

requirements for environmental protection and public health,

Ways to Improve the Legal Framework of Mineral Waste Management in Ukraine

Oleksandr Trehub¹

¹ Department of economic and legal research of economic security issues,

V. Mamutov Institute of Economic and Legal Research of the National Academy of Sciences of Ukraine,

blvd. Shevchenko 60, Kyiv - Ukraine

Abstract— The main purpose of the paper is to substantiate the ways to improve the legal framework of mineral waste management in Ukraine in relation to the legal regime within technogenic mineral deposits and the property right of such waste. This study used such methods as the method of terminological analysis, the method of analogy, as well as axiomatic and formal legal methods. Special attention is given to the introduction of the dual legal regime of mineral waste within technogenic mineral deposits by combining the legal regime of minerals with elements of the legal regime of waste. The paper shows that the compulsory alienation of mineral waste as minerals must be recognized as a separate ground for termination of property right. It is also proposed to establish the guarantees of the property right of valuable mineral waste, namely: transfer (alienation) of this waste as minerals to ownership of the Ukrainian people exclusively by court decision; the existence of the procedure for such transfer (alienation), determined by law.

Index Terms— mineral waste, technogenic mineral deposits (TMD), minerals, legal regime, property right, the Ukrainian people.

I. INTRODUCTION

For countries with a powerful mining industry, which historically includes Ukraine, the topical issue is to ensure proper management of waste generated by mining, processing of mineral resources and other related technological operations (so-called 'mineral waste'). However, currently the practice of mineral waste management in Ukraine is inefficient in environmental, resource, spatial, territorial and other aspects. In 2019 alone, mining companies generated 286 million tons of such waste (almost 65% of total amount of waste generated this year), about 30% of which was recovered (State Statistics Service of Ukraine, 2020).

Impossibility or inexpediency for one reason or another to involve mineral waste in recycling causes its storage in dumps, heaps, facilities and other places that do not meet the modern

occupy large areas of land and spoil the landscape.

To date, there are already some scientific developments aimed at solving the above problems by improving the legal framework of mineral waste management. These include the fundamental study on codification of subsoil legislation (Kirin, 2016). The publications on administrative and legal regime of TMD (Hladii, 2017), on legal definition of such deposits (Razmietaiev, 2012), on implementation of the Directive 2006/21/EC on the management of waste from extractive industries (Omelianenko, 2013), on economic and legal status of waste as secondary raw materials (Mishchenko and Vyhovska, 2010) et al. are also important. Nevertheless, a number of issues remain in the legal framework of mineral waste management that create problems in practice and require scientific solutions.

Firstly, the current legislation of Ukraine on subsoil contains the rule on unconditional classification of industrially significant mineral waste as minerals (places of waste accumulation are recognized as TMD). As a result, such waste is not subject to the environmental requirements of waste legislation, which is unjustified in terms of environmental protection and public health. The paper will consider the possibility of establishing the dual legal regime (minerals and waste) for this waste based on harmonization of the objectives of subsoil legislation with the objectives of waste legislation.

Secondly, the publication will examine the issue of lacuna in the legal regulation in field of ownership of mineral waste that can be included in TMD. In this part, the key task is to develop the guarantees of the property right of mineral waste, which should not only ensure the legitimate interests of owners of this waste, but also promote its effective management.

In view of the above, the main aim of this paper is to substantiate the ways to improve the legal framework of mineral waste management in Ukraine in relation to the legal regime within TMD and the property right of such waste.



II. MATERIALS AND METHODS

The methodological basis of this study is a set of general scientific and special scientific methods. In particular, the method of terminological analysis allowed to justify the choice of the concept of 'mineral waste' among alternative and similar concepts. The method of analogy was used to develop proposals for the dual legal regime of mineral waste, which is a part of TMD. At the same time, axiomatic and formal legal methods made it possible to offer the guarantees of the property right of mineral waste, which can be recognized as minerals, to determine the main provisions (stages) of the procedure for the transfer (alienation) of mineral waste to ownership of the Ukrainian people.

