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USE OF FORESIGHT IN FORMING A RURAL TERRITORY DEVELOPMENT STRATEGY

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Abstract

The chosen direction of the study is related to the problems of achieving a self-sufficient level of economic development of the agricultural sector, improving the level and quality of life of the rural population. The article shows that the modern foresight research methodology is quite flexible and multidimensional, has a wide target application at various hierarchical levels of management. The need for the use of foresight technologies in the development of strategic plans for the sustainable development of rural municipalities is being updated. The stages of the foresight study algorithm for the strategic planning of sustainable development of the rural areas of the region and the mechanism for its implementation at the municipal level are presented. Methodological aspects of the authors' concept of strategic planning for sustainable development of rural areas based on foresight technologies are considered. The main components of the technology for conducting a foresight study of the economic development of rural territories are determined by the example of the Republic of Bashkortostan. The main directions of the introduction of digital technologies in agriculture and in rural areas of the region in question are identified. It is concluded that foresight technologies should be used as a systemic tool for the formation and implementation of a sustainable development strategy of the rural territories of the Republic of Bashkortostan. The necessity of applying the compiled foresight research methodology to design a strategy for sustainable development of rural municipalities of the Republic of Bashkortostan and other.

Keywords: Foresight technologies, rural territories, strategic planning.

1. Introduction

Currently, the aggravation of the world situation in the political and economic spheres, the expansion of internal problems of the development of the regions of our country intensify the processes of differentiating rural municipalities by the level of social and economic development and reduce their budgetary provision. Current trends in the development of the Russian economy in the face of external challenges actualize the need to search for new drivers and "growth points" in rural areas and present new requirements for the strategic management system of competitiveness and achieve sustainable rural development.

The sustainable development of rural areas is determined by the diversity and dynamism of various scientific approaches and methods for its solution. These circumstances determine a special role in the application of foresight technologies to determine the prospects for sustainable development of rural areas.

Today, there is an increased interest of the scientific community in the use of foresight technologies for the development of strategic plans for sustainable rural development (Pelucha & Kveton, 2017). Foresight methodology is used not only at the level of studying global trends, but also for generating scenarios of a predicted sustainable future at the regional level and at the level of urban and rural municipalities (Lilia & Simone, 2018). The general methodological principle of the development and conduct of foresight research is the involvement of completely different social forces (public authorities, science and business) in the processes of discussing the development of strategies and forecasts for sustainable development of rural territories. The main vector of the development of the modern foresight methodology is aimed at a more active use of the knowledge of experts involved in projects (Calof, Meissner, & Razheva (Edelkina), 2018).

Heuristic, organizational and managerial potential of foresight is actively used in economically developed countries as an effective tool for strategic planning (Gameiro & Martins, 2018). In the USA, Canada, Japan, and EU countries, the foresight program "smart specialization" has become widespread, which makes it possible to concentrate efforts and reserves not only on certain sectors of the development of the agricultural economy, but also on certain types of activities of economic entities (agricultural formations) (Hammouda, Wery, Darbin, & Belhouchette, 2018).

It should be noted that a contextual or "open" foresight based on the consideration of environmental factors is developing abroad (context-based "Open" Foresight). Currently, in the context of the development of planning and program documents for sustainable rural development systemic and synergistic Foresight are being actively merged, foresight and competitive intelligence integration (Jones, 2017). Quantitative methods such as inverse forecasting, cross-impact analysis, synthetic methods (environmental scans, multicriteria and patent analysis, relevance tree (objectives tree)) and game modelling are gaining popularity (Amblard, Berthomé, Houdart, & Lardon, 2018).

2. Problem Statement

Despite the growing interest of the Russian scientific community in the problems of using foresight and in the presence of a number of domestic foresight studies, many methodological issues of

the foresight on sustainable development of rural areas remain unresolved, debatable and insufficiently studied (Bereznoy, 2017). In our opinion, this concerns the problems of embedding foresight and roadmaps in the development of strategic plans for sustainable development of rural municipalities, the formation of strategies based on them, evaluating the effectiveness of foresight projects, as well as the lack of detailed methodological approaches to the development of foresight studies at the level of rural territories. Today, more accurate forecasts based on the real possibilities of the functioning of rural municipalities and with a greater likelihood of the influence of management structures on their future sustainable development are required (Pyankova, 2017). However, solving these pressing issues is not a trivial task and necessitates a systematic approach to this study.

