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## TRANSFORMATION OF SCIENTIFIC APPROACHES TO THE STUDY OF TOURISM AND RECREATION SYSTEMS

**Background.** Territorial recreational systems (TRS) are a significant area of study in recreational geography, integrating natural, social, and economic components to meet human needs for leisure, recreation, and tourism. The concept of TRS, introduced by V. S. Preobrazhensky in the 1960s, has undergone significant evolution, reflecting the transition from a planned to a market economy, where tourism has become a key sector. Contemporary challenges such as globalization, urbanization, the growth of tourist flows, ecological constraints, and informatization necessitate a rethinking of TRS as a tool for sustainable development and economic growth.

**Methods.** The research is based on the application of systemic and system-structural approaches, which allow TRS to be viewed as integral geographical entities. Classification methods were used to distinguish types of TRS and their components, while synthesis methods helped generalize the evolutionary stages in the development of TRS theory. The analysis considered current trends such as sustainability, informatization, and commercialization of tourism, emphasizing an interdisciplinary approach that combines geography, economics, and ecology.

**Results.** The article systematizes the stages in the evolution of the TRS concept: from the early studies of the 1960s focused on the social organization of recreation to modern integrated models that account for economic efficiency, ecological stability, and global challenges. The key elements of TRS (recreationists, natural resources, infrastructure, management) and their interrelations forming the spatial organization of the system are identified. A comparative analysis of models (by V. S. Preobrazhensky, V. I. Pavlov, L. M. Cherchyk, and I. V. Smal) revealed a shift from static structural approaches to dynamic functional-component models emphasizing system–environment interaction. The main stages of TRS conceptual development were distinguished, ranging from local planning models to the recognition of TRS as dynamic, open systems that form the basis for regional tourism clusters. Modern trends such as the integration of sustainability, management, and marketing principles, as well as the necessity of considering the regional specificities of Ukraine, are highlighted.

**Conclusions.** The concept of a territorial recreational system has evolved from a narrowly specialized geographical notion into an interdisciplinary tool for regional management. Further development of TRS theory requires improving management methodologies, integrating geoinformation technologies, and developing strategies to balance tourist flows and resource preservation – especially in the context of global challenges such as climate change and urbanization. The study results can inform the design of regional tourism development strategies.

**Keywords:** territorial recreational system (TRS), tourist-recreational system, recreational geography, geosystem, evolution of concepts, systems approach, sustainable development, tourism, recreational resources.

### Background

Territorial recreational systems (TRS) are a key object of study in recreational geography, integrating natural, social, and economic components to meet human needs for leisure, recovery, and tourism. The concept of TRS was first introduced by V. S. Preobrazhensky in the 1960s and has since undergone significant evolution, reflecting transformations in economic, social, and technological conditions. From the planned economy of the Soviet period to the modern market system, where tourism has become a powerful branch of the tertiary sector, TRS have evolved from local, socially organized entities into complex, dynamic geosystems interacting with global processes. Contemporary challenges – globalization, urbanization, increasing tourist flows, environmental constraints, and informatization – demand a new understanding of TRS as a tool for sustainable development, economic growth, and social integration. This article systematizes the evolution of scientific approaches to TRS, analyzes their key concepts, and proposes recommendations for improving theory and practice within the context of modern economic and geographical development.

**The aim** is to systematize the evolution of scientific approaches to TRS, analyze their key conceptual

foundations, and develop recommendations for improving both theoretical and practical aspects in line with current economic and geographical realities.

### Methods

A comprehensive set of methods was applied to ensure a holistic analysis of the evolution of the territorial recreational system (TRS) concept:

- Systemic approach – to consider TRS as integral geographical formations integrating natural, social, and economic components into a unified functional system;
- System-structural approach – to analyze the internal structure of TRS, including key elements and interrelations that define their spatial organization;
- Classification methods – to typify TRS and their components, which allowed systematization of the diversity of recreational systems by structural and functional characteristics;
- Synthesis methods – to generalize evolutionary stages in TRS theory development, covering both historical and modern conceptual approaches;
- Comparative analysis – to contrast theoretical models of TRS developed by different authors, identifying their specific features, differences, and transformations of scientific perspectives;

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- Interdisciplinary approach – to integrate knowledge from recreational geography, economics, and ecology, thus incorporating modern trends such as sustainability principles, informatization, and commercialization of the tourism and recreation sphere.

The application of these methods enabled systematization of evolutionary stages in the development of the TRS concept, analysis of its structure and functional interconnections, and formulation of recommendations to improve theoretical and practical management aspects in the context of global challenges – particularly climate change, urbanization, and the growth of tourist flows.

### Results

Geographical systems represent a special type of system, characterised by their spatial anchorage to a territory. The notion of a "geosystem" was introduced by V. B. Sochava (Topichev, 2001) in 1963 and was initially applied to physiogeographical formations. Later, following numerous scientific investigations, it was recognized that a geosystem constitutes an integral geographical unity, grounded on the close interconnection of nature, population, and economy. A generalized component of any geosystem is spatial relations. The application of systemic and system-structural approaches enables viewing diverse processes, phenomena, and geographical objects as geosystems. Geosystems are distinguished by their reality or conventional nature into object, subject, and abstract types (Topichev, 2001):

- Object geosystems: these possess a definite status (for example, city, village, region, country) and formal boundaries, which may be natural, administrative, historical, or cultural.

- Subject geosystems: these systems do not have strict official boundaries. They are delineated via analysis when a group of geographical objects share unique characteristics and maintains closer, more intensive links among themselves than with objects outside that group.

- Abstract geosystems: these are second-order models (mathematical, cartographic) created for deeper analysis of object and subject systems. They emerge through formalization and simplification of real systems to study their individual aspects.

The transition from real objects to abstract models is often a multistage process. Initially, real objects (e.g. cities) are represented as a system (the settlement system). Then that system itself is regarded as a unified object for analysis, isolating its individual parameters, which in turn may be represented as new, even more abstract geosystems. The result of such modelling may be, for instance, a comparative evaluation of the quality of life across different settlement systems.

Key systemic relations in geosystems are those linkages that shape their spatial organization and ordering. A central direction in the study of geosystem structure is the analysis of its territorial (spatial) structure. This is why geosystems are often identified as territorial systems, emphasizing that they belong to a special class of "earth systems", whose main task is the investigation of spatial organization and the analysis of territorial structures of various components of the geographical envelope – natural, social, and economic.

Let us examine the fundamental principles:

- Complexity: any geosystem forms from elements. Its building blocks may be components of the geographical envelope or smaller (lower-level) geosystems.

- Interconnection: between these elements, there exist diverse linkages. They may be deterministic or probabilistic (stochastic) in nature, and can be either positive or negative. Critical is the dynamics of interaction: direct linkage implies cause-and-effect relationships (a certain action provokes an

expected reaction). Feedback linkages reveal the system's response to change and underpin its self-regulation.

- System-forming relations: although many linkages exist, system-forming ones play a key role in defining essence. For geosystems, these are relations that generate spatial order and the organization of objects on the Earth's surface.

- Structural nature: each system has its own internal architecture – a structure (in geosystems often referred to as geostructure). This structure can be analyzed from multiple viewpoints: morphological (shape), functional (purpose), managerial, etc.

- Emergence: geosystems exhibit the property of emergence: the whole possesses qualitatively new properties not inherent in individual elements. These arise from their interaction.

- Equipotentiality: geosystems also exhibit equipotentiality. This means that the same geographical object may be considered an independent geosystem (if one studies its internal elements) or as a component (or subsystem) of a larger, higher-order geosystem.

- Hierarchy: the property of equipotentiality directly leads to hierarchical, multilevel organization of all geosystems, where each level is a constituent part of a higher level (Topichev, 2005).

The theoretical foundation of domestic recreational geography is formed by the concept of territorial recreational systems (TRS), which regard the spatial organization of tourism and recreation as an independent object of scientific inquiry. The methodological base of TRS is the anthropocentric principle, according to which all structural elements and interrelations in the system are subordinated to human recreational needs. Based on this approach, principles for evaluating recreational demand as well as criteria for analyzing the necessary resources and infrastructure have been formulated. It is noteworthy that the development of TRS theory occurred during the pre-transition period, resulting in an insufficient elaboration of the economic-management component in its early versions. In our view, this gap has caused many applied issues – including organizational and informational ones – to remain unresolved.

