

Approaches to assessing the sustainability of territorial communities

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Received: 01.10.2024; Accepted: 20.12.2024
<https://doi.org/10.32347/tit.2024.7.2.01.05>

Abstract. The article is devoted to exploring approaches and identifying sustainable development indicators for territorial communities. The ability to apply sustainable development principles in managerial decision-making regarding the development of territorial communities requires the establishment of priorities or goals for sustainable development. These priorities, in turn, must be based on criteria that can be measured and assessed.

Currently, sustainable development approaches are among the fundamental ones in preparing funding proposals for territorial communities or evaluating them from the perspective of potential investors. However, even though certain territorial communities actively use the defined term when preparing proposals or presenting the community to the public, few can accurately determine which specific indicators need to be calculated.

In the practice of managing a territorial community, various indicator systems are widely used to assess the state of a particular sphere of activity (or development direction) of the community from a chosen perspective (which underpins the formation of the indicator system).

An analysis of the literature revealed that there are sufficient approaches offering suggestions for defining indicators that can characterize the sustainable development of a community. The article proposes using the Bellagio principles to develop an approach for quantitative calculations. It also suggests the application of mathematical methods to calculate certain indicators.

The proposed approach includes, taking into account sectoral characteristics, groups of indicators for ensuring the livelihood of the population, territorial development, and entrepreneurial development, as well as indicators



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reflecting the social and environmental responsibility of the territorial community. This set of indicators can be used as criteria for substantiating managerial decisions in territorial communities.

Keywords: sustainable development, territorial community, bellagio principles, integral indicator, strategic priorities.

INTRODUCTION

The possibility of applying sustainable development principles in managerial decision-making for the development of territorial communities requires establishing sustainable development priorities or goals. These priorities, in turn, must be based on measurable and evaluable criteria. From a sustainability perspec-

tive, assessment and measurement are interrelated but not identical concepts.

During the measurement process, parameters relevant to sustainable development are identified, and data is collected and analyzed using appropriate methods. In the assessment process, indicator values are compared with standard criteria (or sets of criteria).

The implementation of the sustainable development paradigm in decision-making practices at various levels largely depends on the ability to quantitatively assess sustainability, particularly through the development of three key elements of an assessment system: unification of criteria, definition of general guiding principles, processes, and methodologies, as well as adequate implementation of the sustainable development concept in the context of improving management practices [1].

The search for appropriate assessment tools is crucial for bridging theory and practice and achieving successful results in enhancing sustainability. Although existing sustainability assessment mechanisms are a useful alternative to standard indicators for researchers and practitioners, the question of determining the most important sustainable development priorities and methods for their quantitative evaluation remains underexplored, especially for social and economic aspects. This statement is particularly true for Ukrainian territorial communities, where significant efforts to assess their functioning from the perspective of the sustainable development paradigm as interpreted by the UN are lacking.

P. Brandon and P. Lombardi [2] identify several principles that should underpin all assessments in the field of sustainable development to make them as useful as possible for decision-making. Assessments should be holistic, harmonious, behavior-shaping, useful, seamless, reliable, and humane.

R. Gibson and co-authors highlight several sustainability requirements that correspond to criteria such as the socio-ecological integrity of the system, adequacy of means for existence and development, fairness and equity across generations, resource availability and efficiency, socio-ecological compatibility and democratic governance, safety and adaptability,

illustrative consequences, and rationality. R. Gibson also provides basic requirements for sustainability assessment, which are quite standard and align with the requirements for assessing other parameters of socio-economic systems.

In [3], it is rightly noted that the concept of sustainable development is highly appealing but is very difficult to measure or even formalize as a tangible and identifiable goal. Sustainability is a broader concept than merely the interconnection of the economy, society, and the environment.

Both individual researchers and entire international organizations and research institutes have developed a range of indicators designed to assess development sustainability or adjust traditional indicators to incorporate sustainable development principles. Key directions for improving methodology can be summarized as adjusting data obtained from the system of national accounts (GDP, GRP, GNP, etc.) and developing new alternative indicators. The latter include, first and foremost, the Human Development Index (HDI), the Human Poverty Index (HPI), the Genuine Progress Indicator (GPI), and the Ecological Footprint.

