



ДНІПРОВСЬКА
ПОЛІТЕХНІКА
1899

НАУКОВИЙ ВІСНИК

Національного
гірничого університету

Рецензований
журнал

2 2023

194

Геологія

Розробка родовищ корисних копалин

Фізика твердого тіла, збагачення корисних копалин

Геотехнічна і гірнична механіка, машинобудування

Електротехнічні комплекси та системи

Технології енергозабезпечення

Екологічна безпека, охорона праці

Інформаційні технології, системний аналіз та керування

Економіка та управління

ЗМІСТ

Геологія	5
П. Г. Пігулевський, О. В. Кендзера, К. В. Бабій, Л. Б. Анісімова, О. С. Кирилюк. Зв'язок тектоніки Кривбасу із природною й техногенною сейсмічністю	5
Д. В. Рудаков, О. В. Інкін. Підхід до ранжування закритих шахт відносно ефективності використання їх геотермального потенціалу	11
М. О. Мізерна, А. П. Мірошнікова, А. І. Мізерний, К. Т. Зікірова, З. І. Черненко. Геологія, магматизм і особливості мінералізації Бакирчикського рудного поля (Східний Казахстан)	19
Розробка родовищ корисних копалин	25
Є. А. Коровяка, М. Р. Мекшун, А. О. Ігнатов, Б. Т. Ратов, Я. С. Ткаченко, Є. М. Ставичний. Визначення технологічних показників властивостей бурових розчинів	25
Тієн Трунг Ву, Хунг Дук Фам. Вплив підземних гірничих робіт на топографічну поверхню на прикладі вугільної шахти Нуї Бео (В'єтнам)	33
А. О. Герасименко, В. О. Расцветаєв, А. Л. Ширін. Вибір засобів допоміжного транспорту та адаптація їх параметрів до специфічних умов експлуатації	40
Фізика твердого тіла, збагачення корисних копалин	47
В. С. Моркун, Н. В. Моркун, В. В. Тронь, О. Ю. Сердюк, А. А. Гапоненко. Використання нелінійних ультразвукових вимірювань для оцінки параметрів осадження твердої фази пульпи в дешламаторі	47
Геотехнічна і гірнична механіка, машинобудування	53
С. М. Пономаренко, І. Ю. Потапчук, Л. Б. Кабакова, Ю. М. Радченко. Закономірності руху аеросуміші в робочій зоні кільцевого ежектора пневмотранспортної системи	53
В. Г. Шаповал, Г. П. Іванова, С. М. Гапєєв, В. В. Янко, С. О. Барсукова. Контактні напруження під подошвою жорстких фундаментів глибокого закладення і ґрунтових анкерів	58
В. Еллер, С. Салаї, М. Сисин, Д. Гаррах, Я. Лю, Ш. Фішер. Ефект підвищення опору внутрішньому зсуву бетонного полотна баластного шару залізничної колії	64
Р. В. Пузік, В. Ю. Кондусь, І. В. Павленко, С. С. Антоненко. Вплив конструктивних особливостей робочого колеса на комбінований робочий процес вільновихрового насоса	71
М. Сайлигарасва, А. Нурлан, К. Рисбеков, С. Солтабаєва, Б. Амрالیнова, Ж. Джакупбекович. Прогнозування вертикальних зсувів конструкцій інженерних будівель та споруд	77
Технології енергозабезпечення	84
Р. В. Булгаков, Т. В. Рабоча, О. С. Фролов, А. В. Венцюк. Особливості термомодернізації системи опалення військових інфраструктурних комплексів	84
Екологічна безпека, охорона праці	91
В. В. Коваль, І. С. Міхно, О. Б. Жарікова, О. О. Цвірко, Т. К. Метіль, В. С. Ніценко. Інвестиційний менеджмент і фінансове забезпечення реновації інфраструктури сталого середовища	91
Н. М. Фіалко, Р. О. Навродська, С. І. Шевчук, Г. О. Сбродова. Підвищення екологічної ефективності димових труб скловарних печей при застосуванні теплоутилізаційних технологій	98
В. А. Цопа, С. І. Чеберячко, О. О. Яворська, О. В. Дерюгін, Т. О. Білько. Удосконалення процесу керування професійними ризиками за матрицею Хеддона	105
С. В. Тимошук, С. В. Писаревська, Р. С. Петришин, З. М. Яремко. Соціальна відповідальність за безпеку та здоров'я працівників на роботі	113
М. С. Долинська, Л. В. Ярмол, Н. В. Ільків, Р. Я. Бутинська, В. М. Масін. Теоретико-правові аспекти регулювання еколого-земельних правовідносин в умовах воєнного стану в Україні	118
Ф. Аїт Мерзег, Н. Баїт, Т. Мокрані, І. Аккарі, Р. Ладжі, К. Башарі. Адсорбція фенолу активованим вугіллям з оливкових вичавків: моделювання та оптимізація	125

