



# Formation of the Concept of Sustainable Development of Territory in the Worsening Ecological Conditions

## Formación del concepto de desarrollo sostenible del territorio en condiciones ambientales adversas

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### ABSTRACT:

**Subject.** Actuality of the topic of the research is predetermined by growing threats for humanity due to aggravation of the ecological situation in the world and decrease of fertile grounds, resources, and minerals on the planet. Growth of population in developing countries and risks of famine and soil depletion lead to aggravation of opposition between developed countries and continents with low living standards. Due to this, the search for compromise solution between the necessity for increase of food production and goods of prime necessity is the most civilized way of development of the modern society. Many countries' implementing the concept of sustainable development will allow concentrating the existing potentials on preservation of the environment for future generations, which predetermined the topic of this research.

**Goal/tasks.** The purpose of the research is to substantiate – theoretically and practically – the search for effective mechanisms of preservation of territory's sustainability in view of growing needs of the society and aggravation of the ecological situation. According to this goal, the authors formulate and solve the following tasks: evaluating the criteria of sustainable development and directions for its strengthening in the world, characterizing the modern ecological situation in the world, analyzing the peculiarities of sustainable development for Russia, and viewing ecological problems of separate Russian regions. **Methodology.** The authors use the method of statistical analysis, financial analysis, and horizontal and vertical analysis of data for analyzing the ecological situation and monitoring of the ecological work in the Russian

### RESUMEN:

**Tema.** La realidad del tema de la investigación está predeterminada por las crecientes amenazas para la humanidad debido a la agravación de la situación ecológica en el mundo y la disminución de las tierras fértiles, los recursos y minerales en el planeta. El crecimiento de la población en los países en desarrollo y los riesgos de hambruna y agotamiento del suelo llevan a agravar la oposición entre los países desarrollados y los continentes con bajos niveles de vida. Debido a esto, la búsqueda de una solución de compromiso entre la necesidad de aumentar la producción de alimentos y los productos de primera necesidad es la forma más civilizada de desarrollo de la sociedad moderna. La implementación por muchos países del concepto de desarrollo sostenible permitirá concentrar los potenciales existentes en la preservación del medio ambiente para las generaciones futuras, lo que predeterminó el tema de esta investigación. **Meta / tareas.** El objetivo de la investigación es fundamentar, teórica y prácticamente, la búsqueda de mecanismos efectivos de preservación de la sostenibilidad del territorio ante las crecientes necesidades de la sociedad y el agravamiento de la situación ecológica. De acuerdo con este objetivo, los autores formulan y resuelven las siguientes tareas: evaluar los criterios del desarrollo sostenible y las direcciones para su fortalecimiento en el mundo, caracterizar la situación ecológica moderna en el mundo, analizar las peculiaridades del desarrollo sostenible para Rusia y visualizar los problemas de regiones rusas separadas. **Metodología.** Los autores utilizan el método de análisis estadístico, análisis financiero y análisis horizontal y vertical de datos para

regions. **Results.** In the conditions of unstable development of economy, when the needs of the modern society grow and the Earth's natural resources are depleted, the authors try to evaluate the existing perspectives and offer the mechanisms of transition to sustainable development. **Conclusions/significance.** The value of this work consists in the fact that attention is paid to the existing ecological threats from the environment with the existing production rates and rates of Earth's population growth.

**Keywords:** ecological threats, Sustainable Development, effective mechanisms of preservation

analizar la situación ecológica y el monitoreo del trabajo ecológico en las regiones rusas. **Resultados.** En las condiciones de un desarrollo inestable de la economía, cuando crecen las necesidades de la sociedad moderna y se agotan los recursos naturales de la Tierra, los autores intentan evaluar las perspectivas existentes y ofrecer los mecanismos de transición hacia el desarrollo sostenible. **Conclusiones / significado.** El valor de este trabajo consiste en el hecho de que se presta atención a las amenazas ecológicas existentes del medio ambiente con las tasas de producción existentes y las tasas de crecimiento de la población de la Tierra. **Palabras clave:** amenazas ecológicas, desarrollo sostenible, mecanismos efectivos de preservación