Most scholars agree that TRS research has been underway for over fifty years, beginning in the 1960s:

- The first stage (1960s-70s) is associated predominantly with the works of V. S. Preobrazhensky and his followers; the concept of "recreation system" emerges, and gradually the territorial dimension is incorporated into studies of the organization of recreational activity, ultimately giving rise to TRS (territorial recreational systems).

- The second stage (1970s-80s) marks in-depth investigations of TRS, system analyses of tourist regions and specific locales, with increasing emphasis on the social and planning aspects of TRS models.

- The third stage (1990s) sees radical shifts in approaches within recreational geography: a gradual transition of emphasis toward the tourism component, resulting in the transformation of recreational systems into tourist-recreational systems. The functional-structural paradigm of TRS shifts its focus from social and planning aspects to a commercial orientation and managerial-economic approaches.

- The fourth stage (early 21st century to present) positions TRS as a kind of geosystem – a set of recreation and tourism elements united by spatial relations and linkages. New efforts are forming to replace the term TRS with other territorial tourism organization constructs – tourism cluster, tourism destination, or tourist-type free economic zones, etc.

The notion of a "recreation system" is fundamental in studies of the recreation phenomenon, which later became the foundation for the formation of a territorial recreational system. According to the conceptual approach developed by

Professor V. S. Preobrazhensky in the 1960s, a territorial recreational system is a complex, socially organized, and partially self-governing structure in which the central role is played by subjects of tourism activity (see Fig. 1).

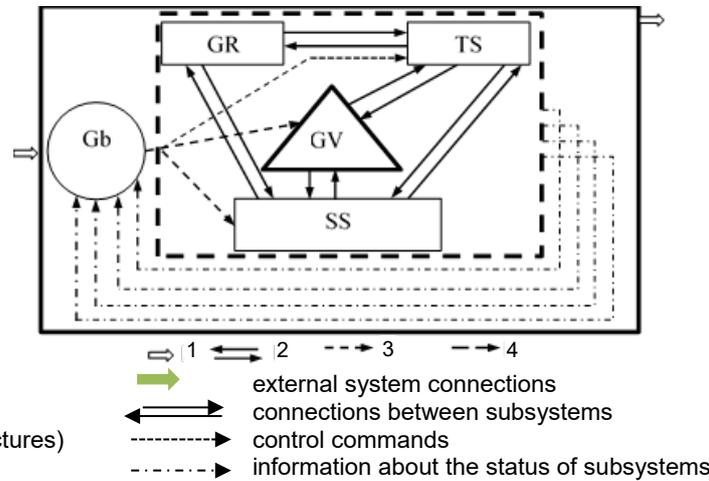


Fig. 1. Schematic diagram of the TRS (according to Preobrazhensky, 1975)

Source: (Arion, 2023)

The target function of this system is to optimally satisfy the recreational needs of individuals, which entails the coordination and integration of various components that ensure optimal conditions for rest, recovery, and personal development. The territorial recreational system (TRS) is a socio-geographical system, heterogeneous in composition, consisting of interrelated subsystems (...) and characterized by both functional integrity (the state of subsystems is determined by the overall function of the system) and territorial integrity (Arion, 2023). The territorial recreational system is a complex formation composed of several interdependent subsystems, including recreationists and tourists, natural complexes, the material base and infrastructure, service personnel, and management authorities.

In our view, despite the anthropocentric approach – innovative for its time – which focused on human needs, the theory of territorial recreational systems (TRS) was developed during the era of a planned economy, which determined its key limitations:

- Formal humanism. Although the concept proclaimed a focus on human beings, in practice, this principle often remained merely declarative;
- Dominance of the administrative approach. In a system claiming anthropocentrism, the key role in its creation and functioning was assigned not to tourists themselves, but to administrative bodies;
- Technocratic nature of the model. As later noted by the author of the theory, TRS were interpreted more as technical than as social systems. The factors of self-organization and the role of recreationists themselves in these processes were underestimated;
- Detachment from practice. The model had a weak empirical foundation and excessive theorization, which made it rigid and poorly adaptable to dynamic changes in tourism and recreation;
- Limited spatial coverage. TRS were mainly viewed as destination areas, while their functioning is inseparable from the territories that generate tourist flows. Thus, the model

did not account for the full complexity of recreational interconnections.

In 1982, Yu. A. Vedenin proposed to classify territorial recreational system models into two types: *object-oriented*, where the main focus is on the territories receiving recreationists, and *subject-oriented*, where the emphasis is on people as consumers of recreational services and on their places of residence as centers of demand formation. The concept is based on the systemic approach developed by V. S. Preobrazhensky and refines TRS models in terms of their orientation. This classification is mentioned in later works by O. O. Beidyk, O. O. Lyubitseva, and P. O. Maslyak, where TRS models are adapted to Ukrainian realities.

Beidyk (1997) proposed considering TRS as a complex of interrelated elements (natural resources, recreationists, infrastructure, management) functioning within a certain territory for recreational purposes (Beidyk, 1997). The features of this approach are a concise and generalized description oriented toward educational purposes. It is based on Preobrazhensky's systemic approach, emphasizing territorial organization, without a clear distinction between "tourist-recreational" and "recreational" systems, but highlighting the spatial aspect. The study focuses on the structure of the TRS (resources, infrastructure, recreationists, management) without a deep analysis of economic or ecological aspects. Its distinguishing feature is the simplicity of definition, intended for a broad audience, without an emphasis on sustainability or marketing.

Pavlov and Cherchyk (1998) approached the territorial recreational system in a somewhat different manner. They argued that the developed concept of TRS represents an open socio-economic system, comprising complex, interrelated subsystems. It is formed within a specific territory and united by common activity aimed at using the recreational potential of that territory (Pavlov, & Cherchyk, 1998). The set of elements in their model is similar to that in Preobrazhensky's model, but with certain refinements emphasizing their belonging to the system-geographical approach (Fig. 2). The authors proposed a model of the

TRS consisting of the following elements, interconnected by direct and feedback links:

- Recreational resources and conditions (RRC): natural and historical-cultural objects involved in recreational activity;
- Material and technical base (MTB): engineering facilities, equipment, and other material resources necessary for the functioning of the system (e.g., hotels, sanatoriums);
- Recreational infrastructure (RI): a network of facilities and services ensuring access and comfort for recreationists—transport, communications, etc.;
- Recreationists (R): the vacationers themselves, consumers of recreational services;
- Service personnel (SP): employees providing these services;

- Management systems (MS): institutions and mechanisms that govern the activities of the TRS.

In the interpretation of Pavlov and Cherchyk, the TRS is a functional system characterized by structural integrity (Pavlov, & Cherchyk, 1998).

It is characterized by the interconnection of its elements, where the state of individual components is determined by the social function of the system as a whole. However, the differences between the models of territorial recreational systems can be presented in a comparative table (Table 1). The model of V. S. Preobrazhensky is considered classical, while the model of V. I. Pavlov and L. M. Cherchyk represents its refinement, providing a more detailed view of the infrastructural component.

