SUSTAINABLE DEVELOPMENT OF AGRICULTURAL ENTERPRISES
WITH AN ACTIVE ENVIRONMENTAL STANCE: ANALYSIS OF INTER-ORGANIZATIONAL MANAGEMENT ACCOUNTING

a Liudmila Khoruzhy, b Yuriy Katkov, c Ekaterina Katkova, d Anastasiya Romanova, e Meri Dzhikiya

ABSTRACT

Objective: The purpose of the research is to investigate the concept of system sustainability in the framework of inter-organizational management accounting with particular attention to the environmental sustainability of agricultural enterprises. The study is aimed at researching the factors affecting the stability of the cooperative, understanding the mechanism for achieving sustainability, and developing an adaptive system of management accounting for environmental costs.

Methods: The research relies primarily on conceptual and theoretical analysis. In addition, it attempts to develop an adaptive system of management accounting with a special emphasis on environmental costs.

Results: A form for reporting on environmental costs adapted for companies with an active environmental stance and participants in inter-organizational cooperation is developed. The form is designed to account for environmental costs by type of activity, an example of which is livestock production. The study also emphasizes the need to adapt the range of products to the changing requirements for organic food, diversification of production activities, and a focus on green investments.

Conclusion: Responding to the requirements of global trends and progress, producers should diversify their production activities and develop fundamentally new products. Agricultural producers should become a promising industry for investment with an emphasis on green investment.

Keywords: inter-organizational management accounting, agriculture, sustainability, active environmental stance.

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a Doctor of Economic Sciences, Russian State Agrarian University, Moscow Timiryazev Agricultural Academy, Moscow, Russia, E-mail: hli@rgau-msha.ru, Orcid: https://orcid.org/0000-0003-3061-1374
b Candidate of Economic Sciences, Russian State Agrarian University, Moscow Timiryazev Agricultural Academy, Moscow, Russia, E-mail: kun95@yandex.ru, Orcid: https://orcid.org/0000-0001-5238-1343
c Candidate of Economic Sciences, Russian State Agrarian University, Moscow Timiryazev Agricultural Academy, Moscow, Russia, E-mail: kea1459@yandex.ru, Orcid: https://orcid.org/0000-0001-8275-7098
d Candidate of Economic Sciences, Russian State Agrarian University, Moscow Timiryazev Agricultural Academy, Moscow, Russia, E-mail: romanovargaymsha@mail.ru, Orcid: https://orcid.org/0000-0001-8405-0715
e Economic Area, Russian State Agrarian University, Moscow Timiryazev Agricultural Academy, Moscow, Russia, E-mail: dzhikiya@rgau-msha.ru, Orcid: https://orcid.org/0000-0001-8600-013X
DESENVOLVIMENTO SUSTENTÁVEL DE EMPREENDIMENTOS AGROPECUÁRIOS COM POSTURA AMBIENTAL ATIVA: ANÁLISE DA CONTABILIDADE GERENCIAL INTERORGANIZACIONAL

RESUMO

Objetivo: O objetivo da pesquisa é investigar o conceito de sustentabilidade do sistema no âmbito da contabilidade gerencial interorganizacional, com atenção especial à sustentabilidade ambiental das empresas agrícolas. O estudo visa pesquisar os fatores que afetam a estabilidade da cooperativa, entender o mecanismo para alcançar a sustentabilidade e desenvolver um sistema adaptativo de contabilidade de gestão para custos ambientais.

Métodos: A pesquisa baseia-se principalmente na análise conceitual e teórica. Além disso, tenta desenvolver um sistema adaptativo de contabilidade gerencial com ênfase especial nos custos ambientais.

Resultados: Desenvolve-se um formulário de reporte de custos ambientais adaptado para empresas com postura ambiental ativa e participantes em cooperação interorganizacional. O formulário foi elaborado para contabilizar os custos ambientais por tipo de atividade, a exemplo da pecuária. O estudo também enfatiza a necessidade de adequação da gama de produtos às novas exigências de alimentos orgânicos, diversificação das atividades produtivas e foco em investimentos verdes.

Conclusão: Respondendo às exigências das tendências e progressos globais, os produtores devem diversificar suas atividades de produção e desenvolver produtos fundamentalmente novos. Os produtores agrícolas devem se tornar uma indústria promissora para investimentos com ênfase no investimento verde.

Palavras-chave: contabilidade gerencial interorganizacional, agricultura, sustentabilidade, postura ambiental ativa.

