



Exploring the Impact of International Tourism on Regional Sustainable Development: A Methodological Approach for Enhancing Effectiveness

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ABSTRACT

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The main purpose of the article is to investigate strategies for enhancing the effectiveness of the impact of tourism on the sustainable development of the region. To do this, the main scientific task was to model and evaluate the impact of the impact of tourism on the sustainable development of the region. The prerequisites for the study were the low efficiency of tourism in the region, where over the past decades there has been practically no policy for the development of the recreational sector, where the authors of the article live. The object of the study is the system of sustainable development of the region. The research methodology involves the use of modern methods of analysis and modeling. As a result, we have obtained a graphical model and associated strategies for increasing the effectiveness of the impact of tourism on the sustainable development of the region. The novelty of the obtained results of the study lies in the development and application of a novel methodological approach to modeling the increase in the effectiveness of the impact of tourism on the sustainable development of the region. The study is limited by taking into account the specifics of only one particular region. This aspect will be expanded in further studies. A separate issue for further research will be the study of the impact of tourism not only on the sustainable development of the region of the Silesian Voivodeship, but also of Poland as a whole.

1. INTRODUCTION

The main task of sustainable development of the region is the satisfaction of human needs and aspirations. It is important to emphasize that sustainable development affects the provision of vital social needs and the ability to implement them. The concept of sustainable development is based on 5 basic principles: 1) humanity is really capable of giving long-term sustainability to development; 2) the presence of relative restrictions in the use of natural resources, interconnected with the functioning of innovative technologies and social organization and the ability of the biosphere to cope with the consequences of human activity; 3) the need to meet the needs of the population and enable them to realize their hopes for the future; 4) the need to harmonize the way of life of those with significant financial material resources with the ecological possibilities of the planet; 5) the size and growth rate of the population must be commensurate with the changing production potential of the Earth's global ecosystem.

It should be noted that developing countries face significant socio-economic challenges regarding sustainable development, in particular, tourism. In most regions, they are generally perceived as a promising, dynamically developing multifunctional segment that contributes to the flow of foreign exchange funds and economic development in general. The ecosystems of the poor regions are very attractive and attractive and generate significant interest from tourists. The

dynamic development of the tourism industry in developing regions is causing serious social changes and increasing pressure on ecosystems and the environment.

Due to the practical exhaustion of the possibilities of self-regulation of the tourism sector and, given that the environmental factor is becoming an economic category in the tourism sector, it is impossible to ensure its further sustainable development without government measures aimed at curbing the spontaneous development of tourism. Overcoming existing negative trends, creating systemic and integrated conditions for the sustainable development of tourism is one of the priority areas for ensuring the sustainable development of countries.

The concept of sustainable tourism development is based on the doctrine of sustainable development, which is a set of ideas, concepts, provisions and postulates of various sciences, and is aimed at changing the relationship between man and nature in order to expand opportunities for economic growth and create a coordinated global strategy for the survival of mankind, focused on conservation and restoration natural communities on the scale necessary to return to the limits of the economic capacity of the biosphere.

It should be noted that sustainable tourism requires both a sustainable growth in the contribution of tourism to the economy and society, and sustainable use of resources and the environment, that is, we are talking about rooting an improved nature management paradigm in the system of meeting needs-

economic benefit-ecosystem. However, if the tourism community, in particular a single tourist, does not comply with eco-principles, the influence of the industry can have negative consequences, therefore, an eco-tourism product, which is formed on the basis of the mental values of harmony "man-nature", is important for optimal cooperation in ensuring a sustainable future.

The diversity of the world unites us and gives us the opportunity to explore, use and experience the best that local cultures and communities have to offer, especially for regions of developing countries, creates jobs (especially for women and youth), empowers people to build a better life, generate resources to protect cultural heritage and the environment, contribute to the revitalization of rural and urban areas, bring people together and make us better. Tourism contributes to strengthening peace throughout the world, because it carries a cross-cultural aspect and tolerance for the environment of a tourist destination.

