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SCIENTIFIC PRINCIPLES OF ASSESSING THE EFFICIENCY OF DESIGN SOLUTIONS IN LAND USE ORGANIZATION SCHEMES

A. Tretiak, *Doctor of Economic Sciences, Professor,*

Corresponding Member of the National Academy of Agrarian Sciences of Ukraine

Email: tretyak2@ukr.net

ORCID ID: 0000-0002-1154-4797

Bila Tserkva National Agrarian University

V. Tretiak, *Doctor of Economic Sciences, Professor,*

Email: tretyak2@ukr.net

ORCID ID: 0000-0001-6779-1941

Sumy National Agrarian University

A. Lobunko, *Candidate of Economic Sciences (PhD)*

Email: lobunkoanton@ukr.net

ORCID ID: 0000-0005-3661-3719

Podillia State University

Ye. Butenko, *Candidate of Economic Sciences, Associate Professor*

ORCID ID: 0000-0002-5923-5838

Email: butenko@nubip.edu.ua

National University of Life and Environmental Sciences of Ukraine

A. Volontyr, *Senior Lecturer*

E-mail: a.volontyr@chdtu.edu.ua

ORCID ID: 0000-0001-5609-4569

Cherkasy State Technological University

Abstract. *The paper substantiates that the scientific basis for assessing the effectiveness of design decisions (in terms of economic, environmental and social efficiency) concerning land-use organization measures within land management schemes rests on a combination of general and individual principles. General principles include: 1.1) a scientifically grounded redistribution of land resources among land categories and types (subtypes) of land use aimed at comprehensive ecological, economic and social development of regions, districts and territorial communities and at forming sustainable (balanced) land use; 1.2) consistency between the designated purpose and the functional use of land; 1.3) priority given to agricultural and nature-conservation land use. Individual principles include: 2.1) organization of land use and land protection measures based on taking into account the zonal features of the territory and balancing environmental, economic and social interests, which ensures the achievement of a high level of ecological, economic and social efficiency, preservation of ecological stability and sustainable development of agro-landscape systems; 2.2) plurality and legal equality of forms of land ownership and management; 2.3) protecting land from adverse anthropogenic impact during land use; 2.4) creating conditions for increasing the capitalization and greening of land-use types (subtypes) while reducing their land intensity. Assessing the effectiveness of decisions based on general principles should rely on comparing changes in the ecological condition of land use, the value of land-use types (subtypes) and the added value generated. Assessing decisions based on individual principles — characteristic of specific land-use types, agricultural use in particular — should instead rely on comparing changes in indicators of land-use intensity and, ultimately, on an integral index. The proposed methodology was tested on the Uzyn amalgamated territorial community and on rural territorial communities of Khmelnytskyi oblast, confirming its practical applicability.*

Keywords: *integrated assessment of effectiveness, land use planning, land use organization, land use, design solutions, land use organization schemes.*

Problem statement.

Under Article 45 of the Law of Ukraine “On Land Management,” land management schemes substantiating the use and protection of land in administrative-territorial units are designed to determine the strategic directions of rational use of land resources and their protection. They serve as the basis for developing proposals in the sphere of land relations, improving the organization of land use, ensuring land protection, and redistributing the land fund with regard to the needs of agriculture, forestry and water management [1]. At the same time, sub-clause “g” of clause 1.5 of the Methodological Recommendations for the development of land management schemes and feasibility studies for the use and protection of land in administrative-territorial units, approved by the State Agency of Land Resources of Ukraine, provides for the mandatory determination of the economic effectiveness of measures proposed within the relevant land management schemes [2].

Land resources are one of the key and irreplaceable factors of production, and for the agrarian sector they constitute the basic condition for conducting economic activity and shaping the final results of production [4].

In this regard, ensuring the effective use of land potential remains among the priority directions of the socio-economic development of the state, especially in the context of the functioning of agricultural producers. The issue of assessing the effectiveness of land use has traditionally been at the centre of attention of economic science and is connected with the development of production relations throughout the entire history of society’s economic activity [6].