1 INTRODUCTION

Environmental security in today's world is a foremost goal within the framework of sustainable development and improvement of the competitiveness of individual states. The concept of sustainable development in economics is currently gaining relevance against the background of global environmental problems (Tsenina et al., 2022; Yesmagulova et al., 2023). Within the concept of sustainable development, the environmental aspect refers to the establishment of continuous, renewable development that meets the needs of the population. In other words, sustainable development is understood as development in which the environmental capacity remains at a given level and the population's living standards increase (Shikverdiev, et al., 2023).
As a rule, the environmental orientation of enterprises and industries in Russia lays down long-term benefits without allowing for an immediate return and evaluation of the benefits or giving a clear economic assessment. Along with inter-organizational cooperation, the greening of agricultural production is a promising area for the development of business and production.

Different types of industries in Russia experience the environmental factor to varying degrees, but the positive effect of ecologization of production is undeniable. Environmental protection measures are an advantage for enterprises that actively implement industrial technologies (Henrichsen et al., 2023). For agricultural enterprises, compliance with environmental legislation allows reducing the cost of production by a quarter. The high cost of wastewater treatment plants requires large capital investments, so an active environmental position of enterprises does not require work for the future, the company's image, and sustainable development rather than striving for immediate benefits (Khoruzhy et al., 2023). The place and role of greening businesses in the concept of sustainable development of agricultural organizations form a system of new values, respect for nature, and increasing demand for environmentally friendly products. These areas are supported by legislators as they impose stricter rules and regulations, create a regulatory framework, and develop new economic levers (Nurgaileyeva et al., 2020).

Today, environmentally friendly production is a great opportunity for Russian agricultural enterprises to achieve super-profits. This necessitates solving several issues. Responding to the requirements of global trends and progress, producers need to diversify their production activities and develop fundamentally new products. Agricultural producers have to become a promising industry for investment, where the emphasis should be placed on green investments. Another important aspect is the provision of advice and funding for research areas to address environmental protection issues (Abdullaev et al., 2020).

The resolution of these problems calls for the development of a new set of tools for information, analytical, and accounting support. Thus, a flexible system of accounting and analysis of external and internal factors affecting an enterprise with an active environmental stance is the most critical need of modern businesses. Therefore, the adaptive elements of the system of inter-organizational management accounting of agricultural organizations are the key to ensuring the economic security of agricultural organizations (Khoruzhy et al., 2022).
Environmental safety as a subject of managerial activity of modern enterprises has been actively implemented over the past decade in the indicative assessment of the overall level of safety of companies. The indicators are both financial and non-financial. The creation of financial indicators and operational data within the framework of inter-organizational activity allows controlling the process of ecologization and presents a much-needed block in the management accounting of companies with an active ecological stance.

2 THEORETICAL FRAMEWORK

The basic principles of the formation of the environmental base in the system of inter-organizational management accounting should correspond to the strategy formulated by Danilov-Danilian et al. (2007). For this reason, a rational combination of state policy in the field of fees for environmental impact is extremely important for the sustainable development of companies, as has been noted in the scientific works of researchers such as Erasova and Kurmeleva (2003).

Approaches to the classification of environmental risk elimination have been formulated by Martirosyan et al. (2022), Bekezhanov et al. (2021) and Bottero et al. (2013). The authors note that the mechanisms of allocation of rights and application of charges for damage to the environment underlie the emergence of costs. This opinion is shared by Iakusheva (2015), who notes that the introduction of environmental control systems is a necessity to eliminate cases where companies do not pay for harmful impacts because they do not feel it. In such cases, environmental monitoring systems have to be implemented.

Biryukov et al. (2023) and Yessimbek et al. (2022) address the development of the concept of sustainable development for a modern enterprise. The author has developed an algorithm for measuring the cost of environmental damage. This algorithm is used as a basis for the algorithm of developing the concept of sustainable development for inter-organizational cooperation of agricultural enterprises. The main stages of the algorithm are as follows:

1. To develop a system of indicators for environmental damage according to threats and risks.
2. To detail environmental safety risks through the prism of assessments of project, current, and prevented damage;
3. The system of environmental safety risk assessment should be based on the principle of efficiency. In this case, a special role is given to the application of methods of cost-benefit analysis, i.e. analysis with and without the implementation of the project. The system "with and without the project" is applied as a preventive measure with the use of advanced technologies and simulation modeling.

4. To use comprehensive analysis of the impact of factors on the result broken down by objects and subjects of environmental safety.