It should be noted that tourism, based on the globalization priorities of the sustainable development of developing regions, plays a major role in the socio-economic transformation processes of the world community. The implementation of these goals and priorities is directly proportional to the real tourist and recreational potential, only in this case we have the opportunity to talk about the effectiveness of its impact on the sustainable development of developing regions.

The main purpose of the article is to find ways to improve the effectiveness of the impact of tourism on the sustainable development of the region. To do this, the main scientific task was to simulate the effectiveness of the impact of tourism on the sustainable development of the region. To achieve this goal, the article should be structured as follows: literature review, coverage of methodology, presentation of research results, discussion and comparison, conclusions.

The object of the study is the system of sustainable development of the region. As a result, we have obtained the main graphical model for increasing the effectiveness of the impact of tourism on the sustainable development of the region.

2. LITERATURE REVIEW

More than once in the scientific and practical literature [1, 2], it is noted that in the context of the intensification of world globalization processes, the role of international tourism in the system of international economic relations is increasing. Such activities make it possible to activate the socio-economic processes of sustainable development of developing regions and affect the growth of their competitiveness.

In the first quarter of the XXI century scientists [3, 4] substantiated the paradigm and concept of sustainable tourism development as the basis of the modern international tourism market, which functions dynamically. They are characterized by the peculiarity of the use of mechanisms and tools in the elimination of disproportions in the international development of tourism, as well as in the effective use of the potential of tourist and recreational resources based on synergy. Applying this principle, developing regions establish relationships with potential consumers of tourism services at different levels of the management hierarchy.

Other scholars [5, 6] point out that tourism is a powerful factor in socio-cultural influence, and very often a negative one. In many regions, the consequence of the sustainable

development of tourism has been an increase in crime, prostitution, alcohol and drug use. Adaptation to the needs and expectations of tourists during religious rituals, ethnic rites, festivals leads to their standardization and impoverishment. The neglect of local traditions by tourists in clothing (short skirts or shorts in Muslim countries), behavior (visiting a teahouse by women in Central Asian countries), and lifestyle creates tension in relations between the local population and travelers.

A group of scientists in the literature [7, 8] notes that in an environment where the service sector becomes dominant, tourism plays a decisive role in international social activities. They also note that tourism contributes to continuous development, employment and overcoming poverty, the rational use of resources, the exchange of mental values, as well as the development of mutual understanding between peoples. Therefore, special attention is paid to socio-economic transformations in developing regions, the search for new forms of international tourism activities to form a developed market for international tourism services.

According to scientists [9, 10], all this led to the identification of common problems and the impact of international tourism on the sustainable development of developing countries and the substantiation of mechanisms and tools for their optimal solution. At the same time, there is a need for a comprehensive study of the system of functioning of international tourism based on sustainable development as the basis for socio-economic transformation, which requires an appropriate scientific, theoretical and methodological basis.

The vast majority of material in the scientific and practical literature touched upon the issues of the modern functioning of the tourism market, as well as the impact of international tourism on the social and economic indicators of the regions. Nevertheless, the problems of determining ways to increase the effectiveness of the impact of international tourism on the sustainable development of individual regions require further research based on modern theoretical and methodological approaches to the latest sustainable development imperatives.

3. METHODOLOGY

Influence modeling can be performed to present them in a visual and orderly way that makes them easier to perceive and understand. In particular, the key goal is the educational goal, but the goal is usually to further analyze and improve the methods of sustainable development of the region, as well as to develop projects for their informatization, that is, technological support. Approaches, methodologies and modeling tools have a significant impact on the result of modeling.

For the design of processes and data, the IDEF family of methodologies is used, which is popular with specialists in sustainability assurance and planning. In our opinion, the IDEF0 standard is the most suitable in the context of our research. The idea of IDEF0 is that processes (functions of a real object) are represented as some transformations of the input stream into the output stream under the control (management) of the control stream using a mechanism for transformation.

