„Green Economy“ and Priorities of Biogeocentrism

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Abstract.

The basic postulates of economic science were founded in the epoch when material activities of a man did not exceed the potential for restoration of the natural environment. By today the situation has changed considerably: anthropogenic loading exceeded the condition of natural complex and of entire ecosphere. The mankind passed to responsible stage of its history, which demands change of economy paradigm, its compatibility with the demand of biosphere development. Transition to a new step of culture of material production is necessary, which should be compatible with the exhaustible ecopotential of the universe.

The present work discusses present directions of “green economy” and the need for involvement of the natural environment into the system of social-economic relations. The concept of sustainable debelopment of countries, according to which economy of anthrosphere should obey the laws of biosphere economy that implies a priority of biogeocentrism contrary to anthropocentrism.

Key words: „green economy“, ecopotential, exhaustion, economic paradigm, change.

Introduction

Over entire history of the civilization, especially, in the end of XX century, man’s activity towards the biosphere was mostly destructive. Slowdown in growth of the population and depopulation were important terms of bioresources reduction (Gumilev., 2000, Oldak, 1983). In the beginning of XXI century the mankind keeps developing again at the expense of extensive factors, widens expansion of natural resources. The conflict between a man and the nature was forecast long ago by the classics of exonomy.

Many authors do not consider formation of nososphere to be a faroff perspective. They consider the processes of society’s impact on the nature, mastering of new territories, expansion and deepening of nature use to be nosospheregenesis, but in reality narrowing of biosphere by the technosphere takes place. The latter is a product of human mind and labor; it is not the nososphere, which is vividly witnessed by accelerated, large-scale reduction of the biodiversity (Barbier., Koch., Sillian, 2008). This process generates a conflict between economy and ecology. The object of economic research is public relations in the process of product production, exchange and distribution. The source for resource-provision of entire economy is ecological

environment. Controversy between economic development and ecological wholeness is a main source of the global crisis. This problem has been raised still in the works of T. Malthus and A. Wallace; interest in this problem was especially keen in the years of depression. One of the first reports of the Rome Club "Limits of Growth" (Barbier., Kock., Sillian, 2008) and M. Strong's report at the Stockholm first conference dedicated to the environment protection (Guo., Zhang., Li, 2018) were dedicated to research of the problem of conflict between economic development and ecological security.

Over recent years the terms "sustainable development" and "ecodevelopment" are used in many works of economic-ecological direction, as synonyms. Under the term "sustainable" is implied such development of the society, during which impact on the environment remains within biosphere balance and the natural basis for human life reproduction is not violated (Losev, 2000). Requirements of the earth growing population and the planet's exhaustible resources become a basis for a new understanding of modern economic theory. The problem is closely connected with determination of optimal ecocriterion of agricultural activity.

In the secoond half of XX century the world community seriously worried about condition of the earth's biosphere and the issues of further development of the human civilization. At the UN forums of economic development (Johannesburg-2002, Rio-2012) was declared the strategy of sustainable development – Sustainable Development. J. Forester's "World Dynamics" (1970) and the Rome Club's works essentially contributed to apprehension of the connections between the environment condition and the perspective of civilization development. M. Strong was the first to formulate the concept "ecodevelopment", as ecologically oriented social-economic development, when growth of people's well-being is not followed by worsening of the natural environment (Guo., Zhang., Li, 2018).

In result of holding the international forums for the first time at the global level was comprehended the need for preservation of the ecological wholeness of our planet and for economic growth of the world countries. It became vivid that to reach sustainable development in "a separate country" cannot be managed and that "ecodevelopment" is a universal task. Special structure – "UN Environment Protection Program" (UNCSD, 2012) was formed for implementation of "ecodevelopment". The prognosis received within its research points to the need to review the values by the society.

I. Sustainable and Ecodevelopment of Economy

The concept of "sustainable developmemt" or "allowable development" is close to the concept of "ecodevelopment". In ecological economy this term at the ecologically allowable level means developoment. At the Rio de Janeiro conference of environment protection and development in 1992 was prepared "climate change frame convention" and "convention on biological diversity". These documents differ by sustainable development conception, which is based on such a model of social-economic development, when satisfaction of vital needs of the present-day generation people is reached without exhaustion of natural resources for the future generations and without causing any damage to the environment. Attention is transferred to withdrawal of those models of production and consumption, which do not promote sustainable development. Fundamental demand of of a new model of civilization development is to refuse the economic stereotype that at the expense of environment considers the unlimited growth to be the progress.

Global forum was held in 1992 in Johannesburg at which sharp contrast was revealed between real tendencies of economic development and declarations of sustainable development (Anderson, 2006).