III. TERMINOLOGICAL ISSUES

First of all, in order to achieve the aim of this paper, it is necessary to justify the choice of the concept of 'mineral waste' among the number of similar concepts used in literature and legislation. In the legislation the concept of 'mineral waste' is mentioned in Article 34 of the Mining Law of Ukraine to establish environmental requirements for mining. This concept also has statistical and scientific (Omelianenko, 2013) applications. There are alternative concepts, including 'waste from mining industry' and 'waste from mining enterprises'. The first of these concepts is found in the Tax Code of Ukraine and legal research (Iliushchenko, 2017), while the second – in the Mining Law of Ukraine. In addition, Directive 2006/21/EC enshrines the concept of 'extractive waste' as waste resulting from the prospecting, extraction, treatment and storage of mineral resources and the working of quarries. The Association Agreement between the European Union and its Member States, of the one part, and Ukraine, of the other part, provides for the approximation of national legislation to the provisions of the above-mentioned Directive.

Among the above concepts, the most concise and accurate are 'mineral waste' and 'extractive waste', because the concepts that indicate industry or its enterprises, firstly, are cumbersome, and secondly, do not give a clear picture of the type of waste they denote. For example, mining companies can produce not only mineral but also other waste, including those related to the depreciation of fixed assets. At the same time, the classification of waste as mineral fully corresponds to the nature of its origin, without limiting the name to one type of work (activity) out of several, as a result of which it appears. Therefore, in scientific and legislative terminology, it is appropriate to enshrine the concept of 'mineral waste' in the sense of waste covered by Directive 2006/21/EC (disclosed above).

IV. LEGAL REGIME OF MINERAL WASTE BELONGING TO TMD

One of the problems considered in this paper is the possibility of extending the legal regime of minerals to mineral waste. Article 5 of the Code of Ukraine on Subsoil, along with natural mineral deposits, recognizes the existence of so-called 'technogenic deposits', namely places where waste from the

extraction, enrichment and processing of mineral resources has accumulated, the reserves of which are estimated and have industrial significance. In this case, TMD with reserves estimated as industrial are included in the State Fund of Mineral Deposits, and previously assessed TMD form the reserve of this Fund.

The Code of Ukraine on Subsoil carries out the legal reclassification of mineral waste into minerals, and objects of its placement into TMD without any reservations. In view of this, it can be concluded that there is a lack of proper interconnection and combination of the legal regimes of waste, on the one hand, and minerals, on the other hand. Based on Article 13 of the Constitution of Ukraine and Article 4 of the Code of Ukraine on Subsoil, mineral waste in TMD should be considered as part of national wealth of Ukraine and exclusive ownership of the Ukrainian people (for example, at the level of anthracite), but its harmful environmental properties do not disappear or decrease. Hence, the use of this waste, compared to natural minerals, requires increased safety measures.

This view is quite consistent with the differentiated approach to regulating the extraction of minerals of natural and anthropogenic origin, offered by R. Kirin (Kirin, 2016). One of manifestations of such differentiation should be the development of special rules for environmental protection and environmental safety during and after operation of TMD. In particular, for this purpose, subsoil legislation needs to be supplemented with norms that will refer to special legislation on mineral waste management. In this way, it is possible to introduce *the dual legal regime of mineral waste in the relevant deposits by combining the legal regime of minerals with elements of the legal regime of waste*.

Groundwater has the similar legal regime. As the Supreme Court of Ukraine emphasizes in ruling of 1 April 2015, fresh groundwater is a natural resource with the dual legal regime. The use of this water is regulated by both legislation on subsoil and water legislation. The Supreme Court of Ukraine separately points out that a special subsoil use permit gives the right to extract groundwater, and a special water use permit gives the right to use it (Supreme Court of Ukraine, 2015).

By analogy with groundwater, it can be assumed that a special subsoil use permit should provide the right to extract mineral waste (as minerals), while a waste management permit – the right to operate a facility (object) of placement of such waste, as well as its recovery and other operations after conditional separation from the subsoil.