Generally accepted approaches determine the effectiveness of land use through the ratio of production results obtained to the area of land, the value of output produced, or the production costs incurred. At the same time, the specific characteristics of land as a natural resource — in particular its spatially limited nature and the long period required to restore its natural properties — necessitate the application of specialized approaches to assessing the effectiveness of land use that differ from those used for other production resources [15].

Thus, the comprehensive assessment of the effectiveness of design solutions envisaged by land management schemes at the level of a region, district or territorial community remains a relevant scientific and practical task. Of particular importance is determining the social, economic and ecological effectiveness of measures aimed at the rational organization of land-resource use, its protection, and ensuring balanced territorial development.

Purpose of the article.

The purpose of the article is to substantiate the scientific basis for assessing the effectiveness (in economic, ecological and social terms) of design solutions concerning the organization of land use within land management schemes.

Research materials and methods.

The study employed a set of general scientific methods of cognition aimed at examining the legal and regulatory basis for developing regional-level land management schemes. The information base comprised the current legal and regulatory acts of Ukraine, in particular the Land Code, the Law of Ukraine “On Land Management,” and the Methodological Recommendations for the development of land management schemes and feasibility studies for the use and protection of land in administrative-territorial units, approved by the State Agency of Land Resources of Ukraine. The systemic method was used to reveal the relationships among the factors determining the level of agricultural land use, as well as the ecological, economic and integral effectiveness of the proposed design solutions. The generalization method was applied to substantiate practical recommendations and conclusions concerning the improvement of the methodological, procedural and applied foundations for assessing the integral effectiveness of design solutions within land management schemes.

Analysis of recent research and publications.

The issue of assessing the effectiveness of agricultural land use is one of the important areas of research in the field of land-use economics, land management and land-resource governance [3–7, 15, 16]. A significant contribution to the development of the theoretical and methodological foundations for the rational use of land, and to determining the economic, ecological and social effectiveness of land use, has been

made by A. O. Hutorov and O. I. Hutorov [3], V. M. Druhak [4], M. V. Zos-Kior [5], I. V. Koshkalda [6], R. M. Kuryltsiv [16], A. M. Tretiak, V. M. Tretiak and their scientific schools [7, 9, 11].

The works of these authors substantiate approaches to assessing the effectiveness of land-resource use, forming balanced land use, and ensuring the sustainable development of agro-landscapes [4–9, 15, 16]. Particular attention has been paid to issues of land-resource management, improving the institutional environment of land use, and the economics of land management [5, 7, 9, 11, 13].

At the same time, under the Law of Ukraine “On Land Management” and the Methodological Recommendations for the development of land management schemes, it is necessary to substantiate measures for the rational use and protection of land and to determine their effectiveness [1, 2]. This creates the need to develop effective methodological approaches to assessing the effectiveness of design solutions envisaged by land management schemes.

Despite the considerable body of scientific work, studies devoted to the integral assessment of the effectiveness of design solutions concerning the organization of land use within land management schemes remain few [12, 14]. Most existing approaches focus on individual economic, ecological or social aspects of land use without a comprehensive generalization within a single effectiveness indicator [8, 12].

Among the few studies proposing a methodology for the integral assessment of the effectiveness of design solutions in land management schemes are the works of A. M. Tretiak and A. V. Lobunko [14]. At the same time, the question of adapting such methodological approaches to the conditions of individual regions and territorial communities requires further scientific elaboration [14, 15].

Thus, despite substantial scientific achievements in the field of land-use economics and land-resource management [3–11, 15, 16], the problem of the integral assessment of the effectiveness of design solutions in land management schemes remains relevant and requires further development in light of modern requirements for the balanced use and protection of land resources [1, 2, 12, 14].

Presentation of the main research material.

Land use at the level of regions, districts and territorial communities is a complex system inseparably linked with the natural environment in which it functions. The state of the territory's environment depends to a large extent on how fully the natural conditions are taken into account during the functioning of this system and how organically it is integrated into them. Consequently, the further improvement of the organization of land use must take place exclusively on an ecologically sound basis. Land management design should play the role of a regulator of land use aimed at preventing erosion processes, preserving soil fertility, and forming sustainable (balanced) land use [9].