5. To introduce into the evaluation system the social factor, the impact of environmental measures on human health, the impact on the economy as a whole, as well as on the restoration of the main resources of the enterprise.

Cooperation as an element of inter-organizational interaction of independent legal entities, as well as the types of such interaction, have been examined in the works of Hakansson, Tikkanen, Axelsson, and Easton on cooperation and cooperation networks. Studying cooperation networks as an element of inter-organizational cooperation, the researchers note the shared orientation of participants' interests. In this vein, Ford et al. (2003; 2013) and Tikkanen (1997) emphasize the specificity of ties between partners, particularly the specific types of investment, cooperation, and trust between partners. Axelsson and Easton (1994), Henneberg et al. (2006), Hingley (2005), and Ramos and Ford (2011) describe inter-organizational cooperation through social relationships, a trusting atmosphere of interaction, and resources that, being supplemented by the partners, increase competitive advantage.

The problems and issues of improvement and qualitative advancement of the management accounting system were first highlighted back in 1993 by a team of scientists including HA.C. Hax (1966), Nordsieck (1972) and Kasanen et al. (1993). The authors point to the need to revise accounting by adding analytical functions. Notable contemporaries who specialize in the methods of cost management and production costing in managerial accounting include Klimovskikh et al. (2023) and Markhayeva et al. (2023). The most prominent Russian authors focusing on management accounting are Vakhrushina (2010), Slinkov (2010), Khoruzhy (2004), and Lambekova et al. (2017). Approaches to tactical and strategic modeling of financial performance indicators of organizations in the management accounting system are disclosed by Bank and Suglobov (2014). A detailed and broad classification system of approaches to the interpretation of
management accounting terminology is presented in the monograph "Problems of the theory, methodology, methods and organization of managerial accounting in agriculture" by Khoruzhy (2004).

The present study aims to substantiate the theoretical foundations of the ecologization of agricultural organizations within the concept of sustainable development of inter-organizational cooperation of agricultural enterprises in Russia and the tools to maintain the level of sustainability in the system of inter-organizational management accounting of agricultural organizations with an active environmental position, identify problems in the ecologization of agricultural enterprises, and develop tools to address these problems.

3 METHODOLOGY

The research methodology involved a thorough analysis of related scientific works and studies. This study focused on the theories and viewpoints of various authors to develop a comprehensive understanding of sustainable development and environmental security as applied to agricultural enterprises.

Research is conducted based on normative legal acts, as well as the scientific works of economists concerning the definition and assessment of the efficiency of inter-organizational management accounting and the methods of introducing digital doubles in production. The study utilized the monographic, abstract-logical, economic-mathematical, and comparative methods.

An algorithm for developing a concept of sustainable development for inter-organizational cooperation and cost measurement of environmental damage was also used. Concepts and strategies from the existing literature were included in the analysis, including approaches to classifying environmental risks and accounting for the costs associated with minimizing those risks. In addition, inter-organizational cooperation and management accounting methods were examined to understand their role in sustainability.

4 RESULTS AND DISCUSSION

In the process of implementing the direction of greening activities within the framework of inter-organizational cooperation, the issue of introducing systems to support this process is raised. Among them, we note the tools of assessment, analysis of
business processes, the system of indicators, and reporting as part of management accounting. Thus, to ensure the successful activity of the organization in the framework of ecologization it is necessary to form a superstructure within the framework of inter-organizational management accounting and information-analytical system to address problems in three planes: operational, costing, managerial, and strategic (Table 1).

Table 1. Key problems in the formation of a management accounting superstructure for companies with an active environmental stance

<table>
<thead>
<tr>
<th>No.</th>
<th>Problematic issue</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Operational</td>
<td>Development of a cybernetic operational level control system using advanced digital technology.</td>
</tr>
<tr>
<td>2</td>
<td>Calculation</td>
<td>Development of a hybrid calculation system for measuring the costs of types of products, considering the costs of greening the production, the formation of flexible systems of correlation of the costs of service processes for marketing, distribution, sales, and additional administrative costs.</td>
</tr>
<tr>
<td>3</td>
<td>Managerial</td>
<td>Development of a reporting system, indicators, and integration of elements to assess the effectiveness of green production in the context of structural units, activities, partners, business processes, and products.</td>
</tr>
<tr>
<td>4</td>
<td>Strategic</td>
<td>Application of forward-looking areas of forecasting, simulation modeling, implementation of digital twins to create a picture of the degree of achievement of strategic objectives and the level of long-term competitive advantage for cooperation, individual partners, or individual units.</td>
</tr>
</tbody>
</table>

