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SCIENTIFIC PRINCIPLES OF CLASSIFICATION OF REGIME-FORMING OBJECTS (ON THE EXAMPLE OF WATER OBJECTS)

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The study of scientific works, normative legal acts related to issues of classification of regime-forming objects, restrictions on the use of land and land plots made it possible to identify problems related to regime-forming water objects that need to be solved. In accordance with this, the conceptual apparatus related to regime-forming water objects was considered, their list was standardized taking into account the current legal acts and the need for their classification was substantiated. As a result, a classification of regime-forming water objects is proposed, which will allow to further form the limits of restrictions along and around these objects and to develop a classification of restrictions on the use of land and land plots. According to the proposal of the author's team, this classification can become an analogue for the classification of other objects, such as: an object of main pipelines, an energy object, an object of cultural heritage, military objects. It is justified that the creation of a

single structure of classification is not possible, since each of these objects, when classified from general to specific, will have different levels of classification and require the development of individual approaches to their classification.

Keywords: *regime-forming objects, water objects, restrictions on the use of land plots, classification.*

Formulation of the problem. Each of the branches of production has objects that require the introduction of an appropriate mode of their safe use and operation both for the object itself and for the owners of land and land users bordering them. According to the Law of Ukraine "On the State Land Cadastre", such objects are defined by the term "regime-forming object" and are divided into objects of natural and artificial origin. Regime-forming water objects are only partially regulated by relevant legal acts, but they are not systematized and there is no classification of such objects. This leads to the biased display of such regime-forming objects in land management and urban planning documentation, the adoption of illegal decisions regarding the establishment of restricted zones in the use of land and land plots, which is referred to as abuse in the relevant field.

Analysis of the latest scientific research and publications. The works of Babmindra D., Dobriak D., Dorosh Y., Dorosh O. are devoted to the study of the theoretical and methodological foundations of the formation and establishment of restrictions on the use of land and land plots, their classification and, accordingly, regime-forming objects Dudiak N., Kupriianchyk I., Tretiak A., Yaremka Yu. and others [1-6].

In particular, Yaremka Yu., Dudiak N. point to the legislative indeterminacy of the classification of regime-forming objects and propose to distinguish such groups of regime-forming objects as: objects of the nature reserve fund, water objects, objects of cultural heritage, objects of engineering and transport infrastructure, industrial objects, communal and warehouse objects, agricultural objects, geodetic points, hydrometeorological stations, military objects, state border. It is believed that the

unsettledness of these issues negatively affects the spatial planning of the territories of territorial communities [1].

Dorosh Y., Dorosh O. proposed "methodological approaches to the formation of limits of restrictions in the use of lands and their regime-forming objects" [2]. In their works, they reveal the problems related to the "formation and effective functioning of the institution of land use restrictions and encumbrances of rights to a land plot and proposals based on them to improve regulatory and legal support for their effective functioning" [2,3].

The work of Tretiak A. is devoted to the disclosure and resolution of problematic issues related to the classification of regime-forming objects by the level of threats to the population's vital activities, using the example of defense land use. and Melnychuk A. As a result, the proposed classification of military training grounds according to four levels of threat to the life of the population [4].

Dorosh O. Kupriianchyk I., Butenko E., Danko K., Kharytonenko R. focus on the need to classify regime-forming water bodies, which will allow more precisely to establish zones of restrictions in land use when modeling and assessing the risks of inundation and flooding of land plots [5].

Dobriak D. and Babmindra D. a classification of regime-forming objects is proposed, one of the elements of which is an example of regime-forming water objects for which appropriate restrictions should be established [6]. Taking into account the fact that the classification proposed by them was developed in the early 2000s, taking into account the legal framework relevant at that time, today it needs improvement.

From the analysis of scientists' achievements, it is clear that scientific approaches to the classification of regime-forming objects, primarily water ones, require a new understanding in accordance with modern requirements.

The purpose of the study to scientifically justify approaches to the classification of regime-forming water objects in accordance with modern requirements.

Materials and methods of scientific research. The research used methods of scientific knowledge. Scientific works related to regime-forming objects and restrictions on the use of land and land plots were analyzed using the monographic method. The method of analysis was the study of normative legal acts in the context of regime-forming water bodies. The classification of mode-forming water objects is substantiated and proposed by the method of generalization.

Research results and discussion. At the initial stage of analyzing the list of regime-forming objects, it is necessary to focus on objects that are interpreted in the very definition of the term regime-forming object in accordance with the Law of Ukraine "On the State Land Cadastre". In the future, the list of regime-forming objects will be extended, taking into account the categories of land that will have corresponding objects according to their content and importance. One of the first regime-forming objects that is positioned in the definition of the term "regime-forming object" are water bodies of natural or artificial origin.