In [4], it is rightly pointed out that since sustainable development primarily involves meeting current needs without compromising the consumption of future generations, sustainable (supportive) development relies not only on the use of economic factors but also on social and environmental potentials. Moreover, development challenges are becoming increasingly acute due to the depletion of natural resources being used and the deterioration of the environment.

Sustainability reporting is becoming an increasingly common practice among territorial communities in Ukraine. It is a powerful tool that can help communities: (i) assess their current state in the areas of economy, environment, and society; (ii) identify priority areas for development; (iii) track progress in achieving sustainable development goals; (iv) enhance transparency and accountability to citizens; (v) attract investments and support from partners.

Currently, a growing number of territorial communities strive to increase the transparency

of their activities in the field of sustainable development by using disclosure methods such as publishing annual reports, sustainability reports, and providing information in dedicated sections of corporate websites.

It should be noted that even in those territorial communities that publish sustainability reports, some indicators important to stakeholders are either not disclosed or disclosed incompletely. This is primarily due to the absence of a sustainable development management system that would enable comprehensive and accurate accounting and data collection.

Despite the awareness among community leadership of the need to integrate sustainable development principles into business processes to foster community growth and improve their competitiveness at the regional level, practices and international experience in this area have not yet gained sufficient traction in Ukraine.

One of the most popular indicators for measuring the dynamics of societal development is the Index of Sustainable Economic Welfare (ISEW). An interesting feature is the strong correlation between ISEW and GDP up until the 1970s and early 1980s, after which this correlation began to weaken. This underscores once again that GDP growth is not synonymous with sustainable development.

In international practice, the so-called "Bellagio Principles," developed in 1996 as part of a study conducted under the patronage of the Rockefeller Foundation in Bellagio, Italy, by an international group of researchers and practitioners from five continents, are used as the basis for sustainability assessments. These principles serve as guiding standards for the entire assessment process, including the selection and development of indicators, their interpretation, and the presentation of results. They are inter-related and should be applied. The principles are designed to serve as a foundation for activities related to sustainability assessment conducted by community groups, non-governmental organizations, corporations, national governments, and international institutions.

These principles are tenfold [5]:

1. **Presence of a guiding vision and goals** – Sustainability assessment should reflect the establishment of sustainable development goals

from which it will be evaluated.

2. **Holistic perspective**—consideration of the entire system, as well as its individual components.

3. **Inclusion of key elements**—balancing the satisfaction of today's needs with those of the future; incorporating environmental indicators and social measures related to societal well-being.

4. **Adequate coverage**—Accounting for historical perspectives, as well as the applicability of indicators for assessing the current situation and forecasting future development.

5. **Practical orientation**: a clear set of indicators that link vision and goals, indicators and evaluation criteria; a limited number of key questions for analysis; a limited number of indicators that provide clear signals about improvements or issues; standardization of measurement to ensure comparability; comparison of indicator values with goals, benchmarks, thresholds, trends, etc.

6. **Transparency**—accessibility of source data and resulting indicators to the public.

7. **Effective communication**—considering the needs of indicator users and implementing them as tools that users can apply in practice.

8. **Broad participation**—Involvement of decision-makers and other stakeholders in the practical use of indicators.

9. **Continuous evaluation**—regular assessment and the ability to adjust goals and indicators in response to environmental changes.

10. **Institutional (organizational) implementation**—Clear distribution of responsibilities and provision of ongoing support in decision-making processes, data collection, maintenance, and documentation.

It can be concluded that practically all these principles are applicable and justified for assessing the sustainable development of territorial communities.

PURPOSE AND METHODS

Based on the analysis, it can be concluded that the existing sustainable development indicators for enterprises are insufficiently suitable for use in the management practices of territo-

rial communities (especially in domestic conditions), necessitating the development of a specialized set of indicators.