Source: compiled by the authors

Currently, there is a great variety of definitions for managerial accounting of environmental costs. This is a modern direction of accounting, in which special emphasis is placed on the costs of energy and water resources, the burial, recycling, and disposal of waste, and wastewater disposal. Practice has shown that environmental accounting relies not only on financial but also on physical (natural) indicators. The problem in assessing the effectiveness of ecologization is the complexity of forming indicators of the benefits of interaction with counterparties, paying particular attention to environmental issues, and the impact of compliance with environmental standards on the image of partners and participants in cooperation. As with any other object of accounting, environmental costs are processed with the methods of accounting, control, identification of costs, and optimization.

Environmental accounting is a system of collection, storage, processing, and accounting of environmental information. Environmental accounting stands as a separate direction of accounting with its inherent features. The purpose of this accounting is the formation of information for interested external and internal users. Environmental information allows internal users to rely on the environmental aspect to make decisions
within the organization, although much of the information provided can also be used for external reporting.

The International Financial Reporting Standards (IFRS) are being actively integrated into the Russian accounting system. This factor cannot be neglected, as one of the most relevant areas of accounting work is the reflection of information on the objects of environmental protection accounting. In this connection, the methodology and standards of the IFRS have their advantages, since by using the principles of the IFRS it is possible to achieve the efficiency of environmental protection activities. The business carries out voluntary financing of nature protection measures; therefore, the IFRS have several benefits, as this system of norms and standards of reporting is one of the first reflecting the provisions of environmental accounting.

To make a decision on financing an ecological project, enterprises of the agroindustrial complex need to analyze the efficiency of such a project for the inter-organizational cooperation of partners. The analysis described above should show the management of companies with an active ecological position and the efficiency of financing the given project, as well as contribute to the fulfillment of the primary goal of companies in inter-organizational cooperation – ensuring environmental security and maintaining ecological safety.

The creation of a superstructure within the framework of inter-organizational management accounting for companies with an active environmental position should be carried out in the following steps:

1) Development of specialized reporting forms, analytical registers and schedules, and a system of alerting management to changes in the current background of the company's environmental safety, related changes in the financial condition of the business, as well as modeling paths for the development of partners in the implementation of environmental projects.

2) Construction of an adaptive model with a block of environmental monitoring of the state of environmental safety, particularly models of information, accounting, and analytical support of the ecologization process.

3) Carrying out a comparative analysis of environmental indicators before and after the introduction of the technology.

The first stage in the development and implementation of specialized reporting forms gives several advantages to inter-organizational management accounting for the
assessment of the environmental component. Information should be presented promptly and in a form convenient for users, so that management has the opportunity to give an assessment and provide an expert opinion on the environmental and economic activities of inter-organizational cooperation in the shortest possible time. Also as part of this stage, it is necessary to assess the impact of environmental components on the financial and economic activities of cooperation, as well as to determine the proportion of the greening of cooperation activities (Nurgaliyeva et al., 2022). At the second stage, the model of information, accounting, and analytical support for the ecologization of business processes is created. The third stage involves the comparative analysis of indicators in several directions: environmental reporting includes indicators of the efficiency of ecological investment, correlation and factor analysis of the dependence of business development on the implementation of the environmental project, comparison of planned, factual, and base indicators, both ablative and relative coefficients, indicators showing the degree of environmental pollution and the dynamics of its assessment, assessment of the share of environmental funds, energy-saving technologies, and resource-saving plants in the asset structure, the share of receivables for the greening of production, its turnover, the probability of realization of threats to environmental safety in relation to the reserves of companies with an active environmental position for leveling environmental risks and threats, the amount of financing for projects with an environmental focus (Duarte et al., 2023).

Environmental reporting in inter-organizational management accounting must meet the requirements of the strategy of management and interaction of members in agro-formations. The strategy determines the assessment of the ecologization of inter-organizational cooperation according to the parameters presented in Table 2.