Land resources constitute a strategic asset of society, and society must therefore closely monitor the forms, methods and means of their use. For this reason, land relations belong among the special objects of control — both on the part of public authorities and civil society [13]. The concept of sustainable (balanced) land use, conditioned by the exhaustibility, non-renewability and ecological vulnerability of land resources, calls for strengthening state intervention in land relations in order to uphold the key principles of fair distribution, effective use, and the ecological safety of land use as a whole. State regulation of land use is thereby regarded as a process of selecting and optimizing methods and instruments that directly or indirectly affect the level of effectiveness of land-resource use, taking into account the interests of society and individual land users. The foundation of land-resource and land-use management should be a state policy oriented towards high-technology and ecologically safe land use, consistent with the nature of a regulated, socially oriented market economy [7].

The issue of increasing the effectiveness of land-resource use has been sufficiently covered in the specialized economic literature, with researchers focusing mainly on technologies for improving the effectiveness of agricultural land use and its ecological-economic aspects [5, 8]. In particular, V. Budziak notes that effective land use can be achieved only if the existing ecological problems of agricultural land use are taken into account beforehand and optimal ways of resolving them are sought [8]. At the same time, most ecological problems of land use are linked precisely to a lack

of well-considered management decisions, which should be developed in the course of land-management planning of land use and protection, in particular when developing land management schemes for the relevant territories [9].

The effectiveness of land use is ensured by observing the following principles:

1) a scientifically grounded redistribution of land resources among land categories and types (subtypes) of land use in the interests of the comprehensive ecological-economic and social development of regions (districts) and territorial communities, and of forming sustainable (balanced) land use;

2) consistency between the designated purpose of land and its functional use;

3) priority given to agricultural and nature-conservation land use;

4) organization of land use and land protection carried out with regard to the natural-climatic and zonal features of the territory and based on balancing ecological, economic and social development priorities, ensuring an increase in the effectiveness of land use, the maintenance of ecological stability, and the formation of resilient agro-landscapes and natural ecosystems [16];

5) diversity and equality of forms of land ownership and forms of management;

6) protection of land from adverse anthropogenic impact in the course of land use [13];

7) an increase in the capitalization and greening of land-use types (subtypes) accompanied by a simultaneous reduction in their land intensity.

Economic effectiveness should be interpreted as a category reflecting the operation of objective economic laws and manifested through the most important aspects of the organization of land use and protection — the capitalization and greening of land use, taking into account public and social interests. The effectiveness criterion serves as the yardstick by which society determines the level of effectiveness of land use and reveals the purpose of land-management design through the corresponding characteristics and parameters of indicators.

At present, the assessment of the effectiveness of land use as a unique natural asset [10] is based on a system of physical and value-based indicators. Following the approach set out in [9, 11], such indicators should reasonably be grouped into three

categories: indicators of land-use conditions, indicators of the effectiveness of land management, and indicators of the effectiveness of using land as a unique natural asset. On this basis, a classification of the types of effect produced by land-management measures within the land-management system has been developed [9], and indicators of social, economic, ecological and social effectiveness have been proposed for assessing design solutions in land management schemes.

Under current economic conditions, the use and protection of land are considered effective and rational when there is a simultaneous increase in output per unit of area, a reduction in unit costs per unit of output, an increase in the value of land use (positive capitalization), ensured ecological safety (an acceptable level of anthropogenic load and ecological stability of land use), growth in the gross value added generated by land use (calculated as the sum of the land-use profitability level and the wage level per unit of area), accompanied by a simultaneous decrease in land intensity [9].

It should be noted that the mechanism of state regulation of sustainable (balanced) land use relies on a set of general and individual principles. Given the scale and degree of influence on the economic development of land-use types (subtypes), the principles for regulating the effectiveness of land use and land relations by means of land management should be divided into general and individual ones, depending on which conditions of land use and protection they reflect. The first, second and third of the principles listed above are general, while the fourth, fifth, sixth and seventh are individual.