Many strategic plans and programs for sustainable development of rural municipalities are formed without taking into account the views of stakeholders, are usually declarative in nature, and are not focused on achieving certain strategic goals (Magdanov, 2015). At the same time, the low accuracy of the developed strategies for sustainable development of rural municipalities, the inaccuracy and overestimation of the forecast indicators presented in them makes it impossible to implement the planned long-term guidelines. Of course, the foreign experience of scientific research devoted to the use of foresight technologies in the practice of strategic planning for rural development requires adaptation and adjustment in relation to Russian conditions. The insufficiently developed theoretical and methodological base of the research problem actualizes the formation of methodological and practical approaches to the application of foresight technologies to the design of a strategy for sustainable development of rural territories. Along with this, the use of foresight technologies makes it possible to take into account the socio-economic potential of rural areas to the greatest extent.

3. Research Questions

For the strategic vision and future of the Republic of Bashkortostan, as a classic agro-industrial region of our country, the sustainable development of rural areas as complex socio-economic systems is important, as there are 818 rural settlements in the region, united in 54 rural municipalities. Today, about 1.5 million people live in rural areas which is 38% of the total population of the republic. The system of rural municipalities of the Republic of Bashkortostan can be considered as a certain model territory from the scientific point of view of the appropriateness of applying foresight technologies for its sustainable growth and development, a set of methodological and practical problems associated with this process and the results achieved.

4. Purpose of the Study

The purpose of this study is to justify the need to use foresight technologies for designing a strategy for sustainable development of rural territories of the constituent entities of the Russian Federation; development of methodological recommendations for conducting a foresight study of the state and prospects of sustainable development of rural municipalities of the Republic of Bashkortostan.

5.   Research Methods

The developed foresight algorithm for strategic planning of sustainable development of rural areas is based on the formulation of the mission of rural areas, hierarchical goal-setting, analysis of socio-economic problems of rural development and their ranking. In contrast to existing approaches, the proposed concept of strategic planning for sustainable development of rural territories based on the foresight methodology includes conducting expert surveys, a comprehensive assessment of starting conditions, missions and the formation of an "environment map" of a foresight study, a "problem field", opportunities and threats of the external environment of rural areas.

6.   Findings

Actually, the current structural imbalances in the social and economic development of rural areas of the Republic of Bashkortostan determine the development of strategic plans and the definition of strategic directions for the sustainable development of rural municipalities based on foresight technologies (Gusmanov, Kuznetsova, Stovba, & Avzalov, 2018). Foresight methodology is based on the purposeful identification and use of expert knowledge, namely: businessmen and heads of administrations of rural municipalities of the republic, representatives of the research community, the public, legislative and executive republican authorities, and the media. The main stages of the foresight study algorithm we have developed for strategic planning of sustainable rural development include pre-foresight, foresight and post-foresight (Table 01).

Table 01. The main stages of the foresight research algorithm for strategic planning of sustainable rural development

Stages of foresight research	Foresight research phases
1. PRE-FORESIGHT STAGE	1.1. Comprehensive assessment of the natural, economic and social conditions of rural development
	1.2. Formation of starting conditions, mission and strategic goals, the "problem field", threats and opportunities of the external environment of rural areas based on foresight technologies
2. FORESIGHT STAGE	2.1. Conducting expert surveys and highlighting key foresight indicators
	2.2. Foresight analysis and monitoring of promising areas and trends in rural development
	2.3. Expert assessment of strategic priorities and development drivers, the level of influence of "jokers" on strategic guidelines for rural development
3.POST-FORESIGHT STAGE	3.1. Development of alternative rural development scenarios
	3.2. Formation of strategic plans for sustainable rural development

The authors' concept of strategic planning for sustainable development of rural areas based on foresight technologies includes two rounds. I round determines the next stages:

1 stage: pre-survey preparation which includes:

▪   definition of specific tasks and conditions of expert surveys, sources of information that are used in a deeper study of the identified socio-economic problems of rural development;

- wording of topics for expert discussions and promising areas of sustainable development of rural areas, which are subsequently translated into "statements" for a further survey of experts;
- development of priority criteria for key issues of expert discussions.

2 step: development of a questionnaire that defines the formation of the main socio-economic indicators and strategic directions of sustainable development of rural territories for expert assessment.

3 step: expert survey and pointing out foresight factors. During the survey, the experts analyze the selected foresight factors based on the PEST analysis, which is modified for the foresight tasks. At this stage, an assessment of the priority and likelihood of the impact of the selected foresight factors for the prospects for sustainable development of rural areas is made. The grouping of foresight factors allows us to identify potential "threats" and "opportunities" for the sustainable development of the social sphere and rural economy of the region.

