

Theoretical aspects of regional sustainable development in the EU and Ukraine

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Abstract. Effective use of the potential of both an individual country and its regions in order to ensure sustainable development is possible only on the basis of conscious, purposeful, scientifically grounded actions on the transformation of regional systems. That is why, the aim of the paper is to provide an analysis of the theoretical aspects of regional sustainable development in the EU and Ukraine, which will create a methodological basis for the further development of practical mechanisms for ensuring balanced regional development. As a main method of research, we use the critical analysis and comparison of normative documents, analytical reports, regional development strategies and scientific publications on the issues of sustainable development. As a result, the authors substantiate the essence of sustainable development and clarified the concept of regional sustainable development. This made it possible to determine its features. The paper also summarizes the institutional framework for ensuring regional sustainable development, including the justification of informal constraints, formal rules and coercive mechanisms. The authors identify vectors for ensuring the regional sustainable development in Ukraine. However, for the effective implementation of certain strategic priorities, a change in the public consciousness is needed in order to understand the importance of regional sustainable development, as well as the definition of clear criteria for the achievement of sustainable development and continuous monitoring of its level. We consider education as one of the most effective tools that will allow the formation of a system of knowledge, skills and competences necessary for the formation of citizens responsible for the future of the country.

Key words: sustainable development, regional sustainable development, European Union (EU), sustainable development strategy, social responsibility

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1 Introduction

Regional development is formed under the influence of the trends of socio-economic development of the country, the availability of human capital, the level and quality of life of the population, the ability to rational use and reproduction of natural resources. At the same time, the imbalance of development both within individual regions and the disproportions in the level of development of different regions can disrupt national security. That is why, not only sustainable development of the country, but also sustainable development of its regions is important. Since the adopted global goals of sustainable development [1] only reflect existing global problems and priorities, they can be achieved through international and multilateral cooperation. At the same time, the development of national strategies is only an outline of the priorities of the country's development. The real achievement of these priorities takes place at the local level [2], based on the individual potential of each region. It is also worth remembering that the policy of equalization of development of the regions, adopted by the EU [3], is ambiguous in countries with different rates of economic development. The concept of national selfishness is gaining popularity [4]. This complicates the achievement of the global goals of sustainable development, but gives impetus to the development of regions, which in the future will lead to sustainable development of countries and their associations.

Systemic management of sustainable development has a great theoretical and practical value, since effective use of the potential of both an individual country and its regions in order to ensure sustainable development is possible only on the basis of conscious, purposeful, scientifically grounded actions on the transformation of regional systems. That is why, the aim of the paper is to provide an analysis of the theoretical aspects of regional sustainable development in the EU and Ukraine, which will create a methodological basis for the further development of practical mechanisms for ensuring balanced regional development. Realization of the set goal requires solving the following tasks:

- Substantiation of the essence of sustainable development, clarification of the concept of regional sustainable development (this will allow the determination of its features);
- Generalization of institutional principles for ensuring regional sustainable development;
- Definition of vectors for ensuring the regional sustainable development in Ukraine.

2 Data and Methods

As a main method of research, we use the critical analysis and comparison of normative documents, analytical reports, regional development strategies and scientific publications on the issues of sustainable development.

We believe that the assessment of the level of display of the term "regional sustainable development" in comparison with the term "sustainable development" in the usual search results of Google, Google Scholar and Web of Science Core Collection suggests that the level of development of the scientific basis is not sufficient, especially in Ukraine (Table 1).

Table 1. Display of terms «sustainable development» and «regional sustainable development» " in the usual search results of Google, Google Scholar and Web of Science Core Collection

	sustainable development		regional sustainable development	
	Ukr.	Eng.	Ukr.	Eng.
Google				
Number of results, million	15.4	423	5.1	235
Time, sec.	0.44	0.55	0.49	0.53
Google Scholar				
Number of results, million	61.7	3230	28	2520
Time, sec.	0.09	0.07	0.11	0.09
Web of Science Core Collection				
Number of results, thousand	-	100.8	-	8.6

Source: Own research (Ukr.- results in Ukrainian, Eng. - in English, as of 04.10.18).