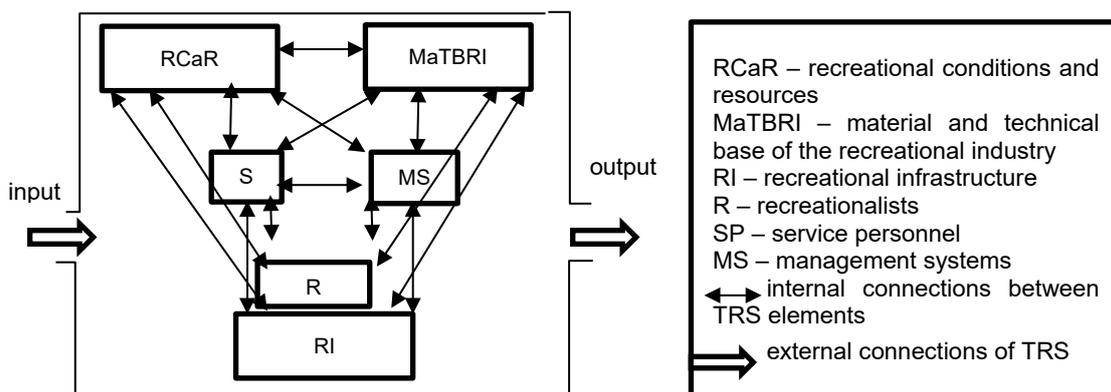


Fig. 2. Elements of the TRS (Pavlov, & Cherchyk, 1998)

Table 1

Comparative characteristics of TRS models (V. S. Preobrazhensky and V. I. Pavlov & L. M. Cherchyk)

Comparison Criterion	Model of V. S. Preobrazhensky	Model of V. I. Pavlov and L. M. Cherchyk
Number of elements	5 main subsystems	6 main elements
Composition of elements	1. Recreationists (vacationers) 2. Natural and cultural complexes 3. Technical infrastructure 4. Service personnel 5. Administrative bodies	1. Recreational resources and conditions (RRC) 2. Material and technical base (MTB) 3. Recreational infrastructure (RI) 4. Recreationists (R) 5. Service personnel (SP) 6. Management systems (MS)
Key differences	Considers the technical infrastructure as a single subsystem that includes all man-made elements of the system	Divides technical elements into two separate components: – <i>Material and technical base</i> (facilities, physical objects) – <i>Recreational infrastructure</i> (services). This approach enables a more detailed analysis of the system's functional and material aspects
Conceptual approach	A general theoretical model that laid the foundations for the systemic approach in recreational geography	A practical model that develops Preobrazhensky's ideas and is applied to specific regional studies

Source: developed by the authors based on (Pavlov, & Cherchyk, 1998; Beidyk, 1997)

In the 2000s, V. Z. Savranchuk adapted the concept of territorial recreational systems (TRS) to the modern conditions of independent Ukraine, focusing on the sustainable use of resources, regional planning, and economic potential. He defined TRS as a unified territory with significant recreational potential, encompassing a set of recreational institutions that function through close production linkages and common management structures, ensuring the efficient use of resources. The author regarded TRS as a complex, managed (partially self-regulated) social system that serves as an object of study in recreational geography. It possesses a social character and functions to meet the recreational needs of the

population, with an emphasis on territorial integrity and economic efficiency (Savranchuk, 2000).

Savranchuk emphasized that a TRS is not merely a set of resources or facilities, but a dynamic geosystem integrated into the regional economic complex. It achieves the status of a system only when it satisfies the core requirements of the model – interaction between elements and functional integrity – and evolves under the influence of external factors, such as the economy, demography, and ecology. The researcher distinguished between a recreational territory (any area with resources) and a territorial recreational system (a system with interacting

elements that meet the criteria of systemic organization). His research laid the theoretical foundation for the development of recreational geography in Ukraine, focusing on behavioral stereotypes and regional models. The proposed TRS model influenced later studies by Maslyak (2008) and Skrypyk (2021).

Within the framework of systematizing tourism and recreational activity, Topchiiev and Tszinshen (2003) developed one of the most detailed classifications of territorial tourism and recreational systems. In their concept, they identified three main types of such systems: organized recreation, unorganized recreation, and tourism. Within these categories, the authors distinguished 18 types and 10 subtypes of tourism and recreational activities.

TRS is conceptualized as a spatially organized socio-natural system functioning within a specific territory to meet the recreational needs of the population. It is not just an aggregate of elements but a dynamic, managed geosystem integrated into a broader territorial structure (region or country), emphasizing the interaction between natural resources and socio-economic processes. The authors stressed that TRS is a core subject of recreational geography, focused on the territorial organization of the recreational economy, excluding closed or isolated facilities (such as individual hotels or rooms).

In their research, Topchiiev and Van Tszinshen highlighted methodological transformations in recreational geography, where TRS is analyzed as part of the integral geosphere (the socio-natural shell of the Earth). They introduced elements of a monistic approach – emphasizing the unity of nature and society – which differentiates their concept from classical models of the 1970s-1980s. TRS is not static but evolves under the influence of globalization, urbanization, and environmental challenges, with an emerging need for sustainable development (even though the term "sustainability" was not yet dominant in 2003, it was implied through environmental aspects).

According to these authors, TRS as an object of recreational geography is not merely a descriptive model but a tool for analyzing the territorial organization of the recreational economy. They criticized traditional models for neglecting system dynamics (e.g., the impact of economic crises of the 1990s in Ukraine), proposing instead an integrated approach, where TRS is considered part of the Earth's landscape shell. In studying TRS, they introduced modern methods such as landscape modelling, spatio-temporal analysis, and ecological stability assessment – precursors to GIS integration. They also classified TRS across three spatial levels: local, regional, and global, with particular attention to Ukrainian realities (the Carpathians, the Black Sea region).

In her work, Lukianova (2004) conceptualized the territorial tourism and recreational system (TTRS) as a complex system oriented toward satisfying the social needs of society. Her approach was functionally oriented, emphasizing the social role of TTRS, which distinguishes it from economically or spatially centered definitions proposed by other scholars (Lukianova et al., 2004). Lukianova viewed TTRS not only as a collection of physical objects (resources and infrastructure) but also as a set of phenomena, including tourist flows, cultural interactions, and social practices. She emphasized that TTRS exists to perform recreational functions – therapeutic (sanatoria), sports (tourist routes, mountaineering), and cognitive (excursions). Each function corresponds to a particular type of TTRS (therapeutic, sports, educational), which influences the organization of the system (for instance, medical TTRS require higher infrastructure standards due to the need for healthcare services).

With the gradual transformations that occurred in the socio-economic space, the structural components of territorial recreational systems also evolved. Smal (2004) proposed a shift in focus – from analyzing the structural elements themselves to examining the economic and geographical relationships that form the system (see Fig. 3, 4). He emphasized that the key characteristics of TRS are its relationships, which he divided into two main types:

- Economic-geographical vertical (intersystem) linkages: these are the relationships between the TRS and its external environment. Such linkages connect the recreational system with elements of a higher level (for example, with state administrative bodies, the country's transport networks) or with other recreational systems.

- Economic-geographical horizontal (intrasystem) linkages: these are the relationships among elements within a single TRS. They ensure the functioning of the system as an integrated whole, such as the interaction between recreationists, infrastructure, and natural resources within a certain territory.

The author considers the TRS as a dynamic structure, in which the nature of these linkages determines its functioning and its place within the overall economic system. The comparative table of TRS models provides a clearer view of the key differences among the examined theories (Table 2).

As already noted, the division of the "technical structure" into a *material-technical base* (buildings, facilities) and *recreational infrastructure* (roads, communications) allowed for a more detailed study of infrastructural aspects. These concepts are mainly component-oriented, describing what the TRS consists of. In contrast, Smal's approach (2004) is dynamic and functional, emphasizing *how* the system operates, describing it through the interrelationships (horizontal and vertical) that make his model more suitable for analyzing flows and the interaction of the system with the economic and social environment.

Thus, a territorial recreational system is a complex, dynamic, hierarchically organized, and interrelated set of components whose functioning and evolution are aimed at restoring human vitality and meeting social needs and demands. In a narrower sense, a territorial recreational system represents a set of tourism and recreation objects within a territorial entity that are functionally interconnected, which allows this set to be viewed as a system (Smal, 2011).

During the Soviet period, recreation was mainly viewed as a state function of social nature, aimed at restoring the workforce's vitality. Accordingly, tourism was viewed as part of the planned economy; however, with the transition to a market economy in the 1990s-2000s, the situation changed drastically.

- First, commercialization and competition began to dominate: recreational activity was no longer a state service but a commercial industry generating profit. This required models capable of evaluating efficiency and competitiveness.

- Second, the opening of borders and the removal of the "Iron Curtain" caused a sharp increase in international tourist flows. As a result, researchers began analyzing TRS not only within the country but in the context of the global tourism system, emphasizing intersystem linkages.

