

Projekta nosaukums latviski: Bio-reģioni kā integrēta stratēģija ilgtspējīgai lauku teritoriju attīstībai Latvijā

Projekta nosaukums angļiski: Bio-Regions as an Integrated Strategy for the Sustainable Development of Rural Territories in Latvia

Projekta numurs: Izp-2 022/1-0519

Projekta īstenotājs: Latvijas Biozinātņu un tehnoloģiju universitāte

Projekta vadītājs: Līga Proškina Dr.oec.

Papildus informācija par projektu: <https://www.lbtu.lv/lv/projekti/apstiprinatie-projekti/2023/bio-regioni-ka-integreta-strategija-ilgtspejigai-lauku>

Projektā paveiktais: 2.pusgads (01.07.2023. – 31.12.2023.)

Projekta otrajā pusgadā tiek turpinātas projekta aktivitātes saskaņā ar plānoto laika grafiku.

1. Tiek turpināta projekta pirmās pētījuma darba pakas īstenošana “Bio-reģionu teorētiskais un konceptuālais ietvars”, ar mērķi izpētīt teorētiskos un praktiskos aspektus par bio-reģionu būtību, izveidi, iesaistītajiem subjektiem un pārvaldi, kā arī atklāt bio-reģionu darbības ietekmi uz teritorijas attīstību. Ir uzsākta 2. darba pakas “Bio-reģionu teritoriju identificēšana Latvijā” īstenošana. Darba pakas mērķis izmantojot esošās telpiskās un teritoriālās plānošanas sistēmas iespējas, identificēt potenciālos Latvijas bio-reģionus un analizēt šo potenciālo bio-reģionu attīstību raksturojošus rādītājus.
2. Pētījuma rezultāti ir prezentēti starptautiskās 3 konferencēs un sniegts ieskats sagaidāmajos rezultātos un veidota diskusija ar klātesošajiem par sagaidāmo rezultātu nozīmīgumu:
 - Starptautiskā zinātniskā konferencē “RURAL DEVELOPMENT 2023” ar stenda referātu “*Bioregions as an Approach to Sustainable Production and Consumption in Latvia*”, 2023. gada 26.09.-28.09.2023. Kauņa, Lietuva.
 - Starptautiskā zinātniskā konferencē SGEM Vienna GREEN 2023, International Scientific Conference on Earth & Planetary Science: “Green science for green life” ar stenda referātu “8. The relevance of the bioregion in Latvia for the preservation of biological diversity”, 28.11.-01.12.2023. Vīne, Austrija
 - 18. starptautiskajā zinātniskajā konferencē “Sociālās zinātnes reģionālajai attīstībai 2023” ar mutisku referātu “Bioreģioni kā inovācija lauku teritoriju attīstībai: eiropas valstu piemēri”. 20.10.-21.10.2023. Daugavpils, Latvija.
3. Sagatavotas zinātniskās publikācijas:
 - Publicēts zinātniskā raksta kopsavilkums: Līga Paula, Līga Proškina, Daniela Proškina, Dace Kaufmane, Kaspars Naglis-Liepa, Sallija Ceriņa. (2023) “Bioreģioni kā inovācija lauku teritoriju attīstībai: Eiropas valstu piemēri”. 18. starptautiskās zinātniskās konferences "Sociālās zinātnes reģionālajai attīstībai 2023" tēzes, Daugavpils, Latvija, 20.-21.Oktobris, 2023 / Daugavpils Universitāte. Daugavpils, 2023. 32.-33.lpp., URL: https://du.lv/wp-content/uploads/2023/10/ABSTRACTS_TEZES_2023.pdf#page=32 ISBN 9789984149967.
 - Iesniegts publicēšanai zinātniskais raksts: Dace Kaufmane, Līga Proškina, Līga Paula, Kaspars Naglis-Liepa, Daniela Proškina. The relevance of the bioregion in Latvia for the preservation of biological diversity. Zinātniskās konferences SGEM Vienna GREEN 2023, International Scientific Conference on Earth & Planetary Science: “Green science for green life” rakstu krājumā.
 - Iesniegts un pieņemts publicēšanai raksts: Daniela Proškina, Līga Proškina, Modrīte Pelše, Dace Kaufmane, Kaspars Naglis-Liepa, Līga Paula “BIOREGIONS AS AN APPROACH TO SUSTAINABLE PRODUCTION AND CONSUMPTION”. Conference proceedings “Rural Development 2023: Bioeconomy for the Green Deal”.