Інформаційні технології, системний аналіз та керування	134
Б. Іссіна, Д. Козаченко, І. Таран, Г. Муратбекова, З. Бітілеуова. Підвищення ефективності використання магістральної та приватної залізничної інфраструктури в умовах транспортного ринку	134
Т. М. Циганкова, О. М. Яценко, Т. Є. Оболенська, Т. Ф. Гордєєва, В. Є. Осадчук. Вплив Індустрії 4.0 на стратегії виходу компаній на глобальний ринок послуг інтеграції даних	141
Г. О. Кришталь, Л. О. Згалат-Лозинська, О. В. Денисюк, Г. І. Скиба, Є. В. Панін. Вплив Індустрії 4.0 на цифрову трансформацію виробничих підприємств в Україні	149
Г. Гапіч, О. Орлінська, Д. Пікареня, І. Чушкіна, А. Павличенко, Х. Рубік. Перспективні методи визначення втрат води зі зрошувальних систем для забезпечення продовольчої та водної безпеки України	154
Економіка та управління	161
Н. Г. Калюжна, А. О. Ходжаян, І. Г. Барон. Економічна безпека України в умовах деструктивного впливу екзогенних детермінант	161
Л. М. Радзіховська, І. О. Гулівата, Л. П. Гусак, І. І. Ніколіна, О. В. Івашук. Особливості проведення оцінки результатів реалізації програм регіонального розвитку в Україні	171
О. Г. Вагонова, Н. Г. Метеленко, О. О. Шапуров, В. В. Чорнобасв. Ефективність та інтернаціоналізація гірничо-металургійних груп України	177
В. Д. Залізко, Р. Г. Добровольський, Ю. І. Мискін, О. М. Соколова, С. А. Дяченко. Дефінляндизація та нова економічна політика України у повоєнний період	184
А. Ю. Полчанов, Н. Г. Виговська, Т. П. Остапчук, С. М. Дячек. Детермінанти прибутковості підприємств ІТ-галузі: приклад України	190

„Науковий вісник НГУ“ включений до категорії А „Переліку наукових фахових видань України“ з геологічних та економічних наук (Наказ МОН України від 07.05.2019 р. № 612) і з технічних наук (Наказ МОН України від 11.07. 2019 р. № 975)

L. M. Radzihovska*¹,
orcid.org/0000-0003-0185-8036,
I. O. Hulivata¹,
orcid.org/0000-0003-4752-535X,
L. P. Husak¹,
orcid.org/0000-0002-0022-9644,
I. I. Nikolina¹,
orcid.org/0000-0001-7718-8599,
O. V. Ivashchuk²,
orcid.org/0000-0002-6439-0306

1 – Vinnytsia Institute of Trade and Economics of STEU,
Vinnytsia, Ukraine
2 – National Pirogov Memorial Medical University, Vinnytsia,
Ukraine
* Corresponding author e-mail: larirad@ukr.net

PECULIARITIES OF EVALUATING THE RESULTS OF IMPLEMENTATION OF REGIONAL DEVELOPMENT PROGRAMS IN UKRAINE

Purpose. To systematize current problems in the field of using modern methods for evaluating the effectiveness of regional development programs in Ukraine and to substantiate the scientific foundations of program evaluation methodologies in accordance with modern principles of program-target planning.

Methodology. In the process of work, generally accepted methods of scientific economic research were used, namely, systematic and comparative analysis of scientific literature, practices of development and implementation of spatial development programs in Ukraine and abroad, generalization, methods of logical abstraction and generation of conclusions.

Findings. As a result of the conducted research, a problem is established of the lack of a regional development program evaluation system in Ukraine, which reduces the effectiveness of the creation and implementation of such programs. The research lays out the foundations of a scientifically based methodology for monitoring and evaluating regional development programs, which has been tested in economically developed countries and requires further scientific elaboration and introduction into the practice of state regulation of post-war reconstruction and socio-economic development of the regions of Ukraine.

Originality. The scientific and practical prerequisites and the current state of the problem of forming a modern system for assessing the effectiveness of regional development programs in Ukraine are revealed. The concept of the theory and methodology of forming a modern evaluation mechanism of post-war reconstruction and development programs of Ukraine's regions is put forward, theoretically justified and confirmed by the practice of regional management in economically developed countries.

Practical value. The introduction of the proposed methodology for the development and implementation of regional development programs will ensure compliance of the practice of regional management in Ukraine with EU standards, which will contribute to European integration processes; will increase the capabilities of state authorities and local governments to attract funds for post-war reconstruction programs and further development of Ukraine's regions; will ensure transparency of the use of funds in the process of program implementation and reduce the level of corruption risks; will increase the efficiency of program implementation in general.

Keywords: *evaluation, monitoring, program, development, region, management, methodology, European integration*

Introduction. Regional development programs are a key management tool in economically developed countries. With the help of this tool, it is possible to reform other areas of the economy of Ukraine. When analyzing this area of management, i.e. programs, we can see that they exist in all regions and communities. However, when considering the content of these programs, it becomes obvious that they have a declarative nature and are not used as a tool for managing the socio-economic development of the territory.

