

## THEORETICAL-METHODOLOGICAL ASPECTS OF LANDSCAPE PLANNING

*Landscape planning definition is carried out in this article. The key features of landscape planning as an essential part of spatial planning are analyzed. Objects of landscape planning, which need to be taken into account, were defined in this article. Moreover, the main directions of landscape planning realization are explained. The key territorial levels of landscape planning are under consideration in this article and the variety of territorial units and range of scales for each level of landscape planning are shown.*

**Key words:** *landscape, landscape planning, object of landscape planning, territorial unit, hierarchical level.*

**Вікторія Удовиченко. ТЕОРЕТИКО-МЕТОДОЛОГІЧНІ АСПЕКТИ ЛАНДШАФТНОГО ПЛАНУВАННЯ.** У представленій статті окреслено поняття ландшафтного планування. Проаналізовано головні особливості ландшафтного планування як важливої складової процесу просторового планування. Виокремлено головні об'єкти, які підлягають ландшафтному плануванню, та виступають його головними операційними одиницями. Крім того, визначено головні складові процеси ландшафтного планування. Базові територіальні рівні планування було окреслено у поданій статті та подано усе різноманіття операційних одиниць й робочих масштабів по кожному з ієрархічних рівнів.

**Ключові слова:** *ландшафт, ландшафтне планування, об'єкт ландшафтного планування, територіальна операційна одиниця, ієрархічний рівень.*

**Вікторія Удовиченко. ТЕОРЕТИКО-МЕТОДОЛОГИЧЕСКИЕ АСПЕКТЫ ЛАНДШАФТНОГО ПЛАНИРОВАНИЯ.** В представленной статье раскрыто понятие ландшафтного планирования. Проанализировано главные особенности ландшафтного планирования как важной составляющей процесса пространственного планирования. Было выделено главные объекты, которые подлежат ландшафтному планированию, и выступают его главными операционными единицами. Кроме того, определены главные составляющие процесса ландшафтного планирования. Базисные территориальные уровни ландшафтного планирования раскрыты в данной статье и представлено все разнообразие операционных единиц и рабочих масштабов по каждому иерархическому уровню.

**Ключевые слова:** *ландшафт, ландшафтное планирование, объект ландшафтного планирования, территориальная операционная единица, иерархический уровень.*

**Introduction.** The main objectives of any reasonable society and community is to adapt and optimize its existence in the current environment. It is a geographical cover (Geosphere), or part of it – certain landscapes for humanity all together. Thus, there are two main variants of our interaction with nature. The first variant – passive – to live waiting for nature through crises revolutions and disasters alone leading us to a new relatively stable level of common development and existence. Therefore, it is possible opportunity that this transition will not happen and we could disappear from nature, like mammoths. The second variant – active – to help nature and humanity mutually adapt to coexistence on a new level of sustainable development of the noosphere by using methods of landscape planning, landscape design and improving production standards. It is necessary to us to create independently highly effective natural-economic systems or cultural landscapes favorable to the human activity and convenient for the surrounding landscape geoecosystems according to the concept and principles of landscape planning.

The theoretical and methodological basis of the article cover the wide range of works written by native and foreign geographers such as L. Rydenko, E. Marynjak, E. Pozachenjyk, A. Antipov, A. Drosdov, L. Kazakov, E. Kerimova, D. Kozlov, E. Kolbovskij, I. Kychinskaja, D. Markov, V. Sisjev, Haaren von C., H. Lier, G. Carsjens, Tress B. etc.

**The purpose of the article.** The purpose of the article is to display the theoretical-methodological aspects of landscape planning such as definition, the key features, objects and levels of landscape planning.

