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Tetyana KALNA-DUBINYUK[1]

INTERACTIVE CONSULTING SYSTEMS FOR THE DEVELOPMENT OF DOMESTIC TOURISM

The article highlights the features of creating of tourist information and consulting centers with interactive systems in rural tourism. It is considered as an integral part of domestic tourism for the integrated socio-economic development of the village and its territories. The variety of types of rural tourism and the forms of accommodation of tourists complicate the search for a place of rest, indicating the need to improve the methods of information provision in this area. The use of integrated indicators of rural tourism improvement and the effectiveness of the organization of information and advisory support for the development of rural tourism show the need for computerization of rural areas, the formation of an electronic system of informational and consulting support for rural tourism development, the use of modern information technology. The importance of creating tourist information and consulting centers with the use of interactive systems in rural tourism with the provision of the necessary recommendations for prompt satisfaction of client's needs is emphasized.

Keywords: rural tourism, domestic tourism, interactive consulting

1. INTRODUCTION

Integration of Ukraine into the world economic space has led to the development of the tourism industry and its important component – rural tourism, which provides sustainable socio-economic development and the full existence of rural areas. A number of scientific studies of various aspects of rural tourism development point to the need to use modern information technology and consulting systems to promptly formulate the necessary recommendations for clients.

The modern concept of consulting systems and technologies is based on the optimal combination of computer equipment, computer networks, software, operating systems and databases that have their mission of accumulation, storage and transmission of large volumes of data in electronic form.

In Ukraine today there are a significant number of tourist information centers that provide information on tourist and recreational opportunities, including places, resources chosen by tourists in the region. However, the successful development of rural tourism in Ukraine is hampered by the imperfection of the process of providing information and consulting services.

[1] Tetyana Kalna-Dubinyuk, Doctor of Science (Economics), Prof., National University of Life and Environmental Sciences of Ukraine, Tourism and Extension Department Kyiv, Ukraine; e-mail: tatiankd@yahoo.com. ORCID: 0000-0002-6770-4833.

Information and consulting activity as an innovative component of the state's economic policy, combining science, education and production, acts as a catalyst for the scientific and technological process in agriculture, promotes the dissemination of new knowledge and is a well-founded and necessary component in the modern socio-economic conditions of the development of the agrarian sphere of production in Ukraine.

Having defined the main stages and positions that characterize the process of rural tourism, in particular, the regulatory and legal aspects, the features of different types of agro-homesteads and types of services in rural tourism, issues of categorization, etc., an interactive consulting system has been developed taking into account the specifics of the sector and trends in the development of information technology.

For operational satisfaction of clients' needs it is suggested to create tourist information and consulting centers using interactive consulting systems as a modern tool for cognitive and production activities with a significant arsenal of methods and programs for this purpose.

2. RESEARCH ANALYSIS AND PROBLEM STATEMENT

Despite the increased attention of scientists to the development of rural tourism, the issues of its information support, connected with the application of innovative consulting using information technologies, have not been thoroughly studied. The study of these issues was dealt with by foreign and domestic scientists, including Van den Benn, S. Johnson, V. Rivier, P. Sabluk, M. Kropivko etc. However, some issues regarding the role, place and main components of tourist information and consultation centers for rural tourism remain insufficiently highlighted and require comprehensive research. Particular attention today needs aspects of the development and application of interactive consulting systems in rural tourism. This problem is a new direction of scientific research of domestic scientists and needs due attention.

The purpose of the study is to reveal the role of interactive consulting systems in the development of rural tourism, as well as the creation of tourist information and consultation centers.

3. RESEARCH RESULTS

The development of Trism and the tourism industry in the world stimulates this process in Ukraine as well. “The tourism business is on the rise, indicators are the best in the last few decades, growth in 2018 – by 6.5% compared with last year (Statistical Yearbook of Ukraine, 2018). People travel the planet despite wars, natural disasters and threats of terrorism”, said Beck Dzhequely, Coordinator of the World Tourism Organization (UNWTO). To date, in Ukraine there are already 111 higher educational institutions with specialty tourism, hotel and restaurant business. The emergence in recent years of such a number of academic and scientific institutions with educational in tourism reflects the global trends in the economic growth of the sector and its components.