There are many grounds for such a conclusion, namely: in Ukraine, unlike economically developed countries, there is no institutional body that deals with issues of socio-economic planning and forecasting the development of territories; there are no professionals and no training system for them, accordingly; the existing system of training and the structure of the programs do not meet the standards accepted today in the world; there is no system of financing the needs provided for by the program; there are no plans and schedules for the implementation of the program; the problems of creating and implementing programs do not receive due attention of scientists; management decision-making is not related to the needs of the program implementation; there is no evaluation system for program implementation.

From the entire set of shortcomings in this study, we consider it necessary to emphasize the issues of evaluating the implementation of regional development programs. Evaluation

and monitoring, according to modern methodology, should be planned during the development of the program, that is, these are a section of the program itself, monitoring and evaluation should be systematically carried out during the implementation of the program and after its completion. Improving of the evaluation system of regional development programs, based on international experience, will speed up the process of European integration of the country, give a powerful impetus to the improvement of the entire system of regional development programming in Ukraine and, accordingly, will significantly contribute to the solution of the complex problems of the functioning of the public administration system in Ukraine in general.

Current scientific problems in the specified field of research today are: conducting scientific research which is focused on the development of recommendations to the authorities of Ukraine at the national and regional levels regarding the formation of a modern institutional system for monitoring and evaluating spatial development strategies and programs; introduction of modern methods for program evaluation based on the experience of the USA and EU countries; determination of methods for increasing the capacity of government structures of Ukraine to carry out activities concerning the evaluation of the program implementation effectiveness.

Scientific substantiation and practical application of the methodology for evaluating the results of the regional development programs implementation in Ukraine will make it possible to solve a set of existing problems in this area, namely: establishing and systematizing program effectiveness criteria;

strengthening control over the rational use of funds allocated for the implementation of programs; increasing the transparency of both the implementation of programs and the activities of government bodies in general; wider involvement of the public and business in the process of implementing positive changes in communities through programs; ensuring the cyclicity of the program implementation (this is when the results of the evaluation of the previous program are the analytical basis for the formation of the next program).

This issue becomes especially relevant in the context of the necessity to form and implement programs aimed at eliminating the consequences of Russian military aggression in certain territories that have experienced the greatest destruction of the socio-economic infrastructure.

Literature review. Some aspects of the methodology for evaluating the effectiveness of regional development programs within the framework of general studies of the methodology of regional development programming are considered in the scientific works by such domestic scientists and economists as: V. Vartsaba [1], V. Vorotin, Ya. Zhalilo [2], N. Verkhoglyadova, V. Olinichenko [3], G. Kish [4], V. Kuybida, A. Tkachuk, T. Zabukovets-Kovachych [5], I. Shevchenko [6], and others.

At the same time, in the works of domestic scientists on this subject, the emphasis is put on the methodology of creating and implementing the programs and strategies of regional development, whereas insufficient attention is paid to the issues of planning and implementation of the evaluation, which largely neutralizes the potential practical effect of such practical developments. At the same time, the achievements of world economic science and practice in the field of planning and implementation of evaluation systems of regional development programs are insufficiently taken into account.

It is also important to pay attention to such an aspect as conducting the procedure itself (both in general when creating programs and when creating and implementing program evaluation systems) being underestimated by domestic scientists in the process of regional development programming research. The last aspect can be obviously explained by the traditional underestimation of the procedural aspects of the activity, which is generally inherent in the national mentality historically, as well as in the field of programming and evaluation procedures. In developed countries, procedural aspects are the object of thorough scientific research in the field of program evaluation. It is obvious that the attitude towards this aspect of scientific research should be changed in Ukraine.

Unsolved aspects of the problem. The need and importance for Ukraine of the scientific substantiation of the program evaluation model in order to ensure the objectivity and adaptability of the results in solving the problems of post-war reconstruction and spatial development of the country is being actualized after granting Ukraine the status of a candidate for membership of the European Union.

Uneven development of the regions of Ukraine, and, taking into account the current realities, the different degree of destruction of cities and regions of the country, the corresponding growth of differences in socio-economic development between regions is a well-known problem, although the methods for solving the differences in the evaluation and evolution of regional development are far from obvious. Methodological approaches to the evaluation of the level of economic and social development within regions are a particularly problematic aspect both in Ukraine as a whole and in individual regions.

Most of the existing approaches to the creation of territorial development programs in Ukraine do not at all provide for the creation of a system for evaluating the implementation of programs, which reduces the level of effectiveness of their implementation and makes it difficult to attract the necessary funds and resources. Existing programs, as economic models of development for large cities and regions, which have proven their effectiveness, are often difficult or impossible to apply in

small towns and communities precisely because of the lack of a standardized methodology for evaluating the effectiveness of programs.