According to the proposed classification of regime-forming objects by Dobriak D. and Babmindra D. water bodies along and around which a limited land use regime should be introduced are classified as follows [6]:

- a river that is not a source of water supply;
- a lake that is not a source of water supply;
- a reservoir that is not a source of water supply.

Article 1 of the Water Code of Ukraine defines the essence of the term water object, which must be understood as "a natural or artificially created element of the environment in which water is concentrated (sea, estuary, river, stream, lake, reservoir, pond, canal (except canal on irrigation and drainage systems), as well as the aquifer)" [7]. Article 5 of the Water Code of Ukraine stipulates that water objects are divided into objects of national and local significance [7]. Water objects of "national significance" include: internal sea waters; territorial sea; water areas of sea ports; underground water, which is a source of central water supply; surface waters located and used on the territory of more than one region, as well as their tributaries of all orders, which are divided into: lakes, reservoirs, rivers, canals (except canals of

irrigation and drainage systems)" [7]. Water bodies within the territories of the nature reserve fund are of national importance, and are also classified as therapeutic.

Water bodies of local importance are divided into: "surface waters located and used within the boundaries of one region, and also not classified as water bodies of national importance; underground water, which cannot be a source of centralized water supply" [7].

From the above, it is possible to highlight the features of the division of water bodies. The first feature is their division into natural and artificial. The second feature is their division according to their importance - of national and local importance.

The Water Code of Ukraine defines the term "closed water body", which should be understood as a natural or artificially created body of water, not connected to other water bodies (except aquifers) [7]. Natural water bodies (reservoirs) are those objects that formed independently, without human intervention: seas, rivers, lakes, springs, swamps, etc. [7]. Artificial water bodies (reservoirs) are those formed by human activity by artificially sinking into the earth's surface, in which water accumulates and is retained, a surface water body without a drain or with a slow flow [7]. Artificial water objects include a reservoir, a pond, and a canal [7]. The main function of artificial water bodies is the accumulation of surface water, and the name specifies the specifics of their functional purpose.

If we are talking about ponds and reservoirs, then these objects are similar in purpose, but differ in terminology. A reservoir is an "artificial reservoir with a capacity of more than 1 million m³, built to store water and regulate its flow" [7]. A pond is an "artificially created reservoir with a capacity of no more than 1 million m³" [7]. A separate term is allocated technological reservoir as an artificially created reservoir of special technological purpose, which is determined by the technical project and/or passport and is filled artificially with the help of hydraulic structures and devices.

The Water Code of Ukraine provides for the term "artificial body of surface water" which is a surface water object or its part created as a result of human activity [7]. If we take as a basis the definition of the terms covered in Article 1 of the Water

Code of Ukraine, then the list of water bodies includes: swamps, reservoirs, reservoirs, closed water bodies, estuaries, lakes, ponds, technological reservoirs, artificial bodies of surface water [7].

It should also be noted that the Land and Water Codes of Ukraine introduced the concept of a coastal protective strip [7,8]. The norms applied to coastal protection strips are established by Article 60 of the Land Code of Ukraine [8]. Similar norms are reflected in Article 88 of the Water Code of Ukraine [7]. Regime-forming objects related to water include: small, medium, large rivers, streams, streams, ponds and lakes up to 3 hectares and more than 3 hectares; reservoirs on medium rivers larger than 3 hectares; reservoirs on large rivers with an area of less than 3 hectares [7,8]. The area of water bodies is determined by their water table. As for the term water mirror, it is used by experts in cartography.

According to Article 79 of the Water Code of Ukraine, rivers are classified according to the catchment area of the river basin. 63,119 rivers and streams with a total length of more than 206,000 km flow through the territory of Ukraine [9,10]. Large rivers include those that are located in several geographical zones and have a catchment area of more than 50,000 km² [7]. According to the National Atlas of Ukraine, 9 large rivers are identified, such as: Dnipro, Desna, Danube, Dniester, Western Bug, Tisza, Pripyat, Siverskyi Donets, Southern Bug [9,10]. Medium rivers, according to the classification given in Article 79 of the Water Code of Ukraine, belong to rivers with a catchment area of 2 to 50 thousand km² [7]. According to the quantitative composition of such rivers, there are 81 with a total length within Ukraine of 15,488 km [9,10]. Small rivers include those with a catchment area of up to 2,000 km², and in quantitative terms there are about 60,000 of them [7,9,10].