Economic indicators, in a general sense, help assess the current state of a system, its dynamics, and the deviation of the system's state from the desired (target) state. Qualitative indicators can warn about a problem before it becomes too severe or insoluble and help identify what needs to be done to address it.

Sustainable development indicators differ from traditional indicators of economic, social, and environmental progress. Traditional indicators (e.g., shareholder profit, prices, quality, and others) measure changes in specific areas of enterprise activity as if these parts were entirely independent of other parts. Sustainability indicators, however, reflect the fact that these segments are closely interconnected.

As noted above, considering the specifics of territorial communities, sustainable development priorities are concentrated in the following areas: ensuring the livelihood of the population, territorial development, entrepreneurial development, and ecological and social responsibility.

The next step is to formulate the main sustainable development priorities for the identified areas, initially at a verbal level, and subsequently formalize them into specific measurable indicators or achievable goals. These priorities should adhere to the following principles: (i) **achievability**—Priorities should not be abstract ideals or benchmarks based on competitors in significantly more advantageous starting positions but rather tasks attainable in the future for the specific community in question; (ii) **balance**: It is preferable to achieve improvements across a wide range of indicators rather than having some indicators perform exceptionally well while others perform very poorly; (iii) **clear formulation (specificity)** – priorities should not be framed as political slogans or well-meaning aspirations but as specific measurable indicators or achievable goals.

Without such clarity, it becomes impossible to track progress toward the priorities or use them as a guide for decision-making in specific management situations within the community.

Thus, the following requirements for the set

of sustainable development priority indicators for territorial communities can be highlighted, consistent with the standard requirements for indicators established by economic system theory: (i) **reliability**—the correctness of the information provided, perceived as synonymous with truthfulness by the recipient; (ii) **relevance**—importance for the present time and applicability for decision-making at this moment; (iii) **informational value**—providing as much information as possible to decision-makers.

It is important that:

- **informational value** is combined with **non-redundancy** (the set of indicators should strike a balance between informativeness and non-redundancy);

- **non-excessiveness**: The set of sustainable development priorities should include only those that are useful for managerial decision-making;

- **utility**—alignment with the needs of strategic management decision-making to ensure sustainable development. This is evaluated based on the applicability of indicators to address the tasks faced by the territorial community in the context of sustainable development;

- **objectivity** – Sustainable development priorities should exist and reflect the essential features of the functioning of the territorial community independently of human perception or subjective interpretation by researchers, department heads, or community leaders. Indicators should represent an objective reality.

RESULTS AND EXPLANATIONS

In the practice of managing a territorial community, various indicator systems are widely used to assess the state of specific areas of activity (or development directions) of the community from a chosen perspective (which serves as the foundation for forming the indicator system). The most widespread are the Balanced Scorecard (BSC) system and the "Tableau de Bord" system (translated from French as "dashboard" [6]). These systems allow for consideration of both financial indicators (aggregated financial characteristics at higher levels of organizational management) and non-financial indicators (at lower levels of

the organizational management hierarchy).

The greatest recognition in theory and practice has been given to the implementation of such an approach in the format of the Balanced Scorecard (BSC) system and the Key Performance Indicators (KPI) system, which are widely used to assess the degree of achievement of organizational goals [7].

Summarizing the above, it should be noted that in the theory and practice of managing territorial communities, there is no single correct set of indicators used to substantiate strategic management decisions. Developing a universal set of indicators is impractical, as designing an indicator system requires consideration of the sectoral characteristics of the organization and the range of tasks for which the indicator system will be used.

The analysis also indicates that the examined indicators cannot be directly applied to formulating a set of sustainable development priorities for territorial communities, as they do not account for the specificities of Ukrainian economic practices, the characteristics of various economic sectors, their potential contribution to sustainable societal development, or the interests of stakeholders. Moreover, the analysis concludes that most of the common standard approaches to developing strategic management targets are focused exclusively on economic aspects, without considering the needs of sustainable societal development, environmental priorities, and other factors.