The modern world is characterized by the worsening ecological situation, depletion of fertile grounds, depletion of flora and fauna, reduction of the volumes of fresh water, and the aggravation of the general state of the global ocean. The existing rates and means of production do not stimulate stabilization of the situation and lead to further aggravation of the situation in the world. This problem was first introduced at the international level in 1972 at the UN conference in Stockholm, where the right of each person to live in a favorable environment was stated [1]. Based on the established resolutions, the 1987 saw the creation of the World Commission on Environment and Development, the result of which work was the Brundtland report. This report introduced the term "sustainable development", which was characterized as "...sustainable and long-term development for satisfying the needs of the current generation, without bereaving the future generations of the possibility to satisfy their needs..." [2]. This definition shows that one cannot be a predator with the environment, depleting it and leaving no legacy for the future generation.

The founder of the study of sustainable development in the Russian science was V.I. Vernadsky, who developed the theory of noosphere – the sphere of mind, where a human uses his labor and conscientious management of society and nature to harmonize their interaction, allowing no devastating damage to the nature from the society. According to a lot of Russian authors, noosphere is the final goal of the strategy of sustainable development in the current environment [3].

One of the prominent researchers of the problem of noosphere development, A.D. Ursul, emphasizes, „... speaking of the relation of the notions of sustainable and noosphere development, it should be noted that transition to the path of sustainable development is the initial stage of transformations, aimed at establishment of noosphere (noospherogenesis) ... Noosphere is a goal to which the transitional process aims along the path of sustainable development" [4].

Of course, the central problem of modern ecology is the search for optimal interaction in the system „human – environment" and provision of sustainable secure development of this system. For this purpose, it is necessary to determine threats from the modern world.

Determining the risks and threats to the national security and timely realization of measures for their overcoming are among the key tasks of internal and external policy of any state. This is true for risks and threats that emerge in the sphere of socio-economic development of the country, in particular, as to the main spatial characteristics of this development. The spatial aspect of requirements of national security for Russia, as the country which territory, together with large size, is characterized by large natural & geographic, socio-economic, national &

ethnic, and other peculiarities. Besides, the spatial aspects of economic security are close to the range of issues related to sustainability of functioning of all mechanism of federative relations, which, in the Russian conditions, are determine the federative state's capability to cooperate with all subjects of the Federation and conduct effective policy of spatial regulation.

Economic security, as a special vector of scientific research, was determined in Russia in 1960's [5]. However, institutional establishment of the policy of economic security was achieved in June 1992, by creation and development of activity of the Security Council of the RF. During this time, the institutional & legal basis of the national security policy and its interconnection with all components of internal and external policy of the RF were strengthened.

The work in this direction continues today. This, the modern stage of the policy aimed at provision of national security of the RF is within the transition to the system of strategic planning. One of the first documents of the strategic character that came into effect after passing the federal law on strategic planning [6] became the Strategy of national security of the RF [7]. The Strategy (unlike the similar documents from the previous years) is not a separate declaration on the state's intentions for ensuring its internal and external security, it is a components in the documentary establishment of priorities and specific goals of strategic planning at all levels of state and municipal management.

Strategic planning allows solving the problems of economic security in the long-term and integrating the tasks of provision of national security – in particular, its economic components, into the single system of closely interconnected priorities of the strategic plan aimed at sustainable and innovational development of national economy, its structural transformation and growth of competitiveness. Only the system of strategic planning allows ensuring the key requirements of national security in close connection with solving the tasks of economic and social character in the long-term stage of the country's development. At that, the practice of strategic planning allows increasing the general level or quality of state and municipal management in the country and this solve the tasks that are viewed as the components of the national economic security.

The 2015 "Strategy of national security of the RF" contains a large "economic block". It states that provision of economic security means creation of conditions for development of personality, transition of economy to a new level of technological development, Russia's occupying the place among the leaders for GDP, and successful opposition to the influence of internal and external threats.