Market does not feel dependence on human nature. Collision of ecological demans and economic interests acquired a character of contradiction in the sphere of natural resources consumption. The context needs deep change in economic theory: transition of modern assesments of economic relations to principally different approaches, which should be based on the postulates of "bioeconomy" or ecological-economic system, when along with the traditional the assessment of main biological criteria (stable development of biodiversity, provision of ecological stability, etc) and involvement into the theory of values becomes necessary. Value, as an economic category, should be the result of a synthesis of values and expenses which should consider all producible and non-reproducible resources, among them, the natural resources and ecological conditions.

II. Conception of Green Economy

Comprehension of increase of ecological problems resulted in formation of the term "green economy" in the western science (Green Economics Institute, 2012). By explanation of UNCSD first of all it should be directed to increase of well-being and provision of social justice, and it also should be characterized by reduction of the environment risks and saving of natural resources (UNCSD, 2012).

Provision of incomes and growth of employment in "green economy" is planned by the state and private compabies. The efforts should be directed to increase of efficiency in waste utilization, reduction of negative results in agricultural activity, increase in biosphere diversity and productivity. Main idea of "green economy" is to refuse consumer attitude to the nature, to involve in the cost of damage received from the environment pollution. Innovative activity also becomes of great importance, when novelties give a guarantee of ecological security.

Developed countries, where the term "green economy" appeared, plan to implement processes of continuous and permanent improvement, which will provide gaining of additional ecological and social-economic profit. Demand for just exactly such improvement is put into ISO 14001 standard, on the basis of which transformation of large enterprises is taking place worldwide. In result of these programs ecologization of economy must be implemented not as a secondary effect but as a main purpose (Gumilev, 2000). By 2050 in the USA 20% reduction of exhaust is planned. "Green economies" with high energy efficiency and the level of minimal impact on the environment have become a priority for the world leading countries (Green Economics Institute, 2012).

The conception of "green economy" (or bioeconomy) today is comprehended as a real way out of the global ecological crisis. Flaw of the modern economic science is insufficient attention to those studies, which deal with assessment of allowable impact on the biosphere. Provision of economy with the natural resources for a long time has not proceeded from the ecology laws, but alomg with the growth of production, this attitude become a large-scale one.

From the period of "green revolution" of the 2000s, dynamics of global prodution of food is characterized by not only increase of final products, but also by more growing negative results for the environment, which

are expressed, namely, in successive reduction of soil fertility and areas. This process is accompanied with increase of non-renewable energy spending on the unit of plant products. For example, from 2000 till 2016, global productivity of grain increased by 2, 3 times, at the same time, to raise the grain productivity flow rate of fresh water increased twice, nitrogenous fertilizers – 10 times, phosphorous fertilizers – 7, 5 times, pesticides - 6 times (Barbier., Koch., Sillian. 2017).

Introduction of biological and ecological factors into the economic categories widens sustainable development and the sphere of economic theory usage, makes reanimation of the conception of marginal utility. Dramatism of modern epoch is that the conception of marginal utility becomes more usable towards planetary reserves of biosphere, soils, forests, fresh water and air, i.e. for such resources which were considered to be "non-econo,ic", or "free" wealth. They acquired real value for the mankind. In recent years a number of countries essentially increased investments for "green" projects. For example, the European countries invested 22, 8 billion EUR in the "green" activities, which is 0, 2% of entire GDP; the USA – 94, 4 billion USD, 0, 7% of GDP. Leaders from this viewpoint are South Korea and China: Korea imvested 38, 1 billion dollars, 3% of the country's GDP; China – 215 billion dollars, 3% of the country's GDP (Green Economics Institute, 2012).

In the period from 2008 till 2018 the developed countries, which implement the policy of preservation of their own natural ecosystems, increased the grain import by 42, 2%, while in other countries it increased by average 3, 5% (Green Economic Institute, 2012). Growth of demand on the wood products, wood preservation programs in China and Finland increased production exploitation of wood arrays in neighboring Russia. Import of wood timber is an economic equivalent of export of ecological protection of own natural ecosystems.

Joint global data witness that without intensification of agriculture it would have been impossible even to preserve those natural ecosystems, which today are helpful for food production (Green Economic Institute, 2012). In 2018 to have the earth productivity remain at the level of 2000, it would become necessary to have additional 1761 million arable lands (Guo., Zhang., Li, 2018).

"Our entire planet is at the treshold of uncertainty. Only with certain probability we can prove that the planet and the world community enter a new stage of development. We should say that in result of human activities the balance of natural cycles was violated to restore which is impossible by the methods known to us.