**Main material.** As we know Nature put the major constraints through natural environment and available

natural resources areas in the early stages to human development. Nature has been a powerful factor of leading existence and human adaptively adjust to it planning own business in accordance with the reclaimed areas of landscape structure slightly changing only the weakest local landscapes or migrating to areas that were more favorable. Nowadays situation is changing and the industrial society, which could be characterized by the high level and speed of production, are able to change the nature. In addition, often the negative role of humanity in the organization and functioning of the environment amplifies. It was a prerequisite for the finding of landscapes and geo-ecological approaches to optimize the interaction between Nature and economic activity.

Landscape is turning increasingly from studying landscape as “a thing in itself” or “as they are” to study the properties of landscapes and opportunities for their rehabilitation in accordance with the requirements of human activity, the principles of co-evolution and nature conservation.

In recent decade it became clear even to the public that to achieve high efficiency and environmental safety of natural-economic systems using only technological methods is becoming more expensive and generally not always possible. Therefore, the developed countries are beginning to pay more attention to the landscape spatial planning of economic activity, particularly oriented on the nature conservations. Currently this is probably one of the most pressing constructive geography directions.

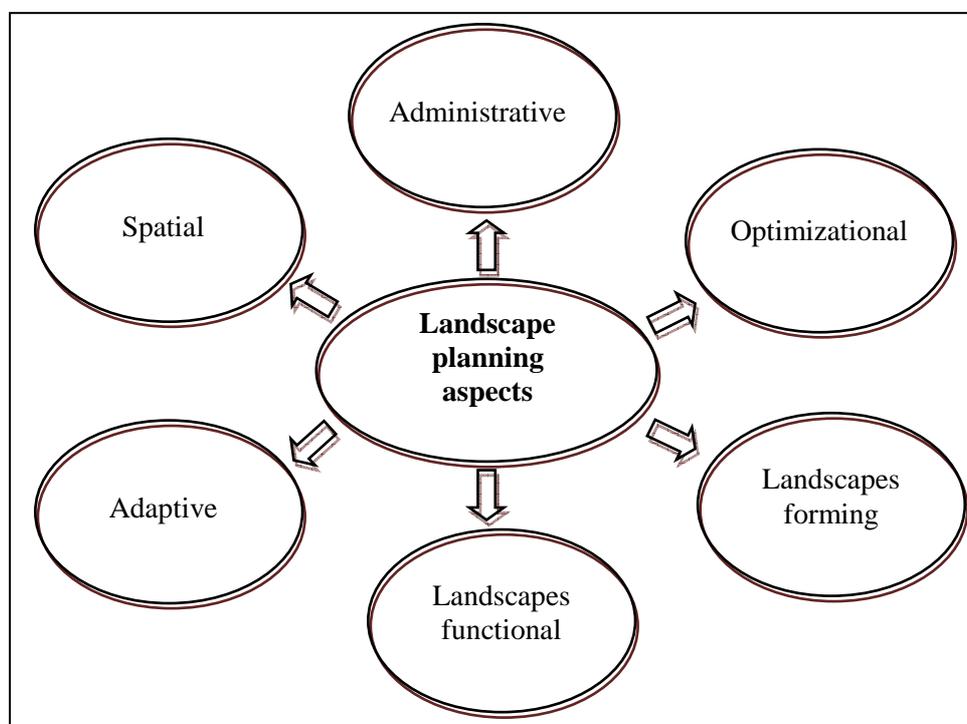
In geography geo-ecological directions of optimization of economic activity and the environment associated primarily with territorial structure improving, organization and operation of natural-economic systems or cultural landscape all together. Only appropriate selection of natural and anthropogenic landscapes for the re-

construction, which are corresponded to the geo-ecological principles of co-evolution, cultural traditions and natural-economic systems, create new possibilities for the sustainable development of the modern highest level of interaction between society and nature.

This area is called a “**landscape planning**”. It is focused on the optimized geo-cultural landscapes formation by improving the territorial structure and function-

ing of natural-economic systems and business technology activities in accordance with the key landscape features of the area [2].

According to the scientific understanding landscape planning is one of the active adaptation humanity of its business activities area in the surrounding landscapes or environment (Fig.1).