Not only in the practice of managing regions, but also in the scientific literature in Ukraine, uniform approaches have not yet been developed regarding the selection of a system of indicators for evaluating the socio-economic development of individual regions and for interregional comparison.

An important aspect that requires improvement of the program evaluation approaches existing in Ukraine is the fact that the availability of a modern and transparent evaluation system for territorial development programs is an important prerequisite for the allocation of funds from partner countries and international organizations for the restoration of the infrastructure of Ukraine destroyed as a result of the war. In a practical aspect, the scientific study on the content of the methodology of regional development program evaluation is also actualized by the fact that Ukraine lacks a state body that would coordinate the development and evaluation of spatial development programs of local authorities, local self-government bodies at the national, regional, and local levels. Such a state body could potentially form a request for relevant research.

The purpose of the article is to deepen the theoretical and methodological provisions in the field of evaluating the effectiveness of regional development programs in the context of the European integration of Ukraine, the transformation of the state administration system and procedures in accordance with the standards of the EU countries.

Methods. In order to systematize trends in the process of creating and implementing regional development programs substantiated in the theories of regional development, as well as to prepare a scientifically based methodology for evaluating the effectiveness of spatial socio-economic development programs, there were used such methods, as: a systematic and comparative analysis of scientific literature, practice of creating and implementing spatial development programs in Ukraine and abroad, generalization, methods of logical abstraction and generation of conclusions. The following methods were also used in the research process: systematic and comparative analysis of documents, forecasting and formation of conclusions.

Results. Programs in the developed countries of the world are used as a universal tool for managing regional development. They contribute to the effective allocation of resources, determination of priorities and selection of those projects that ensure stability and regularity of positive changes. A program is usually taken as a group, framework, or collection of projects or activities that have a clearly defined time frame and are aimed at specific goals that lead to desired changes.

Unfortunately, the practice of creating and implementing territorial development programs without proper scientific justification has formed in Ukraine. However, since this process of formation took place decentralized and without a proper scientific basis, a situation arose when the programming methodology, which is standardized in developed countries, did not undergo integral adaptation to Ukrainian socio-economic realities, and now only individual fragments of this methodology are used. These fragments are mainly focused on the use of modern methods of situation analysis, such as brainstorming, goal tree. The elements of the modern system of monitoring and evaluating the implementation of programs are insufficiently used.

In 2002, the Cabinet of Ministers of Ukraine approved the Concept of using the program-target method in the budget process [7]. This concept does not provide for the application of the methodology for evaluating the effectiveness of programs.

In 2020, the State Strategy for Regional Development was adopted [8]. This strategy meets the modern requirements for state regulation of regional development; however, it is obvious that it needs to be revised, taking into account the recon-

struction of the infrastructure of the regions affected by Russian aggression. And it is evident that the effective implementation of the strategy is possible only if there is a modern methodology for evaluating the effectiveness of regional development programs in Ukraine.

An example of a superficial and fragmentary approach to the process of evaluating the effectiveness of regional programs and strategies is the "Methodology for creating, monitoring and evaluating the effectiveness of the implementation of regional development strategies at the initiative of the Ministry of Regional Development, Construction and Housing and Communal Services of Ukraine" approved in 2016 [9].

This methodology creates an illusion that a modern methodology for evaluating the effectiveness of regional development programs and strategies is used in Ukraine. By the way, it should be noted that, as follows from the content of this methodology and other developments of domestic scientists and practitioners, there is still no unequivocal understanding of the meaning and differences of the terms "program", "strategy", "forecast" and "plan" in Ukraine. Although in the world scientific community there are very clear and unambiguous distinctions between the meanings of these terms. This aspect requires a separate discussion that goes beyond the scope of this study. In the present research, we abstract from the differences in the interpretation of these terms, taking into account the fact that in general, any action plan should provide a system for evaluating its implementation and general methodological approaches for conducting such an evaluation.

The methodology proposed in Ukraine does not properly meet world programming standards. It is obvious that it was developed without taking into account the scientific achievements of domestic scientists in this field, since there are actually no scientific publications and discourse on this issue in our country, which would be based on modern achievements on this subject matter.

The methodology provides "a system of monitoring and evaluating the effectiveness of the implementation of the regional strategy, which provides for quantitative and qualitative indicators of the achievement of goals (which include gender-sensitive indicators) defined by the regional strategy, a forecast of the economic development of the region for the period of the strategy implementation, as well as a forecast of the impact on various groups of the population (women, men, girls, boys, persons with disabilities, etc.). At the same time, it is stipulated that the Council of Ministers of the Autonomous Republic of Crimea, regional, Kyiv and Sevastopol city state administrations: create monitoring groups, determine their composition and approve the procedure for their work; define a list of indicators for monitoring and evaluating the results of the implementation of the strategic goals and tasks of the regional strategy; determine the procedure for entering, verifying and publishing the results of monitoring and evaluating the effectiveness of the implementation of the regional strategy and plan of measures on their official websites" [9].

