

# THE SUSTAINABLE DEVELOPMENT IN ECONOMY AND ECOLOGY

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**Abstract:** The highlights of this article are problems of ecology. Author analyzes the conflict between economy and ecology. After general conclusions the most accessible and practical ways to solve this problem are provided.

**Keywords:** ecology, economy, environment, global problem.

A great health problem on our planet appeared in the second half of the last century. The economic prosperity left a mark on the Earth's environment. As a result, humanity has to make a choice. The first is to accelerate economic growth and improve the material well-being of people, but to worsen the quality of people's life because of environmental pollution. And the second is to slowdown in economic growth, but to increase life expectancy of people, their financial status and improvement of the environment.

The conflict between economy and ecology has reached global proportions. People did not try to observe the harmony and ignore the importance of the issue. In this article author investigates the scope of the problem, the pros and cons of each side and analyzes the path of sustainable development. The main issue of this article is - how the economy affects the environment (Гирсов и др., 2003).

Relevance of the chosen topic is caused by a big volume of resources which are spent on rescue of environment. These problems are aggravated by the fact that they are interconnected. The growth in one sphere entails deterioration in another and vice versa. Nowadays the main problem is to achieve harmony between economy and ecology and also to find possible way of sustainable development.

Development of economy and human activity led to the pollution of the earth as a whole: the ocean, air, water, desertification, deforestation, emergence of "greenhouse effect", disappearance of many animal species and plants. Only for the last half of the century in the world there were produced more products than for all the history of a civilization. According to the UN World Commission of Environment and Development, today 6 million hectares of processed lands annually turn into the desert and 20 billion loses their efficiency. In addition, desert's areas extend, for example, Sahara annually moves to the South at 48 km. In 1950 forest spaces occupied about 15% of land, now it is already 7%. The content of carbon dioxide in the atmosphere over the past 100 years has increased by more than 10 %. An emission of gas to the atmosphere has already destroyed the 9% of the ozone layer (the main defender of the earth from ultraviolet rays). The «Ozone hole» occupies an area equal to the territory of the USA. According to UN statistics, every year 30 billion tons of oil, 50,000 tons of pesticides, 5,000 tons of mercury gets into the world's oceans. A large amount of harmful substances in the atmosphere comes with exhaust gases of cars, and their share in air pollution constantly grows, in Russia - more than 30% and in the USA - more than 60% of the total emission of harmful substances into the atmosphere. Economic growth is one of the main reasons of such scales of an environmental problem.

In general, the rational use of natural resources implies a revision of the traditional principles of production, facility location, technology development, cost accounting, in other words - a systematic approach based on the greening of economic development.

Specialists suggest some opportunities for implementation of ecological economics, here is several of them:

1. The production of one type of product to reduce damage to the environment;

2. The development of clean technologies, efficient treatment systems, and test equipment, which allow to processing of by- products and waste components industries;

3. Linkages between the results of operations and the environmental profile of products and also technology of its production;

4. The company has to distinguish the equipment costs associated with production and bring it up to a certain level of environmental quality, replacing it with another, more eco-friendly (Green economy and trade: trends, challenges and opportunities [site]. URL <http://www.unep.org/greeneconomy/Portals/88/GETReport/pdf/FullReport.pdf>).

Nowadays, it is obvious that there are no unlimited resources. There is a problem of coordination of human's needs in natural resources with requirements of their rational use. Here is an example from ancient times. In 500 years B.C. there was released edict forbidding throwing garbage in the streets. It provided the organization of special dumps and ordered to garbage-men to dispose wastes not closer than a mile from the city. And later dumps were replaced by wells for storage of garbage.

The landfills are still the main method of waste disposal, in the USA. In Europe it is preferred to burn the garbage. This method is evaluated by economists as profitable because the cost of reproduction is not reflected in the cost of production, and the resulting environmental benefits are added to the direct economy.

