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Prospects for the Development of the Green Economy of Russian Federation

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Abstract:

The prospects for the development of Russia in the direction of implementing the ideas of the green economy are determined by the fact that Russia is a country with rich natural resources. Today, both the weak and strong sides of the country in terms of the prospects for the development of the green economy can be defined.

The transition to the green economy, the environmentally sustainable development of Russia implies a transition from an extensive raw materials export model of economic development to modernization. The main indicators are indicators of sustainable development, including indicators of nature and energy intensity, adjusted net savings, and human development indices.

Coordination of national activities with international organizations, in particular within the framework of the WTO, and the integration of the principles of international agreements into the legal framework and practice of economic decisions are of great importance for Russia.

Keywords: *Economy, green economy, sustainable development, investment, energy intensity, ecology, natural capital.*

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1. Introduction

Numerous local, global economic crises of the last decade indicate the instability of the existing world economic structure. The world community continues to discuss the issue of building a new model of the economic system, the so-called "green" economy. Sufficiently strong inflow of investments along with the rapid pace of the "green" economy development, made the prevailing part of politicians and analysts boldly expect strong economic growth in the coming decades.

The development models that have emerged in economics have already contributed to raising the standard of living for many people, but have also resulted in the uneven economic growth, social inequality, systematic market and institutional disruptions, and, indeed, the environmental damage.

Over the past years, the last factor determines the active discussion in the international communities of the need to build a new level of economic thinking that considers not only the broader interests of people, but also the state of our planet as a whole. Such a model of the global system is called the green economy. The concept of "green economy" combines the ideas of many areas of economic science and philosophy, such as ecological economics, the theory of international relations, as well as the related problems of increasing people's well-being and sustainable development (Korableva *et al.*, 2017).

The existing economic system is criticized by "green" supporters, in their opinion, the negative consequences of its functioning are significant – they are: widespread poverty, the uneven distribution of resources in the world, and, as a result, sharp differences in the living standards of the developed and developing countries, the depletion of natural capital, lack of food and fresh water, environmental issues etc. The current economic model is called the "brown economy". How to get on the path to the "green" economy? Opportunities for the transition to a "green economy" are conditioned by a wide range of tools:

– pricing, that is consistent with the principles of sustainable development;
– renewal of the tax system, paying attention to the "environmental" aspects, shifting the focus from the labor tax towards the pollution tax;
– public procurement policies, encouraging the manufacture of green products and the use of production methods that are consistent with the principles of sustainable development;
– the growth of public investment in the infrastructure and natural capital that corresponds to the principles of sustainable development in order to restore, maintain and, where possible, increase the volume of natural capital;
– targeted state support for research and development related to the creation of environmentally friendly technologies (Korableva *et al.*, 2018);
– social strategies designed to ensure the alignment between social goals and existing or proposed economic strategies (Poltarykhin and Tarasova, 2013).

How are these methods implemented in practice, and what are the initiatives of the countries? The "Green economy" as the "sustainable development" concept has been playing the role of the guiding principle in the field of development and cooperation all over the world since the United Nations Conference on Environment and Development held in 1992 in Rio de Janeiro. Since then, the characteristics, the barriers to achievement, and specific examples of the transition to the "green economy" are being discussed. "The "green economy" in the context of sustainable development and poverty eradication" was one of the two central themes of the UN Conference on Sustainable Development (Rio +20), held in Brazil in June 2012.

This direction is the main topic of discussion in other important forums. For example, at the Ministerial Conference "Environment for Europe" (Astana, Republic of Kazakhstan, September 21–23, 2011), main attention was paid to the discussion of economic equilibrium and greening of the economy; with the financial support of the European Commission, a report was prepared on the "Opportunities and ways to encourage the "green economy" in the Eastern Partnership countries.

In many reports including the ones presented by the international experts of the UN, as the main priority, a way of transformation of the world economy in a resource-efficient and low-carbon one by 2050 has been proposed. The main mechanism for the implementation of this scenario is annual investments in 10 priority sectors during 2012-2050 amounting approximately to 1.3 trillion dollars (or about 2% of the world GDP in 2015). It is assumed that such a scenario will provide a higher growth rate of economic development than investing in the existing model and will have no negative consequences for the environment.