The creation and publication of methods for developing, monitoring and evaluating of the effectiveness of the implementation of regional development strategies is a step forward in the direction of building a modern system for evaluating the effectiveness of regional strategies and programs in Ukraine. At the same time, it should be noted that compared to modern approaches to evaluating the effectiveness of programs used in developed countries, the proposed approach is quite limited and insufficiently tested in practice.

This can be explained by the fact that, firstly, the subject of programming, in this case the council of a certain level, evaluates itself, which does not guarantee the objectivity of the evaluation process and results. In developed countries, in order to ensure the objectivity of the evaluation, external arbitrators, so-called "interested parties", namely program clients, members of the public, business representatives, etc. are involved into the evaluation process on a systemic basis.

And the question is not even that these methods do not allow for external evaluation of the program, but that it is not clear from the methods how exactly the involvement and participation of external stakeholders in the evaluation process should be carried out, the appropriate procedures are not provided for.

Secondly, the independent determination of the system of indicators by the subject of programming for the evaluation of the program, which is provided for by this methodology, is a rather strange approach and contradicts the approaches accepted in the world. After all, the possibility for the developer and executor of the program to determine the evaluation criteria of his/her own activity negates the objectivity and realism of such evaluation. On the other hand, the question arises why each council, developing a program, should "reinvent the wheel" in the sense of forming a system of indicators for evaluating the program at a time when scientifically developed and institutionally determined indicator systems for evaluating regional programs are used for this purpose in the world.

In our opinion, one of the reasons for this state of affairs is the fact that in the Soviet times there were domestic planning and programming methods that did not provide for result evaluation systems (the issue of program evaluation was the prerogative of the Communist Party, not the program developers or implementers). It is obvious that such an approach is mentally projected by domestic program developers for new economic conditions, limits the possibilities of paying due attention in modern market conditions to issues of evaluation of program implementation and planning of the evaluation system as a constituent component of the program.

Most of the existing approaches to the creation of territorial development programs in Ukraine do not at all provide for the creation of an evaluation system of the program implementation, which reduces the effectiveness of these programs and increases the economic risks associated with their use (risks of misuse of funds, risks associated with corrupt activities, etc.) [10].

Therefore, when forming a modern system for evaluating regional development programs in Ukraine, the experience of certain economically developed countries (first of all, EU countries and the USA) should be taken into account, as well as the generalization of this experience [11]. In the process of improving the program evaluation system in Ukraine, the work of experts of international projects implemented in Ukraine in the field of regional development can also be an important basis [12].

The process of measuring the effectiveness of regional development programs is generally defined as a set of measures intended to compare the compliance of the program's mission and goals with its actual results. The process of evaluating the effectiveness of the program should be clearly regulated in order to minimize the costs of conducting the evaluation, adapted to the specific conditions of a certain program, and also should be simple and understandable for users. The evaluation of program implementation results, in addition to descriptive characteristics and expert assessments, must necessarily be based on statistically reliable quantitative indicators [13], so that the results are comparable with indicators of GDP or its individual components [14]. Indicators and characteristics should be presented in the most concise form possible. And although the above mentioned general approaches to measuring the effectiveness of programs have been used for a long time, they remain the subject of scientific debate. The term "measuring program effectiveness" is used to identify a system of indicators for evaluating program effectiveness [15], to compare planned and actual program results, and to assess the level of clients' satisfaction with the implementation of the program [16]. The given methodical approach can be based on the analysis of an array of quantitative data reflecting the main goals of the program and regional development in general.

On the other hand, measuring the effectiveness of regional development programs is a multi-criteria and continuous eval-

uation process that is oriented towards long-term results and is based on those positive changes that are achieved due to the implementation of the program. Taking into account the provisions of the Concept of Sustainable Development, an important aspect of the effectiveness measuring process is the evaluation of the sustainability of the achieved results in the long-term perspective.

There are informal and formal evaluations of regional development programs. In informal evaluations, for example, during meetings, program administrators ask clients to express their wishes and suggestions for improving the activity. In addition to informal approaches to gathering information for evaluation and due to the fact that program administrators need to conduct evaluation regularly, evaluation is also conducted through a clearly defined and scientifically based procedure with the appropriate design of its results in the form of reports and recommendations.

Formal evaluation is also important from the point of view that the public closely follows regional development programs, finances them through the allocation of funds from the central and local budgets, contributions from businesses and public organizations, non-governmental funds. Therefore, it is quite natural that the public of the respective region wants to get acquainted with the received results of the program in the form of a written report.

The grounds for the evaluation can be divided into two main groups:

1. To prove, confirm, justify something (reporting).
2. To improve something.

It is obvious that most evaluations have a dual task, while the conduction of each specific evaluation can be assigned to the first or to the second group according to the evaluation priorities. Thus, for example, in the process of conducting evaluations, the task of which is only to write a report, information is used that is helpful for improving the process of programming work for the future.