Taking into account the data in Table 1, we propose focusing on the definition of regional sustainable development, its main aspects and peculiarities of provision in the EU and Ukraine.

For the purpose of achieving the set goals, the following general scientific and specialized methods were used:

- Theoretical generalization, comparison and systematization - to study the essence and features of sustainable development of the region;
- system analysis – for determining the institutional framework for ensuring sustainable development of the region;
- abstract-logical – for theoretical summarization and conclusion;
- graphical method – for visualization of features and vectors of regional sustainable development, etc.

3 Results

3.1 The essence and characteristics of regional sustainable development

Sustainable development is a long-term process of transformation taking place in the economic, social, environmental spheres. It is aggravated by changes in the minds of citizens and increased their social responsibility. At the same time, sustainable development can lead to positive quantitative changes (growth of employment, investments, revenues, etc.) and qualitative transformations (changes in social organization, technical and technological progress).

It is important that an understanding of the need of sustainable development was shaped by the emergence of a number of imbalances and global problems. Thus, the modern world is overpopulated. According to the UN the world will be inhabited by 9.8 billion people by 2050 [5]. There is a significant interference in the natural environment and uncontrolled consumption of natural resources. According to the Food and Agricultural Organization of the United Nations, about 7.3 million hectares of forest are destroyed annually [6]. The problem of poverty and regional imbalances in development is intensifying. Thus, according to the United Nations Food and Agriculture Organization, it is about 815 million people from 7.6 billion people in the world (representing 10.7% of the total). At the same time, the vast majority of people who are suffering from hunger live in low and middle income countries [7]. These and other global problems encourage humanity to reflect on what decisions should be made and which vector of development should be chosen. The term “sustainable development” is the subject of scientific discussion in many countries (Table 2).

Table 2. Determination of the essence of sustainable development

Country	Author	Definition
China	Xuedong Liang, Dongyang Si, Xinli Zhang [8, p.2]	«Regional sustainable development emphasizes the coordinated development of the economy, society and the ecology to promote the regional economy, improve residents' lives, ensure an efficient use of resources and maintain the environment».
France	Taya Louise Owens [9, p.414]	«Sustainable development is an organising principle for global development that supports the well-being of both people and the planet».
Hungary	Mariann Szabó, Mária Szalmáné Csete, Tamás Pálvölgyi [10, p.399]	There are two levels of sustainability. «Weak sustainability allows the substitution of natural resources with another type of resource. ... Strong sustainability is when we do not allow the value of natural resources to be reduced; each stock must be non-declining separately».
Korea	Yongrok Choi [11, p.1]	«Sustainable development is positively related to economic growth in China and Korea, but negatively related with energy efficiency improvements in Russia and the Democratic People's Republic of Korea, while it is relatively complicated in Japan and Mongolia due to a combination of these factors».
Poland	Zofia Wysokińska [12, p.76]	Sustainable development «is based on stable and sustainable economic growth in environmentally friendly sectors and reduces unemployment by using existing social resources in the labor market».
Romania	Rodica-Manuela Gogonea, Adrian Aurel Baltalunga, Adrian Nedelcu, Daniela Dumitrescu [13, p.3]	«Sustainable development implies that the interaction between the economy, society and the environment (ecology) should be acceptable, viable, sustainable and fair».
Slovenija	Katja Vintar Mally [14, p.33]	«The regional level is often the most important for achieving sustainable development ... (from the economic, social, and environmental viewpoints)».
South Africa	Marlon E. Cerf [15, p.1]	Sustainable development is based on «public accountability and participation in priority setting for the sustainable development goals».
UK	Dawid Pearce, Giles Atkinson [16, p.103]	«The measurement of sustainable development is not without considerable difficulties, yet this should not detract from the positive advances that can be made in this direction».
USA	Robert Costanza Herman E. Daly [17, p.1]	«A minimum necessary condition for sustainability is the maintenance of the total natural capital stock at or above the current level».

Source: Own research.