First, the introduction of a land-management mechanism for regulating the effectiveness of the organization of land use and protection, and of land relations, through a scientifically grounded redistribution of land resources among land categories and types (subtypes) of land use, makes it possible to achieve an appropriate degree of alignment between political and ecological-economic goals, and to combine administrative (regulatory) and economic methods of management and regulation. In other words, the economy within all land categories and types (subtypes) of land use is shaped through the development of management decisions in the course of land-

management design — in accordance with the functions of land as a unique natural asset under market conditions.

For example, a scientifically grounded redistribution of land among types (subtypes) of land use has a direct bearing on the intensity of land use and on the level of its capitalization and greening. Comparing the changes in the value of land-use types (subtypes) and their ecological condition under the design solutions of a land management scheme with the existing state makes it possible to assess the effectiveness of those solutions. To assess sustainable (balanced) land use according to the criteria of greening, capitalization and socialization, it is proposed to apply the methodological approach developed by A. M. Tretiak and co-authors [12]. Table 1 presents the normative values of the ecological, economic and social assessment of the main types of land use depending on the level of intensity of use of land and other natural resources in Ukraine.

Table 1. Normative values of the ecological, economic and social indicators of various types of land use, taking into account the intensity of natural-resource development in Ukraine [12].

“Groups of types by intensity”	“Types by level of land-use intensity”	“Ecological stability coefficient (K.e.s.)”	“Value of land use, UAH/ha”	“Value of land use, \$/ha”	“Gross value added, UAH/ha”	“Gross value added, \$/ha”
1	1.1.1. “Resource-industrial (extractive industry)”	0.00	62200	2356	4795	182
	1.1.2. “Forestry-industrial”	0.50	12000	455	600	23
	1.1.3. “Agricultural (traditional land use)”	0.20	25000	947	1895	72
	1.1.4. “Water-industrial (hydropower, water transport, fishing)”	0.50	26400	1000	2000	76
	1.1.5. “Residential (rural)”	0.40	663950	25150	50300	1905

“Groups of types by intensity”	“Types by level of land-use intensity”	“Ecological stability coefficient (K.e.s.)”	“Value of land use, UAH/ha”	“Value of land use, \$/ha”	“Gross value added, UAH/ha”	“Gross value added, \$/ha”
2	2.1.1. “Residential (urban)”	0.05	1897000	71856	143712	5444
	2.2.1. “Industrial (local)”	0.00	41547	1574	3148	119
	2.2.2. “Energy”	0.25	41547	1574	4197	159
	2.2.3. “Transport (linear)”	0.20	41547	1574	3598	136
	2.2.4. “Special (defence)”	0.10	20700	784	–	–
3	3.1.1. “Nature reserve”	1.0	73788	2795	6388	242
	3.1.2. “Nature-conservation”	0.90	36894	1398	3727	141
	3.1.3. “Health-resort”	0.60	47091	1784	3568	135
	3.1.4. “Recreational”	0.55	39237	1486	2973	113
	3.1.5. “Historical-cultural”	0.55	74566	2825	678	26
	3.1.6. “Forestry”	0.95	6000	227	400	15
	3.1.7. “Water-management”	0.80	13200	500	1330	50
	3.1.8. “Agricultural (non-traditional land use)”	0.51	50000	1894	4040	153
	3.1.9. “Homestead (personal peasant farm)”	0.51	37000	1402	2790	106

Note: US dollar exchange rate as of 17.10.2021: 1\$ USD = 26,400 UAH.

On the basis of these normative values for the types by level of land-use intensity, it is reasonable to calculate the value of land use for a given territory both under the existing structure of land-use types and under the land management scheme, taking into account the design proposals for changing the structure of types (subtypes) of land use (Table 2).

Table 2. Comparative assessment of the value of land use under the existing state and according to the design solutions for the territory of the Uzyn amalgamated territorial community, by key types of land use [13].