Rural tourism is a popular form of recreation, an important component of the tourism industry and the market of services. In modern conditions, rural tourism in Ukraine is gaining increasing importance and is one of the promising directions for sustainable development of the Ukrainian village [Rural green tourism].

Rural tourism is considered in Ukraine, as in most countries of the world, as an integral part of the integrated socio-economic development of the countryside and as one

of the means for solving many rural problems. It broadens the employment of the rural population, especially women, and provides peasants with additional earnings, increases the opportunities for employment of the farmer not only in the production sector, but also in the service sector. The development of rural tourism provides benefits not only for the economy, environmental protection, improvement of the ecological situation, it is also important for the united territorial communities, stimulates the development of the territories and the creation of new jobs, which leads to the influx of young specialists into the countryside.

According to the Union for the Promotion of Rural Green Tourism Development in Ukraine, under the current economic conditions, about three thousand farms providing rural tourism services are registered. However, the potential of rural tourism development in Ukraine is much higher, since there are 6.3 million residential houses in Ukrainian villages, of which 98% are privately owned. Researches show that the average annual number of able-bodied population in rural Ukraine is 6.4 million people, a significant number of whom are not employed or partially occupied, as well as the fact that every ten private peasant farms have the opportunity to provide services in the field of rural tourism.

Each region of Ukraine is characterized by its unique and special direction of development of rural tourism. In particular, the most favorable regions for the development of rural tourism in Ukraine, such as the Carpathian region, Transcarpathia, Slobozhanshchyna, Polissya, Podillya, and Bukovina. In these regions, about 90% of rural tourist farms are concentrated. The most popular rural travel services for each of the regions. In particular, in Ivano-Frankivsk and Transcarpathian regions, tourists are most popular in public holidays and ceremonies, visiting folk craftsmen, horseback riding. In Lviv region and in Chernivtsi regions tourists often take part in winter entertainments and village evening parties, etc.

In Table 1 presents the most necessary information for successful promotion of services in the field of rural tourism and the fate of respondents in this.

Table 1. Information for the successful promotion of rural tourism services

Information	Male	%
Information about potential consumers of services	191	63.8
Information on collective customers	163	54.3
Creation of a single information Internet portal of rural tourism	163	54.3
Analytical information on the development of rural tourism	159	52.9
Internet marketing for promotion of rural tourism to the market of tourist services	155	51.6
About contests, fairs and other events	153	51.1
Information on standards and quality management services	132	43.9
Other information	24	8.1

Taking into account the probabilistic nature of the influence of various factors on the development of rural tourism by types of information and consulting services, and in order to determine the level of development of the studied conditions and the objective assessment, applied methods of data processing using correlation-regression analysis, which allowed to identify the most important factors and the degree of interdependence

between them. The most important among them is the integrated indicators: improvement of rural tourism in Ukraine (I_{rb}) and the effectiveness of organizing information and advisory support for rural tourism development in Ukraine (I_{ef}) (Pugach, 2014).
So, in order to calculate the improvement of rural tourism in Ukraine, the availability of heating, gasification, sewage, water supply, baths in buildings, hard-coated roads, connection of "station-terminal arrival point" and so on.

The integrated indicator of the effectiveness of the organization of information and advisory support for the development of rural tourism in Ukraine is determined by the formula:

$$I_{ef} = \sum_{k=1}^{n} Ci(I_{rb}/C_{5)}),$$

where: C_1 – an increase in the volume of information and consulting services provided,
C_2 – increase of wages of consultants providing information and consulting agrotourist services,
C_3 – the amount of material assistance to consultants,
C_4 – growth of agro consulting structures that can provide services,
C_5 – the volume of services that do not meet the requirements and norms.

Forecast results of the integrated indicator of the effectiveness of the organization of information and consulting support for the development of rural tourism in Ukraine for the future are presented in table. 2 As can be seen from the table, there is an annual increase of this indicator.