In our opinion, sustainable development can be defined as a form of interaction, which maintains a balance of interests of all stakeholders and ensures the survival of future generations. So, ensuring sustainable development is not only a legal problem (the development of a regulatory framework), not only a technical problem (the invention of technical possibilities for optimal use of available resources), not only a scientific problem (the development of theories and concepts). Ensuring sustainable development primarily requires the change of consciousness on an ethical basis, which will promote cooperation and mutual understanding. The main principles of sustainable development are maintaining the integrity of ecosystems, preserving natural resources with the simultaneous development of

society, achieving equality, social justice, cultural diversity and self-determination, optimal satisfaction of basic human needs.

Accordingly, regional sustainable development is a dynamic process that can save and accumulate the potential of the region, increase its long-term competitiveness, and balance development indicators in the region. This is achieved by defining and following the development priorities in the environmental, social and economic spheres (Fig. 1), efficient management of the resource base of the region, ensuring social justice and social responsibility, coherence of interests of all stakeholders, etc.

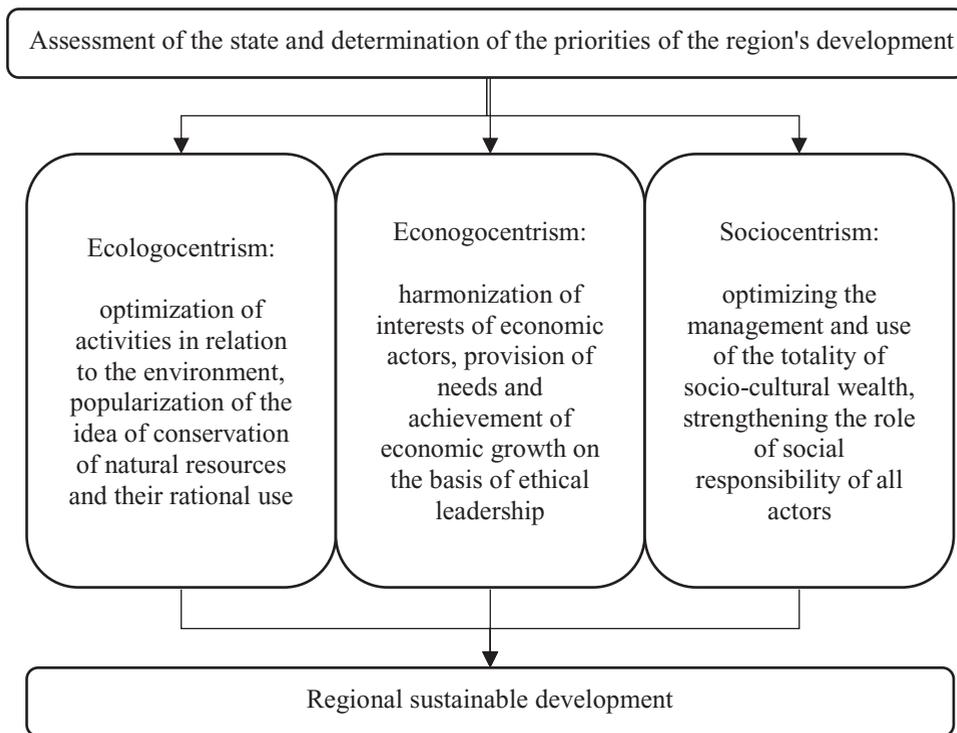


Fig. 1. Features of regional sustainable development

Source: Own research.

The sustainable development of the region takes place under the influence of numerous interrelated social, economic, spatial and other factors of internal and external character. That is why for realization of the model of regional sustainable development in Ukraine it is necessary to prepare and substantiate strategic decisions taking into account European experience.

3.2 Institutional framework for Regional Sustainable Development in the EU and Ukraine

The rules of interaction in society, according to Nobel laureate D. North [18, p. 7] define the institutions that constitute a system of restrictive conditions, namely:

- informal restrictions (combination of traditions, customs, cultural and historical features);

- formal rules (the country's legal framework, international norms and law);
- coercive mechanisms (judicial and law enforcement systems).