The main advantages of IDEF0 are as follows:

1. Completeness of the description of the process (management, information and material flows, feedback);
2. Complexity in decomposition (migration and tunneling)

of arrows);

3. The possibility of aggregating and detailing data and information flows (separation and merging of arrows);

4. The presence of stringent requirements of the methodology, ensuring the receipt of process models of a standard form.

Also, a feature and advantage of using the methodology of graphic notations, noted by experts, is the possibility of a visual picture and description of the stages of the simulated process, which allows you to graphically reflect the control algorithm and visualize the sequence of stages of the simulated process, while the arrows on the left reflect tasks and input resources, the arrows on top-regulations, instructions management and regulation, the arrows on the right-the result (effect) after the transformation of resources, the arrows below-depict the tools of support (fixed and partially current assets) and labor resources involved in the process.

The blocks on the diagram are placed in order of importance, thus obtaining a dominant order and allows you to determine the impact that one block has on other blocks of the diagram.

For our research and modeling, we chose the region where most of the authors of the article live-Silesian Voivodeship, which is in Poland. In order to best carry out the simulation, we first conducted a SWOT analysis.

Also, within the framework of our methodology, the SWOT analysis method was applied. The most important step in improving the effectiveness of tourism impact on the sustainable development of the region should be to apply a strategic and competitive analysis. One of these tools is SWOT-analysis, which is widely used in corporate governance practice. This universal method is especially effective in analyzing the advantages and disadvantages of the tourism market. Based on the results of the strategic analysis, tourism development priorities are made, as well as in terms of the strategy to counteract negative factors. SWOT analysis helps to find out the circumstances under which the tourism market of developing countries develops, to balance the influence of internal advantages and disadvantages with the influence of favorable opportunities and threats. Such an analysis helps to determine not only the capabilities of the region, but also all the available advantages to competitors. Taking into account all four components of the SWOT-analysis in a complex will determine the main strategic directions for the development of tourism, formulate goals and

specific tasks. In addition, the SWOT analysis will allow to outline a plan for the sustainable development of the tourism industry in developing countries in the future, provide for the necessary actions and means, and take into account new opportunities.

In general, SWOT analysis is actively used in leading scientific and practical sources in the framework of sustainable development [11-13]. The source of data in our study was official data on the development of the region from the relevant authorities (Department of sustainable development of the region). The choice of threats and opportunities took place within the framework of the authors' own experience of living and working in the system for ensuring the sustainable development of this region.

4. RESULTS OF RESEARCH

There are several main factors influencing its sustainable development and tourism influence in the Silesian Voivodeship, one of them (Figure 1).

Figure 1 aims to show which factors, in the opinion of the authors, are essential for ensuring sustainable development in the region. The purpose of their disclosure and presentation is to demonstrate that there are problems in the region and this should be taken into account in the modeling.

Thus, as a result of the SWOT analysis, we found that the weakest sides in the system of sustainable development of the Silesian Voivodeship are its tourist unattractiveness due to the low tourist impact on the most sustainable development (Table 1).

One of the biggest problems that we see from the results of the conducted SWOT analysis is the development of tourism in the region and the fact that as a result of such a weakness we have its low impact on sustainable development.

The current goal of modeling is a generalized combination of our own experience in the selected region and the results of the conducted SWOT analysis (weaknesses were identified).

Therefore, we should set ourselves the goal of modeling T0 « Improving the effectiveness of the impact of tourism on the sustainable development of the region». Let's represent its achievement in the form of process blocks, each of which is a full-fledged step-by-step action for the region. The web of stages for achieving T0 is shown in Figure 2.