4. Projektā iesaistītie pētnieki ir iesaistījušies kā klausītāji un diskusiju grupu dalībnieki ar tēmu saistītos pasākumos:
 - LLKC rīkotā konferencē “Kā stiprināt labbūtību lauku telpā?”, attālināti, online. 18.10.2023.
 - Starptautiskā forumā “Misija – Bioreģiona izveide Gaujas Nacionālajā parkā”, 25.10.2023., Sigulda, Latvija.
5. Informācija par projekta aktivitātēm ir publicēta LBTU mājaslapā:
 - 01.08.2023. LBTU tiek pētītas bio-reģionu izveides iespējas Latvijā <https://www.lbtu.lv/lv/raksts/2023-07-24/lbtu-tiek-petitas-bio-regionu-izveides-iespejas-latvija>
 - 11.12.2023. Starptautiskā konferencē LBTU iepazīstina ar bioreģionu nozīmi bioloģiskās daudzveidības saglabāšanai <https://www.lbtu.lv/lv/raksts/2023-12-11/starptautiska-konference-lbtu-petnieki-iepazistina-ar-bioregionu-nozimi>



Bioregions as Innovation for Rural Development: European experience

*Līga Paula, Līga Proškina, Daniela Proškina, Dace Kaufmane,
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“Bio-reģioni kā integrēta stratēģija ilgtspējīgai lauku teritoriju attīstībai Latvijā”, Nr. Izp-2022/1-0519 (R128)



Why bioregions?

- ① Bioregions, as an innovative and sustainable rural development approach, aim to transform existing food systems and to transform understanding of communities towards sustainability goals, including the preservation of biodiversity, local culture and traditions.
- ① Their main objective is to promote the development of sustainable, mutually integrated, climate neutral areas through a holistic approach linking the various agents in the region within a single framework.
- ① In the global context, bioregions are defined differently, yet the idea of areas moving towards nature conservation, biological lifestyles, healthy diets and human relationships is common, fostering ecological sustainability, social justice, place identity.



Ecological consciousness

- an **individual's awareness** that every little thing they do will somehow have an impact on the environment
- «awareness that almost every aspect of people's life affects the environment, and this phenomenon is characterized by evaluating the **society's concern** about environmental degradation, people willingness to donate time and invest money in environmental maintenance and improvement; knowledge of environmental degrading factors and their prevention» (*Briška, 2013a:10*).



Bioregion defined by European Environment Agency

A territory defined by a combination of biological, social, and geographic criteria, rather than geopolitical considerations; generally, a system of related, interconnected ecosystems.

<https://www.eea.europa.eu/help/glossary/chm-biodiversity/bioregion>

Development of bioregionalism paradigm

Regional science

- In the process of regionalization, in which the territorial space is divided into smaller parts with a specific purpose
- Biogeography and ecology as the main criterion of regionalization
- Flexibility of understanding the concept of region.

Anti-globalization movements

- Bioregionalism was one of the currents of social change, and arose in the counterculture environment of Northern California from 1950 to 1970
- Ecosocialism - non-monetary values, social justice and ecological balance

Agro-ecology

- An interdisciplinary field of study that could change the way people see agriculture
- As a science (in Germany), a social movement (in Brazil) and a set of methods of practical application (in France)



Bioregion examples

- ③ There are 63 bioregions in Europe (and North Africa) + 11 bioregions are in the process of creation
- ③ The beginnings of the bioregion approach can be found in Italy within Europe, bioregions are most actively created in Southern Europe
- ③ The need for sustainable development of territories pushes the idea of the bioregion system also in the direction of Western Europe and Northern Europe, where the first bioregions are in the process of being created



Bioregions in Europe



Source: <https://www.ecoregion.info/2020/11/09/organic-districts-map/>



Bioregions in Europe: drivers of development

- ③ cooperation between the stakeholders and support at the national level including the allocation of funding for the sustainable development of rural areas
- ③ consumer demand: local produce and organic food
- ③ availability of land resources for agriculture or tourism
- ③ involvement of local communities in the functioning of bioregions