*Figure 1. The key aspects of landscape planning (done by author)*

Landscape planning is an essential component of spatial planning and management in the process of development of economic activities in the region. It is focused on its environmental and economic optimization whereas its elements are reflected in regional plans, state economic development plans and its individual sectors (energy, urban planning etc.).

To add further credence to our assertion we should note that landscape planning is a kind of scientific activity connected with territorial planning which is taking into account the landscape and its ecological features, areas planned for current types of nature resource management. It is focused on the optimization of the territorial structure of landscapes and production technologies in the natural-economic systems for effective long-term operation maintaining or improving the ecological state of environment.

According to this definition we could summarize that the overall aim of landscape planning is the production efficiency improving, increasing of quality of biological productivity and biodiversity of landscapes during maintaining the stability of geosystems and favorable conditions for human life. It is definitely essential part of constructive geography and applied geography in general.

As **an object** of landscape planning according to the general understanding we could mention natural,

natural-anthropogenic, anthropogenic, material-industrial and cultural landscapes, natural-territorial economic systems, their parts and morphological units, their facilities, land and technology business activities, modern facilities, historical and cultural heritage which are need to be organized in accordance with the principles and patterns of landscape-ecological optimization.

Taking into account that modern natural, anthropogenic and especially cultural landscapes include inter-related natural and technical elements, and the very concept of “landscape” and “cultural landscape” widely interpreted, landscape planning could be focused on the following **directions**:

- collecting the information about previous, contemporary and future features and states of landscapes;
- evaluation of landscapes, their features, dynamics, landscape structure, current directions of human activity etc.;
- landscape planning researches about landscape organization indicating phenomena and others;
- landscapes transformation for the purpose to achieve more favorable conditions of life properties (for ex. melioration);
- landscape planning for ecological-economic optimization of human activities and accommodation facilities (for a given technology);

- landscape planning of production technology, used raw materials and protective measures for existing economic objects (for a given landscape conditions);
- landscape planning of residential areas in order to optimize their functional (industrial and residential) zoning and environmental well-being;
- landscape planning of changes in landscapes to improve their resistance to anthropogenic impacts (such as environmental engineering and restructuring landscapes, compensatory measures, etc.);
- landscape planning for the purpose of conservation and restoration degraded lands;
- landscape planning to aim to enhance the aesthetic appeal of recreational, residential and other areas.

**Territorial units** covered by the developed standards and regulations include the following objects of landscape planning which could be definitely taken into account during evaluation the territory and creation landscape-ecological schemes:

- ✓ districts;
- ✓ residential area (city, town, etc.) – land areas of housing, public, industrial and recreational usage;
- ✓ area of industrial and non-industrial complexes with their local infrastructure;
- ✓ elements of housing, public, industrial, transportation, household, recreational and environmental protection areas;
- ✓ functional-planning zones of residential, public, industrial and recreational usage;

- ✓ system areas of social, transport and engineering infrastructure, public areas and facilities landscape elements;
- ✓ functional areas and planning areas: residential neighborhoods and other residential areas, community centers and urban district values, industrial zones, recreational areas and facilities (parks, gardens, boulevards, parks, especially protected natural and natural-historical with recreational facilities zones);
- ✓ socially significant location facilities: preschool, educational facilities, health, cultural, social security, trade and consumer services, provide services to the population according to urban, social, sanitary, environmental and other regulations;
- ✓ zones, areas and facilities of individual housing, suburban and other construction, separated production zones, agricultural land and facilities;
- ✓ public areas for general usage: functional areas and planning zones designed to provide people with free access to objects and their complexes with important public interest (coastal area ponds, parks, forests, recreational-sports and other recreational facilities, environmental facilities, monuments of history, cultural, natural objects, roads, transport system and storage places, etc.) as well as areas that are essential for road construction and provide pedestrian and transport link between socially important objects, zones and areas;
- ✓ territories for nature and environment protection purposes (water conservation, landscape protection, etc.) (Fig. 2).