Figure 1. The main factors influencing the sustainable development of the region

Table 1. Matrix of SWOT analysis

S	Diversity and richness of natural landscapes and recreational resources;
	Cheap cost of labor resources involved in the tourism industry
W	Formation of tourist offers with high added value.
	Low impact of tourism on sustainable development;
	Socio-economic problems of sustainable development;
O	Underestimation of the role of tourism in the country's economy;
	A narrow palette of aspects of service management in business processes.
T	Popularization of national cultures, historical heritage, natural resources in foreign markets;
	Introduction of new safety standards in tourism;
T	Emergence of new tourist markets;
	Investment in tourism.
	Increasing competition between tourist regions;
	Environmental degradation;
	Pandemic challenges, including COVID19.

In addition, any model must have appropriate inputs and outputs. Let's represent this in the form of a box diagram of inputs and outputs to reach T0 (Figure 3).

We have resources at the entrance. Ensuring sustainable development is one of the main priorities, which implies the effectiveness of tourism activities. This is due to the fact that it is the constancy of activity that provides a number of advantages, such as increasing the level of organizational management and social responsibility, new market opportunities and increasing investment attractiveness, innovation in production and management processes, minimizing risks and reducing costs, as well as creating favorable conditions for development future generations through the rational allocation and use of resources.

Thus, the achievement of T0 "Improving the effectiveness of the impact of tourism on the sustainable development of the region"

region" can be achieved through:

T1. Formation of international economic relations in the region. International economic relations are characterized by a structure that reflects various aspects of sustainable development and the formation of the modern potential of global economic development. Various structural elements, including the countries that are the objects of analysis, taking into account the sectoral, typological and regional structure of the world economy, embody the approaches and criteria for separation. The typological structure of the world economy turns out to be a single system of countries with different levels of socio-economic development. Its specificity is manifested in the fact that it is in constant dynamics, since the pace of economic, social, technological development of the countries of the world is not the same; from time to time there is a transition of countries from one typical bloc to another.

T2. Application of the principles of persistence. Applying the principles of sustainability is the best way to save tourist destinations from social, cultural and environmental degradation. Well-planned tourism can also increase income and become a source of wealth for a developing region based on the principles of sustainable development. Tour operators can raise capital from banks and investors, so tourism can be seen as a common method of accessing capital. Sustained action can help reduce operating costs by reducing waste generation and water and energy use.

T3. Increasing the tourist flow. To increase the tourist flow, special emphasis is placed on the general improvement of the environment, regular planting of trees, improving the aesthetic appearance of resorts and attractions. Huge investments are being made to improve facilities in the region such as recreation areas, shades, sanitation, drinking water. More attention is paid to the preservation of cultural and architectural monuments, archaeological and historical heritage.