A logical step in the conceptual establishment of the components (requirements) of national security was establishment of the new Strategy of economic security of the RF until 2030 [8]. In this Strategy, the viewed circle of issues of the socio-economic character is further developed. The ideas on risk (threats) to economic security of the country, their sources and possible ways of overcoming are deeper and larger, in view of internal and external factors that influence socio-economic development of the country and its sustainability.

We think that the Strategy of economic security is an important step in formation of a completely new level of ideas on the key tasks for all directions of the socio-economic policy of the RF. This documents shows that this circle of authorities and responsibility of the state in the socio-economic is considered in development of specific priorities and practical ways of their achievement. The results of this work will contribute into the course of preparation of all documents of strategic planning in Russia – if these documents are ensured with sufficient level of specificity of goal-setting and mutual coordination.

The positive sense of the new Strategy of economic security of the RF is emphasized not only by organic inclusion into the practice of strategic planning. The previously absent extended analysis of foreign economic factors that creates additional risks and threats to sustainable development of Russian economy is very important. Also, there is a certain shift to "institutional threats" to the country's economic security, which means the additional focus on increase of effectiveness of the whole system of public (state and municipal) management.

However, despite the significant progress as compared to the previous documents [9], the new Strategy shows that there are still a lot of “blank spots” in the theory and methodology of economic security and the direction of the socio-economic policy. At that, these “blank spots” are close to the notions “threats” and “threshold values”, which are the key ones in the theory and practice of economic security. Unfortunately, it hasn’t been possible yet to overcome these “blank spots” and achieve maximum specification of all conditions and components of provision of this aspect of the country’s security.

It should be noted that the Strategy establishes not risks and threats as such, but only certain socio-economic trends – as was before. These trends can potentially contain certain threats for the national, including economic, security, but the sense of these potential threats is not elaborated. For example, these risks and threats include “preservation of a large share of shadow economy”. “Shadow economy” is sustainable trend or phenomenon of the Russian economy [10]. But why is this phenomenon so stable, despite multiple efforts to fight it? What threats does it create for economic security of the country? The document does not provide answers to these questions.

The threat specified as “increase of population’s differentiation as to the income” leads to similar associations. As a matter of fact, it is a certain socio-economic trend (obviously, negative – especially, if this differentiation grows). This trend may contain the threats to economic security of Russia. But which exactly? The document doesn’t state that. Besides, it is worth noting that as compared to certain other “threats”, “differentiation of population as to the level of income” is a controlled process. It may not be possible to overcome this differentiation (it is impossible due to regularities of the market type economy), but it is possible to reduce it with the help of tax policy. This is proved by a lot of economically developed countries of the modern world (progressive taxes on income and property of individuals; though – not just formally declared – responsibility for tax evasion, etc.). The threat here lies not in differentiation but in recurrence of differentiation as a seeming “threat” for economic security and social stability – but no active measures for reducing the differentiation are performed.

It should be noted that scientific studies and practical developments on the issues of economic security acquire real managerial sense, which is realized in the practice of strategic planning, when “threshold values” are established. They set the limit beyond which certain negative economic, social, ecological. And other trends produce potential risks and threats. Recently, various scientific and expert groups offered a lot of practical developments on the problems of threshold values in the system of economic security – at the general state and regional levels [11]. However, in view of integration of this circle of issues into the single practice of strategic planning and the necessity for coordination of all documents in this direction, the ideas on the above “threshold values” should receive quantitative evaluation and official status. The statements “large share” and “growing level” cannot be real landmarks for the practice of socio-economic strategizing. All socio-economic trends that contain potential threats for the country’s security should be clearly limited, and the plans of the strategic character should contain the instructions under which conditions and when these trends could be taken beyond the “threat-containing” limits.

At present, the following directions of economic transformations that directly or indirectly stimulate the reduction of load on the environment in Russia are distinguished:

1. ecologically well-balanced restructuring of economy, support for innovational development;
2. adequate consideration of the value of nature in economic indicators during economic decisions, economic evaluation of resources and services;
3. change of investment policy for ecological balance of priorities;
4. creation of ecologically consistent systems of taxes, credits, subsidies, trade tariffs, and charges;
5. clear definition of ownership rights for natural resources;
6. improvement of the mechanisms of privatization in view of the ecological factor;

7. demonopolization;
8. reform of prices;
9. transforming the banking structures and capital market, which should stimulate the creation of innovational forms of financing of nature protection activity – ecological banks, ecological funds, and insurance systems;
10. change of export policy for reduction of the share of primary resources in export with the increase of the share of high-tech products and goods with high share of added value.