There are many ways of conducting an evaluation, but all of them contain two elements: the first is the acquisition and accumulation of facts, indicators and evidence, the second is the comparison of the obtained facts with certain criteria.

Conducting both intermediate and final evaluations of the effectiveness of programs is determined by the necessity to: create a basis for making decisions regarding the initiation of programs, making changes to them, and terminating them; substantiate personnel changes; determine priorities; substantiate the directions of program implementation; form public opinion about programs; deploy and redistribute resources.

In Ukraine, program evaluation has been considered as a one-time and separate process, which is not related to the general and long-term dynamics of the development of the region. According to modern approaches, the evaluation of program effectiveness is a cyclical process that ensures the interconnection of previous and subsequent regional development programs. This process is as follows: program creation – formation of a system of evaluation criteria – creation of an information database for evaluation – analysis of indicators and facts – combination with the general process of regional management, conclusions – use of conclusions for the formation of the chronologically following regional development program.

Strategic planning involves taking into account the factors of external influence of this or that program on the future. One of these factors is stakeholders, organizations and people interested in this program. Those interested in checking and confirming the positive contribution of the program may be representatives of such population groups as: taxpayers, members of advisory committees of the program, representatives of controlling organizations, administrators of higher management levels. Another important category, which is also involved in the evaluation process, involves program participants, that is, those people who benefit from the program and at whom it is aimed. In addition, the opinion of those who

help to implement the program – volunteers and organizations, sponsors or partners – is also taken into account.

Theoretical studies on the participation of different categories of people in the evaluation process indicate that the more actively interested parties participate in the evaluation process, that is, in its planning, in the collection of factual information and in the process of reporting the results, the more effectively the results of the conducted evaluation will be used. Representatives of interested groups and organizations can act as volunteers to perform the following tasks in the evaluation process: telephone surveys, analysis of received data, reporting on evaluation results.

The following form (Table) may be useful for planning the evaluation process and involving stakeholders in it.

The expediency of conducting an evaluation when planning and implementing a specific program must be considered through the prism of the following criteria: the benefit of conducting an evaluation; realistic performance of the planned evaluation; compliance with the principles of ethics and confidentiality of the evaluation process; if an evaluation has already been conducted, how carefully it has been done.

Table

Form for planning the involvement of representatives of interested groups and organizations in the implementation of certain stages of the evaluation process

STAGES OF EVALUATION (those related to involving representatives)	Representatives of interested groups and organizations							
	responsible for the evaluation	participants (clients) of the program	employees and colleagues	advisory groups	regional and local specialists of advisory services	advisory services administrators	deputies and authorized representatives of authorities	institutions and organizations – sponsors of the program
1. Selection of the evaluation object								
2. Goal setting								
3. Task learning								
4. Selection of the level of influence								
5. Decision-making on “when, how and who” issues								
6. Selection or creation of documentation formats								
7. Validation or pilot testing								
8. Analysis of actual data								
9. Generalization of the obtained data								
10. Writing reports								
11. Submission and distribution of reports								
12. Assessment of the conducted evaluation process								

Highlighting five main stages in the process of evaluating the effectiveness of regional development programs, we will describe them. At the first two stages planning of the evaluation process takes place, whereas the last stage provides for the implementation of the evaluation, which is the result of the work carried out in the evaluation process. The first stage in conducting an evaluation is the selection of the evaluation object. This stage, in addition to a detailed description of the evaluation object, also involves determining the goal of the evaluation process, that is, it is determined what will be the main result of the evaluation – proving (confirming) something or improving it. The next, second stage of the evaluation is planning of the evaluation strategy (procedure). The third stage involves the collection of factual data for the evaluation. The fourth is the analysis of the information database. And the last, fifth, is reporting on the results of the program implementation.

The criteria of the program evaluation can be as follows: productivity, efficiency and satisfaction of customer expectations.

Quantitative and qualitative characteristics are used to evaluate the effectiveness of the program according to the defined criteria. Quantitative characteristics are used when it is possible to display information in digital form, for example through statistical data. Qualitative characteristics reflect information through a description of the return or contribution of the program in the form of words, phrases, quotes. Combined, the quantitative and qualitative components of the database complement each other, resulting in a more complete picture of the program's positive return and contribution.

There are many possible ways of collecting factual data: available reporting information (census results, production and financial reporting of enterprises, internal reporting of program administrators, statistical data, etc.); telephone surveys; sent out or distributed (and collected) questionnaires; personal surveys of respondents using questionnaires; work in groups; modeling; observation; public feedback; personal interviews with respondents (personal assessments of a private nature, interviews with leaders).

Most of the above mentioned techniques for collecting factual data can be adapted and used to collect information at various stages of programming: planning, design and implementation, and evaluation of the program.