It is advisable to give sustainable development indicators for territorial communities a tree-like hierarchical structure (Fig. 1).

The integral indicator of sustainable development for a territorial community is a metric that reflects the degree of sustainability of the community's development in terms of the average achievement of the set sustainable development goals. Aggregated indicators for individual areas are consolidated average metrics for the identified spheres of sustainable development in the territorial community (ensuring the livelihood of the population, territorial development, entrepreneurial

development, the social sphere, and the environmental sphere).

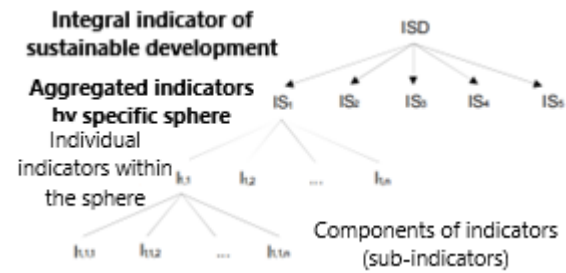


Figure 1. Hierarchical structure of indicators of sustainable development of the territorial community

Individual indicators within the spheres reflect specific characteristics that allow for an assessment of sustainability in the identified areas. These indicators can, in turn, be broken down into components (sub-indicators) if additional detail is required. Thus, the primary role is played by specific indicators that are directly aggregated into the integral sustainable development indicator and can also be subdivided into sub-indicators. The value of each individual indicator is denoted $I_{s,j,n}$, where s – is the index of the sustainable development sphere ($s = \overline{1, S}$), j – is the index of the indicator within the given sphere of sustainability assessment ($j = \overline{1, J_s}$), and n – is the index of the component of the j -th indicator within the s -sphere of sustainability assessment ($n = \overline{1, N_{s,j}}$, J_s – is the number of indicators in the sustainable development sphere, $N_{s,j}$ – is the number of components for the j -th показника s sphere of sustainability assessment).

It is important to delve deeper into specific spheres:

1. Ensuring the livelihood of the population. In Ukraine, the assessment of this sphere varies significantly as the situation in the country dynamically changes depending on the region. Overall, the key aspects include: (i) *basic needs*. access to food, water, medicine, and other essential goods remains generally intact, though supply disruptions may occur in regions affected by hostilities; (ii) *infrastructure*. Critical infrastructure such as energy, water supply, and transportation has

suffered damage due to the war, but repair and restoration efforts are ongoing across the country; (iii) *economy*. Ukraine's economy has been significantly impacted by the war, resulting in increased unemployment and inflation.

Relevant sustainable development indicators for this sphere include access to basic needs for the community's population: (i) *Percentage of the population with access to clean drinking water*. Reflects the level of access to safe and quality drinking water; (ii) *Percentage of the population with access to sanitation*. Indicates access to proper sanitation facilities such as toilets and sewage systems; (iii) *Poverty level*. Reflects the share of the population living below the poverty line, unable to meet basic needs for food, housing, and clothing; (iv) *Malnutrition rate*. Represents the proportion of children suffering from chronic malnutrition.

Key indicators for this sphere are access to basic needs and food security.

2. Territorial development. This sphere is evaluated based on the following factors: (i) *Quality of electricity supply*. Reflects the reliability and continuity of electricity supply; (ii) *Quality of water supply*. Indicates the quality of drinking water provided to the population; (iii) *Condition of transport infrastructure*. Represents the state of roads, bridges, public transport, and other transportation systems. (iv) *Access to the Internet*. Reflects the population's level of access to the Internet.