“Types (subtypes) of land use and land classes”	“Value, \$/ha”	“Area, ha”	“Value of land use, \$”
“1) Value of land use under existing land use”			
“Agricultural (traditional land use)”	947	23171	21942937
“Residential (rural)”	25150	909	22861350
“Public and other development”	50299	260	13077740
“Industry, transport, electronic communications, energy, defence and other purposes”	50379	2883	145242657
“Other purposes”	1486	499	741514
“Nature-conservation”	1398	333	465534
“Forestry”	227	734	166618
“Water-management”	500	335	167500
Total	7028	29123	204665850
“2) Value of land use with the authors’ proposals for changing the structure of types (subtypes) of land use”			
“Agricultural (traditional land use)”	947	14071	13325237
“Residential (rural)”	25150	909	22861350
“Public and other development”	50299	260	13077740
“Industry, transport, electronic communications, energy, defence and other purposes”	50379	2883	145242657
“Nature-conservation”	1398	333	465534
“Forestry”	227	734	166618
“Water-management”	500	335	167500
“Agricultural (non-traditional land use)”	1402	9100	12758200
“Recreational (rural green tourism)”	1486	499	741514
Total	7170	29123	208806350

The data in Table 2 show that the value of land use under the existing structure of land-use types amounts to \$204.7 million (\$7,028/ha), while, taking into account the design proposals for changing the structure of types (subtypes) of land use, it increases to \$208.8 million (\$7,170/ha) — that is, by \$4.1 million, or 2.0% more compared with the structure of types (subtypes) of land use as of 2017. Thus, the change in the value of land use in the territory of the Uzyn amalgamated territorial community indicates a

noticeable additional capitalization of land use (by 2.0%, or \$4.1 million), which confirms the effectiveness of the proposed design solutions.

An equally important general principle for regulating the organization of land use and protection and of land relations is achieving a balance between the designated purpose and the functional use of land, having regard to the vital interests and security of the individual, society and the state in the sphere of land use. The legal basis for realizing national interests and the life and security of the individual, society and the state is formed by the current laws and regulations. In this respect, what matters is not only the legislative consolidation of the priority of agricultural and nature-conservation land use, but also the ecological-economic substantiation of the public significance of such decisions, dictated by the need to ensure the food and ecological security of citizens and society as a whole [13].

To confirm the importance of observing the general principles outlined above for regulating the organization of land use and protection and of land relations by means of land management within land management schemes, use was made of the findings of A. M. Tretiak and A. V. Lobunko [14], based on materials from Khmelnytskyi oblast, where the ploughing (arable-land) ratio reaches 61.3% against a national average of 54% [9]. It was established that the main indicators of the effectiveness of arable-land use are changes in the intensity, land capacity, and the level of capitalization and greening of land use in the given territory, determined by the following indices:

- 1) the change in the land-use intensity index (I.int) — the ratio to a base, normative or average level under existing land use and under the land management scheme. The base level of arable-land use intensity is taken as the highest value of gross-output production (based on the yield of grain and leguminous crops); in particular, in Khmelnytskyi oblast this is the Horodok rural territorial community, whose indicator is taken as 1.0;

- 2) the change in the land-capacity index (L.c.) — the area of land per 1,000 UAH of gross output under existing land use and under the land management scheme;

3) the change in the land-use capitalization index — the level of change in the normative monetary valuation under existing land use and under the land management scheme;

4) the change in the ecological-condition index of land use under existing land use and under the land management scheme.

To assess the factors influencing the level of arable-land use in the territorial communities of Khmelnytskyi oblast, Table 3 summarizes the correlation coefficients between the value of gross output produced, on the one hand, and the fertility (soil-quality) score of arable land, land capacity, the land-use intensity index, and the normative monetary valuation (NMV) of arable land, on the other.

Table 3. Summary results of the calculation of correlation coefficients for the indicators studied [14].

No.	“Correlations”	“Correlation coefficients”
1	“between the value of gross output produced and the fertility (soil-quality) score of arable land”	0.34
2	“between the value of gross output produced and land capacity”	–0.99
3	“between the value of gross output produced and the land-use intensity index”	1.00
4	“between the value of gross output produced and the normative monetary valuation (NMV) of arable land”	0.56

The correlation coefficients obtained show that: 1) the relationship between the value of gross output produced and the fertility score of arable land is close ($r = 0.34$); 2) the relationship between the value of gross output produced and land capacity is very close and inverse ($r = -0.99$); 3) the relationship between the value of gross output produced and the land-use intensity index is very close ($r = 1.00$); 4) the relationship between the value of gross output produced and the normative monetary valuation (NMV) of arable land is likewise very close ($r = 0.56$).