Bioregions in Europe: factors impeding development

- resistance from conventional agricultural producers unwilling to acknowledge new agricultural practices
- lack of education/knowledge/ understanding in society
- limited access to funding and other resources
- competition from industrial agricultural companies
- lack of regulatory framework and support from the state administration



Bioregion creation opportunities in the assessment of agricultural production producers (project interviews)

Benefits	Losses
<ul style="list-style-type: none">• Promoting economic stability, attracting financial resources• Qualitative living environment, cultural and social living space• Quality food• Maintenance of natural values, preservation of environmental quality, preservation of historical landscapes• Rural tourism development• Rural development, job growth• New market for production, increase of organic producers, business development• Development of the county, growth	<ul style="list-style-type: none">• Increase in production costs, increase in production prices• Less area for conventional farming• Profit reduction• Restrictions on agricultural activities, tourism activities, market activities• Reduction in yield• Lack of support• Disagreements between farmers, environmental activists, locals, administrative authorities• Reduction of land use opportunities



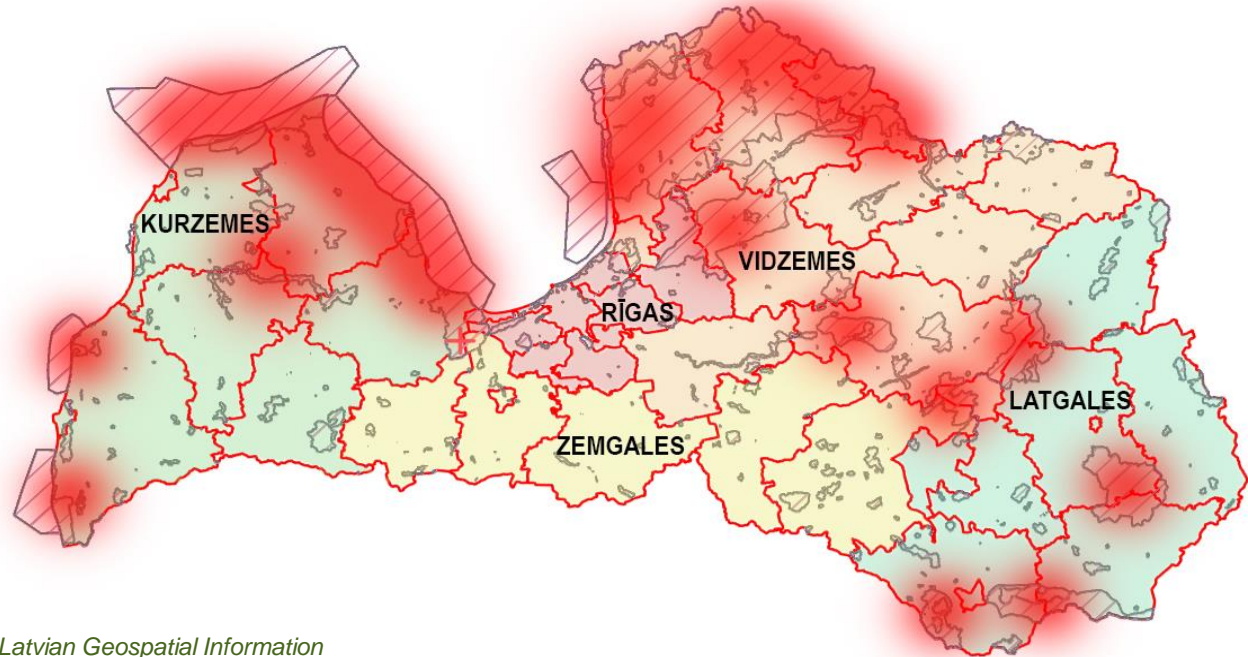
Bioregion in the Latvian context

A bioregion is a region in which **local representatives** of the public, private and non-governmental sectors, as a result of **a voluntary agreement, create a living space** with the aim of preserving and increasing biological, socio-economic, cultural and scenic (landscape) values, bringing to life such farming and consumption practices that **respect local biodiversity and balance the involved interests** of the parties in local development planning, sustainable use and management of local resources.