- Third, tourism itself transformed from a social phenomenon into an industry, becoming a powerful branch of the tertiary sector. This was facilitated by:

- rapid growth in demand (higher living standards and greater transport accessibility led to the expansion of international tourism and revenues, creating the need for models capable of assessing TRS capacity and resilience to peak loads);

o diversification of supply (tourists' preferences became more varied, giving rise to new types of tourism – ecological, cultural-historical, extreme – requiring flexible models that consider different types of resources and infrastructure, reflected in Smal's updated 2011 model);

o informatization (advances in information technology made tourism more dynamic; information itself became a defining factor in destination choice, service booking, and flow management).

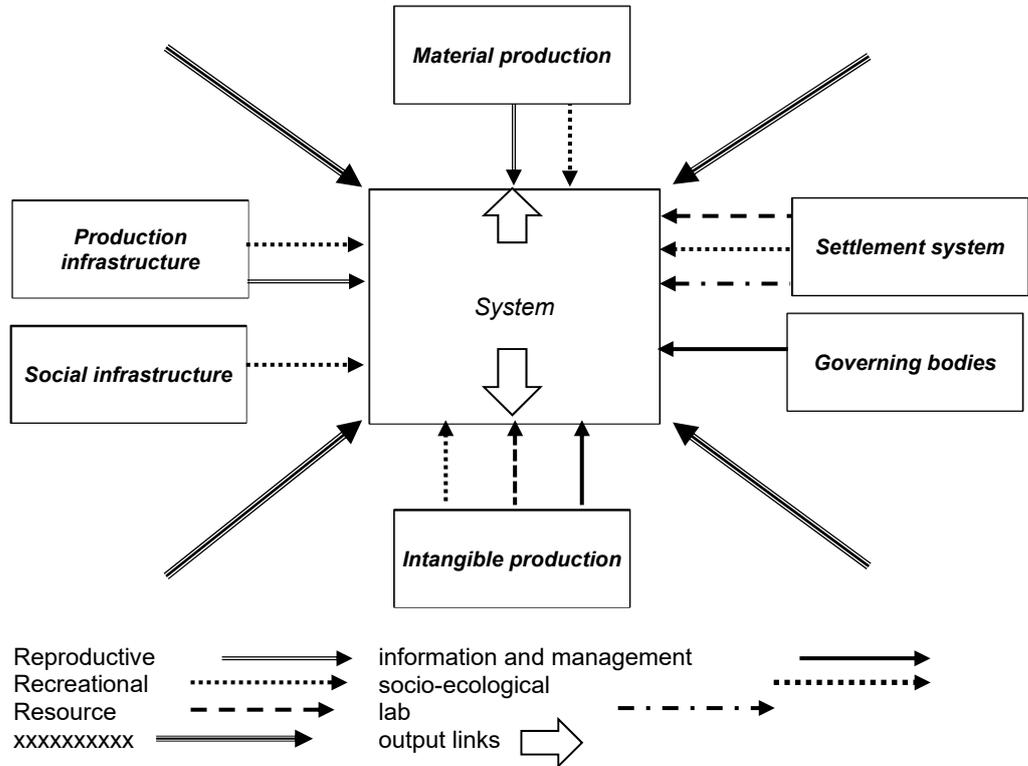


Fig. 3. Economic and geographical vertical (intersystem) connections of the TRS (Smal, 2004)

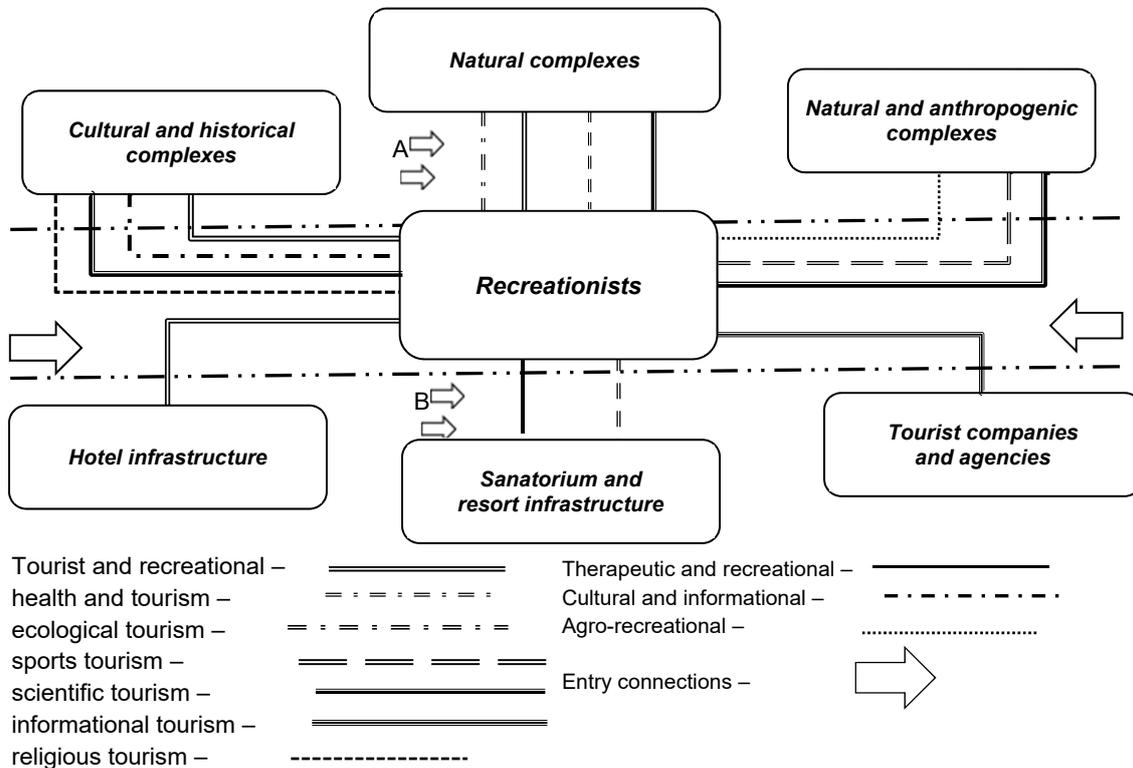


Fig. 4. Economic and geographical horizontal (intra-system) connections of the TRS (Smal, 2004)

Table 2

Comparative Table of TRS Models (V. S. Preobrazhensky, V. I. Pavlov, L. M. Cherchyk, I. V. Smal)

Comparison criterion	Model of Pavlov, Cherchyk (1998)	Model of Smal (2004)
Main focus	Detailing the component structure, especially the infrastructural part	Dynamic relationships and economic-geographical linkages
Key concepts	Elements: recreational resources and conditions, material-technical base, recreational infrastructure, recreationists, service personnel, and management systems	Horizontal (intrasystem) and vertical (intersystem) linkages
Approach	Structural-analytical: separates the technical infrastructure into two parts for deeper analysis	Functional: focuses on interactions among elements and the system's relationship with its environment rather than on its composition
Source	Developed by the authors based on (Smal, 2004, 2011)	Developed by the author (Smal, 2004, 2011)

Source: developed by the authors based on (Pavlov, & Cherchyk, 1998; Beidyk, 1997)

These economic, social, and technological changes prompted a transition from static, component-based models to dynamic, functional-component structures that can adequately reflect the complexity of the modern tourism industry.

Mazur (2005) characterizes the territorial tourist-recreational system (TTRS) as "an open-type system that constantly interacts with its external environment". This approach emphasizes the dynamic and economically oriented nature of the TTRS, differing from Lukianova's sociocentric or Preobrazhensky's geographical-territorial approaches. The TTRS is not isolated but constantly interacts with:

- the economic environment (investment attraction, infrastructure development – hotels, transport, and effects on related sectors such as agriculture and trade);
- the social environment (interaction with local communities, recreationists, administrative bodies);
- the ecological environment (dependence on natural resources such as water bodies and forests, and the environmental impact of tourism – e.g., soil erosion, pollution).

"Openness" means that the TTRS adapts to external changes such as economic reforms, market trends, or climatic factors.

