

Monthly E-Bulletin of the Project “Zero Waste Strategy for Good Environmental Status-BSB257”

E-Bulletin No:10

Common borders. Common solutions

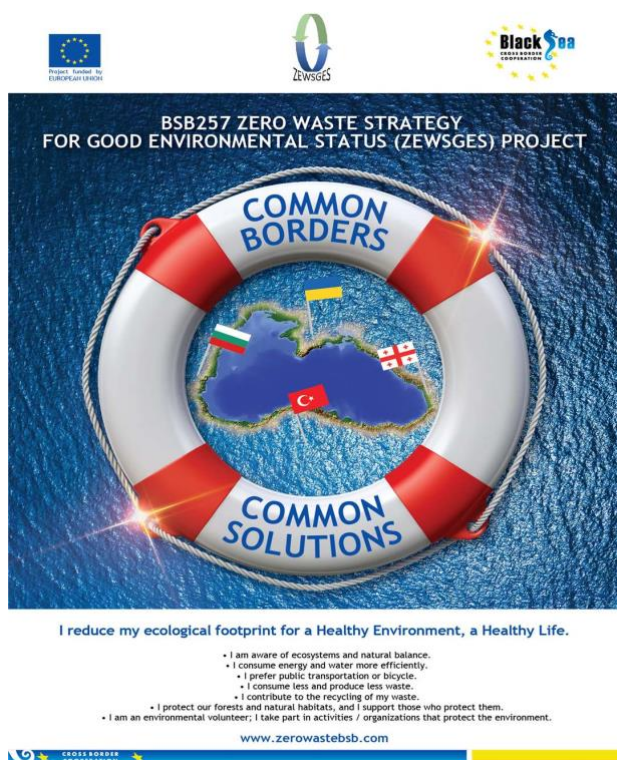
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Ecosystem Education Program (EEP) of ZEWSGES PROJECT

Ecosystem Education starts in September 2019 in the partnering countries, Turkey, Bulgaria, Ukraine and Georgia. EEP Education set, including video films, Training Guide, Game, etc., will be soon ready in four languages and in English. Poster and brochures to be used during the Education is ready. EEP will cover about 2000 students at 7-16 age primary and secondary schools and their teachers.

Poster for EEP

Project poster in the language of partner countries are now ready for use. The poster aims at raising awareness among the primary and secondary school students and their teachers on reducing ecological footprint for a healthy environment and a healthy life.



I will reduce my ecological footprint for a Healthy Environment, a Healthy Life!

- ✓ I am aware of ecosystems and natural balance.
- ✓ I use energy and water more efficiently.
- ✓ I prefer public transportation or bicycle.
- ✓ I consume less and produce less waste.
- ✓ I contribute to the recycling of my waste.
- ✓ I protect our forests and natural habitats.
- ✓ I am an environmental volunteer; I take part in activities/organizations that protect the environment.

Figure. Project poster for EEP and its content.

Brochure for EEP

Similar to EEP Poster, Project brochure in the language of partner countries are now ready for use. The brochure aims at raising awareness among the primary and secondary school students and their teachers on ecosystem through answering the following questions:



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- What is an ecosystem?
- What are the components of the ecosystem?
- How to achieve natural balance in the ecosystem?
- What are the activities that disturb the natural balance in the ecosystem?
- Am I also polluting?
- What should be done to protect the ecosystem?
- What can I do to protect the ecosystem? and
- Conclusions.



Figure. Project Brochure cover page inner page.

What is an ecosystem?

Ecosystem is a permanent system resulting from the mutual interaction of living organism such as plants, animals, microorganism and communities of non-living components surrounding them, e.g. soil, air and water.

What are the components of an ecosystem?

The ecosystem is a life association which includes three living groups, producers, consumers and disintegrants. Producers are photosynthetic organism that are plants. Consumers are usually carnivores herbivores. The disintegrants consist of bacteria and fungi. Producers perform photosynthesis, consumers breath and disintegrants decompose and recycle waste from plants and animals. Organic and inorganic substances such as energy, air water, soil and rocks are also inanimate components of ecosystem, The earth, continent, region, river basin are ecosystems. Only Solar energy is added to this system from the outside. If the earth ecosystem is damaged, solar energy may become into a devastating effect.