Definition developed by the project researchers



Prospective territorial zoning for bioregions in Latvia



Source: authors based on data of Latvian Geospatial Information Agency, Environmental Protection and Regional Development data)



Conclusions (1)

- The paradigm of bioregions is suited to the development of rural areas as it contributes to ecological sustainability.
- The regulatory framework at all levels of policy planning impact is essential to ensure the sustainable use and conservation of natural resources, as well as to promote regional cooperation and sustainable development.
- The establishment of bioregions in the European Union is still in its initial stage and an assessment of the current situation is very important to understand the potential and limitations of the establishment of bioregions.



Conclusions (2)

- Based on the analyzed examples of bioregions in Southern Europe Italy and Spain, it can be seen that the successful creation and management of bioregions requires a participatory approach, involving stakeholders (farmers, producers, consumers, administrative staff, tourism operators and researchers), education of the general public and stakeholders, as well as regular funding for the functioning of the bioregion.
- Given that bioregion is a new concept in Latvia, it currently has no specific regulatory framework, however, the creation of potential bioregions is largely influenced by the development of protected areas and the regulatory enactments regulating organic farming.
- The status of protected areas in Latvia acts as a tool for environmental protection and there are certain restrictions on economic activity in these areas, while the bioregion acts as a tool for the conservation of biodiversity based on biological management methods, so the creation of bioregions in the protected areas would contribute to the full exploitation of economic potential, which would otherwise not be possible.



Thank you!

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Bioregions as an Approach to Sustainable Production and Consumption in Latvia

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Introduction

The opinion of the European Economic and Social Committee on more sustainable food systems emphasizes the need for a comprehensive food policy in the European Union based on several pillars, including the creation of shorter food supply chains. A typical approach used to explain the differences between short and global food supply chains is the geographical proximity between a food processing company and a consumer, as well as the number of economic actors involved; however, there are several research studies that emphasize the link between local food production and the local community as well as the extent of the social and environmental impact of food production, as is not the case with the global industrial food production system.

This determines the need to seek new solutions to the sustainable development of rural areas, which would affect rural areas from social, economic, cultural and environmental aspects.

One of the potential solutions to change the current direction of regional development could be the establishment and development of bioregions in Latvia, aimed at fostering the local economy, developing domestically produced products and local food supply chains at the level of communities (towns, municipalities). Research **aim**: to assess the incorporation of home producers of food into the concept of bioregions in Latvia.