The number of lakes in Ukraine that are potential water regime-forming objects is about 20 thousand [9,10]. More than 49,000 ponds have been created on the rivers and streams of Ukraine [9,10]. According to the directory of the water fund of Ukraine, there are more than 1,100 reservoirs on the territory of Ukraine, the largest of which were created on the Dnipro, Dniester rivers and in the basins of the Southern Bug, Siversky Dinets, and Ingulets [9,10].

There are terms for streams and streams in the legislation, but there is no definition of them. From a geographical point of view, the definition of these

concepts is delimited. On the one hand, a stream is a narrow flow of water from snow and rainwater, and on the other hand, a stream is a small stream formed from snow, rain or underground water that has come to the surface [9,10]. Similarly, on the one hand, a stream is a river/stream with a rapid mountain current, and on the other hand, a stream is a small flow of water from a source, after rain, from melting snow, etc. [9,10]. In fact, the definitions of the terms "stream" and "stream" are synonymous with each other. However, the term "stream" is characterized by the fact that it is assigned to a mountainous area, and therefore it is not appropriate to identify it with a stream.

The Order of the Ministry of Internal Affairs of Ukraine dated 04/10/2017 No. 301 "On Approval of the Rules for the Protection of Human Life on Water Bodies of Ukraine" [11] defines that an artificial water body also includes a pool, which means an open or closed artificial body of water with technical means of water training, intended for engaging in relevant sports or recreational activities [11]. Comparing the given definitions of a water object in accordance with the above order and the Water Code of Ukraine, it should be noted that they differ from each other.

Water bodies also include canals, in addition to canals on irrigation and drainage systems. According to the encyclopedia of modern Ukraine, the term canals is interpreted as artificial watercourses with regularly shaped channels and pressureless water movement [9,10,12]. In order to meet water needs in Ukraine by redistributing the flow of rivers with long-distance water supply, the Dnipro-Donbas Canal, the Dnipro-Ingulets Canal, the Dnipro-Kryvyi Rih Canal, the Kakhovsky Main Canal, the North Crimean Canal, the Siverskyi Donets-Donbas Canal [9,10,12]. According to their classification (purpose), canals are divided into power (derivative), shipping, irrigation, irrigation, water supply, drainage, forestry, fishing, and complex purposes [9,10,12]. The norms of the Land and Water Codes of Ukraine do not reflect the functional purpose of channels when setting restrictions on the "separation lane with a special mode of use" in the use of land plots [7,8].

1. Classification of regime-forming water bodies

Level 1	Level 2	Level 3	Level 4
Closed water object, *Article 1 of the Water Code of Ukraine*	A natural reservoir is not connected to other water bodies (except aquifers), *Article 1 of the Water Code of Ukraine*	Lakes, *Article 1 of the Water Code of Ukraine*	
			lakes up to 3 hectares of water surface *Article 60 of the Land Code of Ukraine and Article 88 of the Water Code of Ukraine (same)*
			lake over 3 hectares of water surface *Article 60 of the Land Code of Ukraine and Article 88 of the Water Code of Ukraine (same)*
	an artificial reservoir is not connected to other water bodies (except aquifers) *Article 1 of the Water Code of Ukraine*	pond (no more than 1 million cubic meters) *Article 1 of the Water Code of Ukraine*	
			ponds with an area of less than 3 hectares of water surface *Article 60 of the Land Code of Ukraine and Article 88 of the Water Code of Ukraine (same)*
			ponds over 3 hectares of water surface *Article 60 of the Land Code of Ukraine and Article 88 of the Water Code of Ukraine (same)*
a natural element of the environment in which water is concentrated *Article 1 of the Water Code of Ukraine*	natural reservoir	sea *Article 1 of the Water Code of Ukraine*	
		estuary *Article 1 of the Water Code of Ukraine*	

		Lakes *Article 1 of the Water Code of Ukraine*	
			lakes up to 3 hectares of water surface *Article 60 of the Land Code of Ukraine and Article 88 of the Water Code of Ukraine (same)*
			lake over 3 hectares of water surface *Article 60 of the Land Code of Ukraine and Article 88 of the Water Code of Ukraine (same)*
			lakes on large rivers *Article 60 of the Land Code of Ukraine and Article 88 of the Water Code of Ukraine (same)*
		swamp (natural) *Article 1 of the Water Code of Ukraine*	
			swamp (natural) with an area of less than 3 hectares of water surface
			swamp (natural) with an area of more than 3 hectares of water mirror
	natural watercourses *Article 1 of the Water Code of Ukraine*	rivers *Article 1 of the Water Code of Ukraine*	
			large rivers with a catchment area of more than 50,000 square kilometers *Article 79 of the Water Code of Ukraine*
			medium rivers catchment area from 2 to 50 thousand square kilometers *Article 79 of the Water Code of Ukraine*
			small rivers with a catchment area of up to 2,000 square kilometers *Article 79 of the Water Code of Ukraine*

