

The formation of the spatial paradigm of a green economy (through the example of a recreation region in Russia)

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Abstract. This article demonstrates the supreme importance of taking account of the environmental factor in the economic development of modern countries and their regions. Through the example of a resort region in Russia – the Caucasian Mineral Waters region – the author looks into the issues of the formation and implementation of a “green economy”, which is about economic development and economic growth inclusive of the threshold of environmental safety and, ultimately, the conservation of various ecosystems. The author brings to light the possible ways of forming the spatial paradigm of a green economy in a specific region of Russia and puts forward possible ways to manage the recreation region using the global experience of achieving sustainable development.

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Introduction

Currently, the formation and implementation of a “green economy” in modern countries is vital to the transition to sustainable development, within the context of which the search for new ways of rational use of natural capital and preserving the features of eco-economic systems and territories is taking on an added importance. As follows from an article by a team of leading American environmentalists, “Human Domination of Earth’s Ecosystems”, man changes the biosphere faster than he understands it [1]. However, it is apparent that only attaining environmentally safe development and conserving natural capital ensures a promising variant of sustainable development for economic communities. In modern countries with a market economy, the conservation of ecosystems and services they provide is a priority area of a “green” economy [2]. However, over the last half-century, around 60% of global ecosystem services, including 70% of regulating and cultural services, have been undermined as a result of anthropogenic impact [3]. In this regard, one of the world’s leading ecological economists Herman Daly has figuratively depicted the present-day trends as a shift from “empty-world” economics, where there was not much man-made capital and there was an abundance of natural capital, to “full-world” economics, where things are the other way round [4]. In scientific literature, it has been noted that currently there is taking place ecological degradation of nations and specific regions, which is a result of irrational nature management and a lack of effective activities to stimulate ecologically safe production on the part

of the government and municipalities [5]. In these conditions, what is really topical is the formation and implementation of the spatial paradigm of a green economy inclusive of the nature and functional orientation of regions.

Main part.

Currently, the world’s science and practice are increasingly placing emphasis on the economic role of natural and ecological services, while the ecological factor is being increasingly taken into account both at the microeconomic level in developing various types of technology for the use of natural capital and at the macroeconomic level in selecting a social-economic direction for the country’s development. The issue of conserving natural capital and attaining ecologically safe development is especially topical in present-day Russia, as natural capital is of special significance to its economy. Indeed, according to World Bank estimates, natural capital in developed countries accounts for just a little share of national wealth: the ratio between natural, human, and physical capital is 2-5%:68-76%:18-20%, while the situation is completely different in Russia, where natural capital accounts for over two thirds: 70%:20%:10% [6].

In essence, Russia’s slow economic growth is associated with an increase in pollution levels and degradation of natural capital. All this makes topical the study of economic regulation of nature management, whose primary element is stimulation. While it is important to study the issue of the formation of a green economy, one should remember

that the 2008 global economic crisis revealed the depletion of Russia's raw materials-export economy. According to estimates by the Economic Expert Group, Russia has spent more than anyone in the world on anti-crisis activities – over 11% of its GDP – but ended up below everyone else in the Top Twenty, by 7-9% of GDP. To compare, the US, for instance, has spent 8.4% of its GDP on anti-crisis activities, while the rest of the world – 7%. However, it is apparent that government efforts are really not enough: over the last 50 years, around 60% of global ecosystem services have been undermined as a result of anthropogenic impact, and they will soon be not enough under the persevering rates of economic growth and depletion of natural resources [8]. Prominent American ecologist L. Brown looks at China to support this argument [9]: to attain the living standards of the US, China will need more oil and paper than it produces for the entire world (and that not including 3 billion people living in developing countries – India, Brazil, etc.). It is apparent that the global economy is having hard time amid ecological restrictions and the present-day model of unsustainable development. Therefore, what must become an important feature of a new model of the global economy are ecological sustainability and stimulating the integration of the ecological factor in the natural resource use process. That is, in essence, it is about the formation of an economy that we call “green”. For the sake of fairness it should be noted that many countries have been joining the green economy formation process of late. Thus, for instance, even in the period of the economic downturn, US federal agencies have authorized \$10 billion worth of spending for preserving and restoring ecosystem services, which has been accompanied by relevant budget cuts at the expense of defense and social-economic program expenditure [10].

We believe that to support the functions of natural capital and be able to ultimately build a green economy we definitely need integral, undisturbed, healthy ecosystems and recreation resources.

In this respect, of interest is the study of possible ways to build a green economy in recreation regions. In this work, we shall be using the example of a sub-region of the Russian Federation – the Caucasian Mineral Waters region (hereinafter referred to as “CMW”).

Note that the formation of the spatial paradigm of a green economy in the regional context is an important methodological task, not only due to the need for a deeper apprehension of the ecological orientation of public production, but also in terms of resolving issues in regional development, including that of recreation regions. It is RF regions that are now becoming the major subjects of various public-

political and social-economic transformations and are in need of a constructive regional policy that would provide ecological guideposts for economic growth and sustainable development, which are in line with the specific nature of the economic set-up and structural-functional parameters of regional ecosystems. The condition of the latter, amid rigorous natural-resource restrictions, the degradation of the life-supporting and ecosystem functions of the natural environment, is increasingly governing regional development.

In our view, in this regard, it is rightful to consider each region in the country as an ecosystem region with a unique set of ecosystem functions (amenities, services), which make it possible to actualize competitive ecological (natural-resource and ecosystem) potential and broaden the scientific notions of regional economics on the content and specific nature of the development of ecologically oriented spatial social-economic systems within the country's economic complex amid the rapidly growing ecological orientation of public production.