Table 2. Integrated indicator of the effectiveness of organization of informational and consulting support for rural tourism development in Ukraine, 2005–2020

Years	Predictive evaluation of effectiveness*	Years	Predictive evaluation of effectiveness*
2005	0.33	2013	0,50
2006	0.40	2014	0.50
2007	0.41	2015	0.51
2008	0.42	2016	0.52
2009	0.45	2017	0.55
2010	0.45	2018	0.60
2011	0.47	2019	0.70
2012	0.50	2020	0.80

* Corresponds to: a sufficient level of > 0.80; unsatisfactory level of stability 0.4–0.59; a satisfactory level of 0.6–0.79; dangerous level 0.2–0.39; critical level <0.19.

In the assessment of effectiveness, the organization of information and consulting support for the development of rural tourism in Ukraine will approach a sufficient level in 2020, and in the current 2019 the level of 0.70 indicates its satisfactory level.

The effectiveness of the organization of information and advisory support for the development of rural tourism in Ukraine depends on various factors and conditions, in particular, the solvency of potential tourists, long-term expectations of socio-economic

and regulatory reforms in society, state support for rural tourism and the need for computerization of rural areas, formation of the electronic system of informational and consulting support for the development of rural tourism in Ukraine with the accumulation of databases, necessary for its effective functioning for making decisions both by tourists and consultants. Application of new information technologies – an interactive system of counseling on the development of rural tourism becomes of great importance.

The development of the globalization of economic relations and new ways of production based on the widespread use of information technologies, including the global Internet network, as well as the intensive formation of the information society, which is being realized on the total use and electronic exchange of information, require new methodological approaches to the organization of effective interaction, adequate to today's the realities of life. At the same time, tasks in the agrarian sector usually do not remain constant, but vary depending on internal and external factors, and these changes lead to changes in management methods, etc.

According to the European Federation of Management Consulting Associations (FEACO), information technology is currently most demanded by the western market. In Europe, information technology accounts for more than 40% of revenue earned by consultants (Survey of the European Management Consultancy 2016/2017). In the world ranking of consulting companies, the companies that are the first to receive information technologies are the first places to go (Leading Companies, 2017).

Such dominance in information technology consulting is due to the flexible formulation of recommendations that will allow you to organize the consultation process with the help of a computer, or any device with Internet access. Counseling technology is a sequence of consulting processes or operations that allows the technical implementation of the procedure for forming recommendations for solving the problems of a given counseling problem.

The modern paradigm of information technology in agriculture is support for various agrarian issues at anytime and anywhere, by any means and in any applied agricultural sector (Shapoval, Bolotina, Kalna-Dubinyuk, 2018.)

Consequently, information technology for rural tourism will be able to support a single chain: information – consultation – recommendation – decision-making. Implementation of the effective functioning of such a chain leads to the description and solution of a complex of interrelated practical tasks implemented on the basis of the construction of an integrated information environment, which is: the information environment on the basis of data and knowledge base, elements of information and reference systems, expert systems, geographic information systems and decision-making systems that work in the network of personal and handheld computers, mobile phones and the Internet environment; printed publications and brochures; interactive applications on electronic media.

Continuing to consider the current state of informational and consulting support for rural tourism in Ukraine, one should pay attention to the fact that there is a significant number of tourist information centers in Ukraine (Tourist Information Center). Tourist Information Center is a place where information on tourist and recreational opportunities, including places, resources, chosen by the tourist of the region is given. A characteristic feature of all tourist information centers in Ukraine is a number of services for visitors to the center, namely: the whole range of reference information; Promotional and promotional materials (brochures, maps, directories); Wi-Fi, Internet; reservation of

places in hotels and private farmsteads within a certain area; order excursion services (city tours).

Consequently, in the field of information and consultation providing for the development of rural tourism in Ukraine, certain measures are taking place. However, the successful development of rural tourism in Ukraine is hampered by the imperfection of the process of providing information and consulting services. The imperfection of informational and consulting provision of rural tourism management in the present conditions is characterized, first of all, by the lack of reflection of indicators of development of the industry, both quantitative and qualitative. This, in turn, leads to the leveling of their influence in the overall economic development of the region and the country as a whole and requires the use of modern information technology with interactive consulting systems.