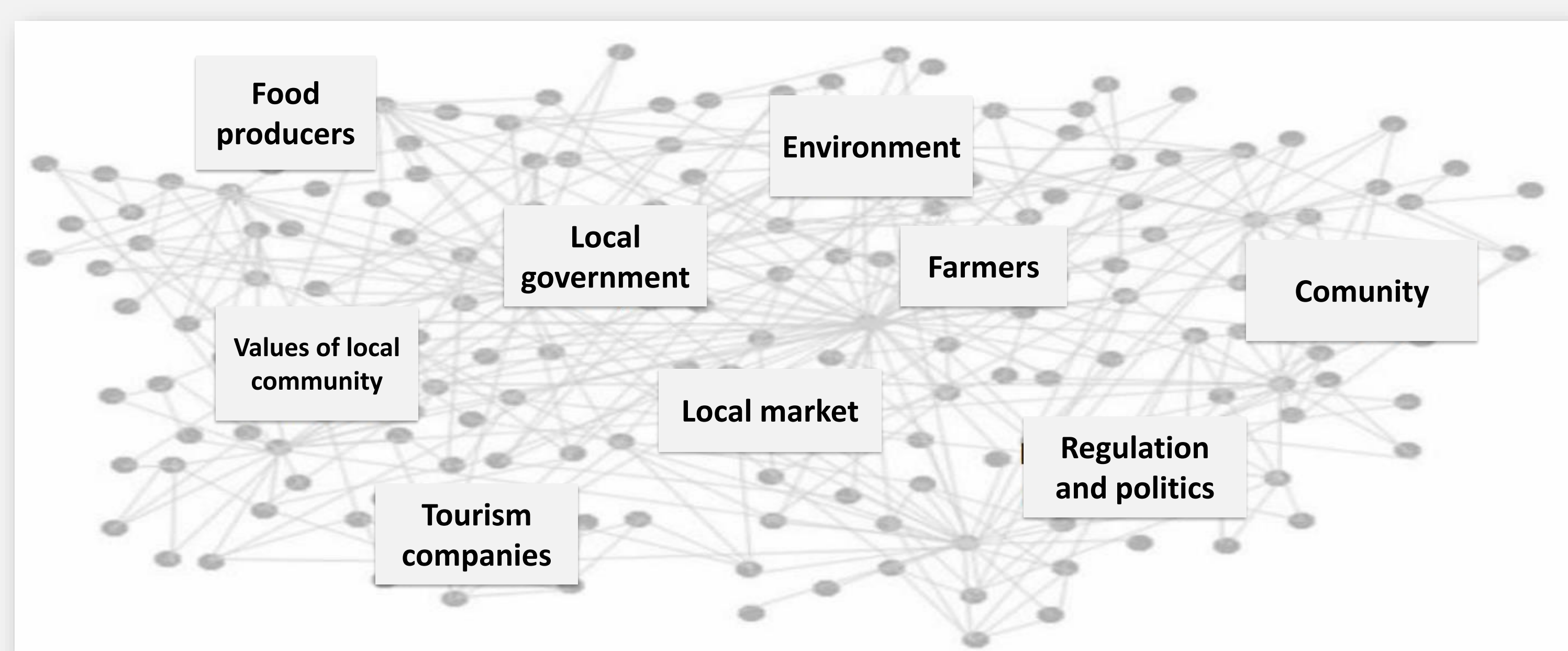
Methodology

The theoretical and political aspects of territory development, conducting an in-depth study of the region as a concept, the study of sustainable territory development and the study of rural territory development, based on the agroecology approach, as well as the study of policy planning documents related to sustainable territory development were used in the research.

Results

The establishment of bioregions is aimed at the sustainable development of territories, promotion of the local economy and development of domestically produced products and local food supply chains at the level of local communities, preserving the landscapes, cultural heritage and gastronomic peculiarities typical of the territory.

Local food supply systems basically involve establishing various relationships with consumers, relationships that create value and meaning around the product and its origin because the participating farms perform not only agricultural production but also other essential functions: •activities related to environmental protection and landscape maintenance, •biodiversity preservation, •keeping cultural traditions alive and passing them on to future generations, • promotion of local values, maintenance of rural population and spruced-up landscapes, which fully complies with the strategic principles of bioregions.

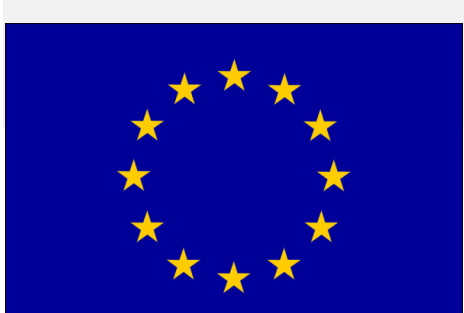


Stakeholders relationship in bioregion according to the local food systems approach by Gureschi, et al., 2020

Practical benefits for each of the dimensions of sustainability are significant: landscaping, a stable market, internal food supply chains, an increase in employment in rural areas, food origin traceability, as well as an increase in the population's self-awareness about local culture and identity.

Main conclusions

The creation of bioregions is aimed at sustainable development of territories, promotion of the local economy and development of domestically produced food and local food chains, while preserving the landscape, cultural heritage and gastronomic peculiarities characteristic of the territory at the level of local communities.



Fundamental and applied research
project No. lzp-2022/1-0519 «Bio-
Regions as an Integrated Strategy for the
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Territories in Latvia».



THE RELEVANCE OF THE BIOREGION IN LATVIA FOR THE PRESERVATION OF BIOLOGICAL DIVERSITY

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INTRODUCTION

The common objective of any regional development policy is related to improvement of the quality of the living environment of a particular society. In general, regional development is a key aspect for sustainable development, creating balanced and prosperous communities in rural areas. The current trends in the development of bioregion concept in Latvia are partly related to the implementation of guidelines of the European Commission for the identification and creation of bioregions. In order to emphasise the importance of biodiversity and specially protected nature territories (SPNT) for the creation of bioregions in Latvia, the authors of the paper define their research aim: to analyse publicly available documents to reveal the topicality of the bioregion concept in Latvia in the context of the preservation of biological diversity.

RESULTS & DISCUSSIONS

Bioregion combines the Greek word for life (*bios*) as a term with the Latin word for territory (*regia*) and the Latin term for rule/administration (*regere*). Thus, a bioregion means “territory of life” or “place of residence”. Despite the many different arguments for establishing a bioregion, theoretical discussions show three main directions (Fig.1).