Thus, informal constraints are formed during long periods, fixed in the public consciousness, used in everyday life of citizens and business environment. Therefore, agents for change are needed to correct informal constraints. For example, multinational corporations introduce common standards for business in all countries of the world. Or universities can raise the future intellectual elite of the nation, which cares about sustainable development. So, in 2005, the United Nations announced the Decade for Education for Sustainable Development (DESD) (UNESCO, 2005) to integrate the principles, values and practices of sustainable development into all aspects of education and training.

Coercive mechanisms are also effective tools for shaping the consciousness of citizens and starting a new habit – to act within the norms of sustainable development. Thus, the system of restrictions imposed fines for excessive emissions into the atmosphere, stimulates the transition to environmental fuels and transport, has established product quality certificates, etc. For EU countries, it has become the norm to adhere to certain rules of the game and limitations. However, imperfection and corruption in the judicial and law-enforcement systems of Ukraine do not promote the spread of European norms in the country.

Taking into account the above-mentioned conditions, we propose to focus on the formal rules (Table 3). The emergence and development of the concept of sustainable development began in the 70s of the twentieth century.

Table 3. International norms in the field of sustainable development

Date	Event	Goal
1972	United Nations Conference on the Environment (Stockholm, Sweden)	Recognition of the relevance of environmental issues and the need to create effective international mechanisms for its solution. Bringing the relationship between economic development and the deterioration of the environment.
1980	World Strategy for the Conservation of Nature (International Union for the Conservation of Nature)	The argumentation of the thesis that the development of society should occur under the condition of preserving nature.
1982	The World Charter of Nature Defense	Proclamation of a number of principles for the conservation of nature, according to which any human activity that affects nature must be managed and evaluated.
1983	World Commission on Environment and Development WCED	Creation of the Commission, the tasks of which were to develop the basic principles, indicators of sustainable development, as well as the global ecological and economic program of action.
1987	Our Common Future (The Brundtland Report) (International Commission on Environment and Development)	A new concept of sustainable development as an alternative to development, based on unlimited economic growth, is presented.
1992	United Nations Conference on Environment and Development (Rio de Janeiro, Brazil)	Adoption of the Declaration on Environment and Development, the World Program of Action «Agenda 21» for the next 100 years, the UN Framework Convention on Climate Change, the Convention on Biological Diversity, the Declaration on the Direction for the Development, Protection and Use of Forests.
1997	Summit (special session of the UN General	Government talks were held on the documents that were adopted during the Earth Summit ("Rio + 5").

	Assembly), New York, USA	
1997	Amsterdam Treaty of the EU	Sustainable development has been identified as a key principle of all EU policies. At the same time achieving goals in one of the spheres (economic, social or environmental) should not restrain progress in others.
2000	The Millennium Development Goals (The Millennium Summit of the United Nations)	Defining eight major development goals: 1) to eradicate extreme poverty and hunger; 2) to achieve universal primary education; 3) to promote gender equality and empower women; 4) to reduce child mortality; 5) to improve maternal health; 6) to combat HIV/AIDS, malaria, and other diseases; 7) to ensure environmental sustainability; 8) to develop a global partnership for development.
2002	World Summit on Sustainable Development (Johannesburg, South Africa)	Education should stimulate change in behavior for a sustainable future. Attention was focused on the need to remove barriers to sustainable development in modern society, reduce poverty and disease, manage natural resources rationally, promote responsible consumption and production, and take advantage of globalization to achieve a balance between development and the environment.
2005	The United Nations Decade of Education for Sustainable Development (2005-2014)	The main goal is mobilization the educational resources of the world to help create a more sustainable future. This can be achieved through integration the principles, values and practices of sustainable development into all aspects of education and learning.
2015	Sustainable Development Goals (UN Summit)	Countries adopted the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals.

Source: [19-21].