3. Entrepreneurship development. To assess the sustainability of this sphere, the following indicators are relevant: (i) *Number of registered businesses*. Reflects the dynamics of entrepreneurship development within the community; (ii) *Volume of production and services*. Indicates the contribution of entrepreneurship to the community's economy; (iii) *Business diversification*. Represents a strategy aimed at expanding a company's activities through new products, markets, or areas of operation. Its goal is to reduce risks, increase profits, and improve competitiveness; (iv) *Employment level*. Reflects the impact of entrepreneurship on the labor market; (v)

Investment level. Indicates the community's attractiveness to investors; (vi) *New jobs*. Reflects the creation of new jobs because of entrepreneurship development; (vii) *Innovations*. Represents the level of implementation of new technologies and products in businesses; (viii) *Competitiveness*. Reflects the ability of businesses to compete in the market; (ix) *Social responsibility*. Represents the level of businesses' involvement in addressing community social issues.

For measuring diversification, an adapted Herfindahl index can be used [8]:

$$0 \leq 1 - \sum_{i=1}^N (p_i)^2 \leq 1 - \frac{1}{N},$$

where N – is the total number of enterprises; p_i – is the share of the i -th enterprise in the total volume of service utilization by all enterprises in the territorial community.

4. Social Responsibility. In examining social responsibility, it is appropriate to focus on the main areas of social policy for territorial communities: ensuring employment, motivation, incentives and rewards, workplace safety, and social protection for the population.

In [9], social responsibility is analyzed from the perspective of corporate governance. The study also explores the patterns of corporate social responsibility (CSR) as a management theory, conducts a comparative analysis of the "synthetic" concept of corporate social activities and key alternative concepts such as stakeholder theory, corporate sustainability, and corporate citizenship. Additionally, it examines the relationship between CSR and modern strategic management concepts and substantiates promising directions for integrating CSR principles into management practices.

Based on the analyzed works, sustainable development in the social sphere can be summarized as ensuring decent working conditions and wages, fostering the development of territorial communities, and implementing social support measures (both for community members and residents). It is essential to consider that social policy depends on available financial resources and the readiness and willingness of owners,

shareholders, employers, and management to allocate funds for its implementation.

The following are proposed as key social indicators: (i) *Crime rate*: Reflects the level of crime in the country; (ii) *Education level*: Indicates the educational attainment of the population; (iii) *Healthcare level*: Reflects the accessibility and quality of medical services.

5. Environmental Responsibility. In the environmental sphere, responsibility is about reducing the negative impact of production, implementation, and use of products (from raw material extraction to end-user consumption). In practice, this may include a wide range of measures, such as: (i) Reducing waste during production and implementation of products; (ii) Preventing water and air pollution during production and implementation; (iii) Considering recycling potential in all processes, starting from product design; (iv) Environmental activities, such as reforestation and tree planting; (v) Training employees in environmental practices; (vi) Collaborating with national and local authorities on environmental protection; (vii) Requiring suppliers to produce materials responsibly and use more environmentally friendly materials; (viii) Supporting national and local authorities in developing environmental policies tailored to industry specifics; (ix) Assisting non-governmental, non-profit organizations in environmental protection; (x) Regularly publishing information about the company's environmental activities and their results.

Since these activities are implemented through allocated funds, and because it is impossible to define and formalize a universal list of measures while maintaining model versatility, it is advisable to consider environmental responsibility in terms of allocated funds for environmental purposes without detailing specific measures.

Key priorities in the Environmental and Social Spheres can be formulated as follows: (i) levels of air, water, and soil pollution; (ii) consumption of water, energy, and other natural resources; (iii) number of protected areas, population of rare species of animals and plants; (iv) participation in environmental initiatives and number of environmental

emergencies.

Summary of Strategic Priorities for sustainable development (emphasizing the desirability of improving relevant indicators) for territorial communities are summarized in Table 1.