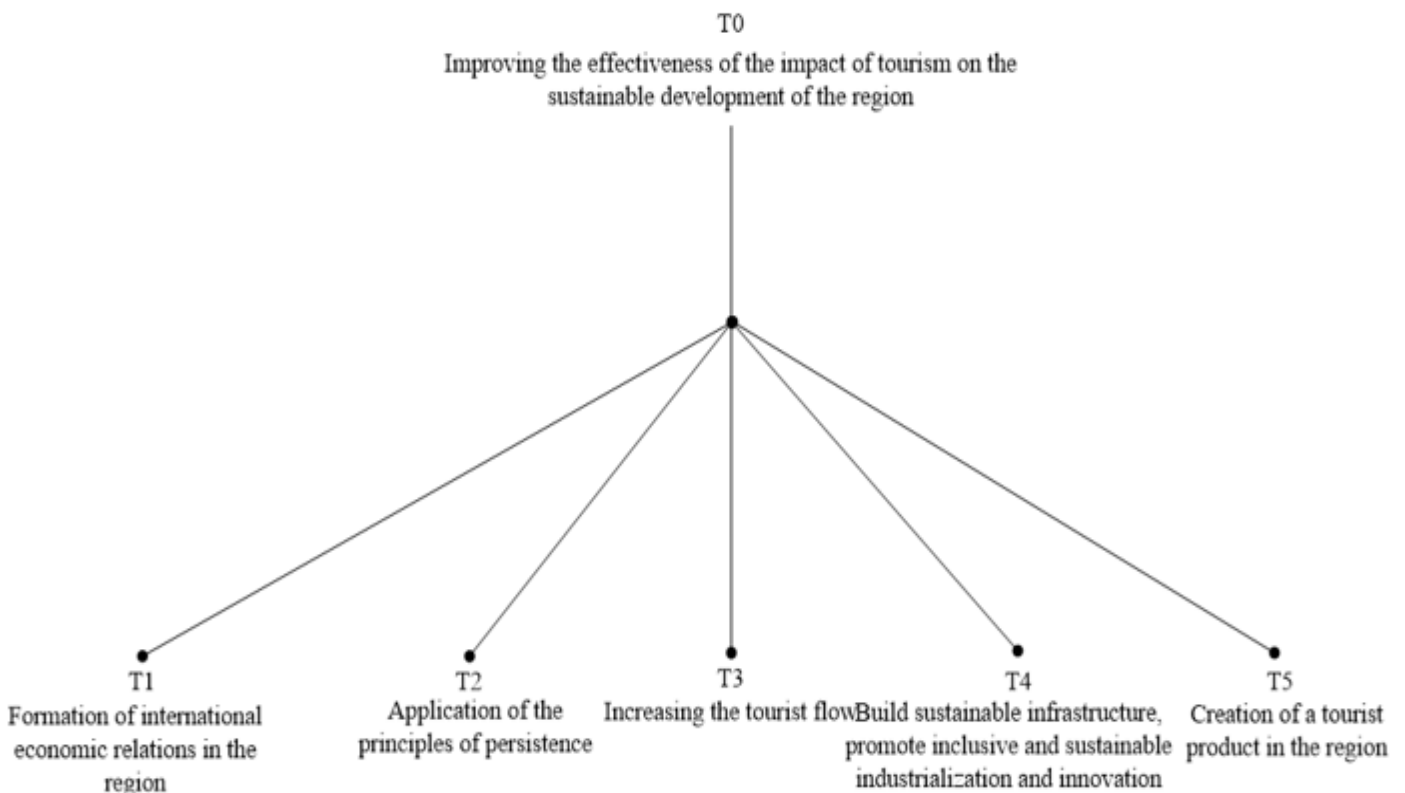


Figure 2. Web of stages of achievement of T0

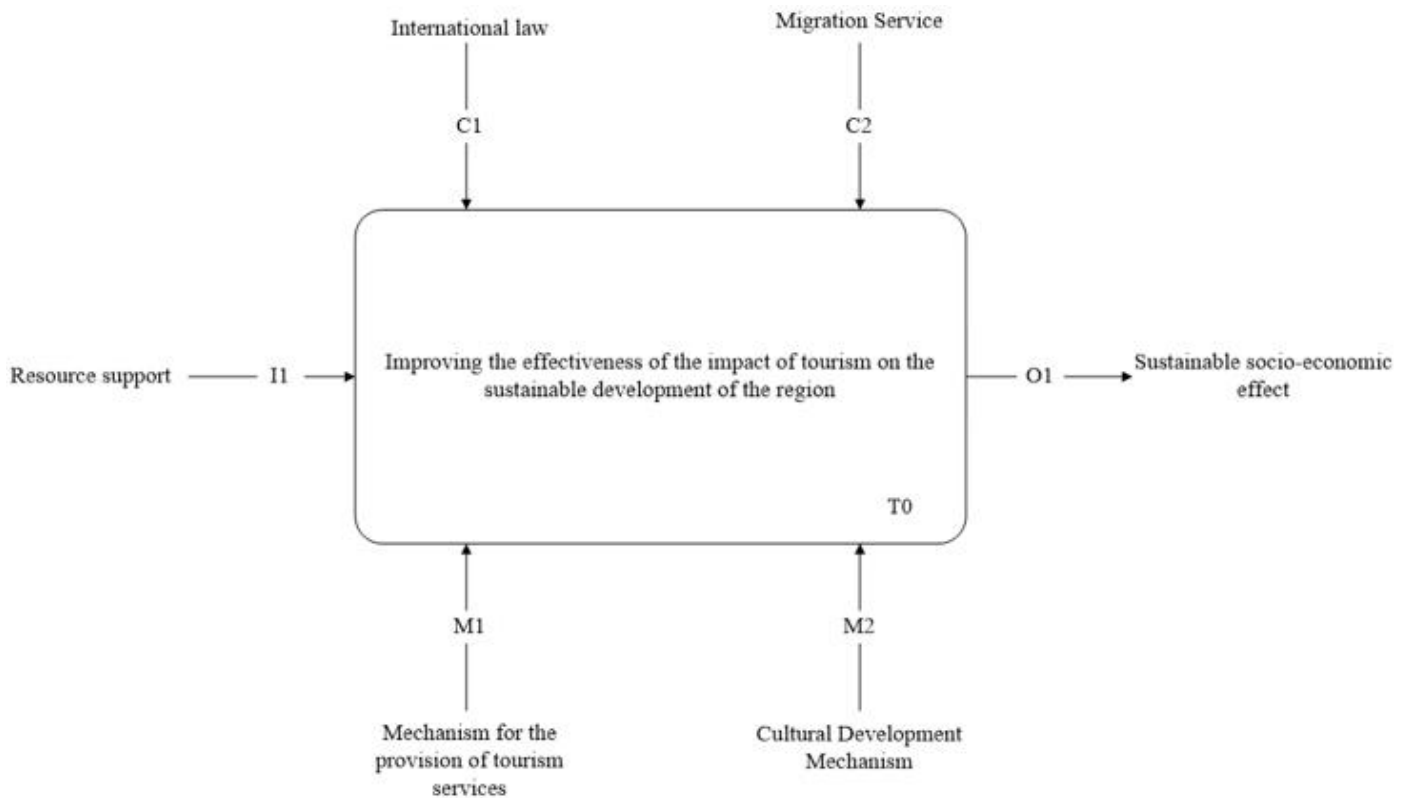


Figure 3. Box of inputs and outputs of reaching T0

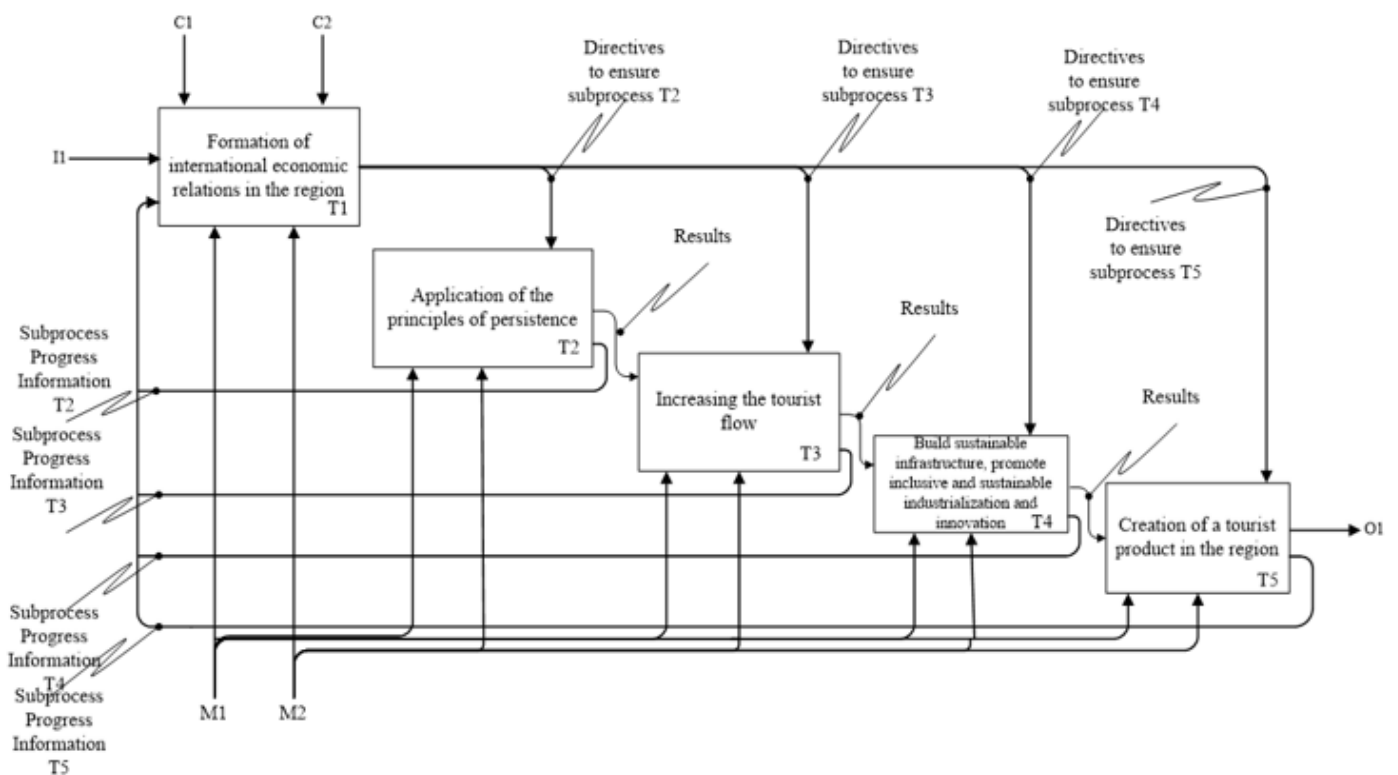


Figure 4. Box of inputs and outputs of reaching T0

T4. Build sustainable infrastructure, promote inclusive and sustainable industrialization and innovation. A key prerequisite for the development of international tourism is high-quality, reliable, sustainable and sustainable infrastructure, therefore, in the future, the task of the industry will be to develop environmentally sustainable and sustainable infrastructure in developing countries, by increasing financial,

technological and technical support for African countries, the least developed region, countries, landlocked and small island developing States, as well as substantially increase access to information and communications technology and strive for universal and affordable Internet access in the least developed countries.