The study of the bioregion paradigm in the context of biodiversity conservation and regionalisation was based on a document analysis what was done to analyse the role of biodiversity and SPNT in the creation of bioregions as well as topicality of the bioregion idea in Latvia (Fig.2).

An analysis of the documents (development policy strategies, laws, records of relevant public discussions, and scientific publications) provided an overview of the awareness and ways of promoting the bioregion topic. The documents for analysis were selected if they comprised the following concepts: bioregion, biodiversity, organic farms, specially protected nature territories.

The authors propose to form groups of bioregions within planning regions, assuming that precise boundaries of planning regions may not be respected. The approach shown in the Figure 4 would allow economic development interests to be defined while ensuring that environmental needs are met and that natural diversity is preserved (Fig.3).

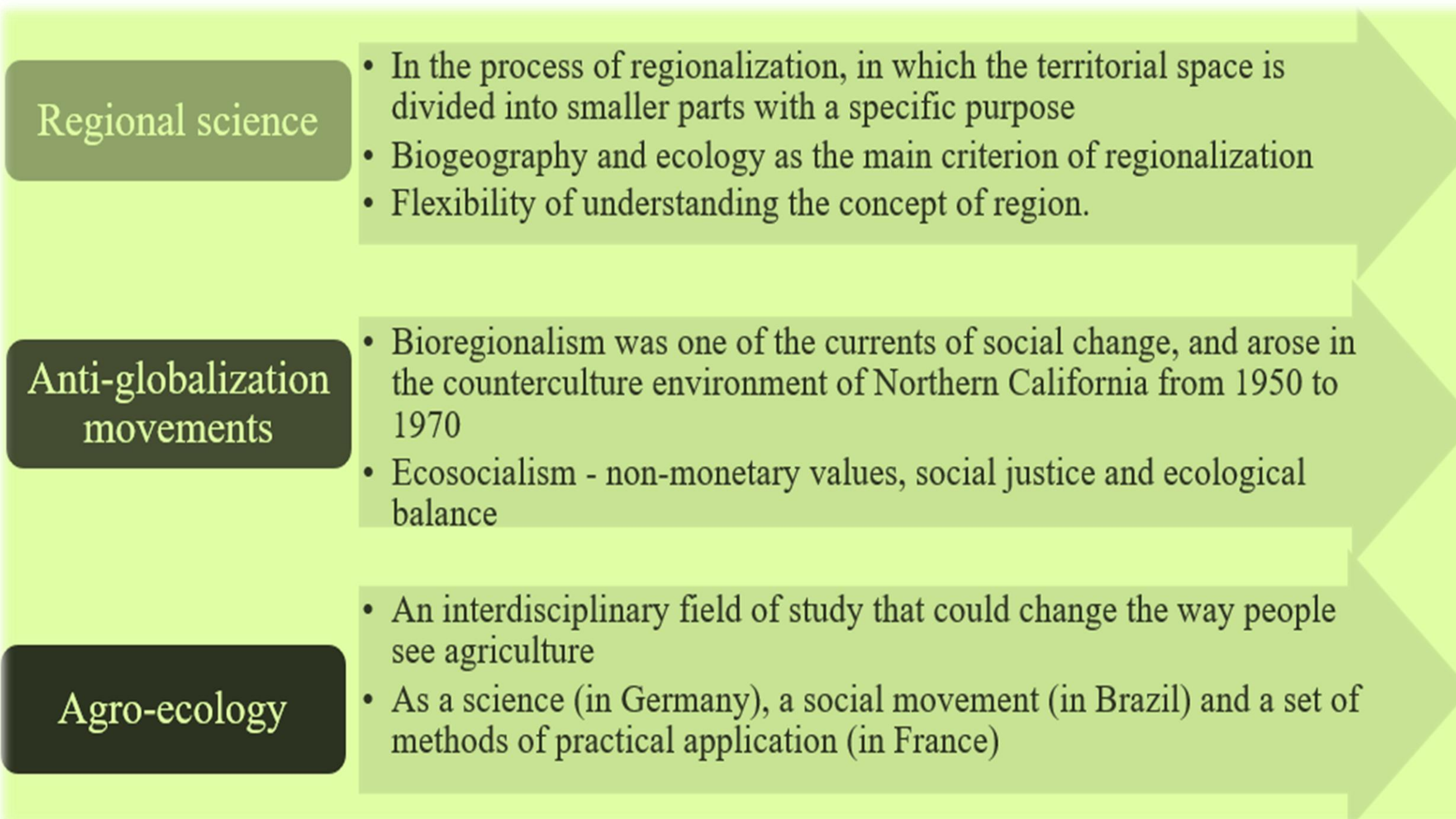
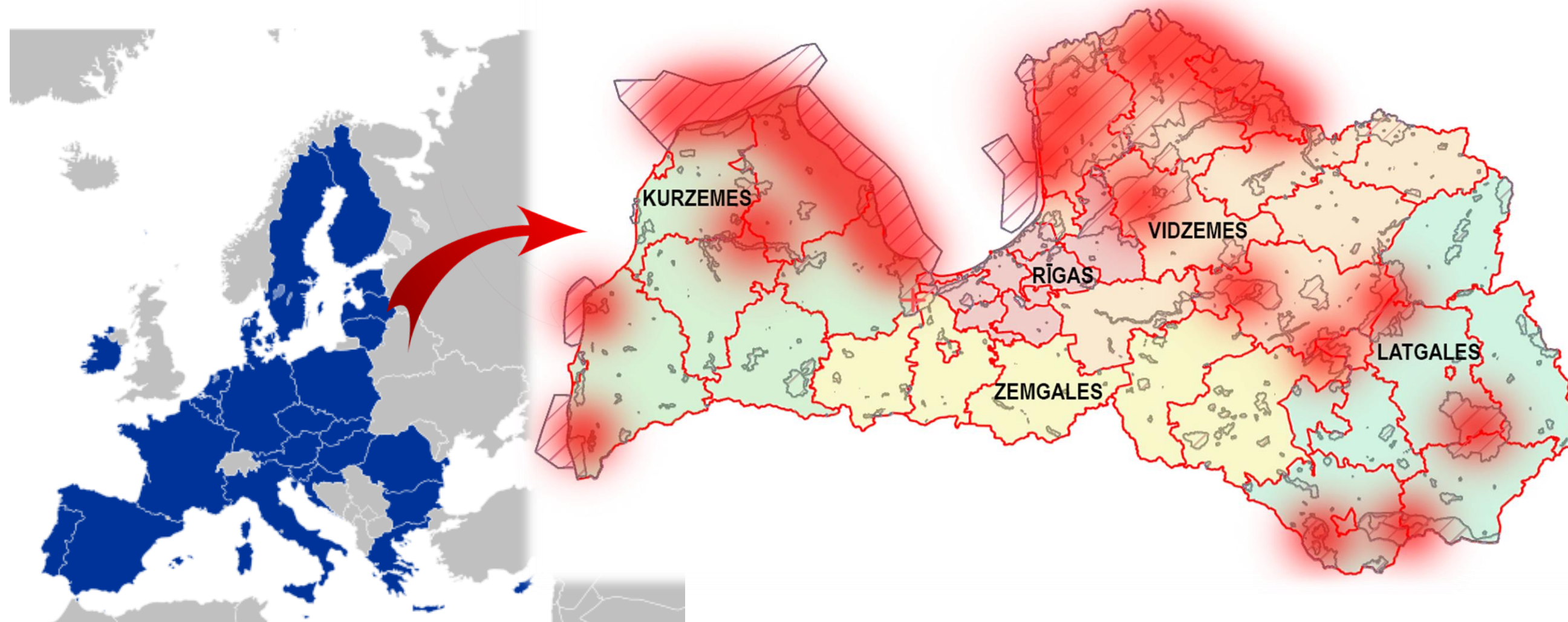


Fig. 1. Development of bioregion paradigm.



Source: authors based on the data of Latvian Geospatial Information Agency [18] and the Ministry of Environmental Protection and Regional Development [19].

Fig. 3. Prospective territorial zoning of bioregions in Latvia.