Due to a significant increase in the energy efficiency as a return on the green investments, the decline in the energy demand of the global economy by 40% by 2050 in comparison with the energy consumption at the level of 2014 is forecasted. All these factors will affect the reduction of the greenhouse gases emission nearly by a third in comparison with the current level. It is mentioned in the resulting document of the UN Conference in Rio de Janeiro "The Future We Want" (2012), that during the transition to the green economy every country can choose its own approach in accordance with its national policies and priorities for sustainable economic development (Poltarykhin *et al.,* 2013; Scully, 2003).

2. Methods

It is clearly defined in the reports of the UN Environment Programme (UNEP) that the green economy ensures social justice, increases the welfare of people and significantly reduces environmental risks. The important features of this type of economy are the efficient use of natural resources, increase and preservation of natural capital, low carbon emissions, diminution of pollution, preventing of

biodiversity and ecosystem services loss, employment and income growth.

We tend to agree with the supporters of the green scenario of economic development. The progress will be obvious and, in general, the positive influence on the socio-economic development will be impressive, especially in the agricultural sector. Moreover, it will also positively influence the reduction of many environmental and climatic risks. However, it is necessary to consider many factors that significantly limit the scope and effectiveness of the future global transformation. They include the inertness of the institutional and technological bases, the considerable difference in the conditions and the level of the green economy development in different countries and regions. The difference is noticeable in the production costs (prices) of agricultural products of the green economy, the agroindustrial complex (AIC) and the level of agricultural subsidies and support given to the bioenergetics and other sectors of the green economy at the government level.

This fact can be considered at the level of the development of the green economy in Russia, which endorsed this concept. However, the practical absence of the legal base, regulating the concept of organic agriculture, which would regulate and be in line with international regulations, rules of certification and standardization hampers the development of organic production market and blocks the inflow of investments in this sector.

The crisis clearly showed the enormous dependence of the Russian economy on the exploitation and sale of natural raw materials. It was quite unexpected to Russia. Despite the theses on innovations, modernization, diversification, in recent years the country's economy has increasingly become export and raw-material one, moreover, the increase in the share of industries with strong negative environmental impact is observed therein, the environmental pollution has increased in several areas. The high-tech military-industrial complex is largely based on Soviet technologies.

The inertial economic growth is associated with the increase in pollution and environmental degradation, the imbalance in the biosphere, which leads to deterioration of human health and limits the possibilities for further human potential/capital development. This means that the solution of the extremely important task of improving the well-being of the population does not provide the necessary quality of life.

Approximate risk assessments of water and air pollution suggest that the economic costs for the health of the Russian population associated with air and water pollution amount to at least 4-6% of GDP on average. In the regions, for example for the Urals, the damage to health for environmental reasons can reach 10% of the GRP 3.

This poses a question about the development of the country. The answer to it will determine the measures to be taken. With current attitudes and modern anti-sustainable trends, the Russian economy can finally turn into a resource-based nature-exploiting economy located on the periphery of world development, with depleting natural resources, suffering from any, even minor, decline in prices for raw materials. Small exports of manufacturing industries amid huge imports of engineering products shows a growing technological dependence of the country on developed countries, which may increase the economic vulnerability of the country. This is an important reason for the need for rapid and large-scale modernization.

Unfortunately, new ecological and economic realities are not sufficiently considered in the long-term economic documents regulating the development of the country. For example, such an ambitious document as "Strategy 2020" takes into account the environmental factor to a minimum degree and is based on the traditional GDP paradigm (Volobueva, 2012).

The new economy should focus on qualitative development rather than a quantitative one. The country does not need to strive to increase the volume of extraction and use of natural resources, to affect the environment additionally – it should use raw materials and resources that are already involved in the economic turnover and eliminate their losses.

Russia has huge reserves of natural resources associated with modernization. Almost half of the energy resources can be saved, which is emphasized in the official energy strategy of the Russian Federation until 2030. In this regard, it is not necessary to strive for quantitative indicators, whether they are value indicators (GDP, etc.) or physical volumes (oil, gas, metals, etc.). The quantitative benchmarks of economic growth, increasing GDP should give way to the awareness of the importance of ensuring social and environmental quality of growth.

To achieve sustainable development goals in Russia, considerable efforts involving a drastic change in nature intensive commodity trends are required. Environmental sustainability should be the main feature of the new model. Unfortunately, nowadays there are some "unsustainable" development trends in the country, such as serious impact of environmental pollution on human health, the factor of economic growth in depletion of the natural capital, increase of the proportion of the polluting and nature exploiting industries, rising of the environmental risks due to high physical depreciation of the equipment, the natural resource type of export, high level of the environmental capacity indicators, environmentally unbalanced investment policy leading to the growth of the imbalance between the processing and nature-exploiting, infrastructural and manufacturing industries, etc (Volobueva, 2012).