According to Fomenko (2007), the TRS is a complex internal formation. Each element – natural complex, service system, engineering structures – can be considered as an independent system composed of several components. She illustrates this through the multi-element structure of a natural complex, which encompasses diverse components such as climatic conditions, water resources, and vegetation cover etc. Each of these elements can be further detailed.

A large number of characteristics are important for a comprehensive understanding of a given TRS. Moreover, its functioning is closely connected with other non-recreational systems, which both influence it and are affected by it. This interconnected environment adds new parameters to the overall system assessment, as it is necessary to consider the features of adjacent systems as well.

To better visualize the complexity and diversity of TRS features, it is advisable to present them schematically (Fig. 5). The central element of a territorial recreational system is the group of recreationists, since their presence and activity determine the recreational nature of the system.

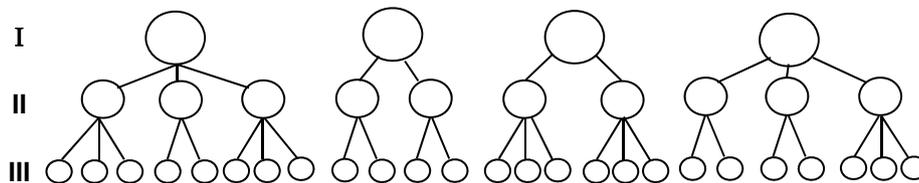


Fig. 5. Possible number of characteristics of the TRS (Fomenko, 2007)  
I – TRS elements; II – components of elements; III – characteristics of components

Stafiichuk (2008) proposes a more comprehensive and systemic understanding of the territorial recreational system (TRS) than is traditionally accepted in recreational geography, emphasizing its role in human health restoration and interaction with social and natural systems. TRS is defined as "a unified territory with significant recreational potential, comprising a set of recreational establishments that function on the basis of close production links and organizational unity, ensuring effective use of natural recreational resources and socio-economic conditions existing in the area". The scholar emphasizes that TRS is both an objective and a social formation, including recreationists (participants of recreation), natural complexes, technical infrastructure, service sphere, production sphere, labor resources, and settlement system.

According to Masliak (2008), TRS is a spatially organized set of recreational institutions within a specific territory of a certain taxonomic rank that functions based on the use of local resources and is spatially interconnected.

TRS is viewed as a dynamic geosystem comprising interrelated elements (resources, recreationists, infrastructure) that ensure recreational functions with an emphasis on territorial integrity and efficiency. His concept builds on the systemic approaches of the Soviet school (Preobrazhensky, 1975; Myronenko, & Tykhonova, 1981), yet focuses on spatial organization and regional development under the conditions of independent Ukraine.

Malska (2008) defines the territorial tourist-recreational system (TTRS) as a complex system of interrelated elements linked with other non-tourist systems, where tourism acquires a new quality through territorial integration. TTRS is a combination of mutually connected elements and relationships that form a structure meeting recreational and tourist needs. A major advantage of this concept is its treatment of tourism phenomena as an internal, complex system interacting with other non-tourist systems. The model explains tourism as an active form of human communication and presents TTRS as a territorial network

with new economic and social qualities. It is one of the first conceptual models to describe the essence of the tourist-recreational space and its formation through interaction with non-tourist sectors, such as transportation, agriculture, and banking.

Novikova (2008) defines TRS as a spatially organized system of recreational objects, subjects, and resources within a certain territory that interact to satisfy recreational needs. TRS is a dynamic geosystem where the balance between resources, infrastructure, and recreational flows is key, with an emphasis on regional characteristics. She highlights that TRS becomes a true system only through the interaction of its elements and spatial integrity, which enables typology and practical application. The researcher generalizes previous approaches (O. H. Topchiev), offering her own typology based on seven criteria that expand classical models. Typology, in her view, is an analytical tool for differentiating the highly diverse and multifaceted recreational activity.

In the study by Korol and Krachylo (2009), the tourist-recreational system is viewed as an integrated territorial formation functioning within a broader spatial structure of the tourism economy. They argue that "tourist points, as the lowest links of tourism as a subsystem of the territorial recreational system (TRS), represent a primary yet rather complex hierarchical unit". Hence, tourism is considered a subsystem of the TRS. "A tourist region is a territorial-recreational system uniting tourist districts" (Korol, & Krachylo, 2009).

Their approach is characterized by several key ideas:

- Tourism as an economic-geographical phenomenon: Emphasis is placed on the spatial nature of tourism—tourist resources and accommodation areas are located in different territories, which requires territorial organization and management.

- Focus on management: Tourism needs specialized governance not only as a business process but as a socio-economic system. A tourism manager must understand geography, spatial planning, and recreational resources.

- Systemic view of the tourism industry: The industry is seen as a complex of interconnected enterprises – tour operators, agencies, hotels, transport companies, restaurants, etc. – that function within a single value-creation chain.

- Impact of external environment: External factors such as demographics, income levels, leisure time, mental shifts, and ecological constraints significantly influence tourism, making its management complex and dependent on the macroenvironment.

- Classification of tourism types and forms: The authors provide a detailed classification by purpose, form, duration, and spatial extent, allowing for deeper market and demand analysis.

- Innovation and social responsibility: The model stresses innovation in tourism, environmental standards, and social tourism, asserting that modern tourism should be profitable yet socially and environmentally responsible.

Shablilii (2009) defines TRS as a complex territorial system of recreational economy that integrates natural and cultural resources, infrastructure, economic actors, and governance mechanisms to meet recreational needs and ensure the rational use of territorial potential. TRS is viewed as an economic-social geosystem in which recreation is integrated into the regional economic complex, contributing to territorial differentiation and socio-economic development. The scholar emphasizes that TRS acquires systemic qualities through spatial concentration of resources and objects, allowing optimization within Ukrainian regions (e.g., within economic districts).

In 2011, Smal updated his model by combining two approaches: the structural component (what elements make up the system) and the functional link (how these elements interact). Unlike his 2004 model, which mainly focused on interrelations, the revised version offers a holistic view where system components (recreationists, resources, infrastructure, governance) are analyzed through the prism of their functions and interconnections (Fig. 6).

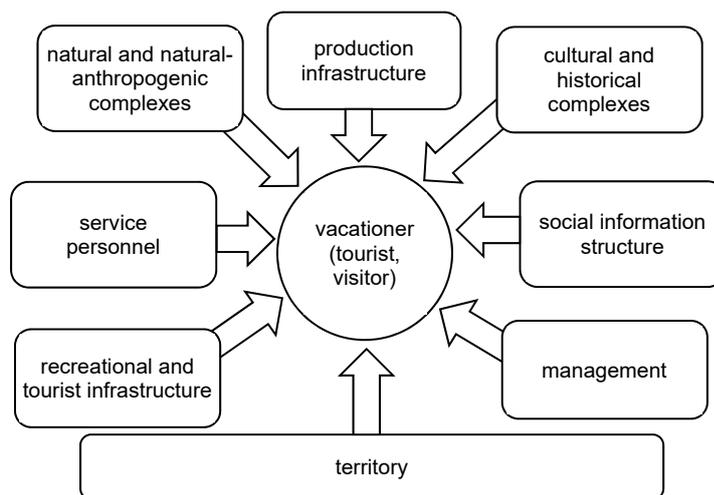


Fig. 6. Model of the functional-component structure of the territorial recreational system (Smal, 2011)

This approach is more advanced, as it not only identifies the components of a recreational and tourism system (RTS) but also provides an understanding of how it functions, how it responds to changes, and how it can be effectively managed.

This enables RTS to be considered not merely as a set of elements or a network of connections, but as an organized system in which each component performs a specific function necessary for its sustainable development (Table 3).

Table 3

Comparative Characteristics of RTS (Smal, I.V.)