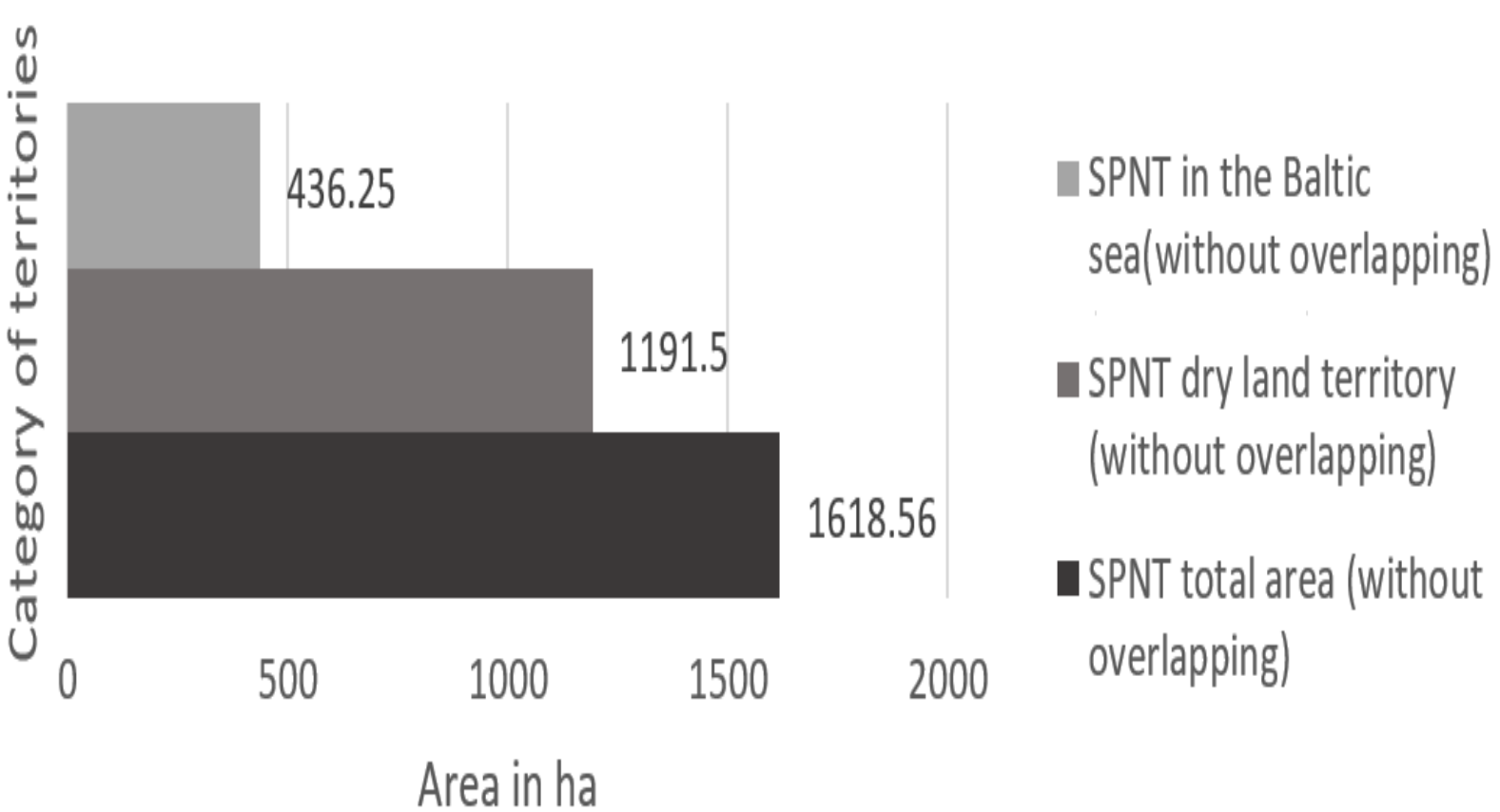


Fig. 2. Specially protected nature territories in Latvia, 2023 (ha).

CONCLUSION

Overall, the paradigm of bioregions is suited to the development of rural areas as it contributes to ecological sustainability.

SPNT in Latvia functions as an environmental protection tool, while the bioregion could be a biodiversity conservation tool based on organic farming methods.

The creation of bioregions in this area promotes the full use of economic potential, which would otherwise be impossible.

Taking in to account the location of the SPNT, the number and location of biologically certified farms, as well as other considerations, the authors proposes to form groups of bioregions in Vidzeme, Kurzeme and Latgale planning regions, assuming that the boundaries of precise planning regions may not be respected.

Acknowledgements

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