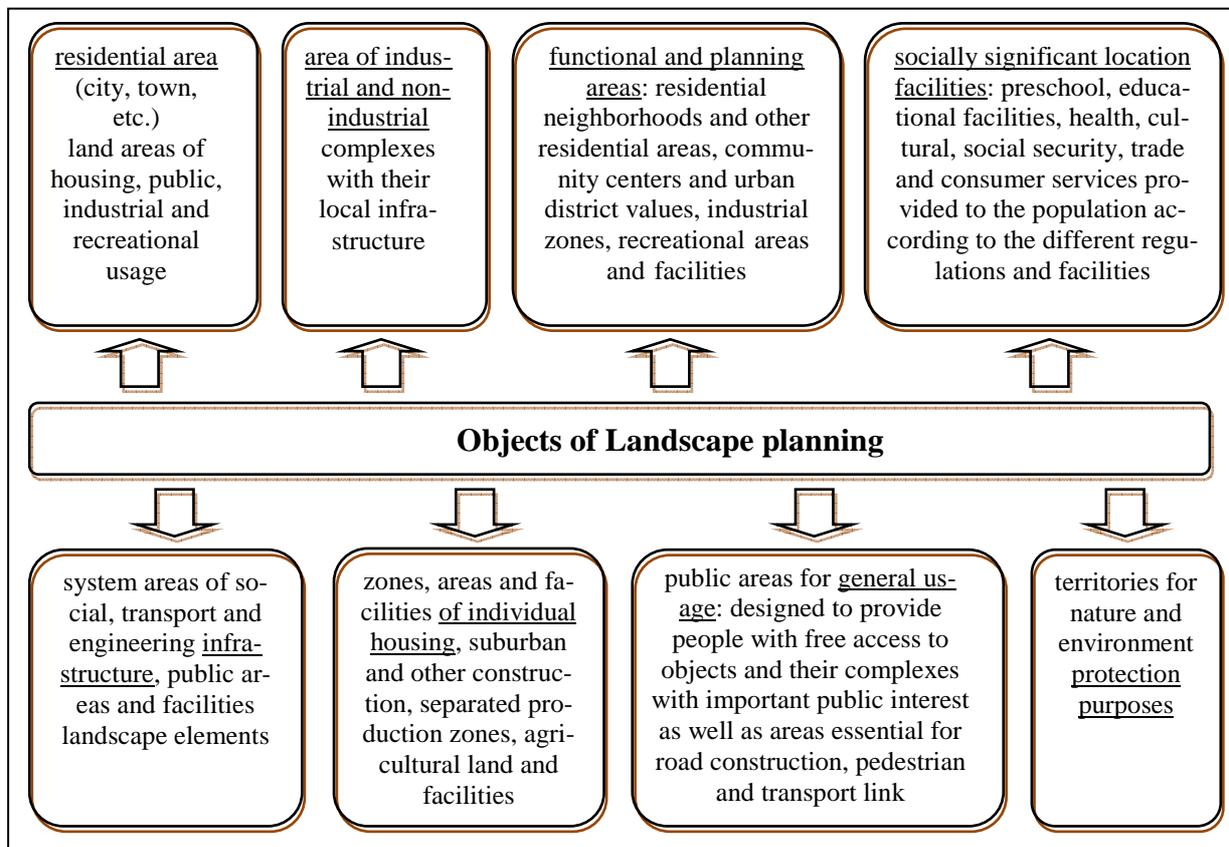


Figure 2. Landscape planning objects classification (done by author)

There are several **territorial levels** and areas of ecological and geographical (geoecological) planning, studying and improvement of economic activity for compliance planning, design and management at the national, regional, local administrative and local landscape levels. The results of each of the highest level of

territorial development by planning regulations should serve as a framework documents for the work at the lowest levels of territorial planning and business design.

There are the following levels of landscape planning and economic management (Fig. 3).