The CMW resort cities, no doubt, play a special and really significant role in Russian society's social-economic life, as they have been successful in resolving the issue of improving the quality of Russians' health and restoring the country's labor potential for over two hundred years. This role of the resort cities in the national system of health resort treatment was once again substantiated – in the Decree of the Government of the Russian Federation No. 14, dated January 17, 2006, “On Recognizing the Resorts of Yessentuki, Zheleznovodsk, Kislovodsk, and Pyatigorsk, located in Stavropol Krai, as Federal Significance Resorts and On Approving Provisions on these Resorts” [11].

Thanks to unique sanative factors and resources, the primary use of the ecosystem in a CMW region is providing recreation and, above all, resort services. Positioning CMW as an ecosystem region with a unique set of recreation functions (amenities, services) enables the sub-region to mobilize the internal sources of economic growth and actualize to a maximum ecological-resource “comparative advantages” in providing resort services and substantiates the need to build up and effectively employ its ecosystem potential. Such a scenario for development facilitates the greening of the region, enabling CMW to keep abreast with global and national “greening” trends.

The world's experience indicates that in recent years considering ecosystems, including recreation ones, as capital has received its practical interpretation in projects and designs by the World Bank Environment Department. More specifically, a work by S. Pagiola, K. von Ritter, and J. Bishop,

“Assessing the Economic Value of Ecosystem Conservation” [12], suggests viewing ecosystems as a form of capital. For instance, forests are a wealth when it comes to wood and non-wood products as well services they provide. Among promising scientific works in the area of approaches to assessing the development of the use of various ecosystems, one should also note the Report “On the Measurement of Economic Performance and Social Progress” [13]. It, particularly, notes that GDP does not cover various social processes, changes in the environment, and certain phenomena, which are called the “sustainability” of development. Consequently, creating at the level of federal and regional bodies of authority effective indirect and direct economic instruments and regulators for the development of ecologically adapted types of activity and entrepreneurship will facilitate proper assessment of eco-resources and eco-systems.

Thus, in CMW municipal-level ecological initiatives are implemented as part of specialized municipal programs. More specifically, the sub-region is eagerly developing energy-conservation projects and programs. For instance, the resort city of Pyatigorsk is implementing a municipal program entitled “Energy Conservation and Improving Energy-Efficiency in the Resort City of Pyatigorsk over 2011-2015”, while the resort city of Kislovodsk is working on its own “Energy Conservation in the Territory of the Urban District of the Resort City of Kislovodsk in Stavropol Krai over 2010-2013”, and the resort-city of Yessentuki is implementing its “Integrated Development of Community Infrastructure Systems in the City of Yessentuki over 2012-2017” [14].

Major attention in the “green” development of CMW is given to resolving issues related to water supply and water disposal. More specifically, as part of the Strategy for the Development of the Sub-region, the authorities are planning on building an engineering infrastructure for the sewage handling of populated areas and treatment facilities, which would ensure normative treatment of wastewater and an increase in the output from 360 to 550 thousand m³/24 hr. The green prospects of the development of the transport complex in the CMW sub-region are linked with effecting the technical refitting of transport conveyances to ensure moving to the level of the Euro VI and Euro V standards on pollutant discharge. It is expected that by 2033 the city of Kislovodsk will have isolated an area that will have restricted access for personal cars equipped with an engine that does not conform to the Euro III standard and higher, as the city is also planning on the development of electromobility, including buses. By 2033, electric-engine cars owned by Kislovodsk

residents are expected to account for no less than 35% of all personal cars in the city.

Note that the majority of green initiatives in the CMW resort cities are envisaged within the framework of the implementation of specific strategies for their development. Thus, “The Strategy for the Development of the Resort City of Pyatigorsk through to 2020” tests the city’s ecological objectives in the format of “The Ecology of Life” park, which includes the following strands: “The Ecology of Man” – creating an ecologically safe and comfortable living environment for the people, places for work and leisure or any other activity; “The Ecology of the Natural Environment” – conserving and protecting the natural environment and stage-by-stage reduction of the levels of impact on the environment from all anthropogenic sources; “Ecological Business” – creating an effective ecological sector of the economy; “Ecological Innovation” – developing and putting into practice eco-friendly and resource-conserving technology and innovation methods for resort, rehabilitation, and other types of medical treatment [15].

When it comes to activities that are either planned or are already underway, what is of critical importance in this respect is attaining the “decoupling” effect [16]. The term “decoupling” has lately been in wide use among scientists and politicians. It has been popular among international organizations as well. It is often noted that decoupling is a strategic basis of shifting to an ecologically sustainable economy, which helps break the link between the rates of growth of people’s well-being, on the one hand, and resource consumption and ecological impact, on the other [17]. We believe that ensuring ecological safety and nurturing a “green” economy via decoupling is crucial to the development of CMW, for recreation regions require a special regimen for natural resource use.

Inferences

Thus, unfavorable ecological-economic processes taking place in the present-day world, at large, and in Russia, in particular, can disrupt the balance of development if the ecological factor is not given proper attention in the natural resource use process and when there are changes in the economic structure. We can conserve our ecological-economic systems only if we focus on building and implementing a “green” economy, which facilitates really ecologically safe development both in countries as a whole and in regions inclusive of their functional orientation. The vector of implementation of a “green” economy should be directed towards developing models for the ecological-economic development of regions, which would combine

various forms and methods of state and municipal regulation of the area of natural resource use as well as private initiative. The wide application of various measures for managing rational natural resource use in present-day Russia and its regions must create conditions for the unidirectedness of the economic interests of natural resource use subjects and, ultimately, facilitate the formation of a green, or ecologically oriented, model of the economy.

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