful way to develop an understanding of national and global equality.

In order to achieve a sustainable future for our world, we need to reduce our collective ecological footprints. One way of reducing our ecological footprint is through measures such as adopting conscious consumption habits, using our own resources instead of external ones, and not being wasteful when using energy. By changing our lifestyle choices, such as the way we travel (like walking, cycling or using public transport instead of a car) or where we shop (like buying at local grocery stores or markets) and what we buy (like organic instead of non-organic) and using energy with a more efficient use of natural resources, our ecological footprints can be reduced.

By and large, people have come to realize that certain trends in economic development are incompatible with sustainability and have argued that public awareness should be raised in this context. Nowadays, it is known that environmentalists are searching for different solutions with practices such as levying fines, establishing environmental protection organizations, taking protective and deterrent measures, using alternative energy sources, and also engaging in international cooperation in order to cope with environmental problems. However, human beings cannot be made environmentally sensitive through police measures or laws alone. Finding a real solution to environmental problems only becomes a possibility when environmentally sensitive people are raised. For this reason, especially in the last quarter century, the necessity of informing people about the environment and environmental problems with an effective lifelong environmental education has begun to be accepted within the international community. The main

purpose of environmental education is to raise individuals who understand their environment, develop a critical view in their interaction with the environment, are sensitive, sociable and take an active role in solving problems.

Education is a key concept for leading society towards sustainability. Education for sustainable development enables people to develop the necessary knowledge and skills to participate in decisions about what to do individually and collectively, locally and globally, to improve their quality of life for the future without harming the planet. Education concerning sustainable development is directly related to sustainable environmental education. For this reason, it is important to raise individuals with an awareness of sustainable development through the application of sustainable environmental education.

When various studies concerning the concept of "sustainable development", which is of great importance for the future of the world, are examined, it may be observed that the data are generally obtained with scales and a focus on the appropriate attitude to adopt. As a result of examining such studies, it was concluded that one of the ways that students can become more involved in environmental awareness and sustainable development is through effective environmental education. Researchers have stated that a new education system should be created in which environmental awareness can be taught in such a way as to ensure sustainable development and they also emphasized that environmental awareness should be taught to individuals at every stage from primary education onwards.

In ongoing studies, it has been emphasized that an education consistent with sustainable development plays a very important role in the development of environmental awareness, value judgments, attitudes, and behaviours. It has been stated that each teacher is a potentially important agent in encouraging people to make the change to the value judgments and lifestyles necessary for sustainable development, innovative teacher training is essential in order to tap into this potential, and education faculties have the potential to realize this change.

Ways to Reduce Ecological Footprints in Food Consumption

Students should;

- Be encouraged to emphasize the nutritional values of purchased foods and to reduce their consumption of ready-made and frozen foods.
- Get to know the local areas where food is produced to increase their focus on locally grown fresh vegetables and fruits.
- Be encouraged to reduce their meat consumption and adopt herbivorous eating habits as much as possible, through speeches by experts
- Be encouraged to use mesh bags instead of plastic bags.

Ways to Reduce Ecological Footprints in the Field of Energy Consumption

Students should be;

- Enlightened as to the benefits to nature of turning off their computers and televisions when not in use
- Made aware of how big a step towards sustainability it is to keep the light off while watching TV in their room, not to run the washing machine or dishwasher without filling it, and not to keep the refrigerator door open for too long

Ways to Reduce Ecological Footprints in Transportation

Students should be encouraged;

- To take public transport through the idea of how fun it can be to take shuttles, walk or cycle instead of using private vehicles
- To convince their families to buy low-fuel vehicles because of how much they will benefit the environment.

Teachers are the first authority figures to create a certain awareness in students. There are several types of practises that teachers should engage in to raise awareness concerning sustainability in students and to facilitate the implementation of the above-mentioned measures:

- Students can be informed about their ecological footprint and sustainable living, and they can be invited to produce projects on these issues. At the same time, larger numbers of people can be reached through applied training.
- Interesting brochures can be prepared and distributed during each lecture, seminar, or conversation that can make people realize the importance of their ecological footprint.
- By including senior managers and municipalities in the projects to be implemented, teachers can convince their students that the sustainability issue is in fact an issue that concerns the whole country. Such a state of awareness and intent can spread throughout society.
- Regardless of their field of expertise, teachers can choose a topic related to sustainability after each lesson and ask their students to explain this topic to 3 people they know and prepare a presentation for the next lesson concerning what can be done about it and what kinds of precautions can be taken.
- Teachers can make it a habit to host seminars and conferences on sustainability on a regular basis, just like regular exams.