T5. Creation of a tourist product in the region. Unlike most

other service markets, a significant place in the creation of a tourist product belongs to various sectors of the economy, and in particular agriculture, which provides food for restaurant complexes in hotels and other accommodation facilities. For developing regions, support for this area is essential, since the share of these industries in the structure of their economy and GDP is high. As a result, the introduction of new technologies for growing agricultural products in compliance with international standards and the requirements of hotel and restaurant chains can serve as an impetus to increase the use of both the tourist and recreational potential and the economy as a whole (Figure 4).

Therefore, for the region, the development of the tourism industry and the attraction of additional tourist flows can serve as a significant tool for improving the level of sustainable development of the state in general and regions in particular.

The presented stages in the form of blocks of the model may have different time and resource periods in application, depending on the efficiency of the department's work to ensure sustainable development.

The results of the study have a certain practical and scientific value and can influence the region's policy and strategic planning of sustainable development.

5. DISCUSSIONS

Discussing the results of the study, you should compare them with similar and previous ones. Scientists [14, 15] prove that the main factors that led to a significant increase in tourist flows during the period under review were factors of exogenous and endogenous nature. The key domestic reasons for the growth of the global tourism services market are the growth in the economic well-being of citizens of many countries of the world, the increase in the duration of vacations and, accordingly, the reduction in working hours, the desire to develop and see new countries and continents, culture, customs, and the multinationality of modern tourists.