The most important direction of transition to sustainable development should become ecologically balanced structural & technological transformation of economy which allows conducting effective saving of resources and reduction of the environment pollution.

Territories with undamaged ecosystems occupy only 51.9% of land, or 77 million sq.m. However, a large part of them accounts for ecologically inefficient glacier, rock, or exposed surfaces – Antarctica, Greenland, the Himalayas, etc. That's why 57 million sq. m., or 37% of the whole biologically productive part of land are undamaged – at that, these undamaged territories are spread unequally on the Earth.

Russia possesses the largest resources of water and swamp territories. 120, 000 rivers stretching 2.3 million km and 2 million lakes with the total surface area (with the Caspian Sea) of 370,000 sq. km are situated in Russia. Swamps occupy 1.8 million sq. km. The area of fen forests is 1.5 million sq. km. The sealine stretches for 60,000 km.

According to the Kyoto protocol, developed countries are to reduce the carbon emission into the atmosphere. Minimal cost of reduction of carbon emission by 1 ton constitutes USD 550-1,100. The Russian natural ecosystems, except for full liquidation of carbon emission in the country, absorb 300 million tons of carbon per year – that is, they take out of the atmosphere and deposit the carbon emission of the developed countries for USD 160 – 325 billion per year. As a matter of fact, Russia invests this money into the Western countries each year [12].

Thus, the given data shows that the country's contribution into solving the issue of stabilizing the carbon dioxide's entering the atmosphere should correspond not only to its economic capabilities but to the level of preservation of natural ecosystems on its territory. From this point of view, there are three types of countries:

1. countries with good starting ecological conditions of transition to sustainable development (area of undamaged ecosystems exceeds 60% of their territory);
2. countries with low starting ecological conditions of transition to sustainable development (less than 10% of the area of undamaged ecosystems);
3. countries with intermediary starting ecological conditions of transition to sustainable development (10% - 59% of undamaged ecosystems).

Possessing one third of the world stock of wild forests and the largest share of water and swamp resources, Russia belongs to the countries with good starting ecological conditions of transition to sustainable development. While solving the task of transition to sustainable development, Russia has to perform its specific role, caused by the fact that its territory with undamaged ecosystems is a part of the North Eurasian center of stabilization of harmful influence of human's economic activity on the surrounding environment, with existing scientific developments for human society's transfer to the path of sustainable development – the theory of natural biotic regulation of the environment of V.G. Gorshkova and „Hyper economy“ of B.V. Prykin, which allow passing from the current resource concept of sustainable development to the alternative biosphere concept of sustainable development, which does not require a priori suppositions on future development. The essential strategic line of development of Russia should be the fact that future generations will place the priority not on overconsumption of material goods and possession of wealth as the indicator of social rank but intellectual and moral ideal during satisfaction of human's needs at the optimal level. Accordingly, development of material production in the real sector of economy will be shifting from manufacture of material goods for supersaturation of physiological needs of humans to creation of the material



basis and conditions of their information & analytical, intellectual & cognitive, and spiritual & aesthetic development.

Under these conditions, the main goal and the decisive means of achieving this goal is the current intellectual and spiritual potential of the people that live in Russia. In this regard, Russia's potential is not fully used. An American scholar who develops the methods of effective resources use evaluates the Russia's potential in the following way, „In the forming global information economy, which is based on human resources, Russia's advantage consists in its priceless wealth – its people. Their natural talent, enriched by history and one of the most elaborate and effective educational systems, is a unique contribution. This contribution may be a basis for the new Russian economy – stable, comprehensive, and deep“.

That's why it is necessary to fully use the existing intellectual potential for the purpose of Russia's transfer to the path of sustainable harmonic development. Russia's labors on the path of sustainable development can become the national idea that would unite all powers for Russia's revival.

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