An important component of the further development of consulting activities in Ukraine is the organization of the introduction and use of innovative consulting systems and technologies. Foreign experience of leading countries of the world, such as USA, Canada, Germany, testifies to the efficiency of their functioning on the basis of innovative models of activity (Johnson, Kalna-Dubinyuk, 2018). At the same time, innovative consulting systems and technologies become the main tool for distributing market information among agricultural producers and the population.

The modern concept of consulting systems and technologies is based on the optimal combination of computer equipment, computer networks, software, operating systems and databases that have their mission of accumulation, storage and transmission of large volumes of data in electronic form.

Innovations change the conditions and forms of accumulation, processing and transfer of large volumes of electronic information.

The application of innovative telecommunication facilities, Internet technologies, and innovative computer programs based on digital technologies and distance education creates conditions for a significant expansion of specialists' audiences at the local, regional and national levels. In this case, there is an unlimited possibility of involving specialists in the use of information, which is a reflection of the results of scientific research and the accumulation of new knowledge (Kudin, Kalna-Dubinyuk, 2018).

The rapid development of information technology contributes to the continuous dissemination of knowledge and information in society. In order for the information to quickly find its user, there are consultants – specialists who form qualified recommendations for its application. Such people should have modern consulting technologies and systems.

Creation of new highly effective interactive consulting systems will help the consultant to develop optimal recommendations for making scientifically sound solutions in various areas of problem solving.

Interactive consulting system is a complex human-machine system, which should combine machine processing of information and automation of the formation of recommendations with the activities of the person acting as the operator, manager, and expert. The role of a person, even at a very high level of automation of consulting processes, is leading, since it will always perform the most important functions – the choice of purpose and criteria for the formulation of recommendations, the search for alternatives to achieve the objectives of substantiating the methods of forming recommendations, technical and economic analysis etc.

Having determined the main stages and positions that characterize the process of organization of rural tourism, in particular, the regulatory and legal aspects, the features of various types of objects and areas of activity in rural tourism, the issue of categorization etc., an algorithm is created that allows organizing an interactive user dialogue (persons interested in organization rural tourism) with a consultation system. Ultimately, the system should provide the user with a set of recommendations that correspond to the information entered by him.

In a market economy, it is necessary not only to have knowledge, but to continuously replenish them. An interactive consulting system will help you succeed in rural tourism, provide knowledge and interactively get the answer to the customer's questions. The effectiveness of the interactive consulting system, its reliability and practicality is supported by software, which is a set of programs – an orderly set of commands designed to solve tasks on a computer.

The software is divided into three classes: the system (the programs are supplied with the computer); Applied (accounting, teaching, modeling programs) and instrumental editors (text, graphic, music), table data processing systems (table processors), database management systems, etc.).

A direct example should be the development of information and consulting support for the organization of village homesteads using modern software and logistics of a highly effective interactive consulting system (Kalna-Dubinyuk, 2018). With the programming languages HTML, CSC, XML, PHP there is an interface programming (a set of tools for human interaction and computer system) of this software product and building a logical system for solving consulting problems for rural tourism.

Application of an interactive consulting system in rural tourism provides users with a modern tool for cognitive and production activities with a significant array of information and consulting methods and computer programs for their implementation to find the optimal solution for the client.

It is suggested to create tourist information and consulting centers using interactive consulting systems. In Fig. 1 presents the structure of the tourist information and consulting center.

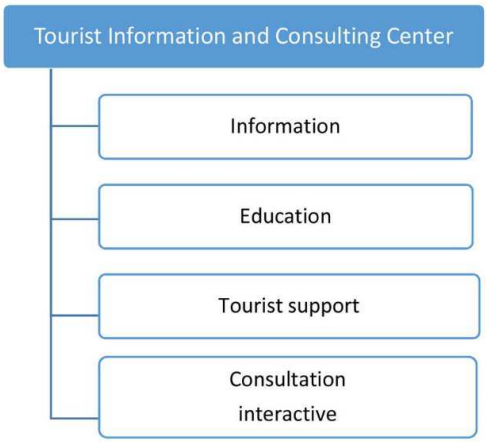

Fig. 1. The structure of the tourist information and consulting center

As can be seen from the figure, the tourist information and consultation center provides for the provision of various tourist information (from advertising to routes and accommodation), consultations (from selection of rest, creation of agro-homesteads, categorization to the use of alternative energy sources, etc.) with the use of interactive consulting systems, organization of trainings on active tourism and travel guided tours.