Comparison criterion	V.S. Preobrazhensky Model	Smal's Model (2004)	Smal's Model (2011)
Main focus	Classical structure and functional integrity of the system	Dynamic relationships and economic-geographical linkages	Integration of components and functional connections for holistic analysis
Key concepts	Five subsystems: recreational users, natural and cultural complexes, technical infrastructure, service personnel, and management bodies	Two types of connections: horizontal (internal) and vertical (inter-system)	Functional-component structure: combines key components with specification of their functions and interrelations
Approach	Structural-functional: emphasizes the composition and purpose of parts	Functional: focuses on interactions between elements and with the environment	Integrative: combines structural analysis with a functional approach, providing a more comprehensive understanding of RTS
Novelty of the model	Initiated a systemic approach in recreational geography	Shift from analysis of elements to analysis of relationships between them	A combination of structural elements and functional connections in a single model for deeper analysis

Source: developed by the author based on (Smal, 2004, 2011)

Liubitseva, Malska and Zinko (2011) define a recreational and tourism system (RTS) as a spatially organized system of recreational objects and actors interacting to provide recreational and tourism activities. Their approach emphasizes the integration of tourism and recreation as a single system, highlighting the role of spatial organization and interactions among actors (tourists, local communities). They incorporate contemporary aspects such as regional planning and tourism marketing, considering tourism as a key component of RTS, with emphasis on economic and social linkages. In their studies, they gradually move away from the classical recognition of recreation and focus on tourism.

Pokolodna (2012) defines RTS as a system of interconnected recreational elements (natural, social, economic) within a given territory, emphasizing their functional integrity. RTS is a dynamic geosystem comprising subsystems (resources, recreational users, infrastructure) that function to meet recreational needs and support regional development. It achieves the status of a system through close interconnections between elements, generating a synergistic effect for efficient resource utilization. The author emphasizes that RTS is not merely a collection of objects but a self-regulating system adapting to regional conditions (e.g., urban RTS in Kharkiv or natural RTS in the Carpathians).

Velychko (2013) defines RTS as a socio-geographical system composed of interrelated subsystems (recreational users, natural and cultural complexes, engineering structures, service personnel, management bodies) characterized by functional and territorial integrity. RTS is a heterogeneous system in which elements interact to provide recreational services, with emphasis on spatial organization and efficiency. It attains system status through close linkages that create a synergistic effect for service provision.

Kyfiak (2013) examines RTS as a territorially organized system of recreation and tourism, based on the categorization of recreational resources and formed according to the principles of rational use of natural and cultural potential for economic development. RTS is a complex economic system in which the interaction of resources, infrastructure, and actors (recreational users, tour operators) generates a synergistic effect for regional economic development. RTS functions as a factor of economic growth, integrating tourism into the regional economic complex. Kyfiak emphasizes that RTS is shaped based on resource types (natural, cultural) and principles

(rationality, sustainability), enabling the optimization of tourism activities to diversify the economy (e.g., replacing traditional industries with tourism in depressed regions).

Makara and Harasiuk (2014) investigate territorial tourist-recreational systems (TTRS), which are considered either synonymous with or an extension of the concept of a territorial recreational system (TRS) with a particular focus on tourism. The authors generalize the definition of TTRS based on the work of Luk'ianova (2004), who interprets TTRS as a set of interacting structures aimed at meeting recreational needs. They use this definition to emphasize the social purpose of TTRS, reflected in their typology (e.g., the criterion of "significance for consumers" – local, national, global). In the study by F.F. Mazur, the dynamic and open nature of TTRS is highlighted, which interacts with other systems (economic, social, ecological) and the external environment (e.g., natural conditions, market factors) (Mazur, 2005). This approach underscores the intersectoral nature of TTRS, incorporating links with transport, agriculture, trade, and other sectors. They apply Mazur's concept of openness to justify the intersectoral connections within TTRS, as reflected in its structure (e.g., interactions with production sectors such as construction or transport). Preobrazhensky's ideas regarding the consideration of TTRS as a territorially organized system are also applied, emphasizing the spatial distribution of recreational facilities (sanatoria, tourist bases) and their economic roles, forming a network that integrates sub-sectors (resort management, tourism, leisure) with their own development patterns (e.g., concentration in regions with natural resources such as Crimea or the Caucasus).

Thus, O.V. Makara and D.M. Harasiuk provide an integrative definition: TTRS is a complex, open, intersectoral non-productive system that unites recreational resources, infrastructure, tourists, personnel, and management to satisfy tourist-recreational needs. It operates in close connection with other systems (economic, social) and depends on territorial characteristics (e.g., the natural resources of the Carpathians or Volyn).

A number of authors, including Hrodzynska, Nezdoyminov, Huseva and Zamkova (2014), define TRS as a complex dynamic system where the interaction of elements (resources, tourists, infrastructure) creates a balance between economic efficiency, ecological sustainability, and marketing attractiveness. TRS attains the status of a system when close interconnections ensure the sustainable use of resources. TRS is an interdisciplinary object, where recreation

science (recreology) integrates economics (service marketing), ecology (resource sustainability), and sociology (tourist needs) and functions under market conditions in Ukraine, where marketing (regional promotion) and ecology (resource protection) are key for sustainable development.

Pushkar and Pushkar (2014) investigate TRS as a complex economic system, where recreation acts as a factor shaping regional economies through rational resource allocation and infrastructure development. TRS serves as an instrument of territorial organization, where recreational activity is integrated into the regional economic complex to foster economic growth. The authors emphasize that TRS attains systemness through spatial concentration of resources and interaction of elements, optimizing tourism as an industry (e.g., cultural TRS in the Lviv region).

Bavrovska and Butenko (2015) define TRS as a spatially organized system of recreational elements (natural resources, tourists, infrastructure, management structures) interacting within a defined territory to ensure recreational functions and sustainable regional development. TRS is a dynamic geosystem, where the key factor is the balance between resources, tourist needs, and economic efficiency, with emphasis on territorial integrity. The authors highlight that TRS forms based on the interaction of natural, social, and anthropogenic factors, and its development depends on regional characteristics of Ukraine (e.g., Carpathians or the Black Sea region).

Gerasyenko (2016) considers TRS as a complex, multi-component structure formed at the intersection of three subsystems: nature, society, and the national economy. It is a spatially organized system of recreational elements (natural resources, tourists, infrastructure, management structures) interacting within a territory to provide recreational functions and promote sustainable regional development. TRS is a dynamic geosystem, with the key aspect being the balance between resources, tourist needs, and economic efficiency, emphasizing territorial integrity and system properties (hierarchy, adaptability).

In the context of TRS concept development, Moiseieva and Kobchenko (2019) focus on socio-economic aspects, considering TRS as an instrument for economic growth and social integration, acting as a catalyst for regional development. The authors highlight the phenomenology of tourism – its role in forming social ties, economic flows, and cultural exchange – with less attention to ecological risks. TRS is considered a structural-dynamic model, where socio-economic factors (income, employment, migration) determine its effectiveness. This approach is less focused on long-term sustainability, prioritizing short-term economic benefits, which may overlook resource degradation.

Snihur (2019) argues that TRS is a spatial-functional system uniting recreational resources, activity subjects (tourists), infrastructure, and management structures to meet recreational needs and promote sustainable regional development. TRS is a dynamic geo-economic system formed through the interaction of elements and characterized by gradual quantitative and qualitative changes aimed at rational resource use. TRS is employed as a tool for the efficient functioning of recreational activities, where development depends on factors determining its attractiveness and sustainability. The author emphasizes the need to systematize factors for the formulation of national and regional development strategies.

Povorozniuk (2019) defines TRS as a spatial-functional system integrating recreational resources, activity subjects (tourists), infrastructure, and management structures to provide recreational needs and sustainable regional development. TRS is a dynamic geo-economic system, where development involves gradual quantitative and qualitative changes, aimed at rational resource use and reproduction while meeting service demand. The system is a tool for developing national and regional strategies, where its level of development, efficiency, and territorial organization are determined by specific factors. The author emphasizes that TRS acquires system status through element interaction, creating conditions for attractiveness and sustainability, with a focus on overcoming entropy (degradation) through factor regulation.

Arkhylova, Fomenk, Kinash and Holovnia (2019) define TRS as a set of subjects and elements formed from internal components, interrelated among themselves and with the surrounding environment, where connections change over time and space to ensure dynamic sustainable development. TRS is a dynamic socio-natural system, where recreational activities are balanced with ecosystem processes to prevent degradation. They view TRS as an instrument of sustainable development, where dynamic processes (fluctuations in tourist flows, ecosystem changes) require modelling to balance recreational needs and ecological stability. The authors stress that TRS attains system status through interaction with the biosphere, and its development is constrained by the buffer capacity (homeostasis of the geosystem).