		streams *Article 1 of the Water Code of Ukraine, Article 60 of the Land Code of Ukraine and Article 88 of the Water Code of Ukraine (same)*	
		streams *Article 60 of the Land Code of Ukraine and Article 88 of the Water Code of Ukraine (same)*	
an artificial element of the environment in which water is concentrated *Article 1 of the Water Code of Ukraine*	artificial reservoir *Article 3 of the Water Code of Ukraine*	reservoir (with a capacity of more than 1 million cubic meters) *Article 1 of the Water Code of Ukraine*	
			reservoir on medium rivers *Article 60 of the Land Code of Ukraine and Article 88 of the Water Code of Ukraine (same)*
			reservoir on large rivers *Article 60 of the Land Code of Ukraine and Article 88 of the Water Code of Ukraine (same)*
			complex purpose reservoir *Article 1 of the Water Code of Ukraine*
		pond (no more than 1 million cubic meters) *Article 1 of the Water Code of Ukraine*	
			ponds with an area of less than 3 hectares of water surface *Article 60 of the Land Code of Ukraine and Article 88 of the Water Code of Ukraine (same)*

			ponds over 3 hectares of water surface *Article 60 of the Land Code of Ukraine and Article 88 of the Water Code of Ukraine (same)*
		swamp (artificial) *Article 1 and 4 of the Water Code of Ukraine*	swamp (artificial) with an area of less than 3 hectares of water surface
			swamp (artificial) with an area of more than 3 hectares of water mirror
		basin *order of the Ministry of Internal Affairs No. 301 dated 04/10/2017*	
		technological reservoir *Article 1 of the Water Code of Ukraine*	
			technological reservoir with an area of less than 3 hectares of water surface
			technological reservoir with an area of more than 3 hectares of water mirror
	artificial watercourse	channels	
			channels (except the channel on irrigation and drainage systems) *Article 1 of the Water Code of Ukraine*
			channels for irrigation systems
			channels for drying systems

Formed on the basis of sources [7,8]

Taking into account the institutional features of formal and informal norms relating to water bodies, a classification of regime-forming water bodies is proposed, which will contain four levels, taking into account the principle from the general position of the water body to its specific components (Table 1).

Conclusions and suggestions. The classification of regime-forming water bodies will further allow the formation of limits of restrictions along and around them and the development of a classification of restrictions on the use of land and land plots. The proposed classification is formed on the basis of legislative norms. By analogy with the given classification of regime-forming water objects, it is possible to classify the objects of main pipelines, energy objects, objects of cultural heritage, and military objects. It should be noted that when compiling the classification of each of the specified regime-forming objects, it is not possible to create a single classification structure, since each of these objects, when classified from general to specific, will have different levels of classification. Thus, the peculiarities of determining the list of regime-forming objects, along and around which the limits of restrictions on the use of land and land plots are formed, require the development of individual approaches to their classification.

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НАУКОВІ ЗАСАДИ КЛАСИФІКАЦІЇ РЕЖИМОУТВОРЮЮЧИХ ОБ'ЄКТІВ (НА ПРИКЛАДІ ВОДНИХ ОБ'ЄКТІВ)

Опрацювання наукових праць, нормативно-правових актів що стосуються питань класифікації режимоутворюючих об'єктів, обмежень у використанні земель та земельних ділянок дозволило виявити проблеми пов'язані з режимоутворюючими водними об'єктами, що підлягають розв'язанню. У цій відповідності розглянуто понятійний апарат, що має стосунок до режимоутворюючих водних об'єктів, унормовано їх перелік враховуючи діючі нормативно-правові акти й обґрунтовано потребу щодо їх класифікації. Як результат, запропонована класифікація режимоутворюючих водних об'єктів, яка дозволить надалі сформувати межі обмежень вздовж та навколо цих об'єктів та розробити класифікацію обмежень щодо використання земель та земельних ділянок. За пропозицією авторського колективу ця класифікація може стати аналогом для класифікації інших об'єктів, як: об'єкту магістральних трубопроводів, енергетичного об'єкту, об'єкту культурної спадщини, військових об'єктів.

Обґрунтовано, що створення єдиної структури класифікації не є можливим, позаяк кожен із цих об'єктів при класифікації від загального до конкретного матиме різні рівні класифікації й потребують розроблення індивідуальних підходів до їх класифікації.

Ключові слова: *режимоутворюючі об'єкти, водні об'єкти, обмеження у використанні земельних ділянок, класифікація.*