The economy of the future in terms of environmental sustainability should have the following essential characteristics:

- environmental conditions of life of the population and their provision are of great importance;
- economic strategies and plans conceptually include guidelines and programs stated in the documents of the OECD and the UN dedicated to the green economy;
- high-tech, science-intensive, infrastructural and manufacturing industries with low environmental impact are developed;
- the use of natural resources and their preservation are drastically increased, which is further reflected in the reduction of the natural resources and pollution per unit of the net result;
- the raw material sector of the economy is reduced;
- environmental pollution is decreased (The World of Organic Agriculture, 2013)

In recent years, the transition to environmentally sustainable development and the innovative and socially oriented economy has remained the same in Russia. For example, a required considerable increase in energy efficiency (about 40% by 2020) will result in a huge environmental outcome. In the next 10-20 years, the policy of the "double win benefit" should be the basic principle of economic, social and environmental policies.

The government should provide support through the whole range of accumulated in the world and the country legal and economic instruments to stimulate such technological upgrading. The Ministry of Natural Resources and Environment has recently submitted a bill on the best available technologies to the State Duma of the Russian Federation. For the transition to the green economy, Russia will need a long period of modernization and transformation of the existing one, structural and technological changes and the formation of a new model. The reduction in the costs of this transition and a radical increase in the efficiency of the use of natural resources are regarded as an important task (Poltarykhin and Tarasova, 2013; Kurbanova *et al.*, 2018). It is possible to define two basic trends:

- it is necessary to strengthen the effectiveness of government regulation in the sphere of the use and the extraction of resources;
- it is necessary to create a competitive environment and to increase the competition between producers in order to eliminate the monopoly prevailing in the energy sector and the whole economy (Poltarykhin *et al.*, 2013).

The tendencies listed above convincingly demonstrate the increased vulnerability of the economy to natural hazards and processes, or, in the terms adopted above, the increase in the natural risks of economic development (not to mention social stress and a decrease in the welfare of households affected by this impact), which

means the need to increase the costs of society to reduce these risks. At the same time, a full-scale assessment of the social and economic consequences of the specified impact exceeds the data given above, which relate only to direct economic damage from natural disasters, excluding the losses. In contrast to the damage reflecting the irretrievable (non-compensable) loss of physical capital (tangible assets), measured by the cost of its restoration or compensation in an emergency, financial losses reflect a temporary reduction in financial flows due to this situation. This reduction is due to a temporary decline in the labor productivity and production volumes in the real sector of the economy, lower incomes in the services sector and additional costs related to supporting for the victims as well as the emergency and recovery operations.

The government can facilitate and accelerate the transition to the green economy through environmentally sustainable and balanced economic reforms and the creation of the appropriate economic environment at the macrolevel. The entire taxation system needs to be transformed considering the objectives of sustainable development, modernization and diversification, i. e. maximum taxes should be imposed on polluting and nature exploiting activities, alongside with minimization of the tax burden on processing and manufacturing industries, infrastructure and high-tech sectors. The system of subsidies, especially in the energy sector, does not contribute to the transition to the green economy in the country. Here, the government support is particularly significant for oil and gas producers (Scialabba and Müller-Lindenlauf, 2010; The Future We Want, 2012).

For the transition to the green economy and ecologization of the economic policy, Russia can determine its priority tasks as follows: it is not necessary to use more natural resources because they are limited; it is necessary to invest in the use improvement of already exploited natural resources and environmental protection through the support of the innovation, economic modernization and replacement of nature intensive technologies by the energy-efficient and resource-efficient ones. The best available technologies, diversification and intensification of the raw materials processing should also be invested in.

These tasks are the main trends in the formation of the green economy and the transition to sustainable development in Russia. Changing drastically its technological basis, investing in the resource-saving restructuring, achieving its ecologization and reduction of the environmental capacity, thereby conserving natural capital and reducing expenses on the elimination of the ecological consequences of the negative anthropogenic economic development in the future, the country can achieve the main goal. All these measures will allow increasing the GDP by two or three times at the present level of the exploitation of natural capital and withdrawal of raw materials and to decrease the level of the environmental pollution.