Table 1 – Sustainable development indicators of the territorial community

Notation	Indicators	Sub-indicators	Standard
Ensuring the livelihood of the population			
I _{1,1}	Share of the population with access to basic needs	By types of needs	1
I _{1,2}	Food security	By poverty level	1
Territorial development			
I _{2,1}	Quality of utility networks	By types of utility networks	Best in the region, country
I _{2,2}	State of the transport infrastructure	By type of transportation system	Best in the region, country
Entrepreneurship development			
I _{3,1}	Number of registered enterprises	By activity type	1
I _{3,2}	Degree of enterprise diversification	By activity type	1
Social Responsibility			
I _{4,1}	Crime rate	No	1
I _{4,2}	Education level	By education levels	1
I _{4,3}	Level of healthcare	Accessibility and quality of medical services	Best in the region, country
Environmental Responsibility			
I _{5,1}	Level of environmental pollution indicators	By type of natural resource	1

$I_{5,2}$	Share of renewable energy sources used	By type of renewable source	1
$I_{5,3}$	Share of waste sorted for recycling	By waste type	1

Through the application of a specific list of indicators characterizing individual spheres of sustainable development assessment, it becomes possible to calculate the integral indicator of sustainable development:

$$ISD = \sum_{s=1}^5 (IS_s \times w_s),$$

where IS_s – the value of the indicator characterizing the s -th sphere of activity of the territorial community, selected from the perspective of the community's sustainable development; w_s – represents the weighting coefficient for the s -th sphere of sustainability assessment, with the condition that $\sum_{s=1}^5 w_s = 1$.

The value of w_s should be proportional to the importance of the given sphere in terms of sustainability assessment. However, it is not possible to provide an objective evaluation of the weighting coefficients, as they are determined by the specific goal-setting priorities of the community's leadership. By default, equal values for the weighting coefficients can be assumed.

The value of IS_s depends on the values of individual indicators within each sphere:

$$IS_s = \sum_{j=1}^{J_s} (I_{s,j} \times w_{s,j}),$$

where $I_{s,j}$ – the value of the j -th indicator within the s -th sphere of activity of the territorial community, selected from the perspective of the community's sustainable development;

J_s – the number of indicators identified for assessing the s -th sphere;

$w_{s,j}$ – the weighting coefficient of the j -th indicator within the s -th sphere of activity of the territorial community, with the condition that $\sum_{j=1}^{J_s} w_{s,j} = 1$.

Similarly to w_s the value of $w_{s,j}$ should be proportional to the importance of the given indicator for the overall s -th sphere of the community's activity. Since it is not possible to

provide an objective evaluation of the weighting coefficients, it is reasonable to assume equal values for these coefficients.

If necessary, an indicator can be broken down into components (sub-indicators). In this case, it is calculated using the following formula:

$$I_{s,j} = \sum_{n=1}^{N_{s,j}} (I_{s,j,n} \times w_{s,j,n}),$$

where $I_{s,j,n}$ – The value of the n -th sub-indicator for the j -th indicator within the s -th sphere of the community's overall activity;

$N_{s,j}$ – the number of sub-indicators for the j -th indicator within the s -th sphere of the community's overall activity;

$w_{s,j,n}$ – the weighting coefficient of the n -th sub-indicator of the j -th indicator within the s -th sphere of the community's overall activity,

with the condition that $\sum_{n=1}^{N_{s,j}} w_{s,j,n} = 1$. The value of $w_{s,j,n}$ is proportional to the importance of the given sub-indicator: (i) If the sub-indicators correspond to separate areas of the community's activities, their weighting can be proportional to the share of that activity area in the total volume of the community's activities; (ii) If the sub-indicators represent specific types of activities within the community, their weighting can be proportional to the share of that type of activity within the overall volume of the corresponding activity area used for the community's operations.

Since the initial indicators are heterogeneous, it makes little sense to use their raw values directly for calculating sustainable development indicators. Normalization is necessary by comparing them to a certain reference value, which represents the target that decision-making in the field of sustainable development aims to achieve.

Thus, $I_{s,j,n}$ will represent the result of comparing the actual value to the reference value, expressed as

$$I_{s,j,n} = \gamma(I_{s,j,n}^F, I_{s,j,n}^E),$$

where γ – the comparison function;

$I_{s,j,n}^F$ – the reference value of the initial indicator for assessing the n -th sub-indicator of the j -th indicator within the s -th sphere of the community's overall activity;

$I_{s,j,n}^E$ – the reference value of the initial indicator for assessing the n -th sub-indicator of the j -th indicator within the s -th sphere of the community's overall activity.

