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### Економічні проблеми сталого розвитку

### Экономические проблемы устойчивого развития

### Economical Problems of Sustainable Development



#### Матеріали

Міжнародної науково-практичної конференції  
імені проф. Балацького О. Ф.  
(Суми, 11–12 травня 2016 р.)

У двох томах

Том 1

Суми  
Сумський державний університет  
2016

# 2

## ЕКОНОМІКА ПРИРОДОКОРИСТУВАННЯ ТА ОХОРОНИ НАВКОЛИШНЬОГО СЕРЕДОВИЩА ECONOMICS OF NATURE USE AND ENVIRONMENTAL PROTECTION ЭКОНОМИКА ПРИРОДОПОЛЬЗОВАНИЯ И ОХРАНЫ ОКРУЖАЮЩЕЙ СРЕДЫ

### FEATURES IMPLEMENTATION OF ENVIRONMENTAL INNOVATION IN UKRAINE

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Given the pace of global economic growth, industrial development, mining and processing industries, whose products are targeted including in meeting their social needs, objectively there is a risk reduction of available natural resources to a critical point, and the deterioration of the environment and endangering the people because of technological issues and environmental issues. Based on these risks at present and in the future effectiveness of social production will fully depend on the efficiency of environmental protection, which should pay attention not only state and public nature protection organizations, and especially enterprise industries, which rely implementation and responsibilities adherence to environmental regulations and technological standards of production and economic activity.

It should be noted that today Ukraine is one of the most polluted and environmentally problematic countries. According to the Index of Environmental Quality (Environmental Performance Index), which carries Yale University (USA), Ukraine occupies 87th place among 163 countries. The level of stress on the environment in Ukraine is 4-5 times higher than in other countries. In terms of management and quality of water resources of Ukraine, according to UNESCO, took 95th place with 122 countries. State Land Resources in Ukraine is close to critical, throughout the country there are processes of land degradation. Is the biggest erosion (about 57.5% of the land) and land pollution (20% of the territory), and the annual loss of humus up 0.65 t / ha [1].

Regarding the environmental performance of the Poltava region should be noted that the state of the environment in the region remains relatively stable compared to most other regions of Ukraine. Also, in a positive trend for the reduction of pollutant emissions from stationary sources. More than half of all air emissions area provide mobile sources, of which the lion's share accounted for by motor vehicles. The main pollutants of land resources at the industrial waste are enterprises of the mining and petroleum industries c. Kremenchug and the city. Komsomolskaya, as well as areas of production and transportation of gas, so there is a need to stabilize and restore the ecological balance in the area of influence of such enterprises. In addition, one of the major environmental problems of the

region, which affects almost all regions of Ukraine is the accumulation and improper storage of pesticides and agrochemicals abandoned [2].

Catastrophic modern methods of economic development, shortage of natural resources and the relationship of environmental and economic processes are an important cause of finding methods of sustainable society. One way to balance social development are environmental innovations that contribute to the implementation of environmental standards in all areas of human life.

According to scientists, innovation, including environmental, contribute to strengthening the competitiveness of enterprises, since there is strong correlation between market activities and new environmental products.

Environmental technology is a worldwide industry that is growing rapidly. Becoming increasingly important economic factor, environmental technology challenge facing innovation development in industrial scale. The main markets innovative environmental products are: production and storage of energy; energy conservation; economical use of raw materials; environmentally friendly transport; the rational use of water resources; bioplastmasy and polymers; solar cooling.

To date, the segment of the world market for environmental technology is about 1,000 billion. Euros a year, which is currently an important factor in the global economy, 45% of this segment takes technological solutions in the field of energy efficiency. Economic growth segment of environmental technology is about 5.4% per year to an estimated 2020 amount to 2.2 trillion euro per year.

The most promising currently include such technological areas as: solar power, solar cooling, membrane technologies in the water industry, bioplastmasy and polymers, decentralized water supply synthetic biofuels and others.

However, a feature introduction in Ukraine of environmental innovations is that in the innovative development of our country, unfortunately, there is a contradiction, which is on the one hand, we have a fairly high innovation potential, and on the other - the structure of the economy mechanism and management were unable to use this potential.