Listed in tab. international norms, as a rule, countries adapt to their own specifics. Ukraine is no exception. Thus, in order to implement the proposed Goals of Sustainable Development, a national consultation was held in Ukraine, attended by about 300 representatives of government agencies, United Nations agencies in Ukraine, the National Academy of Sciences of Ukraine, the public and expert community [22, p. 4-5]. As a result, the following goals were identified as the most priority for Ukraine: No.8 (Promote inclusive and sustainable economic growth, employment and decent work for all), No.1 (End poverty in all its forms everywhere), No.9 (Build resilient infrastructure, promote sustainable industrialization and foster innovation), No.3 (ensure healthy lives and promote well-being for everybody at all ages), No.16 (Promote just, peaceful and inclusive societies). It is important that the experts identified the most important tasks for the integration of the Sustainable Development Goals, namely: 1) the definition of national goals, targets and indicators for the medium and long term; 2) capacity building (at the national, regional and local levels) for strategic planning and prioritization (ranking) to increase the effectiveness of program / project implementation under conditions of limited resources

In recent years, many regions in Ukraine, while determining priorities for regional policy, choose regional sustainable development as a tool for effective management of the territory (Table 4). However, most often the definition of the priorities of balanced development of the region is declarative, they are not supported by scientific substantiation and methodological development of regional policy guidelines.

Table 4. Regional Strategy for Sustainable Development in Ukraine

Region	Separate strategy	Part in the overall strategy for the region	Missing information
Vinnitsa, Volyn, Dnipropetrovsk, Kharkiv and Chernihiv regions	+		
Lviv, Poltava, Sumy, Chernivtsi regions		+	
Donetsk, Zhytomyr, Zakarpatska, Zaporozhye, Ivano-Frankivsk, Kiev, Kirovograd, Lugansk, Nikolaev, Odessa, Rivne, Ternopil, Kherson, Khmelnytsky, Cherkasy regions			+

Source: Compiled by the authors on the basis of official sites of regional state administrations, as of 10.04.2018.

However, for the effective implementation of certain strategic priorities, a change in the public consciousness is needed in order to understand the importance of sustainable development of the region, as well as the definition of clear criteria for the achievement of sustainable development and constant monitoring of their level. In Ukraine, it is important to address a number of systemic issues, such as the low level of transparency and efficiency of local self-government, the lack of partnerships between government and business communities, the presence of significant asymmetry in the development of regions.

3.3 Definition of vectors for ensuring the regional sustainable development in Ukraine

Further integration into the European community requires the development and implementation of effective mechanisms of cooperation between the state, business and communities. According to experts, coopetition is rapidly becoming a key success factor for operating in the contemporary world [23]. Given the European experience of using the concept of social responsibility for regional balanced development, the main priorities are responsible production, responsible investment and responsible consumption (Fig. 2).

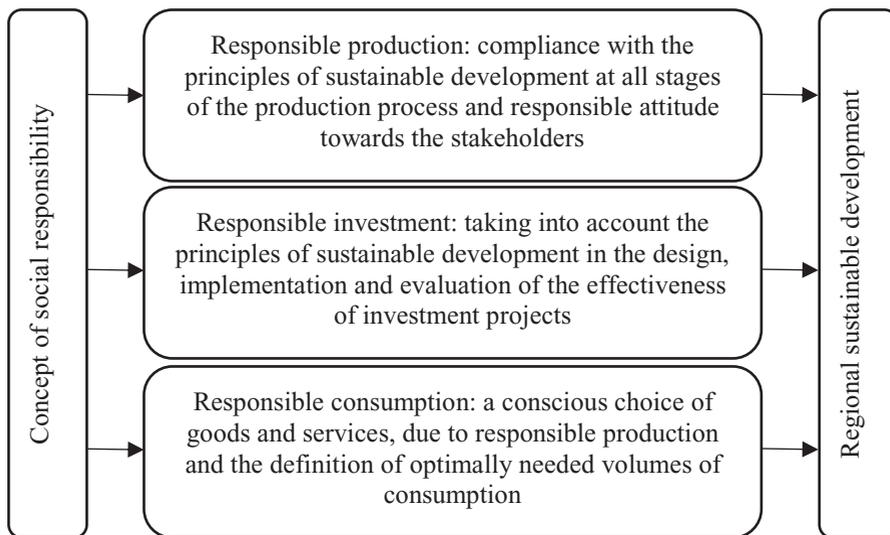


Fig. 2. Vectors of regional sustainable development of the region on the basis of social responsibility
 Source: Own research.