The comparison function is used to evaluate the desirability of a particular characteristic's value for a given indicator compared to a reference value. In the basic approach, it is advisable to use the function as the ratio of the characteristic of the studied territorial community to the reference value (for positive characteristics, such as the share of expenditures on environmental measures in the revenue from the community's activities) or as the inverse ratio (for negative characteristics, such as pollutant emissions).

That is:

$$\gamma(I_{s,j,n}^F, I_{s,j,n}^E) = \begin{cases} \frac{I_{s,j,n}^F}{I_{s,j,n}^E}, I_{s,j} \in I^+ \\ \frac{I_{s,j,n}^E}{I_{s,j,n}^F}, I_{s,j} \in I^- \end{cases},$$

where I^+ – the set of positive characteristics; I^- – the set of negative characteristics.

The limitation of the final value of a characteristic to 1 is intended to avoid distortions in calculations if, for some reason, the actual value exceeds the reference value.

The reference values of the characteristics are determined individually for each indicator and, as a rule, correspond either to a set target benchmark, values achieved by competing communities, or values attainable using modern technologies.

Thus, the final formula for calculating the sustainable development indicator for a territorial community takes the following form:

$$ISD = \sum_{s=1}^S (\sum_{j=1}^{J_s} (\sum_{n=1}^{N_{s,j}} (\gamma(I_{s,j,n}^F, I_{s,j,n}^E) w_{s,j,n}) w_{s,j}) w_s)$$

Considering the specifics of the calculations: $0 \leq ISD \leq 1$.

As seen in Table 1, the presented list of sustainable development priorities does not include standard economic indicators commonly used in managerial decision-making practices (such as profit, solvency, profitability, etc.). This exclusion was deliberate.

First, standard indicators are already

widely utilized in management practices, and there is no sense in duplicating them simply by labeling them as sustainable development priorities for a territorial community.

Second, a clear distinction was made between indicators reflecting economic efficiency and effectiveness and priorities that create conditions conducive to achieving economic efficiency and effectiveness but are not directly reducible to them.

In decision-making practice, it is proposed to use standard economic indicators together with the sustainable development indicators for territorial communities suggested here.

CONCLUSIONS

It should be noted that the provided list is not exhaustive and, as mentioned above, may vary depending on the goals and strategies of the leadership of the territorial community and the specific characteristics of each territorial community, particularly concerning the social and environmental priorities of sustainable development. Undoubtedly, there is a generally accepted understanding of the environmental and social responsibility of businesses. However, given the wide variety of areas for implementing measures, the task of researchers is not to create a definitive list of strategic priorities, goals, measures, or indicators, but rather to provide the leadership of the territorial community with decision-support tools in achieving strategic priorities. These priorities should be determined by the community leadership itself, considering their goals and strategies, the specifics of the community, sectoral characteristics, and generally accepted sustainable development goals.

A comprehensive set of sustainable development indicators for territorial communities has been developed, based on the Bellagio principles, which includes, considering sectoral specifics, groups of indicators for ensuring the livelihood of the population, territorial development, entrepreneurial development, as well as indicators reflecting the social and

environmental responsibility of the territorial community. This set of indicators can be used as criteria for substantiating management decisions in territorial communities.

ACKNOWLEDGMENTS

We express our gratitude to Y. Boiko for her critical comments during the research and preparation of the materials for publication.

FINANCE SUPPORTING

The research was conducted within the framework of the research work “The project management methodology of road traffic organization modernization for war and post-war reconstruction of territorial communities” (№ 4 DB-2023), state registration number 0123U101943, funded by the state budget of Ukraine. The project leader is S.D. Bushuyev, Doctor of Technical Sciences, Professor, Head of the of the Project Management Department of the Kyiv National University of Construction and Architecture.