The mankind's activities with great probability will cause degradation of the biosphere and give no guarantee for human existence within it" (Anderson, 2006). It is easy to notice that today the situation has not changed despite all the efforts of the scientific community. In our opinion, bioeconomy together with nanotechnologies and genomic can be the first to form a technological order based on social-biological equality.

III. Production of Bioproducts and General Tendencies of Biofarms Development

Production of bioproducys and generally the biofarms in recent years have increased in some countries by geometrical progress. For example, if in 1990 in Turkey 1000 hectares of land plot were cultivated as a biofarm, by 2018 it reached 103 000 hectares. The farmers' amount also increased from 300 to 16 000. The data of Estonia are also of great interest: from 2000 to 2008 the amount of organic lands increased from 4 000 hectares to 87 000 hectares, and the amount of farners increased from 90 to 1 300 (Meadows,. Panders, 2018).

To clarify better the essence of this phenomenon, we should fundamentally understand what biofarm and bioproducts mean. Biofarm (the same "green farm") means a farm specially elaborated and based on agreed standards. The products produced in this farm are called bioproducts or ecoproducts. In such farms it is excluded to produce products by use of chamical means and genmodified organisms, i.e. the products produced in biofarms are absolutely ecologically clean. Demand on bioproducts keeps quickly increasing worldwide. It concerns especially the USA and the EU countries, in which purchase ability of the population is far higher, and the bioproducts differ by high self-cost and selling price. The experts conclude that small countries, Georgia among them, possess great possibility for development of biofarms and holding of competitive positions.

Georgia is unable to compete, for example, with Canada, Russia or America in production of wheat and corn, with China – in rice production, with Poland – in apple-growing. Great scales enable these countries to bring the self-cost to the minimum. However, proceeding from unique natural conditions Georgia has a good perspective to become a serious producer of bioproducts competitive exporter for the EU countries. Despite this, biofarm in Georgia is not sufficiently developed (Shengelia, 20170.

Many countries, Turkey and Estonia among them, in result of well-implemented state policy, have considerably developed production of bioproducts.

In 1992, in Turkey, "the association of organic agricultural organozations" was formed, which together with the Ministry of Agriculture and with its support tried to increase the farmers' awareness concerning production of bioproducts. The Ministry of Agriculture of Turkey is a responsible body from the viewpoint of biofarms development. It conducts general management of the processes connected with organic farms. This ministry conducts licensing of the organizations, which have the right to give certificates on bioquality of any farm and produce; it initiated elaboration of full legislative base on functioning, certifying, labeling, etc. The state gives low- interest loans to the farmers, who want to transform their farms into organic farms. On the initiative of the Ministry of Agriculture about 25 research institutes are oriented on research in biodirections. In result of these efforts Turkey managed over 15 years to increase the organic lands from 10 000 to 103 000, to increase the amount of biofarmers from 300 to 16 000, to increase bioproducts production to 300 000 tons, 90% of which is exported to the EU countries (Shengelia, Berishvili. 2014).

Estonian government has also spent quite intensive efforts on development of biofarms. Still in 2000 the Ministry of Agriculture of Esronia formed a special bureau, the sphere of direct responsibility of which is to supervise development of organic agrofarm. The state suggests biofarmers or those interested in this field free-of-charge training courses; several research institutes work in direction of organic agrofarm research, etc.

In Georgia, from the viewpoint of biofarms systemic development the state has not done much, only the law "on biological agroproduction" was formed, the processes connected with production of bioproducts were regulated. As for support to development of this field, role of the state here is minimal.

In general, biofarms in Georgia can develop if the following issues will be arranged at the systemic level:

1. The farmers must have proper knowledge and qualification on biofarms, bioproducts and organic farms;
2. The farmers should maximally painlessly pass from conventional (traditional) to organic farms, which requires certain time and financial resources;
3. Biofarmer should have a guarantee that the products, grown by observing all the standards, will face no problems in selling them;
4. Prerogative of the state should become search for a supposed buyer abroad, to establish a contract and to settle the difficult procedures connected with export (Shengelia, 2014).

Settlement of the problems will enable Georgia, as an agrarian country, on the basis of growth of ecological products, to more fully master its export potential, to make radical steps in the field of forming the ecological economy.

Conclusion

Market economy is subject to the laws of demand-supply; it is also clear that market is less sensitive to the demands of the ecosystem. One of the most important problems of XXI century is collision of ecological needs and economic interests in the field of natural resources use, which acquired a character of contradiction. Change of main approaches of economic theory became necessary: transition from modern assessment of economic relations to principlly different approaches, which should be based on the postulates of development of "bioeconomy" or ecological-economic system. Along with the traditional, it becomes necessary to assess ecocriteria and their involvement into the theory of values. Value, as an economic category, is a synthesis of results and expenses, which should take into consideration the natural resources and ecological conditions.

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