Such kind of centers is supposed to be organized at the regional, regional and local levels by creating so-called state tourist information and consulting network.

4. CONCLUSIONS

Thus, the creation of tourist information and consulting centers with interactive consulting systems for rural tourism is relevant in the market conditions. At the same time, it is necessary to apply modern information technologies based on the optimal combination of computer equipment, computer networks, software, operating systems and databases that have their mission of accumulation, storage and transmission of large volumes of data in electronic form.

The basis of such activities is emerging rural tourism and a consultant who needs to promptly provide recommendations to clients using it for: a person with her needs, interests, opportunities; information support with databases and knowledge bases; technical support with modern computer equipment and the Internet; mathematical support with its methods and models and software – that is, all modern tools of cognitive and production activities with a significant arsenal of methods and programs for this.

To summarize, we can conclude that the creation of a network of tourist information and consultation centers will ensure sustainable rural development and well-being of the united territorial communities.

REFERENCES

Leeuwis, C., Van den Ban, A. (2004). *Communication for Rural Innovation*. Blackwell science Ltd.

Yespolov, T. et al. (2012). *Extension in Kazakhstan and the Experience of the USA: Lessons from a Working National Model*, Xlibris Corporation, USA.

Rivera, W.M,. Zijp, W. (2002). *Contracting for Agricultural Extension*. CAB International. Statistical Yearbook of Ukraine. Committee of Ukraine for 2017.

Sabluk, P.T. et al. (2003). *Organization of informational and consulting support of AIC of Ukraine* – K.: IAE UAAN.

Statistical Yearbook of Ukraine. Determination of Ukraine in 2018.

Rural green tourism/Union site [Electronic resource]. Access on the internet: http://www.greentour.com.ua/ukrainian/category/low.

Pugach, N.A. (2014). *The Forecast of the Need for Information and Consultation Support of Rural Tourism in the Carpathian Economic Region*. Warsaw university of life sciences press, Development of Regions in Knowledge Economy.

Survey of the European Management Consultancy 2016/2017 [Electronic Resource]. Access on the internet: http://www.webserverone.net/projects/feaco/FCKeditor_project/FeacoSurvey 2016-2017.pdf.

Leading Companies (2017). *A mix of new ideas and innovations* [Electronic Resource]. Access on the internet: https://news.finance.ua/ru/news/-/417940/kompaniyi-lideri-2017-splav-novyh-idej-ta-innovatsij.

Shapoval, O., Bolotina, I., Kalna-Dubinyuk, T. (2018). *World trends and national priorities for the use of information and consulting technologies. "European Cooperation"* Vol. 8.

Tourist Information Center [Electronic resource]. Access on the internet: https://uk.wikipedia.org/wiki/Tourist Information Center.

Johnson, S., Kalna-Dubinyuk, T. (2018). *Development and innovation of extension system in the USA and Ukraine. "Scientific herald of the National University of Bioresources and Nature Management of Ukraine"*. Series: Economics, agrarian management, business. Vip. 284.

Kudin, T.V., Kalna-Dubinyuk, T.P. (2018). *The role of consulting in the application of alternative sources energy*. Materials of the International Scientific and Practical Conference "Objectives of the Sustainable Development of the Third Millennium: Challenges for Universities of Life Sciences" Kyiv, May 23–25, 2018, NUBiP of Ukraine.

Kalna-Dubinyuk, T.P. (2018). *Interactive consulting systems and their applications in rural green tourism*. Materials of the XII International Scientific Conference "Geography, Economics and Tourism: National and International Experience" Lviv, October 12–14, 2018. Lviv National University named after. Ivan Franko.

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