<table>
<thead>
<tr>
<th>No.</th>
<th>Parameter</th>
<th>Directions of assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Indicators of the organizational and technical level, considering the environmental component</td>
<td>The level and degree of use of energy- and resource-saving technologies and equipment. This parameter should allow the internal subjects of the management report to identify reserves and assess the effectiveness of equipment and promising technologies in the field of savings and renewal of resources, free and available rights to pollution, and so on.</td>
</tr>
<tr>
<td>2</td>
<td>Indicators of production and sales of products, indicators of the cost of production and sales of products, considering the environmental component</td>
<td>Indicator value on the change in costs for the development, testing, and implementation of a system of environmental measures. Effectiveness of the project on greening the production activities.</td>
</tr>
<tr>
<td>3</td>
<td>Indicators of financial performance</td>
<td>Increase in production after the implementation of the environmental project.</td>
</tr>
<tr>
<td>Indicators of the financial condition of the company</td>
<td>Increase in profits after the implementation of the environmental project. Estimation of the amount of lost profits. Cost estimate of the prevented environmental risks.</td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Indicators of the level of knowledge and skills of enterprise management in the field of environmental relations</td>
<td>Realization of legal security risks in the field of environmental regulation of inter-organizational cooperation. Deviation from the provisions developed and contained in the policy on environmental cooperation activities.</td>
<td></td>
</tr>
<tr>
<td>Indicators of transparency in reporting</td>
<td>Audit of fixed assets and environmental assets, including intangible assets of cooperation participants</td>
<td></td>
</tr>
</tbody>
</table>

Source: compiled by the authors

Proceeding from the presented directions of assessment, it is possible to disclose the content of one of the key terms in the inter-organizational environmental accounting system. Environmental inter-organization management reporting and its indicators can be both interlinked and individual. Environmental reporting includes indicators in traditional (cost) terms, in kind, as well as in a descriptive form by highlighting several subjective characteristics. The key provisions are enshrined in the environmental policy of cooperation in the form of targets and indicators. Environmental reporting in the framework of inter-organizational management accounting of agricultural companies is a combination of initial documentation, analytical registers, and a block of specialized reports of the reporting system of cooperation.

The introduction of environmental reporting into the system of inter-organizational management accounting is necessary to achieve the following objectives:

1. Increasing the efficiency of economic activity and achieving sustainable development.
2. Raising the competitiveness of agricultural enterprises in the international arena and achieving domestic market advantages.
4. Increase of investment attractiveness of the agro-industrial sector, improvement of the social reputation of the company among the population and consumers, attraction of sources of state support.
5. Concern for the environment.
6. Development of new and improvement of existing production lines, reaching the international, advanced level of quality of the production, processing, and sale of agricultural products.
The composition of the reporting block needs to correspond to the requirements of the environmental aspect of inter-organizational cooperation of agricultural enterprises. As an example, we shall consider the reporting form “Report on environmental costs by types of environmental activity of inter-organizational cooperation”, meeting the first task “Increasing the efficiency of economic activity and achieving sustainable development”. This report is considered at the level of inter-organizational cooperation without detailing by type of activity, partnership members, and business processes.

The example is based on the inter-organizational cooperation of three entities – Partner №1, Partner №2, and Partner №3, engaged in the processing, production, and marketing of livestock products, respectively. Partner №1 produces peasant butter and traditional butter (Table 3). When looking at the life cycle of both products, we assume that the products have reached maturity and entered a phase of decline. The inter-organizational project team has started the seventh phase, “Product engineering and simultaneous improvements in the production process to achieve the target cost reduction”.

Table 3. Report on environmental costs by type of environmental protection activity in inter-organizational cooperation

<table>
<thead>
<tr>
<th>Cost code</th>
<th>Cost analytics</th>
<th>Etalon, ths. rub</th>
<th>Factual value, ths. rub</th>
<th>Deviation, +/- ths. rub</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chart of accounts code 01.12.49.00.0000 Costs associated with the protection of the environment from the negative factors of industrial activity under cooperation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chart of accounts code 01.12.49.12.3115 Costs of maintaining the proper condition of cleaning technologies and equipment of the main livestock unit of Partner №1 Anechka, their reconstruction and technical re-equipment</td>
<td>6,000</td>
<td>2,000</td>
<td>-4,000</td>
<td></td>
</tr>
<tr>
<td>Chart of accounts code 01.12.49.12.3116 Costs of equipment for the collection, processing, and disposal of waste from the production activities of the main livestock unit of Partner №1 Anechka</td>
<td>12,000</td>
<td>9,000</td>
<td>-3,000</td>
<td></td>
</tr>
<tr>
<td>Chart of accounts code 01.12.49.12.3117 Costs of developing zero-waste technologies for the production activities of the main livestock unit of Partner №1 Anechka</td>
<td>1,000</td>
<td>1,000</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Chart of accounts code 01.12.49.12.3118 Investments in the purchase of devices for laboratory environmental research of the production activities of the main livestock unit of Partner №1 Anechka</td>
<td>500</td>
<td>520</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Current environmental costs</td>
<td>In terms of cost analysis</td>
<td>400</td>
<td>600</td>
<td>100</td>
</tr>
</tbody>
</table>
Let us consider in detail the analytics on the last three groups of costs from Table 3. "Current environmental costs", which are presented in the Chart of Accounts under the code 01.12.50.00.0000 using the example of Partner No. 1 – a member of inter-organizational cooperation, which is engaged in activity under code 12 – production of livestock products. The code of the business process that generates costs is 50. In the structure of livestock production activities, Partner No. 1 has the main livestock subdivision under code 12 – Anechka Livestock Production Complex. The following grouping of costs is presented on synthetic accounts:

— Current costs of livestock waste processing: 01.12.50.12.3119.
— Current costs of wastewater treatment: 01.12.50.12.3120.
— Current costs of waste disposal: 01.12.50.12.3121.
— Current costs of repairing environmental facilities: 01.12.50.12.3122.
— Current costs of the sanitary protection zone: 01.12.50.12.3123.
— Current costs of ensuring environmental safety: 01.12.50.12.3124.

Next, let us examine the analytics on the group of costs from Table 3 titled “Costs of research and development” presented in the Chart of Accounts under the code 01.12.51.00.0000, once again, using the example of Partner No. 1. The code of the business process that generates costs is 51. In the structure of livestock production activities, Partner No. 1 has the main livestock unit under code 12 – Anechka Livestock Production Complex. Synthetic accounts have the following grouping of costs:

— Costs of research and development to improve the technology of production of environmentally safe products: 01.12.52.12.3125.
— Costs of research and development to improve zero-waste technology and waste and by-product processing technologies: 01.12.52.12.3126.
Finally, we should look into the analytics on the group of costs from Table 3 “Costs of elimination of damage and losses” given in the Chart of Accounts under the code 01.12.52.00.0000. The analytics will be considered based on the example of Partner No. 1. The code of the business process generating the costs is 52. In the structure of livestock production activities, Partner No. 1 has the main livestock unit under code 12 – Anechka Livestock Production Complex. On synthetic accounts, there are the following grouping of costs:

- Costs of research and development to improve the technology of livestock production waste: 01.12.52.12.3127.
- Costs of defects due to unsatisfactory consumer properties of the produced environmentally safe products: 01.12.52.12.3128.
- Costs of liquidation and minimization of environmental risks: 01.12.52.12.3129.

The monitoring of etalon values from the point of the environmental component within the inter-organizational management accounting of agricultural enterprises in relation to economic security according to the groups presented in Table 3 will allow providing a flexible, reliable system of secondary-level indicators and sustainability monitoring in relation to all components of the environmental block in the accounting system of inter-organizational cooperation.

5 CONCLUSION

The transition of the inter-organizational management accounting system to a new level will enable cooperation and allow individual members to obtain several strategic benefits to economic entities within the inter-organizational cooperation, attract additional sources of funding, gain consumer confidence, compete with imported and global producers, and ensure the sustainable development of cooperation in harmony with the environment.

Thus, modern approaches to the implementation of the concept of sustainable development of inter-organizational cooperation of agricultural enterprises are extremely underdeveloped. The specifics of sustainable development within the framework of inter-organizational cooperation of agricultural entities are not reflected in economic papers. The sustainability of an economic entity in the framework of this study is interpreted as
the ability of an enterprise to achieve an acceptable level of economic security risks using appropriate tools.

The specialized reporting form developed within the environmental superstructure of inter-organizational management accounting under the influence of the concept of sustainable development of agricultural and agro-industrial companies with an active environmental position must meet the requirements of timely provision of information, adaptability of the warning system to signal to management and accountants about the hidden reserves of equipment available to partners, newly created ways to optimize costs on environmental charges, and fees for members of inter-organizational cooperation for the use of natural resources in their financial and economic and production activities. The need to form an environmental superstructure as part of management accounting within inter-organizational cooperation of agricultural organizations arises from the following factors:

• increasing human impact on nature leading to greater investments in activities to preserve natural resources;
• intensification of requirements to economic entities to preserve nature and natural resources;
• increased financial penalties for neglecting the restoration and protection of natural resources, as evidenced by the growing number of court cases;
• investors financing economic projects of companies with an active environmental stance, which creates their green image;
• new trends in the needs of the public based on a preference for organic products and the formation of new preferences.

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