To ensure the effectiveness of the process and results of the evaluation of regional development programs, group work methods are used: “formal group process”, “target groups” and “conceptual modeling”. They are generally accepted for use. With the help of these technologies, factual information is collected for planning and execution of individual stages of programming, however, along with this, group work technologies can also be applied at any stage of the evaluation process.

In the process of group work, formal and informal group processes are distinguished. The informal process is unregulated and it makes it possible to form a general impression about the effectiveness of the program. This process can be called formal because it concerns only a certain narrow and relatively permanent “formal” group and involves observing all the “formalities” of group work. Productive group work in this case is ensured by compliance with the appropriate procedure.

Program reviews are usually carried out in the last few days of its implementation by group meetings, each of which consists of at least three people who are “external” to the program. Such a group usually includes the program administrator, a specialist who has worked or is working in a program similar to the one being evaluated, and a specialist in the relevant field. Since the program review process is really time-consuming, it is very important to limit this review to only the most important issues and conduct it at a high organizational level.

Monitoring of the program, in the sense of controlling the process of its implementation, is important, because it often happens that the measures are not carried out as it was foreseen in the work plan of the program. During the implementation of the program, it may also be found out that, compared

to the plans, such available resources as time, personnel and materials are insufficient or have been wasted.

The monitoring process performs the following tasks: to provide evidence of the program being implemented; to determine whether the documentation and informational materials of the program are used or not to serve the target audience; to identify any difficulties and deviations from the plans that may arise during the implementation of the program. Self-monitoring is also carried out, which enables staff and other people involved in the implementation of the program to constantly improve their work process.

Analytical processing of data in the process of evaluating the program is carried out by means of various methods: calculation of average values; multifactor analysis, etc.

Evaluation of program implementation is not considered complete until the results of the evaluation are designed in the report form, and the reports are submitted as assigned and/or made public.

The report format should meet the needs and peculiarities of the audience for which the report is presented. That is, as a rule, the result of the evaluation is drawn up in several formats. Possible formats of the report for the general public are publications in the periodical press, radio and television broadcasts. Interested institutions and organizations can order the desired report form. Possible formats of the report in this case are: a video film, a booklet, a short or voluminous written report.

There is no generally accepted standard for a written report. Each body that administers the regional development program creates a certain general structure of the report, which is then adapted to the specifics of each program. The following report structure can be given as a general one: introduction; purpose and tasks; methodology; limitations; the results.

Conclusions. In general, it should be noted that, unlike economically developed countries where regional development programs provide the expected economic effect, in Ukraine they usually do not achieve the declared goals at both the state and regional levels. There are many reasons for this state of affairs; however, in our opinion, one of the main reasons is lack of a scientifically based modern methodology for evaluating the effectiveness of program implementation. Modern methods are the main procedures and methods of evaluation. Such a situation results in ineffective use of the funds involved in program implementation, because it is difficult to provide funds if the system of control over their use is unclear. Given that the main modern tool for regional development management is programs, the shortcomings and problems of the program evaluation system are one of the main limiting factors of regional development in Ukraine. This problem is becoming especially relevant in the context of the necessity to form post-war recovery programs for those regions of Ukraine that suffered from the consequences of Russian aggression.

In order to solve the defined problems, in this study we propose general methodological approaches to the evaluation of the implementation of regional development programs in Ukraine in accordance with the approaches that are generally accepted in economically developed countries.

Prospects for further research on this topic have two directions:

- further research on evaluation methods and technologies of regional development programs of Ukraine, their scientific justification and approval;
- adaptation of modern methodology for evaluating regional development programs of economically developed countries to modern socio-economic realities of Ukraine.

References.

1. Vartsaba, V.I. (2015). *Management of regional development: theory and practice of harmonizing the goals and interests of government, science, and business: monograph*. Ivano-Frankivsk: IFNTUNH. ISBN 978-966-347-084-9.