The establishment of comprehensive legal regime for mineral waste belonging to TMD, with a clear delineation of the mineral segment and the waste segment is a condition for successful approximation of Ukrainian legislation to Directive 2006/21/EC.

The systematic connection of mining and subsoil legislation with waste legislation (on mineral waste management) is noted in the Basic Plan for Adaptation of Environmental Legislation of Ukraine to the EU Legislation (2012) from the standpoint of recommended measures to approximate to Directive 2006/21/EC. This Basic Plan recommended the necessary amendments to the Code of Ukraine on Subsoil, the Mining

Law of Ukraine and related by-laws to adapt them to the Directive. Such changes should also affect TMD, whose legal regime remains incomplete for a long time.

The National Program for the Development of the Mineral Resource Base of Ukraine for the Period up to 2030 provides for the continuation of work on formation of the database of technogenic deposits. In the absence of changes in legal regulation, this will lead to increase in amount of mineral waste, which is called waste without the inherent legal regime. In such circumstances, the loss of natural and human capital from the exploitation of TMD can significantly exceed benefits resulting from the appropriation of such deposits by the Ukrainian people (fee for issuing a special subsoil use permit, rent for subsoil use).

Therefore, in case of allocating mineral waste deposits to TMD, the legal regimes of waste and minerals must be combined, which is proposed to provide by:

- delimitation of minerals not only by their economic significance (national and local), as follows from Article 6 of the Code of Ukraine on Subsoil, but also by origin – for minerals of natural and technogenic origin;
- legal stipulation that the treatment of minerals of technogenic origin, which are mineral waste, is regulated by the waste legislation within the limits set by the Code of Ukraine on Subsoil and other laws;
- identification of elements of the legal regime of waste that are incompatible with the legal regime of minerals, so they should not apply to mineral waste as minerals. In particular, from the moment when the mineral waste becomes the ownership of the Ukrainian people and TMD, its volumes should be excluded from the object and base of waste disposal tax and the provisions on ownership of subsoil rather than waste should be applied;
- imposing obligations on users of TMD consisting of mineral waste to obtain permits and comply with the requirements of waste legislation on the safe operation of waste disposal sites or facilities, which are equated to mineral deposits, and environmental protection measures in the phase after their operation (closure).

V. PROPERTY RIGHT OF MINERAL WASTE BELONGING TO TMD

A key legal issue associated with TMD is the long-term disorder in sphere of the property right of mineral waste that may be included in such deposits.

Decree of the President of Ukraine of 30 December 1993 stipulates that all waste from the extraction, enrichment and processing of mineral raw materials, geologically studied, estimated and recognized as having industrial significance, is TMD, which are included in the State Fund of Mineral Deposits and used in a way determined by subsoil legislation. In addition, the Decree emphasizes that the assignment of waste to TMD does not entail a change in the statutory procedure for payment for its disposal. In other words, despite the actual alienation of mineral waste from enterprises, they must continue to fulfill

their obligation to compensate for environmental damage instead of the new ‘owner’.

The adoption in 1994 of the new Code of Ukraine on Subsoil did not clarify the regulation of property relations regarding mineral waste deposits, reserves of which are estimated and have industrial significance. According to Article 6 of the Code, subsoil is exclusive ownership of the Ukrainian people and is provided only for use. Agreements or actions that directly or implicitly violate the property right of the Ukrainian people of subsoil are invalid.

However, the Code of Ukraine on Subsoil and other acts of subsoil legislation (for example, the resolution of the Cabinet of Ministers of Ukraine of 22 December 1994 ‘On Approval of the Regulations on the Procedure of State Examination and Assessment of Mineral Reserves’) do not determine the procedure for appropriation of mineral waste by a special collective owner – the Ukrainian people. Such lacuna could mean an automatic change of the owner of mineral waste, but it contradicts the basic principles of Ukrainian law.