The assessment of the effectiveness of the organization of land use with respect to implementing the main design solutions for diversifying the use of arable land

(increasing the area of field-protective and water-regulating forest belts, introducing soil-protective and soil-restorative crop rotations, and expanding the area of non-traditional land use) and intensifying land use in regional-level land management schemes is carried out using the following formula [14]:

$$I.soc.eff = I.int \times I.lc \times I.cap \times I.eco$$

Table 4 presents the results of calculating the integral effectiveness index of the main design solutions for diversifying the use of arable land and intensifying land use in the regional-level land management scheme, using as an example the rural territorial communities of Khmelnytskyi oblast.

The assessment scale is constructed as follows: if the value of the integral effectiveness index of the main design solutions lies within the range from 1.01 to 1.35, the proposed solutions for increasing the effectiveness of land use are considered satisfactorily effective; within the range from 1.36 to 1.50, moderately effective; and at a value above 1.51, highly effective.

According to Table 4, the average value across the oblast of the integral effectiveness index of the proposed design solutions is 1.28, which corresponds to a satisfactory level. At the same time, in nine rural territorial communities — Vinkovetska, Derazhnianska, Iziaslavska, Kamianets-Podilska, Letychivska, Novoushytska, Polonska, Slavutska and Shepetivska — the integral index exceeds 1.51, meaning that the proposed measures are capable of raising the level of land use to a highly effective one.

Table 4. Results of calculating the integral effectiveness index of the main design solutions of the land management scheme of Khmelnytskyi oblast [14].

“Model territorial communities”	“CO2 emission-reduction/absorption index (I.CO2)”	“Land-use intensity index I.int = I.proj.use/I.exist.use”	“Land-capacity index I.lc = LC.exist/LC.proj”	“Land-use capitalization index (I.cap.lu)”	“Ecological-condition index of land use (I.eco.lu)”	“Product of functional indices”	“Integral index of social effectiveness”
1. Bilohirska	0.74	1.13	1.64	1.68	1.08	2.488	1.20
2. Vinkovetska	1.27	1.37	2.15	2.06	1.04	8.014	1.52
3. Volochyska	0.55	0.97	1.47	1.45	1.13	1.285	1.05
4. Horodotska	0.62	1.00	1.50	1.49	1.09	1.510	1.08
5. Derazhnianska	1.82	1.35	2.00	2.02	1.03	10.224	1.59
6. Dunaivetska	0.69	1.14	1.71	1.71	1.08	2.484	1.20
7. Iziaslavska	3.83	1.50	2.25	2.24	1.03	29.823	1.97
8. Kamianets-Podilska	1.5	1.39	2.15	2.08	1.05	9.790	1.58
9. Krasylivska	0.61	1.03	1.57	1.54	1.10	1.671	1.11
10. Letychivska	3.83	1.44	2.18	2.14	1.04	26.759	1.93
11. Novoushytska	3.7	1.44	2.17	2.17	1.02	25.591	1.91
12. Polonska	2.35	1.37	2.00	2.04	1.04	13.661	1.69
13. Slavutska	1.64	1.35	2.00	2.03	1.04	9.348	1.56
14. Starokostiantynivska	0.55	0.98	1.53	1.47	1.12	1.358	1.06
15. Starosyniavska	0.53	0.94	1.40	1.41	1.12	1.101	1.02
16. Teofipolska	0.54	0.96	1.47	1.44	1.13	1.240	1.04
17. Khmelnytska	0.91	1.23	1.79	1.82	1.07	3.902	1.31
18. Chemerovetska	0.59	1.01	1.50	1.50	1.10	1.475	1.08
19. Shepetivska	3.83	1.38	2.10	2.06	1.03	23.551	1.88
20. Yarmolynetska	0.71	1.16	1.67	1.74	1.09	2.609	1.21
Total	0.83	1.18	1.85	1.76	1.06	3.380	1.28

Figure 1 presents a diagram of the integral effectiveness index of the main design solutions across the rural territorial communities of Khmelnytskyi oblast under the land management scheme, which clearly demonstrates the multifactorial nature of the integral assessment of the effectiveness of design solutions.