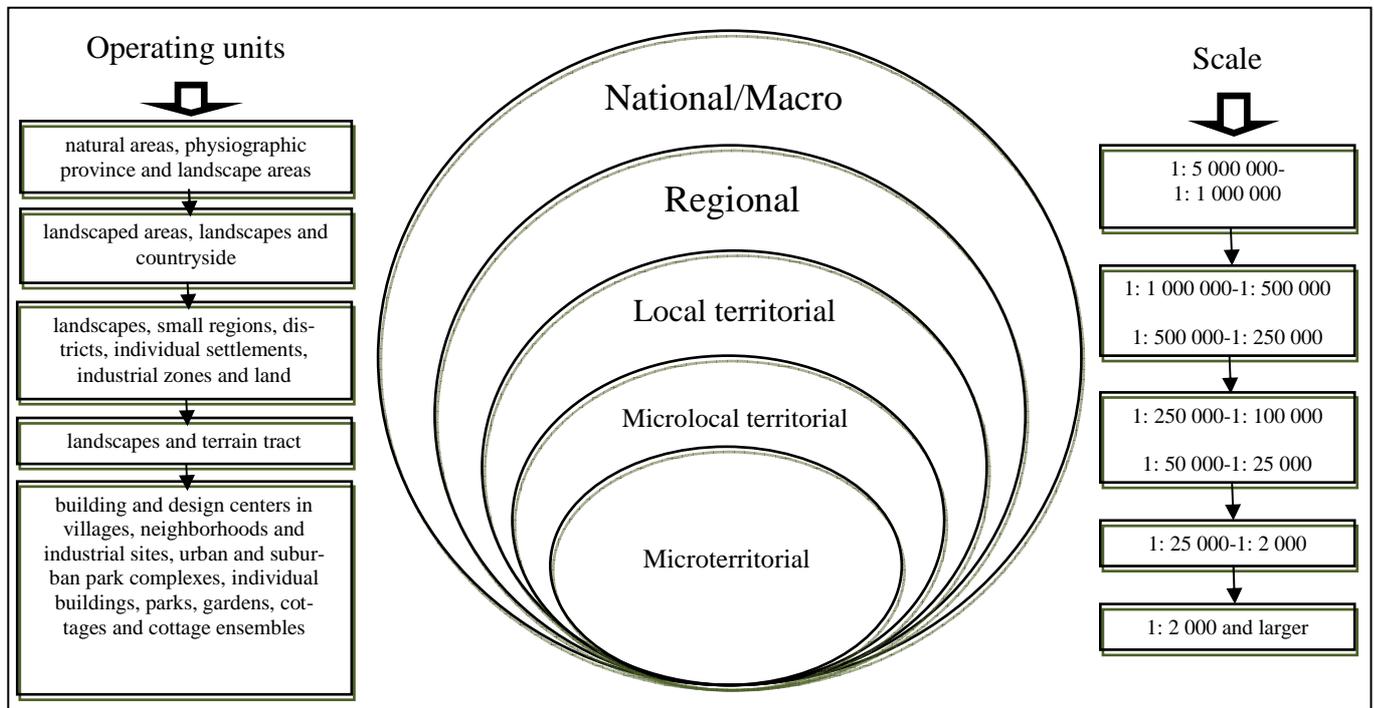


Figure 3. Hierarchical levels of landscape planning (done by author)

**1 . National or macro level** at which concepts, general schemes and plans of economic activity in the country, major regions, economic regions, including sectorial industrial development schemes, schemes of settlement and environment are creating, developing and explaining. Operating units at this landscape planning level of economic activity are natural areas, physiographic province and landscape areas. The cartographic works deals with scale range from 1: 5 000 000 for general schemes (for example accommodation) to 1: 2 500 000-1: 1 000 000 (large regional schemes of development of productive forces).