Particularly, the state has constitutional obligations to ensure protection of rights for all legal subjects of own and compliance with their equality before the law (Article 13 of the Constitution of Ukraine). At the same time, one of the most important constitutional guarantees of the property right is that the legal regime of property is determined exclusively by laws of Ukraine, and not by legal acts of lower legal force. These provisions of the Constitution of Ukraine also apply to the owners of mineral waste, the deposits of which can potentially be attributed to TMD and included in the subsoil as an object of natural ownership of the Ukrainian people.

The spread of the legal regime of minerals to valuable mineral waste inevitably entails its withdrawal from civil circulation. This makes it possible to single out the separate ground for termination of the property right, which is absent in Article 346 of the Civil Code of Ukraine: ‘compulsory alienation of mineral waste as minerals’.

This ground is not similar to any of the grounds for termination of the property right enshrined in Chapter 25 of the Civil Code of Ukraine. The main distinguishing feature is the gratuitous alienation of this waste, while, as a rule, compulsory alienation of property for reasons of public necessity is used only if its value is fully reimbursed (Article 321 of the Civil Code of Ukraine). Specifically, compensation is provided in case of: termination of the right of property that cannot belong to a person; compulsory alienation of privately owned land plots, other real estate objects located on them for public needs or for reasons of public necessity; redemption of cultural heritage monuments; requisition.

The nature of the public interest (more economic and less environmental), which is satisfied by the appropriation of industrially significant mineral waste by the Ukrainian people, generally justifies the gratuitousness of such alienation. The exception is reimbursement of the costs of economic entities incurred for assessment and exploration works, as well as maintenance of places or facilities for waste disposal (Mishchenko and Vyhovska, 2010). At the same time, the right of the state to ensure compulsory alienation of the waste from

its owner in favor of the Ukrainian people needs to be restricted by enshrining the ground and procedure for alienation as legal ‘safeguards’ against arbitrary interference of public authorities in possession, use and disposal of waste.

As follows from the principle of inviolability of the property right, compulsory alienation of the object of relevant right is lawful only if the ground and procedure for such alienation are established by law (Article 321 of the Civil Code of Ukraine).

The precedent of illegal state interference in the property right of industrial waste concerned the ‘Balka Serednya’ landfill in the Zaporizhia region. Particularly, on 21 June 2000 the Cabinet of Ministers of Ukraine issued an order on urgent measures to ensure the preservation of industrial waste accumulated on the territory of technogenic deposit ‘Balka Serednya’ in state ownership and protection of the rights of ‘legal user of this deposit’. The Government of Ukraine also instructed the authorities to make proposals to improve the conditions and procedure for determining industrial waste as technogenic deposits, which in fact called into question the legitimacy of the measures entrusted to them.

The risks associated with the extension of the legal regime of minerals to mineral waste are turning TMD legal institution into a mean of curbing the recovery of this waste. This contradicts the state policy in the field of waste management, as well as in the field of geological study and rational use of subsoil.

According to Article 17 of the Law of Ukraine ‘On Waste’, economic entities are obliged to: determine the composition and properties of waste generated; identify and maintain primary current records of the amount, type and composition of waste generated, stored or disposed of; carry out organizational, scientific, technical and technological measures for the maximum recovery, sale or transfer of waste to other consumers or enterprises, institutions and organizations. V. Mishchenko rightly emphasizes that the fulfillment of obligation to identify the suitability of waste for industrial use by enterprise leads to the loss of its rights to such waste (Mishchenko, 2001).

Thus, there is a situation when the owner of mineral waste takes a ‘waiting’ position and postpones its evaluation, study and recovery ‘for the future’, other stakeholders do not have access to this waste for any assessment and exploration works, and the state does not have sufficient organizational and financial resources to form new TMD. As a result, waste disposal sites continue to occupy large areas of land, have a negative impact on the environment and human health, and the natural resources that could be replaced by waste are further depleted.

In this situation, continuation of works on the formation of TMD database, planned by the National Program for the Development of Mineral Resources of Ukraine until 2030, will exacerbate the conflict of interests related to exploitation of mineral waste potential and contribute to environmental degradation. In this regard, proposals to speed up the process of certification of technogenic deposits (Hladii, 2017), as well as to establish the legal liability for use of TMD or perspective technogenic deposits without a special subsoil use permit (Hladii, 2017) are premature. At present, the environmental and economic benefits of such measures are more apparent than

real, as lacunas in regulation in sphere of the property right of mineral waste provide an additional opportunity to put pressure on legal owners of waste and interfere in exercise of their rights.