Topchiiev, Sych and Yavorska (2020) proposed a general interpretation of TRS as an integral component of the regional recreational environment. It is a dynamic socio-natural system uniting territorially organized elements (natural resources, anthropogenic objects, recreation subjects) to form recreational-tourism potential (Table 4). TRS is not an isolated structure, but rather part of the regional recreational environment, which encompasses landscape, ecological, and socio-economic components.

Table 4

Key Elements of TRS

Element	Description	Role in the Recreational Environment
Natural and landscape resources	Climate, relief, water bodies, biodiversity (e.g., Black Sea coast)	Basis of potential, emphasizing resilience to anthropogenic impact
Anthropogenic components	Infrastructure (hotels, transport), cultural objects (Odessa landmarks)	Ensure accessibility and comfort, but may pose risk of environmental degradation
Subjects (recreationists)	Tourists, visitors with different motivations (leisure, wellness)	Active agents determining flows and system loads
Management and regulatory mechanisms	Regional plans, monitoring, zoning	Coordination for sustainable development, with terminology refinement (e.g., "recreational capacity")

Source: Developed by the author (Topchiiev, Sych, & Yavorska, 2020)

The authors emphasize a conceptual and terminological structure: TRS is not merely a collection of elements but a self-organized geosystem, where the key is the balance between territorial potential and loads from recreationists. They introduce the concept of the "recreational environment" as a supersystem, where TRS ensures the

functioning of the regional recreational-tourism complex (Topchiev, Sych, & Yavorska, 2020).

Their research builds upon classical works (Preobrazhensky, 1975; Vedenin, 1982; Myronenko & Tikhonova, 1981) and previous Ukrainian studies (Maslyak, 2008; Beydik, 1997; Topchiev, 2003), while introducing innovations adapted to the contemporary context (Table 5).

Table 5

Key Differences in TRS

Aspect	Previous Research	Differences in the 2020 Article
Focus on terms	General definitions of TRS as a set of elements (Beydik, 1997; Maslyak, 2008); focus on structure: resources, infrastructure, recreationists	Detailed conceptual and terminological structuring: TRS as part of the "recreational environment" (new key concept) with a hierarchy of terms (potential, capacity, resilience), extending Preobrazhensky V.S.'s classical model and making it more integrative
Level of analysis	Local or general (Pavlov, Cherchik, 1998 – Volyn; Fomenko, 2001 – resort studies)	Regional focus on the recreational environment as a supersystem, integrating TRS into the broader regional ecosystem, unlike subject- or object-oriented models (Vedenin, 1982)
Methodology	System analysis (Velychko, 2013); structure and properties (Smal, 2004); theoretical foundations (Topchiev, 2005)	Qualimetric evaluation (multi-criteria, quantitative) for integrated potential, including elements of a monistic approach (unity of nature/society); differs from earlier approaches by stronger orientation toward practical planning (zoning, monitoring), considering global challenges (COVID-19 pandemic, climate)
Sustainability and integration	Lesser focus on ecological sustainability (Pokolodna, 2012); management (Korol, Krachilo, 2009)	Strong emphasis on sustainable development of the environment, where TRS is an instrument for balance (ecology + economy), differing from traditional approaches; socio-economic focus (Moiseieva, 2019); integration of ecosystem-based approach (Arkhypova et al., 2019)
Innovations	Theoretical models (Lyubitseva et al., 2011 – tourism; Hrodzynska et al., 2014 – recreology)	Problem of integrated potential assessment: authors identify gaps in previous studies (insufficient terminological clarity), proposing the new concept of the "recreational environment" as a framework for TRS, enabling a more interdisciplinary analysis (geography + ecology + tourism)

Source: Developed by the authors (Topchiev, Sych, & Yavorska, 2020)

The general evolution of conceptual approaches to territorial tourist and recreational systems (TRS) is characterized by a transition from a static model, which dominated in the 1990s–2000s, to a dynamic, terminologically organized system integrated into the regional environment. Contemporary researchers critically assess previous approaches for their fragmentary nature, particularly the absence of a holistic model in Topchiev's work (2003), and propose more comprehensive methodologies oriented toward practical application, particularly in the context of spatial planning for tourist and recreational development in the Odessa region.

Skrypnyk and Serdiuk (2021) consider a territorial recreational system (TRS) as a complex system that integrates recreational resources, infrastructure, and stakeholders for the sustainable use of territories. They propose a modern approach to TRS, integrating concepts of sustainable development, ecological resilience, and the scientific foundations of recreational geography, aligning with global trends in tourism and recreation. They emphasize that TRS is not merely a territorially organized structure but also an instrument for harmonious regional development, balancing economic benefits, social needs, and environmental conservation. The key idea is that TRS is regarded as a dynamic geosystem that adapts to contemporary challenges—such as climate change, urbanization, and increasing tourist flows—through the integration of sustainable development principles. Unlike classical definitions (Preobrazhensky, 1975; Beydik, 1997), the focus shifts from merely describing structure to resource management aimed at achieving long-term sustainability. A managerial approach oriented toward the organization and administration of tourism activities is evident. Increasing

attention is paid to transportation infrastructure and tourist flows. Practical aspects of tourism, including organization and logistics, are increasingly considered. Their research is distinguished by an applied approach oriented toward the business aspects of tourism.

Khytra (2021) defines TRS as the territorial component of the tourist-recreational system, interconnected through coherent and co-evolutionary relationships with other economic sectors, elements of social life, and the natural environment. The evolution of TRS occurs according to principles of self-organization and synergetic cyclicality, experiencing fluctuations and passing through bifurcation points accompanied by qualitative transformations. TRS is characterized by increasing entropy, necessitating tools for its mitigation, and encompasses recreational resources, cultural identity, and the tourist product (Khytra, 2021).

Siutkin, Kornus, Kornus, Danylchenko, and Korol (2022) define TRS as a spatial-functional system that integrates natural and anthropogenic resources, recreational users, infrastructure, and management structures to ensure recreational needs and promote sustainable regional development. TRS is regarded as an object of recreational geography, integrating natural, social, and economic components. It is a dynamic geosystem formed through the spatial organization of recreational activities, optimally suited for regional development, with a focus on sustainable resource use and economic efficiency.

Based on theoretical generalizations, we classified the authors according to the main approaches and concepts in the study of territorial recreational systems (TRS) in Table 56. The conducted analysis of scientific approaches and concepts in TRS research allows us to assert a significant evolution in their theoretical understanding.