At this stage of the study, expert focus groups are formed to discuss and analyze foresight factors. Based on the "brainstorming" and the expert panel method, the main trends in the social and economic development of rural areas of the Republic of Bashkortostan for the long term are determined. As a result, experts formulate practical recommendations regarding the use of emerging "opportunities" and the consideration of existing "threats" for specific rural areas.

4 step: expert analysis of the choice of the most preferable strategy for sustainable development of rural areas, based on the calculation of certain weighting factors. The purpose of this expert analysis is to determine the most attractive and realistic strategy for sustainable development of rural areas for its implementation in the future.

5 step: survey results processing and analysis. Statistical processing of the research results (including calculation of the average value of the studied parameters, determination of the median and confidence areas of the obtained parameters) is carried out to establish "feedback" with the experts based on cluster analysis methods.

Round II includes conducting a second survey among experts in order to increase coherence and develop a common opinion of the expert group. After receiving the experts' answers their prevailing judgments are highlighted.

After conducting expert interviews and analyzing the results of a quantitative study, a "consensus zone" is determined regarding the prospects for sustainable development of rural areas of the Republic of Bashkortostan. As a result, a foresight methodology is formed in which the "goal - tasks - state - alternative scenarios - sustainable development strategy – execution" system process is implemented according to the principles of selecting special research methods used and forming expert focus groups.

It is important to emphasize that when conducting a foresight study of the economic development of rural territories, special attention should be paid to the functioning of agricultural production sectors in the context of the formation of an innovative and digital economy. The technology for conducting a foresight study of the economic development of rural areas of the region includes the following components:

1. Assessment of the current economic situation in rural areas and identification of a strategic vision of their future sustainable development.

2. Monitoring the use of innovative and digital technologies and assessing the needs of their use in agriculture and in rural areas in the field of their future sustainable development.

3. Prediction and implementation of digital and innovative technologies in the management practice of rural municipalities of the republic. During the implementation of this stage, scenario options for agricultural development are formed on the basis of an expert assessment of the implementation of promising innovative and digital technologies. So, for example, as a result of the foresight study, promising areas for the introduction of digital technologies in agriculture and in the rural areas of the Republic of Bashkortostan were identified (Table 02).

Table 02. Introduction of digital technologies in agriculture and in the rural areas of the Republic of Bashkortostan

Introduction of digital technology in agriculture	Introduction of digital technologies in the countryside
1. Blockchain of agriculture	1. Monitoring the demand for agricultural production
2. Soil-landscape digital mapping for agricultural organizations	2. E-commerce and the creation of virtual trading platforms in the agri-food sector
3. Development of robotization and "intelligent" agriculture technologies, unmanned agricultural technology and remote control of agricultural equipment	3. Creating a single digital space for municipal government and agricultural enterprises
4. Implementation of geoinformation, precision technologies and compilation of electronic field maps	4. Digital technologies of information processing and storage
5. Digital design in adaptive farming and livestock	5. Digital placement mapping of social infrastructure facilities
6. Formation of clusters of the digital economy based on digital agribusiness platforms	6. Digitalization of management decisions in rural municipalities

It is important to emphasize that the use of foresight technologies will enable local authorities to assess the potential and reserves of rural areas, taking into account unique features, shape their future image and develop practical measures to achieve this image. From the point of view of the image component, thanks to the strategy of sustainable development and a calculated future, the image of rural areas will improve, which, in turn, will directly affect their investment attractiveness. The introduction of the technology of foresight research into the practice of managing rural areas determines the possibility of implementing "cabinet" diagnostics and improves the effectiveness and quality of the process of municipal management of rural development.

7. Conclusion

Thus, the identification of priority areas for the rural territories development based on foresight technologies helps to increase sustainability and design a unified strategy for the sustainable development of such territories of the Republic of Bashkortostan for the future. The multifunctionality of rural areas sustainable development will be determined on the basis of food production increase, an increase in the level of economic efficiency of production activities of agricultural organizations, the creation of new jobs in rural areas and, ultimately, a significant increase in the quality of life of the rural population.

Testing the foresight research methodology proposed in this article allows us to conclude the feasibility of its application to develop a sustainable development strategy in rural areas of Russian regions. The practical significance of the obtained scientific research results is expressed in the fact that they can serve as a methodological basis for designing strategic programs and plans for sustainable development of the rural territories of the Republic of Bashkortostan and other constituent entities of the Russian Federation.

Acknowledgments

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