Some scientists [16, 17] have improved the very concept of sustainable tourism development in developing countries, which reflects their position regarding the strategy for the development of the tourism industry in the long term. This strategy includes specific measures for its implementation, including: development of social infrastructure; rational use of the tourism potential of developing countries; raising the educational and qualification level of the population; formation and support of the tourist image of developing countries.

Various scholars [18-20] agree that tourism is one of the leading and most dynamic sectors of the world economy. The experience of many countries shows that tourism plays a significant role in shaping GDP, creating additional jobs and providing employment for the population, and improving the structure of the foreign trade balance. Acting as a kind of catalyst for socio-economic development, tourism has a significant impact on such key sectors of the region's economic system as: Transport, communications, construction, agriculture, production of consumer goods, etc. At the same time, various factors influence the development of the tourism industry: demographic, natural-geographical, socio-economic, historical, religious, political and legal, etc., which led to a significant increase in tourist flows at the turn of the XX-XXI centuries.

The rest of the scientists [21-23] considered the impact of

international tourism services on the sustainable development of individual socio-economic systems. An international tourism service is a set of services related to the creation, implementation, consumption of tourism products to meet cultural, educational, spiritual, recreational, sports, business and other requests related to moving from a place of permanent residence to another country based on the principles of balanced use of resources and multicultural interaction.

Discussing the results of our study, we should note their originality through the use of a new methodological approach, which gave a better idea of how to increase the effectiveness of the influence of tourism on the sustainable development of the region.

There are certain similarities between our study and the previous ones, this can be manifested in the framework of the SWOT analysis (since this method is popular) and also the theoretical part in which the emphasis and importance of international tourism are manifested.

The uniqueness of the methodological approach is in its very graphic structure, which allows you to better present what you want to achieve than with a regular textual version. The model has detailed boxes and arrows for graphical expression of the recommendatory process within the framework of sustainable development.

6. CONCLUSIONS

Summing up, it should be noted that within the framework of the model framework for the sustainable development of tourism in developing regions, one should be aware of a system of actions to justify common approaches to the policy of sustainable development of the industry. This policy will contribute to the coordination of strategic goals and the formation of industry development priorities, important areas and tools to achieve these goals. The concept reflects the vision of developing countries regarding the strategy for the functioning of the tourism sector for the future and takes into account effective approaches to its implementation.

Tourism is a complex, multidimensional intersectoral complex characterized by the rational use of human resources in the economic process. Consequently, the functioning of this economic sector contributes to an increase in the standard of living of the population, encouraging direct (in hotels, restaurants, travel agencies), indirect (at enterprises supplying goods and services to tourism: agriculture, fishing, industry) and generated employment (in the form of additional jobs, supported by expenses of income received by workers of direct and indirect employment). Tourism is characterized by the temporary and voluntary movement of tourist flows to another environment for the purpose of recreation, recreation, enrichment with other socio-cultural heritage of the world. That is, in the tourism system there is an interaction between tourists and local residents, resulting in qualitative changes in the lifestyle and value system.

In conclusion, it should be noted that the socio-economic nature of tourism is based on the principles of transformation of resources and the creation of added value. The steady growth of tourist flows leads to an increase in income not only in the tourism sector, but also in related industries, which significantly fills the budgets both at the local level (including the tourist tax remains in local budgets) and the state (income of carriers, travel agencies, VAT (value added tax) and excises

on goods sold to tourists). This makes it possible to use the revenue part of the budget to increase the level of social payments, improve infrastructure and, in general, the quality of life of the population in the region.

As a result, we have obtained the main graphical model for increasing the effectiveness of the impact of tourism on the sustainable development of the region. The study is limited by taking into account the specifics of only one particular region. This aspect will be expanded in further studies. A separate issue for further research will be the study of the impact of tourism not only on the sustainable development of the region, but also the country as a whole.

It should be noted that we encountered a number of limitations in our study. This concerned the fact that we did not have all the data within the selected region. There are problems with the accuracy of data on tourism activities in Poland. Future research on tourism data collection and processing may remove these limitations.

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