2. Vorotin, V. Ye., & Zhalil, Ya. A. (Eds.) (2010). *State Administration of Regional Development of Ukraine: monograph*. Kyiv: National Institute for Strategic Studies. ISBN 978-966-554-103-5.
3. Verkhohlyadova, N. I., & Olinichenko, I. V. (2013). The region as a self-governing socio-economic system. *Innovative economy*, 5(43), 113-117.
4. Kish, H. V. (2015). Strategic planning as a tool for managing the national economy. *Scientific Bulletin of Uzhhorod University. Series "Economics"*, 1(45), 3, 73-77.
5. Kuybida, V., Tkachuk, A., & Zabukovets-Kovachych, T. (2010). *Regional policy: legal regulation. World and Ukrainian experience*. Kyiv: Lesta. ISBN 978-966-8312-54-0.
6. Shevchenko, O. V. (2014). Priorities of regional development as a tool of strategic management of the regional economy. *Socio-economic problems of the modern period of Ukraine*, 3(107), 12-21.
7. Cabinet of Ministers of Ukraine (2002). *On Approval of the Concept of application of program-target method in budget process. Order*. Retrieved from <https://zakon.rada.gov.ua/laws/show/en/538-2002-%D1%80?lang=uk#Text>.
8. Cabinet of Ministers of Ukraine (2020). *On Approval of the State Strategy for Regional Development for 2021-2027. Resolution*. Retrieved from <https://zakon.rada.gov.ua/laws/show/695-2020-%D0%BF#Text>.
9. Ministry of Regional Development, Construction, Housing and Communal Services of Ukraine (2016). *Methodology development, realization of monitoring and estimation of effectiveness of realization of regional strategies of development and plans of measures, is on their realization. Order*. Retrieved from <https://zakon.rada.gov.ua/laws/show/z0632-16#Text>.
10. Ivashchuk, O. V., & Radzikhovska, L. M. (2015). The essence of the «economic risk» concept: retrospective and modernity. *Economic Annals-XXI*, 7-8(1), 4-8.
11. Romanyuk, S. A. (2013). *Development of regions in an open economy: theory, policy, practice: monograph*. Kyiv: NAPA. ISBN 978-966-619-330-1.
12. Mikula, N. A., & Zasadko, V. V. (2014). *Cross-border cooperation of Ukraine in the context of European integration: monograph*. Kyiv: National Institute for Strategic Studies. ISBN 978-966-554-238-4.
13. Carron, G., Mahshi, Kh., De Grauwe, A., & Gay, D. (2010). *Strategic Planning. Concept and rationale*. Paris: IPEE-UNESCO.
14. Fathabc, B. D., Fiscused, D. A., Goernerce, S. J., Bereace, A., & Ulanowicz, R. E. (2019). Measuring regenerative economics: 10 principles and measures undergirding systemic economic health. *Global Transitions*, 1, 15-27. <https://doi.org/10.1016/j.glt.2019.02.002>.
15. Adamisin, P., Kotulic, R., Mura, L., Kravcakova Vozarova, I., & Vavrek, R. (2018). Managerial approaches of environmental projects: an empirical study. *Polish Journal of Management Studies*, 17(1), 27-38. <https://doi.org/10.17512/pjms.2018.17.1.03>.
16. Badiu, D., Arion, F., Muresan, I., Lile, R., & Mitre, V. (2015). Evaluation of economic efficiency of apple orchard investments. *Sustainability*, 7(8), 1052-1053. <https://doi.org/10.3390/su70810521>.

Особливості проведення оцінки результатів реалізації програм регіонального розвитку в Україні

*Л. М. Радзіховська^{*1}, І. О. Гулівата¹, Л. П. Гусак¹,
І. І. Ніколіна¹, О. В. Іващук²*

1 – Вінницький торговельно-економічний інститут ДТЕУ, м. Вінниця, Україна

2 – Вінницький національний медичний університет імені М. І. Пирогова, м. Вінниця, Україна

* Автор-кореспондент e-mail: larirad@ukr.net

Мета. Систематизація актуальних проблем у сфері використання сучасної методики оцінки ефективності виконання програм регіонального розвитку в Україні та обґрунтування наукових основ методології оцінки програм у відповідності до сучасних принципів програмно-цільового планування.

Методика. У процесі роботи використані загальноприйняті методи наукових економічних досліджень, а саме системний і порівняльний аналіз наукової літератури, практики розробки й реалізації програм просторового розвитку в Україні та за кордоном, узагальнення, методи логічної абстракції та генерації висновків.

Результати. У результаті проведеного дослідження встановлена наявність проблеми щодо відсутності в Україні системи оцінювання програм регіонального розвитку, що знижує ефективність створення та реалізації таких програм. У дослідженні викладені основи науково обґрунтованої методології моніторингу та оцінювання програм регіонального розвитку, що апробована в економічно розвинених країнах і потребує подальшого наукового опрацювання й запровадження у практику державного регулювання повоєнного відновлення та соціально-економічного розвитку регіонів України.

Наукова новизна. Розкриті наукові та практичні передумови й сучасний стан проблеми формування сучасної системи оцінки ефективності виконання програм регіонального розвитку в Україні. Висунута, теоретично обґрунтована й підтверджена практикою регіонального управління в економічно розвинених країнах концепція теорії й методики формування сучасного механізму оцінки програм повоєнного відновлення та розвитку регіонів України.

Практична значимість. Запровадження запропонованої методики розробки та реалізації програм регіонального розвитку забезпечить відповідність практики регіонального управління стандартам ЄС, що сприятиме євроінтеграційним процесам; збільшить можливості органів державної влади та місцевого самоврядування щодо залучення коштів для програм повоєнного відновлення й подальшого розвитку регіонів України; забезпечить прозорість використання коштів у процесі реалізації програм і знизить рівень корупційних ризиків; підвищить ефективність реалізації програм загалом.

Ключові слова: оцінка, моніторинг, програма, розвиток, регіон, управління, методологія, євроінтеграція

The manuscript was submitted 24.07.22.