Modern economy is characterized by intensive changes and a high risk [24, p. 530]. So one of the main prerequisites for regional sustainable development is the consideration of strategic priorities for both individuals and society. Education is one of the effective instruments for achieving regional sustainable development [25]. Thus, according to the Global Education 2030 Agenda developed by UNESCO, education helps to form the core competences of citizens needed to ensure sustainable development (Fig. 3). In our opinion, one of the most important competencies is critical thinking [27, p. 99; 28, p. 212]. This is important because in the modern conditions, it becomes more relevant to use the artificial intelligence technologies for decision making [29, p. 28].

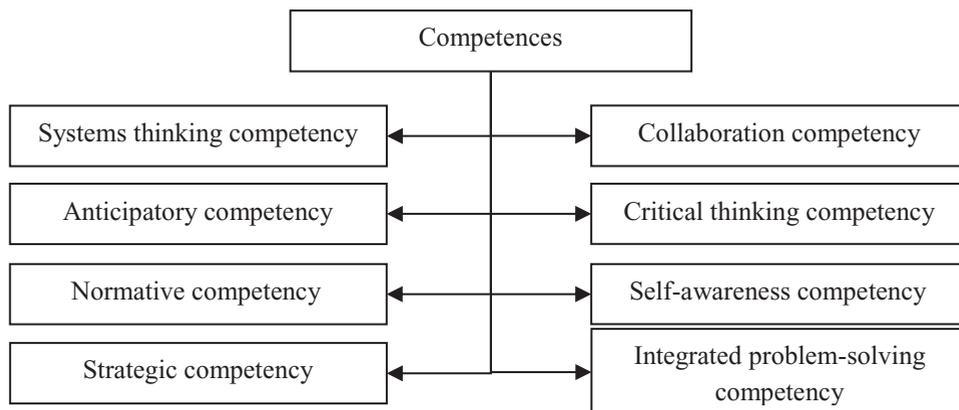


Fig. 3. Basic competences needed to ensure sustainable development
 Source: Compiled by the authors on the basis of the source [26, p. 10].

Therefore, the process of changing the teaching methods and filling the training courses with information on regional sustainable development, both in higher educational establishments and in institutions of secondary and primary education, is important. This will

create a system of knowledge, skills and competences necessary for the formation of citizens responsible for the future of the country.

4 Conclusion

The performed scientific research allows us to formulate the following conclusions:

1. Sustainable development is a long-term process of transformation that can lead to positive quantitative changes (growth of employment, investments, revenues, etc.) and qualitative transformations (changes in social organization, technological and technological progress). In our opinion, sustainable development can be defined as a form of interaction, which maintains a balance of interests of all stakeholders and ensures the survival of future generations. So, ensuring sustainable development is not only a legal problem (the development of a regulatory framework), not only a technical problem (the invention of technical possibilities for optimal use of available resources), not only a scientific problem (the development of theories and concepts). Ensuring sustainable development first of all requires the change of consciousness on ethical principles, which will promote cooperation and mutual understanding.

2. Sustainable development of the region is a dynamic process that can save and accumulate the potential of the region, increase its long-term competitiveness, and balance development indicators in the region. This is achieved through the definition and adherence to development priorities in the environmental, social and economic spheres, effective management of the resource base of the region, ensuring social justice and social responsibility, coherence of interests of all stakeholders, etc.

3. In recent years, many regions in Ukraine, while defining regional policy priorities, choose regional sustainable development as a tool for the effective management of the territory. However, most often the definition of the priorities of sustainable development of the region is declarative, they are not supported by scientific substantiation and methodological development of regional policy guidelines.

5 Suggestions for practice

However, for the effective implementation of certain strategic priorities, a change in the public consciousness is needed in order to understand the importance of regional sustainable development, as well as the definition of clear criteria for the achievement of sustainable development and continuous monitoring of its level. We consider education as one of the most effective tools, that will allow to form a system of knowledge, skills and competences necessary for the formation of citizens responsible for the future of the country.

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