The above gives grounds to join the position of those researchers who propose to solve problems related to TMD based on the principle of balance of private and public interests (Mishchenko, 2001) (Aleshin, 2001). This principle presupposes the existence of the guarantees of the property right of mineral waste that can be recognized as minerals.

The main guarantee of the property right of mineral waste and the stability of relations in the field as a whole is transfer (alienation) of this waste as minerals to ownership of the Ukrainian people only by court decision. For example, civil and other legislation provides for judicial procedure for acquiring the property right in case of: transfer to the state of property that cannot belong to a person; compulsory alienation of land and real estate located on it for reasons of public necessity; redemption of a cultural heritage monument; transfer of ownerless real estate to communal ownership; transfer to state ownership of ownerless property. In view of this, the court decision, which has entered into force, should be the basis for recognition of mineral waste disposal sites of TMD, their inclusion in the State Fund of Mineral Deposits and registration.

The next guarantee is to determine the procedure for the transfer (alienation) of mineral waste to ownership of the Ukrainian people, which takes into account both the possible ownerlessness of such waste and presence of its owner. It is proposed to include the following main provisions (stages) in this procedure:

- establishing the presence or absence of owner of mineral waste as potential technogenic minerals;
- if it is established that such waste is ownerless, the state examination and assessment of its reserves as minerals are carried out. In case of confirmation of the industrial significance of these reserves, the State Service for Geology and Subsoil of Ukraine applies to the court with a statement on the transfer of ownerless mineral waste as minerals to ownership of the Ukrainian people;
- if mineral waste has owner, the State Environmental Inspectorate of Ukraine shall check the fulfillment of its responsibilities for proper storage and prevention of destruction and spoilage of such waste, implementation of measures for its maximum recovery, sale or transfer to other entities;
- if these responsibilities are not fulfilled, which results in significant damage, loss of mineral waste or lack of recovery, sale or transfer to other entities, the state examination and assessment of stocks of such waste as minerals are carried out. If the industrial significance of these reserves is confirmed, the State Service for Geology and Subsoil of Ukraine applies to the court for the compulsory alienation of mineral waste as minerals to ownership of the Ukrainian people.

VI. CONCLUSIONS

In conclusion, it should be noted that the study allows us to identify two ways to improve the legal framework of mineral waste management.

The first way is to establish the dual legal regime of mineral waste in TMD by combining the legal regime of minerals with elements of the legal regime of waste. As a result of combining these legal regimes, users of TMD consisting of mineral waste will be obliged to comply with environmental requirements for the safe waste management. This proposal is relevant because the recognition of mineral waste as minerals does not eliminate its dangerous properties for human health and the environment. In addition, the introduction of a dual legal regime for this waste is one of the necessary conditions for Ukraine to fulfill its obligation to approximate its national legislation to Directive 2006/21/EC.

The second way is to regulate sphere of the property right of mineral waste, the reserves of which are estimated and have industrial significance. The study shows that the compulsory alienation of mineral waste as minerals must be recognized as a separate ground for termination of the property right. The next proposed step is to establish the guarantees of the property right of valuable mineral waste in order to comply with the legitimate interests of its owners, in particular related to the use of this waste. The guarantees include: transfer (alienation) of this waste as minerals to ownership of the Ukrainian people exclusively by court decision; the existence of the procedure for such transfer (alienation), determined by law. The implementation of these proposals will ensure the harmonization of TMD legal institution with the state policy in the field of waste management, in the field of geological study and rational use of subsoil and environmental policy in general. The existence of the guarantees will encourage owners of valuable mineral waste to find ways and directions of its effective recovery. In case of disinterest or inability of owners to such actions, it will allow to secure waste to the public owner with subsequent transfer of TMD for paid use, along with the burden of socially useful responsibilities.

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