3. Results

The GDP is the most widely used sustainability indicator in the world. Most countries including Russia are still measuring the success of their development in terms of this indicator. Meanwhile, the GDP is adequate for the traditional industrial economies. Modernization requirements for the transforming economies are quite different. Thus, for countries with large natural capital, the GDP growth due to the commodity sector is ambiguous. The easiest way to achieve this growth is the overexploitation of forests, energy resources, land, etc. Favorable indicators of the GDP in Russia, before the crisis, were largely based on the depletion of natural capital and transformation of the Russian economy into the raw materials exporting one, considerably depending on the global economy (Global Green Economy Index, 2012).

4. Discussion

Having no issue with the authors and supporters of the "green" economic growth scenario regarding its progressive mission and generally positive impact on socio-economic development, especially in the agricultural sphere, to reduce environmental and climatic risks, it nevertheless seems necessary to take into account factors significant thus limiting the scope and effectiveness of projected global transformations. These include, firstly, the inertia of the institutional and technological base, and secondly, the significant differences in the conditions and level of development of the "green" agro-economics in different countries and regions.

The authors mean the differences in the cost of production (prices) of agricultural products of the "green" agro-economy and traditional (industrial) agro-industrial complex and the differences in the scale of subsidies and other support provided by the agro-industrial complex and organic agriculture, bioenergy and other sectors of the "green" economy at the national level – by the state, at the world economic level – by the key actors of the international community.

This can be traced to the development of a "green" agro-economy in Russia, which endorsed the "green" economy concept. However, the absence of a legislative base that would regulate, for example, the concept of organic agriculture, regulate control and be equivalent to international norms and rules of the standardization and certification system, hampers the development of the market for organic products and blocks the flow of investment in this environment.

Another example popular all over the world is the biofuel industry. For its development, governments of many countries provide benefits, subsidies and quotas for the use of agricultural resources. Grain is the main source of protein and it is considered the main source of the bioenergy production. Competition between the food, feed and biofuel industries leads to the rise in prices for basic foodstuffs. Therefore, a socially urgent question "How energetically justified is the use of the food stock for the production of fuel?" can be answered after a thorough energy

analysis of the problem. However, the bioenergetics in Russia is one of the fast growing and promising industries now. It is a leading industry attracting the practical interest of business and investments, which play a decisive role in the development of all sectors of the green economy (Skidmore, 2001).

Therefore, the implementation of measures for its development must go hand in hand with the development of the institutional basis and financing of the technical re-equipment of the agricultural and industrial complex, which will prevail in the structure of the agricultural production of most nations, including Russia in the near future.

5. Conclusion

The above-mentioned does not imply that the development of organic agriculture and other sectors of the green economy and green economic growth as a whole should be renounced or, in contrast, they should be blindly forced to the accompaniment of environmental slogans, including those in the name of "combating climate change" (the statement of the problem itself appears to be at least incorrect). It is necessary to take a thoughtful, differentiated and gradual approach with provision for production and technological, socio-economic and natural-geographic specifics of regions and states (International Energy Statistics, 2013). Indeed, Russia is aware of the need to adopt the economic system of a new type. The report to the Public Chamber of the Russian Federation "On human development in the Russian Federation 2010. Millennium Development Goals in Russia: prospects" emphasizes that economy greening has become the main goal, rather than a secondary effect. Soon, the key definition for the advanced economies of the world will be the "green" and "low carbon" economy with its high energy efficiency and minimal impact on the climate system (Poltarykhin and Tarasova, 2013).

As for Russia, the most important precedent for the transition to a new type of economic development has become the Kyoto Protocol's mechanisms to prevent global climate change. In fact, this was the first treaty in its history to create a global market, where there is an unusual "air trade" – a market for greenhouse gas emissions. Moreover, on September 17, 2010, a draft program of the environmental policy of the Russian Federation until 2030 was published with environmental innovations, which were stimulated by the State Council on Ecology on May 27, 2010, and declared "the priority for the society of the life-supporting functions of the biosphere in relation to the direct use of its resources" defined the "green growth" as the main goal (Scialabba and Müller-Lindenlauf, 2010).

Thus, the world community recognizes the close interconnection of those components is necessary – economic, social and environmental are required for sustainable development. The "green economy" concept is designed to ensure the coordination and interaction between the components, acceptable to all states, both

developed and developing, and the countries the economies of which are in transition. Only under this condition, the economy will truly be green, socially sustainable and cost-effective.

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