**2 . Regional level** of landscape planning and design for geoecological substantiation of schemes and projects of planning is corresponded to the scale of researches and cartographic materials as 1: 500 000-1: 250 000. Major operating units of landscape planning at this level are landscaped areas, landscapes and countryside. Moreover, from this level landscape planning can really be focused and built on the landscape and ecological framework of the territory as the scale of the planned objects and activities fully commensurate with its basic elements.

**3 . Local territorial level** deals with landscapes with the purpose to create the regional planning projects of small regions, districts, individual settlements, industrial zones and land up to the scale 1: 50 000-1: 25 000.

**4 . Microlocal territorial level** of landscape planning. The main operating units of landscape planning at

this level are landscapes and terrain tract. The projected planning of settlements, industrial zones and protected areas, detailed planning development centers, residential and industrial areas of cities, plans and projects of land are under elaboration and justification at this hierarchical level. The works held at the scale 1: 25 000-1: 2 000.

**5 . Microterritorial level** of landscape ecological architecture and design at which the projects of building and design centers in villages, neighborhoods and industrial sites, urban and suburban park complexes, individual buildings, parks, gardens, cottages and cottage ensembles are justified and developed. Landscape and architectural design, location of landscape and ecological nano-territory design and objects (small architectural forms and fito-objects) made at the scale 1: 2 000 and larger.

**Conclusions.** Thus, humans have always had the dilemma of deciding among various contradictory and yet equally crucial issues of natural resource management especially between how to use essential territory or natural resources, how to create or reorganize them in the better way. That affecting decision making need to be given thorough considerations, especially when we could summarize that landscape planning and projecting play a significant role. One of the underlying factors that a decision maker needs to consider if he or she has enough knowledge about the key features of landscape planning and its objects because theoretical aspects are definitely important part of any scientific researches.

Hierarchy and territorial interconnectedness, including landscape and environmental planning, landscape and architectural design, landscape and environmental design

– an optimizational basis for economic management at different levels of organization.

#### References:

1. Pozacheniuk E.A. *Teoreticheskie podkhody k landshaftnomu planirovaniyu* // *Uchenye zapisky Tavricheskogo natsionalnogo universiteta im. V.I. Vernadskogo. Seriya «Geografia»*. – Том 24 (63). – 2011. – № 2. Част 1. – S. 240. [Позаченюк Е.А. *Теоретические подходы к ландшафтному планированию* // *Ученые записки Таврического национального университета им. В.И. Вернадского. Серия «География»*. – Том 24 (63). – 2011. – № 2. Часть 1. – С. 240].
2. *Landshaftnoe planirovanie: instrumenty i opyt primeneniya* / A.N. Antipov, V.V. Kravchenko, Yu.M. Semenov i dr. – Irkutsk: Izd-vo Instituta geografii SO RAN, 2005. – S. 25. [Ландшафтное планирование: инструменты и опыт применения/ А.Н. Антипов, В.В. Кравченко, Ю.М.Семенов и др. – Иркутск: Изд-во Института географии СО РАН, 2005. – С. 25].

#### Summary

#### **Viktoriiia Udovychenko. THEORETICAL-METHODOLOGICAL ASPECTS OF LANDSCAPE PLANNING.**

In geography geo-ecological directions of optimization of economic activity and the environment associated primarily with territorial structure improving, organization and operation of natural-economic systems or cultural landscape all together. This area is called a “landscape planning”. It is focused on the optimized geo-cultural landscapes formation by improving the territorial structure and functioning of natural-economic systems and business technology activities in accordance with the key landscape features areas. As an object of landscape planning we could mention different type of landscapes, their parts and morphological units, land and technology business activities, which are need to be organized in accordance with the principles and patterns of landscape-ecological optimization. There are several territorial levels and areas of ecological and geographical (geoecological) planning – national (macro level), regional, local territorial, micro local territorial and micro territorial levels. All of them are essential part for understanding, studying and improvement of economic activity for compliance planning, design and management.

**Key words:** landscape, landscape planning, object of landscape planning, territorial unit, hierarchical level.