Table 6

## Comparison of Key Approaches and Concepts in the Study of Territorial Recreational Systems (TRS)

Author(s), Year	Conceptual Approach / Definition	Key Features / Focus	Innovations / Distinctions
Preobrazhensky, 1975	TRS as a spatially organized system of recreational facilities	Emphasis on spatial distribution of sanatoriums, tourist bases; network structure	Classical foundational model; focus on structural organization
Beydik, 1997	TRS as a set of elements: resources, infrastructure, recreationists	Structural description; basic functional elements	Early conceptualization in Ukrainian context
Topchiev, 2003	TRS as a regional system of recreation	Integration of regional development; emphasis on spatial concentration	Lacked holistic model; mostly descriptive
Makara, Harasiuk, 2014	TRS as a complex, open, intersectoral system	Integrates recreational resources, infrastructure, personnel, management; social purpose emphasized	Typology by significance (local, national, global); focus on intersectoral links
Hrodzynska, Zamkova, 2014	TRS as a dynamic system	Interaction of resources, recreationists, infrastructure; balance of economic efficiency, ecological sustainability, marketing appeal	Emphasis on sustainable use of resources and interdisciplinary integration
Pushkar, Pushkar, 2014	TRS as an economic system	Recreation as factor in regional economy; spatial concentration of resources	TRS as a tool for regional economic organization
Bavrovska, Butenko, 2015	TRS as a spatially organized system	Balance of resources, recreationists' needs, economic efficiency; territorial integrity	Dynamic geosystem approach; integration of natural, social, and technogenic factors
Gerasymenko, 2016	TRS as a complex, multi-component structure	Interaction of nature, society, and economy; hierarchical, adaptive	Emphasis on system properties: hierarchy, adaptability
Moiseieva, Kobchenko, 2019	TRS as socio-economic instrument	Focus on regional growth, social integration, tourism flows	Structural-dynamic model; less emphasis on long-term sustainability
Snihur, Povorozniuk, 2019	TRS as spatial-functional geoeconomic system	Integration of resources, recreationists, infrastructure, management; gradual quantitative and qualitative changes	Emphasis on national/regional strategy, resource efficiency, entropy control
Arkhypova, Fomenko, 2019	TRS as dynamic socio-natural system	Recreation balanced with ecosystem processes; dynamic adaptation	Focus on sustainable development; buffer capacity of geosystem
Topchiev, Sych, Yavorska, 2020	TRS as part of regional "recreational environment"	Self-organized geosystem; balance between territorial potential and loads; integrated monitoring and zoning	Concept of "recreational environment"; hierarchical terminological structure; applied planning orientation
Skrypnyk, Serdiuk, 2021	TRS as integrated system for sustainable use	Resources, infrastructure, and actors balanced for regional harmony	Integration of sustainable development principles; managerial and applied approach
Khytra, 2021	TRS as territorial component with co-evolutionary links	Self-organization, synergetic cyclicity, bifurcations, entropy growth	Emphasis on dynamic evolution, cultural identity, tourism product
Siutkin, Korol, Korol, Danilchenko, Korol, 2022	TRS as spatial-functional system	Integration of natural, anthropogenic resources, recreationists, infrastructure, management	Dynamic geosystem approach; regional development with focus on sustainability and economic efficiency

Source: Developed by the authors

A clear transition can be traced from the classical Soviet model, initiated by V.S. Preobrazhensky, which considered TRS as a socio-geographical system with a limited set of interrelated elements (natural complex, infrastructure, personnel, recreational users), to contemporary complex multi-level constructs. This evolution is characterized by a fundamental shift in emphasis: from the purely social and planning-distributive function of the system under a command economy to its perception as an object of market relations, oriented toward economic efficiency, managerial optimization, and the achievement of sustainable development goals.

The complication of theoretical models has manifested in the shift from linear and structurally static representations to the study of TRS as an open, dynamic, and self-organizing system, integrating social, ecological, and economic subsystems into a unified complex. The most

contemporary synergetic and system-integrative approaches consider TRS as a socio-ecological-economic formation, where the emergent effect of interactions among its components plays a key role.

The shift in the scientific paradigm has also been reflected in the terminology. In particular, the widespread adoption and consolidation of the term "tourist-recreational system" indicate a shift in focus from general recreational activity toward its specific economic and commercial dimension, which aligns with contemporary market conditions.

#### Discussion and conclusions

The analysis of the evolution of territorial recreational systems (TRS) concepts demonstrates significant progress in both theoretical understanding and practical application, reflecting a paradigm shift from static, planning-oriented models to dynamic, integral systems focused on sustainability, economic efficiency, and social needs. From

the classical works of Preobrazhensky (1975), which laid the foundation for a systemic approach to TRS, to contemporary studies (Topchiev, Sych, & Yavorska, 2020; Skrypnyk, & Serdiuk, 2021), the TRS concept has transformed in response to global challenges such as tourism commercialization, globalization, informatization, urbanization, and environmental constraints.

A gradual transition is observed from structural analysis (what the system consists of) to functional analysis (how it operates, how its elements interact); from a closed, territorially bounded model to an open, dynamic system integrated into regional and global processes; from a socio-centric approach to a comprehensive perspective considering economic efficiency, ecological sustainability, and social equity. Contemporary research criticizes early models for their technocratic orientation, detachment from practice, weak empirical basis, and insufficient attention to the economic-management component. Current approaches seek to address these gaps by integrating management, marketing, ecological modelling, and sustainable development principles.

Modern trends indicate a desire to unify various approaches into a single integrated concept. The tourist-recreational system (TRS) is increasingly regarded not as a simple aggregation of objects, but as a complex, multi-level, and dynamic component of a region's "recreational environment". This requires comprehensive management to ensure sustainable development.

As a result, TRS theory has confirmed its relevance and potential for further refinement. It has evolved from a Soviet scientific model into a contemporary interdisciplinary tool that allows for the analysis and management of complex spatial systems of tourism and recreation, encompassing natural, social, and economic components. The modern interpretation of TRS provides a crucial theoretical foundation for the effective planning and development of the tourist-recreational sector, both in Ukraine and beyond.

**Authors' contribution:** Zapototskyi Sergii – researched evolutionary approaches to the formation and development of tourist-recreational systems, developed research methodology, conducted information data analysis, verified data results, reviewed and edited the manuscript. Tyshchenko Svitlana – studied and analyzed theoretical information, collected data, synthesized and compared the main approaches and concepts in TRS research.

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## ТРАНСФОРМАЦІЯ НАУКОВИХ ПІДХОДІВ ДО ВИВЧЕННЯ ТУРИСТСЬКО-РЕКРЕАЦІЙНИХ СИСТЕМ

**Вступ.** Територіальні рекреаційні системи (ТРС) є важливим об'єктом дослідження рекреаційної географії, що інтегрує природні, соціальні та економічні компоненти для задоволення потреб людини у відпочинку, оздоровленні та туризмі. Концепція ТРС, започаткована В.С. Преображенським у 1960-х роках, зазнала значної еволюції, відображаючи трансформацію від планової економіки до ринкової, де туризм став ключовою галуззю. Сучасні виклики, такі як глобалізація, урбанізація, зростання туристичних потоків, екологічні обмеження та інформатизація, вимагають переосмислення ТРС як інструменту сталого розвитку та економічного зростання.

**Методи.** Дослідження ґрунтується на застосуванні системного та системно-структурного підходів, що дає змогу розглядати ТРС як інтегральні географічні цілісності. Застосовано методи класифікації для виокремлення типів ТРС та їхніх компонентів, а також методи синтезу для узагальнення еволюційних етапів розвитку теорії ТРС. Аналіз проводиться з урахуванням сучасних тенденцій, таких як сталість, інформатизація та комерціалізація туризму, з акцентом на міждисциплінарний підхід, що поєднує географію, економіку та екологію.

**Результати.** Систематизовано етапи еволюції концепції ТРС: від початкових досліджень 1960-х років, орієнтованих на соціальну організацію рекреації, до сучасних інтегральних моделей, що враховують економічну ефективність, екологічну стійкість та глобальні виклики. Визначено ключові елементи ТРС (рекреанти, природні ресурси, інфраструктура, управління) та їхні взаємозв'язки, які формують просторову організацію системи. Порівняльний аналіз моделей (В.С. Преображенського, В.І. Павлова і Л.М. Черчика, І.В. Смеля) показав перехід від статичних структурних підходів до динамічних функціонально-компонентних моделей, що акцентують на взаємодії системи із зовнішнім середовищем. Виділено основні етапи розвитку концепції ТРС: від локально-планового підходу до визнання ТРС як динамічних, відкритих систем, що є основою для формування регіональних туристичних кластерів. Виокремлено сучасні тенденції, такі як інтеграція принципів сталого розвитку, менеджменту та маркетингу, а також необхідність врахування регіональних особливостей України.

**Висновки.** Концепція територіальної рекреаційної системи трансформувалася з вузькоспеціалізованого географічного поняття у міждисциплінарний інструмент регіонального управління. Подальший розвиток теорії ТРС вимагає вдосконалення методології управління ТРС, інтеграції геоінформаційних технологій та розробки стратегій для балансування туристичних потоків і збереження ресурсів, особливо в контексті глобальних викликів, таких як зміна клімату та урбанізація. Результати дослідження можуть бути використані для розробки стратегій регіонального розвитку туризму.

**Ключові слова:** територіальна рекреаційна система (ТРС), туристсько-рекреаційна система, рекреаційна географія, геосистема, еволюція концепцій, системний підхід, сталий розвиток, туризм, рекреаційні ресурси.

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