Thus, since 1991 the annual figure is typical expenditure on science was 0.3 - 0.5% of GDP and total - from all sources - (0.8 - 1.2)%, at a rate of at least 1.7% GDP. This led to outflow from Ukraine qualified scientific and technical personnel, the decline of many scientific schools, the rapid degradation of the material and technical base of scientific and technical research. Volumes practical implementation of environmental developments are: the environment - 6.7%; health - 16%; production, processing and storage of agricultural products - 3%; clean and energy saving technologies - 4.3%; new substances and materials - 8%; advanced information technology, integrated automation devices, communications - 5%; scientific problems of the state - 13%. Also in Ukraine implemented in practice less than 1% of registered intellectual property; for example, in Finland - 30%.

However, the problem of innovation sphere of ecology cannot be reduced to the status and performance of science. A characteristic feature of implementing

environmental innovations are the problems of modern Ukrainian business, and low entrepreneurial activity of domestic entities, especially in complex, knowledge-intensive types of business which is a real obstacle to the development of national innovation economy.

Since it is the entrepreneurs are the main actors of innovation, which assume all the risks and difficulties of practical implementation of innovation, then it depends on them for an independent environmental innovation economy, which does not form neither science nor state agencies nor legal, financial and trade institutions.

Today among entrepreneurs widespread copying strategy. However, access to the world market with these products is possible only if the price competition that has been losing its effectiveness. World experience of companies that successfully develop, shows that in today survives the one who is constantly engaged in innovation.

One of the main features and issues for the development of environmental innovations in Ukraine is that they need to attract significant funds. Hence, some companies mainly engaged in funding applications that aim at making improving innovation. The creation of a basic innovation, fundamentally new product is extremely time-consuming process that requires significant financial resources and time-consuming (according to international experience from 3 to 7 years). Therefore, it is of no interest to private investors who are focused on immediate returns.

Also, a key aspect of the problem of introducing environmental innovation is that its solution requires dialogue and consolidation of three components: science, business and government.

Thus, the problem of financial support innovation relies on the state, which should act in two directions: to provide direct budget support and to create an effective system of incentives for private investment in science and technology. Direct government support should concentrate on basic environmental innovation, the most competitive world-class technologies with high market potential, as well as those necessary to ensure security. It provides budgetary financing of state programs in priority areas of science and technology and the implementation of state orders for scientific and technical products. Stimulating provides certain benefits, including: deferral of income tax liabilities in terms of spending on innovation objectives; reducing the tax increase innovation spending; "Tax holidays" for several years on income received from the sale of innovative projects and so on.

Environmental technologies not only preserve the environment of human life, but is competitive sector of the economy, being one of the most important areas of growth in the XXI century. They are fundamentally different from traditional industries, often in a state of stagnation and saturation of the market. Research, development and state support of the market is important challenges facing our country today [3].

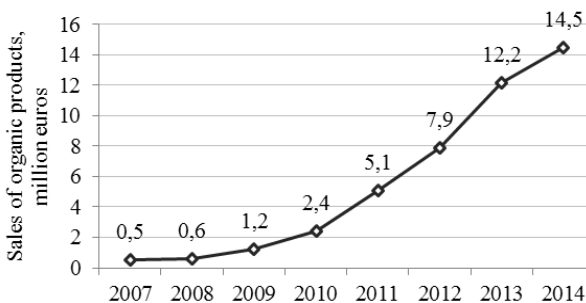
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## **PECULIARITIES OF IMPLEMENTING ENVIRONMENTAL INNOVATIONS IN ORGANIC FARMING IN UKRAINE**

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The development of environmentally-oriented farming systems and management in the agricultural sector is an objective necessity in modern terms, since the implementation of innovative technologies in agricultural activity is often accompanied by exceeding the maximum permissible limits for intensification of production of different directions. Organic agricultural production has become widely spread in the world in recent years. Ukraine also has great potential for development of this area of farming. So, starting with 2000s the organic products market capacity has been rapidly growing (fig. 1).



**Figure 1. The dynamics of the organic products market capacity in Ukraine**

Source: [1]

However, the world practice shows that agroecological methods of production are not limited to organic farming (fig. 2).

For organic production not allowed to use pesticides, synthetic fertilizers, and genetically modified organisms in crop production, as well as hormones, antibiotics and growth promoters in livestock production. In contrast, other areas of ecologically-oriented agricultural production systems allow the use of transgenic plants, certain types of fertilizer, biological and organic preparations, in case of keeping to the rules and standards of acceptable use.