How is the natural balance sustained in ecosystem?

There is corporation between living and inanimate elements in the ecosystem. Each element in the nature is part of this system and each element has a task. The damage to any element in the ecosystem or the failure of cooperation affects the whole system. There is a close relationship



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between human health, production and ecological balance. For example, harm the green plants, that are the producers of the ecosystem, and when the green plants are damaged, oxygen production decrease. Thus, decreasing oxygen affects animals and human health.

What are the activities that damage the natural balance in the ecosystem?

Chemical fertilisers used in agriculture: Excessive use of chemical fertilisers pollute the fresh water resources, affect the structure of the plants and also disrupts the structure of the living organisms that consume this plants. Thus, it deteriorates the health of people who consume plants.

Unconsciously used pesticides: As a results of spraying, harmful chemicals accumulate in the soil and harm living organism.

Chloro-fluoro-carbon gas used in the perfumery industry: Perfume gases spread around causes the ozone layer gets thinner. As a result of this thinning of the ozone layer, protection of harmful rays from the Sun does not occur, which affect human life quality.

Gasses from fossil fuels such as coal and ail pollute the air: Gasses from factory chimney and vehicle cause acid rain and damage the plants and affects the human health negatively. Due to greenhouse effects these gases also cause global climate change. Global climate change on the other hand is an important environmental problem that will upset the balance of the ecosystem and adversely affect all living beings.

Destruction of green and forest areas:It is the most important factor that disrupts the balance of the nature. Thus, both the removal of harmful gases is prevented and the habitats of animals that area the part of the ecosystem are restricted.

The use of plastic and similar substances that take hundreds of years to decompose in the nature: It adversely affects the nature, especially marine environment.

Excessive use of water resources: Disposal of used waste water into water bodies or soil contaminates fresh water resources and soil and therefore cause damages in plants animal and human beings.

Am I also polluting?

There are responsibilities of individuals as well as organisation and institutions for the protection and sustainability of ecosystem. An individual’s impact on the ecosystem is called “ecological footprint” or carbon footprint.

The following factors determine the individual’s footprint:

- The type and amount of food consumed
- Home conditions and amount of energy spent,
- The quality of transport and the amount of fossil fuels like petrol or diesel spent during the transportation,
- How much damage is caused by manufacturing and post-manufacturing of consumable products,



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- The amount and features of change created on the nature by education, health, commerce and tourism services received by the individuals.
- The amount and characteristics of rubbish put by the people,
- The impact of human being on the nature can be assess via the ecological footprint. At that point, an individual is expected to leave the most unclear footprint.

What should be done to protect ecosystem?

The steps below are required to be taken by people for the long-living, healthy and balanced sustainable Ecosystem:

- The amount of pesticides and fertilizers used in agriculture should be decreased by “Good Farming Practices”
- Efficient use of water resources, treatment of industrial and domestic wastewater, recycling of sludge should be ensured.
- Treatment facilities for wastes, particularly hazardous wastes, should be established
- Flood warning systems should be installed.
- Use of renewable energy sources such as solar, wind and geothermal should be increased and supported.
- Forest areas and natural habitats should be protected.
- Misuse of land and erosion should be prevented.
- All activities that cause climate change should be controlled.

What can I do to protect ecosystem?

In order to protect and sustain ecosystem, not only institutions and organisations have responsibilities but also individuals.

By determining the ecological footprint, the impact of humans on nature can be measured. At this point, the individual is expected to form the faintest footprint possible. The annual carbon emission of a family of four with average living standards approaches 3 tons. To convert this carbon, each family member must plant seven trees.

Every individual living in an ecosystem is a part of the ecosystem in which he lives. So every individual, young or elder, has the potential to play an active role in the ecosystem. Individuals are equally responsive to every positive or negative impact they have on the ecosystem. Even very small behavioural changes can have great consequences for the protection of the ecosystem. .

Each student can conserve the ecosystem by consuming the right and the least, paying attention to recycling, and choosing bicycles in transportation.

In addition to individual efforts to protect the ecosystem, we can also take part in an organization as an environmental volunteer.



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Conclusions

The health of ecosystem is measured by the health of predators at the top of the food chain. As human being at the top of the food chain, we must maintain the balance of the ecosystem in order to stay healthy and maintain our life.

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