REFERENCES

1. Stalinska, O.V. (2012) Implementation of the principles of sustainable development in the strategic management of the enterprise: monograph / NAS of Ukraine, Institute of Industrial Economics - Donetsk. – 320 p. (in Ukrainian).
2. Ovchynnikova, V.O. (2021-2022) Social responsibility as a tool for ensuring the sustainable development of railway transport enterprises in the context of the socio-economic crisis / V. Ovchynnikova, M. Korin, G. Obruch, I. Chornobrovka // Bulletin of Trans-Port and Industry Economics. # 76-77. - pp. 58-69. (in Ukrainian).
3. Brandon, P.S. (2005) Evaluating Sustainable Development in the Built Environment / P.S. Brandon, P. Lombardi. – Hoboken: Wiley Blackwell, 2005. – 240 p.
4. Redko, K., Miroshnichenko, V. (2022) Sustainable Development Research in Ukraine: Assessment of the Status of Goals Implementation. Entrepreneurship and innovation. 2022. № 22. С. 5-13. DOI: <https://doi.org/10.37320/2415-3583/22.1>
5. Daly, H. (1991), Sustainable Development: From Concept and Theory towards Operational

- Principles. Steady State Economics, 2nd edition, Island Press, Washington, USA.
6. Dow Jones Sustainability World Indexes Guide Book [Electronic resource] / Dow Jones Sustainability Indexes. – Mode of access: http://www.sustainability-index.com/djsi_pdf/publications/Guidebooks/DJSI_World_Guidebook_11%206_final.pdf/.
7. Business strategy for sustainable development: leadership and accountability for the '90s, International Institute for Sustainable Development, Deloitte & Touche, World Business Council for Sustainable Development, London, UK, available at: https://www.iisd.org/business/pdf/business_strategy.pdf
8. Voronkova, A.Ye. (2000) Strategic management of the competitive potential of the enterprise: diagnostics and organization / A.Ye. Voronkova. - Luhansk: VNZ, 2000. - 310 p. . (in Ukrainian).
9. Kaplan, R. S., McMillan, D. (2020) Updating the Balanced Scorecard for TripleBottom Line Strategies. Working Paper 21-028. Harvard Business School.

Підходи щодо оцінки сталості розвитку територіальних громад

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Анотація. Стаття присвячена дослідженню підходів та визначенню показників сталого розвитку для територіальних громад. Можливість використання принципів сталого розвитку при прийнятті управлінських рішень щодо розвитку територіальних громад потребує вироблення пріоритетів або цілей сталого розвитку. Такі пріоритети, у свою чергу, мають ґрунтуватися на критеріях, які можна виміряти й оцінити. На сьогодні, підходи сталого розвитку є одними із базових при підготовці пропозицій на фінансування територіальної громади чи оцінці останньої з боку можливих інвесторів. Проте, навіть при умові, що певні територіальні громади, вже активно використовують визначений термін при підготовці пропозицій чи при презентації громади на загал, мало хто з них, може достоійно визначити, які саме показники потрібно розраховувати.

У практиці управління територіальною громадою широко використовуються різні системи показників, покликані оцінити стан тієї чи іншої сфери діяльності (напряму розвитку)

громади з обраної точки зору (що лягла в основу формування системи показників).

Аналіз літератури показав, що існує достатньо підходів щодо пропозицій щодо визначення показників, які можуть характеризувати сталий розвиток громади. В статті пропонується використовувати белладжійські принципи для формування підходу щодо кількісних розрахунків. У статті пропонується застосування математичного апарату для розрахунку певних показників. Запропонований підхід містить, з урахуванням галузевих особливостей, групи показників забезпечення життєдіяльності населення, розвиток територій, розвиток підприємництва, а також показники, що відображають соціальну та екологічну відповідальність територіальної громади. Даний комплекс показників може використовуватися як критерій при обґрунтуванні управлінських рішень в територіальних громадах.

Ключові слова: сталий розвиток, територіальна громада, белладжійські принципи, інтегральний показник, стратегічні пріоритети.