

# Sustainable development of border areas as a subject of scientific research

T Bobrovskaya<sup>1\*</sup>, O Gherman<sup>1</sup> and T Zaytseva<sup>1</sup>

<sup>1</sup> Altai State University, 61 Lenina prosp., Barnaul 656049 Russia

E-mail: [btv991@gmail.com](mailto:btv991@gmail.com)

**Abstract.** Sustainable development of border areas is a critical factor in ensuring the national security of Russia. In this regard, it is important to apply a number of research approaches to assess the state and identify positive changes occurring in this area. The relevance of the article is due to the problems of scientific support of these processes. Contemporary approaches to the consideration of aspects of sustainable development of border areas are analyzed in the context of this study. Based on the systematization of scientific publications, the least covered research areas are identified. More than that, topical issues that allow stakeholders to assess the sustainability of development of border areas are proposed.

**Keywords:** sustainable development, border area, approach, research, scientific publication

## 1. Introduction

The relevance of research on the state and development of border areas is due to significant changes in geopolitics and economics. At present, their socio-economic development is becoming a factor in the national and economic security of the country. The asymmetry of the development of border regions is manifested in the fact that they have specific demographic, infrastructural, industrial, and humanitarian characteristics. Even with competitive advantages (favorable geographical position, availability of natural resources, etc.), they do little or no potential at all due to the following socio-economic problems: they are weak or do not realize their potential at all due to the presence of the following socio-economic problems: low population density, low level of infrastructure provision, including social, transport unavailability, lack of deep processing, etc. At the same time, the sustainability of their development is a tool to improve competitiveness, and therefore, a means to improve the well-being of citizens living there.

In this regard, the role of scientific research related to understanding the regulation of the process of sustainable development of border areas is increasing. Not only the identification of existing problems in this area but also knowledge of foreign experience, world practice of solving them become highly important. The directions and positions of scientists on the substantive aspects of the mechanism for creating and maintaining the stability of such territories are of interest.

## 2. Materials and Methods

The working materials of the study include the following: regulatory documents (laws and regulations governing territorial planning, reporting, development programs of border areas in the regions of the

Russian Federation); scientific and methodological texts (conceptual developments, description of approaches to the assessment of sustainable development); reflective notes and suggestions.

The study of scientific approaches to assessing the sustainable development of border areas was started with the study of documents, as well as modern texts and concepts of domestic and foreign authors.

The object of study is scientific publications on various issues of sustainable development of border areas. Such an analysis was an attempt to systematize scientific materials in order to identify the least studied aspects. This will make it possible to identify problems of information support for the development of border areas and outline future directions of scientific research. In the context of the above approaches, the following research positions, which allow analyzing the content of scientific research on the sustainable development of border areas, are defined: a system-thinking approach, involving the transformation of the sign forms of thought in the conceptual apparatus and logic circuits; methodological analysis and reflection; historical analysis and reconstruction; philosophical criticism and understanding.

General scientific and special techniques and methods, including induction and deduction, analysis and synthesis, detailing and generalization, systemic and comparative analysis were used in the research process. This allowed to develop proposals for updating the research topics in the field of sustainable development of border areas.

### 3. Results

A number of normative legal acts and programs for the development of border areas testifies to the increased attention of the state to this topic. The following regulatory documents underlie the study: Law of the Russian Federation *On the State Border of the Russian Federation* of April 1, 1993 No. 4730-1; Federal Law of July 26, 2017 No. 179-FZ *On the Principles of Cross-Border Cooperation*; Presidential Decree of April 19, 2017 No. 176 *On the Environmental Security Strategy of the Russian Federation for the Period up to 2025*; Order of the Government of the Russian Federation of October 28, 2015 No. 2193-p *On Approval of the Concept of Development of Border Territories of the Subjects of the Russian Federation Included in the Far Eastern Federal District*, and others. These documents emphasize the importance of sustainable development of the economy and social stability of the border regions, designate the conditions for the formation of their competitive advantages over the border areas of neighboring states.

In addition, the study is based on the provisions of the documents governing the preparation of reports in the field of sustainable development [1], [2]. International practice shows that such reporting becomes an element of business culture not only for corporations, but also for other organizations and institutions. The concept of territorial unity underlies a number of interstate programs to solve problems of border and cross-border territories [3], [4].

Systematization of the scientific literature on the basis of its content made it possible to identify the main types of research approaches to the study of sustainable development of border areas. The first type is the study of theoretical, conceptual issues of sustainable development of border and cross-border territories. As an example, we can cite a fundamental study of a team of Siberian scientists devoted to the comprehensive coverage of the development of border areas of the Asian part of Russia [5]. Makhotaeva, M. Yu., Andreev, V. N. and Kopytova, O. N. show the possibilities of the border position of the region as a resource for its sustainable development [6].

The second type is the work of authors who investigate certain factors of sustainable development of border areas. It should be noted a significant number of scientific publications on topics related to the environmental component. So, the work of Magomadova, E. S.-Kh. and Mamadiev, A. Kh. are devoted to assessing the environmental sustainability of the regions [7]. Spirin, P. P. justifies promising ways of sustainable development on the example of the border Loktevsky district; this is one of the most economically depressed areas of the Altai Region with a difficult environmental situation as a result of nuclear explosions at the Semipalatinsk test site [8].