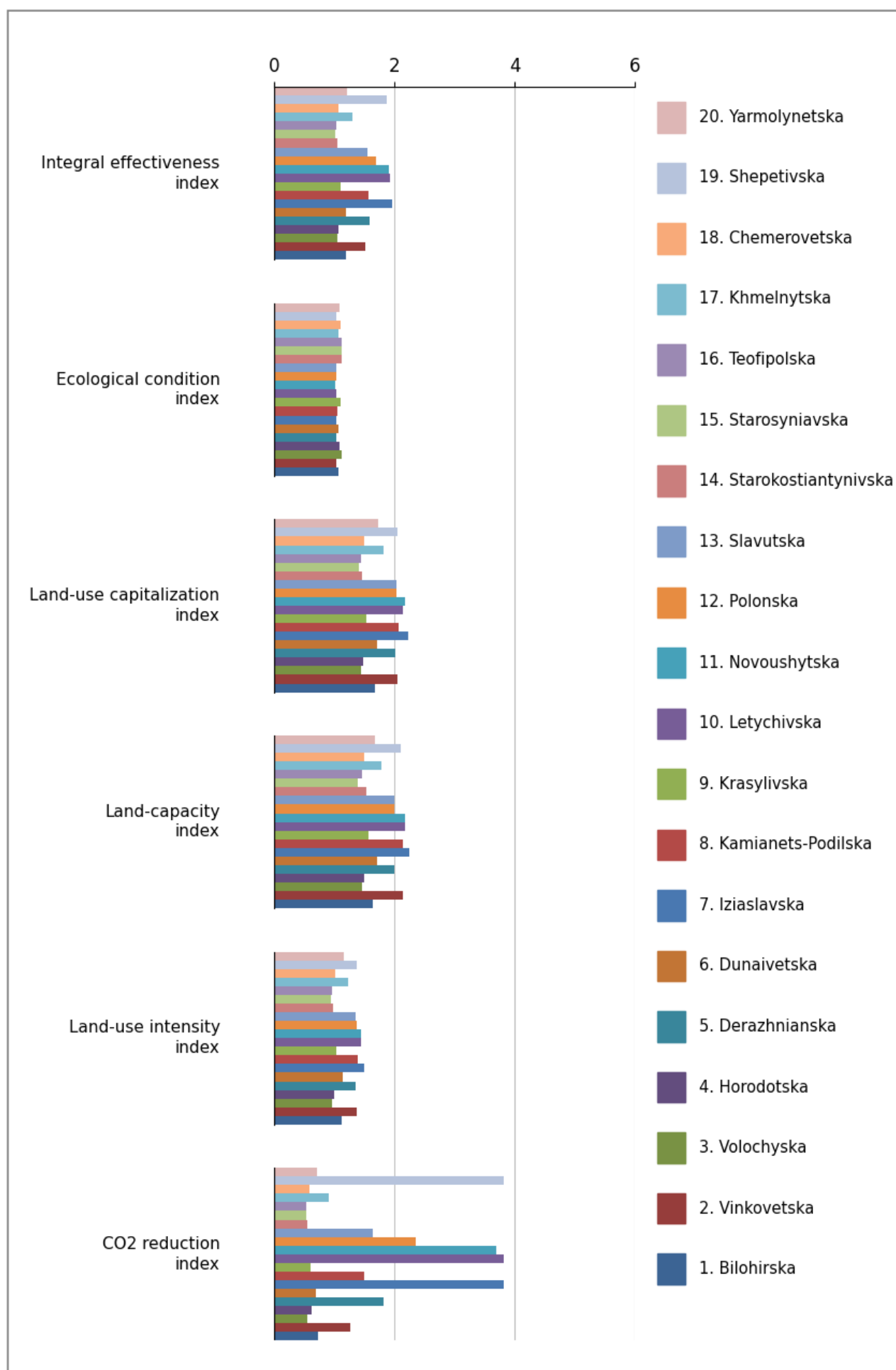


Fig. 1. Comparative chart of the integral index of the effectiveness of the main design solutions under the land management scheme, by rural territorial communities of Khmelnytskyi oblast.