In China during the reign of the Great Mao environmental problems were ignored. Only in the 80's policy has been revised and directed towards the environment. This is what has been achieved in China in recent years. For example, the program "Eco Agriculture" is a combination of agricultural production with measures for improving the living environment.

Another way of economic use of resources is the improvement of the technology. On the one hand, extending the life of products, improving their quality significantly saves material and natural resources. And on the other hand, the consumer doesn't use a quality product and doesn't want to buy a new one (Навстречу "зеленой" экономике. Пути к устойчивому развитию и искоренению бедности [сайт]. URL [http://www.unep.org/greeneconomy/portals/88/documents/ger/ger\\_synthesis\\_ru.pdf](http://www.unep.org/greeneconomy/portals/88/documents/ger/ger_synthesis_ru.pdf)).

However, on practice, polluting technologies are more preferable to the majority of producers. Scientists, supporters and opponents of economic growth, identified the most accessible and practical ways to solve the problem:

1. The use of recycled materials, waste recycling and industrial wastes;

2. The use of new energy sources: wind, solar, tidal power. For example, solar batteries are widely used in Israel. For fuel materials can be used vegetable origin.

3. The restoration of spaces with the impaired environment for reuse. For example, in England, in large parts of carbon copies was planted vegetation. After 20 years, the soil will fully recover and this area can be put under tillage again, without damaging the surrounding landscape.

4. Refinement of waste water. At the heart of this technology is the use of natural processes of bacteria that decompose waste.

Thus, we see that the natural sources of energy may be replaced by alternates. It is necessary to limit it, if we want to limit contamination (Green economy: cities investing in energy and resource efficiency [site]. URL [http://www.unep.org/greeneconomy/Portals/88/documents/ger/GER\\_12\\_Cities.pdf](http://www.unep.org/greeneconomy/Portals/88/documents/ger/GER_12_Cities.pdf)).

Throughout the 20th century the concept of a sustainable development was formulated alternatively to economic growth. This concept provides economy greening, recognition of unity and variety of social options - economic and ecological development of the various countries, policy of optimum effective use of natural resources and biosphere protection in combination with care for future generations

So, after analyzing all the factors, taking into account the views of experts in the field, it can be concluded that human activity is changing the nature of the environment, and in most (not always) cases, these changes have a negative impact on a person, and it is easy to see why. For millions of years, human body has adapted to a well-defined environmental conditions. But at the same time any activity is a life source. So, mankind inevitably continues to change the features of environment, and then looks for ways to adapt to them. The conflict between people and nature which existed throughout all human development, gained now character of economic and environmental problems.

Global environmental future depends on how all measures will be implemented in practice, as will be combined with the general economic solutions to the specific environmental conditions in a particular country.

#### References:

1. Гирусов Э.В., Бобылев С.Н., Новоселов А.Л., Чепурных Н.В. Экология и экономика природопользования. - М.: ЮНИТИ-ДАНА, 2003. - 420 с.
2. Навстречу "зеленой" экономике. Пути к устойчивому развитию и искоренению бедности [Электронный ресурс]: журнал / ЮНЕП - Электрон. журн. - URL [http://www.unep.org/greenconomy/portals/88/documents/ger/ger\\_synthesis\\_ru.pdf](http://www.unep.org/greenconomy/portals/88/documents/ger/ger_synthesis_ru.pdf) (дата обращения 29.11.13)
3. Green economy: cities investing in energy and resource efficiency [Electronic resource]: journal / UNEP - Electronic journal - URL [http://www.unep.org/greenconomy/Portals/88/documents/ger/GER\\_12\\_Cities.pdf](http://www.unep.org/greenconomy/Portals/88/documents/ger/GER_12_Cities.pdf) (дата обращения 29.11.13)
4. Green economy and trade: trends, challenges and opportunities [Electronic resource]: journal / UNEP - Electronic journal - URL <http://www.unep.org/greenconomy/Portals/88/GETReport/pdf/FullReport.pdf> (дата обращения 29.11.13)

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