

Environmental aspects of sustainable development

The concept of "sustainable development" includes three main components: ecological, social and economic, where the first one is seen as the most important. The ecological component is based on the principle of harmonizing our needs with the needs and capacities of nature. Ignoring this principle will disrupt the system, thus achievements in the economic and social spheres of are decreased.

1. Timeline of the term sustainable development

The term "sustainable development" was first mentioned in 1972 in Stockholm at the UN World Conference on the Human Environment. At first it was applied in social and economic fields with problems concerning the creation of jobs, competitiveness of enterprises, regulation of demographics and similar. Later it was applied in environmental field as well.

Today the term is mostly associated with environmental problems and safety. One of the reasons for that is a publication from 1987 of the report of the International Commission on Environment and Development titled Our Common Future, also known as the Brundtland Report. It was the first to make a stern warning that the environment had started changing and that there is a need to take a new path of develop.

It was in 1992, at the UN World Conference on Environment and Development in Rio de Janeiro, where the term "sustainable development" was assigned an environmental aspect as a priority. The center of the conference was the question about the rapid growing environmental threat associated with overpopulation, spending the irreplaceable natural resources, environmental pollution.

In September 2015 world leaders adopted the 2030 Agenda for Sustainable Development and its 17 goals. In the preamble to the Agenda, world leaders affirmed that they are: "Determined to protect the planet from degradation, including through sustainable consumption and production, sustainably managing its natural resources and taking urgent action on climate change, so that it can support the needs of the present and future generations." The goal by 2030 is to demonstrate how improving the environment will bring not only social, but also economic benefits.

2. Environmental Sustainable Development Goals

We can safely say that most of the Sustainable Development Goals are cross cutting, but a few of them specifically address environmental aspects, such as:

SDG 11 Sustainable Cities and communities: Make cities and human settlements inclusive, safe, resilient and sustainable

SDG 12 Responsible Consumption and Production: Ensure responsible consumption and production patterns.

SDG 13 Climate Action: Take urgent action to combat climate change and its impacts.

SDG 14 Life below water: Conserve and sustainably use the oceans, seas and marine resources

SDG 15 Life on Land: Protect, restore and promote sustainable use of ecosystems, etc.

3. Possibility of sustainable development under current conditions

With the industrialization of the production, the volume and the ways of using natural resources is changed. This is also because of the fast use of natural resources. The energy potential is exhausted, meaning socio-economic development is decreased. All of this uncontrolled consumption of resources leads to environmental crisis. The development in almost every sphere of life depends on better environmental management.

The growth of the economy can not be considered as indicator of sustainable development, because in many ways it contradicts the environmental view of the term sustainable development. Today's economy is based on making maximum profit and ensuring growth in production without taking much the consequences for society and nature. The reduction of resources and environmental problems solutions are not taken into consideration.

Generally, in the world more countries consume more of the resources than they can recover. This imbalance needs to change, otherwise a decrease in natural resources can lead to global eco catastrophe.

According to the UN more than 30% of the area of the world is degraded and can not provide essential resources for its citizens. These places are characterized with extreme poverty, disease, food and water shortage and people abandon those places. Armed conflicts and natural disasters are also trigger for this refugee waves.

4. Maintaining sustainable development

Going with this pace of consuming the natural resources it is a matter of time when all of the resources will become exhausted. A new strategy of environmental management is needed. It should go with the already available technologies in direction of increasing energy efficiency, reducing the environmental intensity of production and developing natural resources on the basis of principles of a "green" economy. These technologies would help in water, land and forest management as well as better prediction of natural disasters.

New technologies are also needed for maintaining sustainable development. These technologies should be based on the principle of renewable environmental management, first mentioned in 1992 at the UN World Conference on Sustainable Development. This transition can only be possible with investment in science and letting scientists do their job without interventions from people who know nothing about it.

Resources and further reading:

1. Osipov, V. I. (2019). Sustainable Development: Environmental Aspects. Herald of the Russian Academy of Sciences, 89(4), 396–404. doi:10.1134/s1019331619040087
2. <https://www.unep.org/evaluation-office/our-evaluation-approach/sustainable-development-goals>
3. <https://ceobs.org/armed-conflict-environmental-protection-and-the-sustainable-development-goals>