Conclusions.

The study conducted confirms that the methodological basis for assessing the effectiveness (in economic, ecological and social terms) of design solutions concerning the organization of land use within land management schemes is formed by a combination of general and individual principles. The general principles include the scientifically grounded distribution of land resources among land categories and types (subtypes) of land use in the interests of the comprehensive ecological-economic and social development of territories, the consistency between the designated purpose and functional use of land, and the priority of agricultural and nature-conservation land use. The individual principles cover taking into account zonal conditions and combining the ecological, economic and social interests of society [16], the diversity and equality of forms of land ownership, the protection of land from adverse anthropogenic impact [13], and the increase in the capitalization and greening of land-use types (subtypes) accompanied by a simultaneous reduction in their land intensity.

It has been established that the effectiveness of decisions based on general principles should reasonably be assessed by comparing changes in the ecological condition of land use, the value of land-use types (subtypes), and the added value generated, whereas decisions based on individual principles (in particular those characteristic of agricultural land use) should be assessed by comparing the dynamics of land-use intensity indicators, followed by the determination of an integral index. The calculations performed for the Uzyn amalgamated territorial community and the rural territorial communities of Khmelnytskyi oblast confirmed the practical applicability of the proposed methodological approaches: the additional capitalization of land use in the Uzyn amalgamated territorial community amounts to 2.0% (\$4.1 million), while the average value across Khmelnytskyi oblast of the integral effectiveness index of design solutions is 1.28, corresponding to a satisfactory level, whereas in nine

territorial communities it exceeds 1.51, indicating the high effectiveness of the proposed measures.

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А. М. Третяк, В. М. Третяк, А. В. Лобунько, Є. В. Бутенко, А. В. Волонтир
НАУКОВІ ЗАСАДИ ОЦІНКИ ЕФЕКТИВНОСТІ ПРОЕКТНИХ РІШЕНЬ У
СХЕМАХ ЗЕМЛЕУСТРОЮ

Анотація. У статті обґрунтовано положення про те, що концептуальну базу оцінки результативності проектних рішень (за економічною, екологічною та соціальною складовими ефективності) щодо організації землекористування у складі схем землеустрою утворює поєднання загальних та індивідуальних принципів. До групи загальних віднесено: 1.1) науково виважений перерозподіл земельних ресурсів між категоріями земель і типами (підтипами) землекористування в інтересах комплексного еколого-економічного й соціального розвитку регіонів, районів та територіальних громад, а також становлення сталого (збалансованого) землекористування; 1.2) відповідність цільового призначення земель їхньому функціональному застосуванню; 1.3) переважання сільськогосподарського та природоохоронного напрямів у використанні земель. Індивідуальні принципи охоплюють: 2.1) організацію

землекористування та заходів із охорони земель на основі врахування зональних особливостей території та збалансування екологічних, економічних і соціальних інтересів, що забезпечує досягнення високого рівня еколого-економічної й соціальної результативності, збереження екологічної стабільності та сталого розвитку агроландшафтних систем; 2.2) різноманітність і рівність форм власності на землю та форм господарювання; 2.3) охорону земель від негативного антропогенного впливу в процесі землекористування; 2.4) зростання капіталізації та екологізації типів (підтипів) землекористування за одночасного зниження їхньої землеємності. Оцінку ефективності рішень, що ґрунтуються на загальних принципах, доцільно проводити через порівняння змін екологічного стану землекористування, вартості типів (підтипів) землекористування та приросту доданої вартості. Натомість ефективність рішень, які базуються на індивідуальних принципах і характерні для конкретних типів землекористування (зокрема сільськогосподарського), варто оцінювати методом зіставлення динаміки показників інтенсивності використання земель із подальшим розрахунком інтегрального індексу.

Ключові слова: інтегральна оцінка ефективності, землевпорядкування, землеустрій, землекористування, проектні рішення, схеми землеустрою.