The measures and suggestions listed above, which enable students to see their own ecological footprints, can be important tools for them to grasp the seriousness of the situation. The most important point, in this case, is to be able to clearly show the students how much damage they are doing to the planet. Because in the scenario where our collective consumption frenzy continues at the same pace, an ecological collapse is inevitable. The damage caused by such a collapse will also be devastating for future generations. In this context, what students need to realize is that if there is no reduction in their ecological footprints today, their unborn children will also be endangered. At this point, the right move

would be to show the students the damage they have done to the environment as it is.

- One of the easiest ways to achieve this would be to quantitatively measure and show the damage inflicted by students with an ecological footprint test. According to the results of their footprint size, it can be clearly explained to the students, which generation will last longer and which generation will not survive at all. Next, the endangered students can be asked to prepare a sustainability project on behalf of endangered students and come up with ideas on how to save the generations yet to be born. It should be ensured that the prepared projects can also be used in the international arena so that they can be prepared with enthusiasm.
- Another reason for students to be hesitant about sustainability is the idea that they alone cannot make a tangible difference. It is essential to instil in them the idea that every change begins with an individual. To do this, for example, it can be explained how they can prevent 217 plastic bottles from going to waste by drinking from reusable bottles instead of plastic bottles for just one year, thus saving land even through their own efforts.

As important as it is to teach sustainability, it is equally important to learn the true nature of this concept and what it means. It is essential that the trainers who will provide training on the concept of sustainability should be familiar with this concept and know exactly what it means.

Learning about sustainability is essential for everyone, but especially for educators who will provide sustainability education and one-on-one contact with students, as it helps individuals to understand the impact of their actions on the environment and society and it also enables them to take action to achieve a more sustainable future. A few ways to learn about and teach the concept of sustainability, especially for educators, are listed below:

- **Firstly, it should start with the basics:** Start by developing an understanding of the concept of sustainability and its three components, this will make the learning and teaching process easier. In addition, information may be obtained from the United Nations Sustainable Development Goals, the World Wildlife Fund or the United Nations Environment Programme, which all provide a framework for global sustainability efforts.
- **Reading and research are essential at all stages.** There are many detailed resources available for learning about the concept of sustainability, these range from books and articles to online courses and webinars. Finding and reading resources, especially those based on scientific evidence and peer-reviewed research, is one of the best starting points for learning about sustainability in depth.
- **Sustainability education courses and institutions can be used:** Sustainability courses are provided by various educational institutions and may be conducted online, enrolling in one can provide a solid step in

improving the quality of your teaching. Learning from the coursework can offer a more realistic approach to teaching and also help the teacher to develop a deeper understanding of sustainability concepts and practices.

- ***All initiatives related to sustainability should be informed and participated in:*** Participating in sustainability initiatives in your region and even volunteering for sustainability organizations will shift your understanding of what this concept means in the applied fields. These initiatives will provide hands-on experience in the field of sustainability. Thus, it is easy to see how sustainability is implemented not only in society but also beyond society in the natural world.
- ***Changing your lifestyle and starting to make choices in line with the concept of sustainability can help one to look at the topic from a completely different perspective:*** Making choices in accordance with the concept of sustainability, which reduces one's ecological footprint in particular, will not only bring about a permanent change in one's lifestyle, but also help with teaching this concept by contributing to the future. Reducing energy consumption, using public transportation vehicles or bicycles instead of private vehicles, walking more frequently, using recyclable materials instead of plastic bottles and choosing products with a sustainable certification will not only provide the necessary changes, but will also enable the educators to apply the concept of sustainability in all areas of their life. As "sustainability trainers", they will be able to give their students the pleasure of teaching a lifestyle that they truly believe in.