A number of authors show the role of infrastructure in the development of border and cross-border territories. In particular, Rygzynov, T. Sh. and Batomunkuev, V. S. highlight the role of infrastructure zoning in the development of the cross-border areas of Russia and Mongolia [9]. Publications related to the sectoral specificity of the sustainable development of border areas are also related to this type. This line is clearly traced in the works of Vasilchenko, A. O. [10] and Dunets, A. N. [11], who consider the tourism and hospitality industry to be the most important factor in the sustainable development of border areas. In connection with the increased attention to the development of small aircraft, it would be useful to consider the possibilities of using it to organize tourism in border areas with low transport accessibility to the place of travel, for example, the South Chui Range of Central Altai. This could be a growth point for the development of this border area, since it was closed to tourists during the Soviet era.

A significant number of scientific publications are devoted to the relationship of sustainable development and spatial planning. In such countries of the European Union as Germany, France, etc., landscape planning is an integral part of spatial planning. The results of a scientific study of the sustainable development of border areas, conducted by a team of Russian and German scientists based on the Institute of Geography of the Siberian Branch of the Russian Academy of Sciences, are presented in this aspect [12]. At the same time, landscape planning is considered not only as a tool to attract investments, but also in a broader sense as a means of social, environmental, and economic stabilization.

The third type of work can be called “mixed or combined,” because the authors highlight the interrelation of various aspects of the stability of border areas. So, Shevchenko, O. Yu. and Ushanly, V. A. consider ecologization as a factor in the territorial planning of municipalities [13]. Publications related to the mechanism of cross-border cooperation are also referred to the third type. So, Kurowska-Pysz, J., Castanho, R. A., and Loures, L., on the example of the border regions of Poland and the Czech Republic, consider the possibility of implementing partnership projects, regarding them as a means of eliminating imbalances in the development of regions of neighboring countries [14]. At the same time, they directly link the level of sustainability of development of border regions with the creation of alliances in the following areas: local governments, culture and education, business, research, considering them a competitive advantage. The works of the following domestic authors are devoted to the development of partnerships in transboundary territories: Kibireva, V. E. and Kolpakova, T. V. [15], Golovachev E. V. [16] and others.

A critical analysis of scientific sources allowed us to make a general conclusion about the preferential attention of researchers to the study of factors and the identification of problems of sustainable development of border areas. At the same time, the topics related to the assessment of the effectiveness of the mechanism of their sustainability are poorly covered. Insufficient attention to the issues of the role and content of reports on the sustainable development of border areas leads to the fact that municipalities do not use this information source to interact with their stakeholders. There are practically no works made by domestic authors representing indicators for assessing the sustainability of development of border areas, especially in the long term. The scientific community does not pay due attention to the consideration of the substantive aspects of the sustainable development report. But the system indicators of such a report allow the following:

1. Assessing the current state of the region and conduct a comparative analysis with other territories, with average values for the country, with the territories of neighboring states;
2. Assessing the degree of asymmetry of the development of the territory, outlining certain ways to reduce it due to competitive advantages (rational use of natural resources, attracting investment, institutional changes, social policy measures);
3. Predicting the future socio-economic development of the border areas as an equal subject of economic activity of the region and the country as a whole and justifying its strategic development plans.

According to international approaches, indicators of sustainable development should reflect the process of balanced development of an object based on the so-called “triune approach”: economy, ecology, and social policy. According to the authors, “sustainable development of the border area” is a balanced development of the region, in which the action of economic, environmental and social factors leads to the discovery of the potential of the region, ensuring a high quality of life for people living there in the present and future. The authors intend to continue research on the topics indicated. First of all, further areas of research will be directed to the preparation and testing of a report on sustainable development in municipalities of the border areas of the Siberian Federal District, taking into account the specifics of the territory, as well as studying the information needs of users interested in such reporting.

The results of the study are as follows:

1. The generalization of scientific publications of domestic and foreign authors was conducted in various aspects of the sustainable development of border areas.
2. The main areas of research on the sustainable development of border areas are systematized. Three types of scientific publications on this topic are highlighted: comprehensive studies; studies highlighting the effects of individual factors of sustainable development; combined studies.
3. Based on a critical analysis of scientific publications, the contemporary research areas requiring further development and testing have been identified. They include both comprehensive studies to assess the performance of sustainable development of border areas, as well as studies aimed at modeling the content of reporting on sustainable development, taking into account the specificity of border areas and the interests of stakeholders.

#### 4. Discussion

This study allowed us to formulate a conclusion that scientific publications on the sustainable development of border areas do not sufficiently cover issues related to the assessment of the effectiveness of their sustainable development. The municipal development report on sustainable development is an effective means of informing such an assessment. The authors believe that the role of reporting on sustainable development as an effective tool for creating a positive image of the border area should be rethought.

The reporting requirements for border areas in the field of sustainable development are: (a) awareness of the need and purpose of producing such reports; (b) discussion of the composition and content of reporting indicators with stakeholder groups; (c) selection of key reporting indicators tailored to the region.

#### 5. Conclusion

The study made it possible to formulate worthy conclusions on the relevance of further research in the field of assessing the effectiveness of sustainable development of border areas, as well as reporting as an information base for decision-making by stakeholders. A comparative analysis of reporting indicators allows to assess the dynamics of sustainable development of such territories, as well as to use them as reference points when justifying strategic plans for territorial development. The report on sustainable development of border areas as a new type of report, comprehensively revealing information about the key factors of its development, will help assess the level of current and future sustainability. The principles of its preparation are familiar and understandable to foreign investors; therefore, such reports as an element of the image of a territory can be used to establish contacts with foreign business partners.

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