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## CONCEPT AND FEATURES OF LEGAL REGIME OF LAND FOR DOMESTIC WASTE LANDFILLS

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**Abstract.** The article is devoted to the concept and legal features of legal regime of solid domestic waste landfills, including legal relationship in the field of land remediation of solid domestic waste landfills after their termination. Basing on analysis of the special literature and the current legislation of Ukraine it is proposed to make amendments to the current Land Code of Ukraine, which enables to realize the goals and tasks of the modern state, regional, local, and objective environmental policy in practice.

**Keywords:** environmental policy, solid domestic waste landfills, land remediation of solid domestic waste landfills, legal regulation.

### 1. INTRODUCTION

Implementation of Ukrainian environmental policy in the field of domestic waste management has been reflected, in particular, in the National Strategy for Waste Management in Ukraine until 2030, approved by the Decree of the Cabinet of Ministers of Ukraine dated November 8, 2017 No. 820-p (hereinafter referred to as the National Strategy). This policy-legal document states that modern methods of household waste management in Ukraine are targeted at landfill dumping. Thus, about 94 percent of the generated household waste is located on landfills and landfills, 5,470 units of which were generated in 2016 in Ukraine. At the same time, 1646 units (30 per cent) from the mentioned 5,470 units do not meet environmental safety standards. The implementation measures of the National Strategy include the creation and operation of new regional landfills in accordance with the requirements of Council Directive 1999/31 / EC dated April 26, 1999. "On Disposal of Waste" (from 5 units in 2018-2019 to 50 units in 2024-2030 years) on the one hand; on the other hand, the termination and reclamation of landfills that are irrelevant to the requirements of environmental safety. Therefore, doctrinal studies of legal regulation concerning the assignment of land plots for solid waste landfills, their use for intended purpose, and features of their reclamation are of current interest.

The legal regulation of the use and protection of solid waste landfills is complex insofar it is an integral part of legal regulation of special non-agricultural land use and protection, as well as due to dangerous status of solid domestic waste landfill. Proper legal regulation and implementation of norms in the field of solid domestic waste landfill use and protection is one of the guarantees of citizens' right to safe and healthy living environment.

## 2. ANALYSIS AND DISCUSSION

The legal regulation of the establishment and operation of solid domestic waste landfills, their remediation after termination is inextricably linked to the legal regulation of land use and protection. Land parcels are specially assigned to these purposes. Therefore, legal regime of such land parcels is an integral part of the legal regime of solid domestic waste landfills.

There is no separate legal regulation of land relations regarding solid domestic waste landfills. Though art. 19 (1) of Land Code of Ukraine dated 25.10.2001 (hereinafter referred to as the LCU) differentiates lands of industry, transport, communications, energy, defense and for other purpose that are territorial basis for business constructions. According to art. 65 of the LCU lands of industry, transport, communications, energy, defense and for other purpose are granted in the established manner to enterprises, institutions and organizations to perform the respective activities. Since the list of such land plots is not exhaustive, it may be supplemented.

In course of land and environmental legal doctrine study of legal regime of special non-agricultural land use and legal regulation of household waste management was carried out at the level of textbooks, manuals, comments to the LCU, articles and other scientific publications by such scholars as Andreytsev V.I., Balyuk G.I., Vyvcharenko O.A., Hetman A.P., Zuev V.A., Kovalenko T.O., Kovalchuk T.G., Kulinich P.F., Krasnova Yu.A., Marusenko R.I., Marchenko S.I., Miroshnychenko A.M., Overkovska T.K., Pashchenko O.M., Nosik V.V., Sarkisova T.B., Slepchenko A.A., Tretyak T.O., Shulga M.V., Frolov M.O. and other scholars.

Thus, Andreytsev V.I. proposed to consolidate the legal regimes of actually existing, but not legally defined lands and, in particular, lands of increased danger while studying problems of land legislation codification [1, p. 437]. The possibility of assigning land allocated for solid domestic waste landfills to land plots "for other purpose" was considered by Miroshnychenko A.M. and Marusenko R.I. [4, p.177]. Consequently, considering legislative and doctrinal legal approaches, land parcels of solid domestic waste landfills can be attributed to lands "for other purpose" within such a category as lands of industry, transport, communications, energy, defense and for other purpose.

Land law doctrine such a category as lands of industry, transport, communications, energy, defense and for other purpose is indicated as special non-agricultural lands having some common features of their legal regime [1, p. 369–374; 2, p. 413–417; 6, p. 326–329; 5, p. 337–339; 7, p. 338–341; 3, p. 403–404]. Considering different approaches of scholars, we distinguish the following general features of lands of industry, transport, communications, energy, defense and for other purpose: 1) the use of these lands as a spatial operational basis for construction of buildings, structures and other objects in various sectors of the economy; 2) standardization of land parcels sizes determined either on the basis of the norms (state building codes, building regulations, etc.) approved in accordance with the established procedure or the project documentation, which is also developed in accordance with the relevant norms; 3) location mainly outside the settlements; 4) the possibility of being owned by state, municipal and private entities; 5) implementation of internal zoning of special non-agricultural land plots; 6) imposition of limitation, sanitary protection zones and other zones around the objects located on these lands in order to ensure safety of population and create safe conditions for exploitation of such objects; 7) the multiplicity of departmental internal sector management in the field of use and protection of such lands; 8) placement, design, construction and commissioning of new and reconstructed buildings and facilities shall be carried out in compliance with the environmental, sanitary and technical requirements for the protection of such lands; 9) responsibility for violation of legal regime of lands of industry, transport, communications, energy, defense and for other purpose is determined by the norms of the LCU, special legislation regulating these activities. Composition of such offenses is provided in the Code of Ukraine on Administrative Offenses dated 07.12.1984, the Criminal Code Ukraine from 05.04.2001 and other legislative acts.

Taking into account the general features of "lands of industry, transport, communications, energy, defense and for other purpose" we may define certain special features of the legal regime of lands for solid domestic waste (hereinafter referred to as SDW) landfills:

1. The legal basis for use and protection of lands for SWL comprises norms of the Constitution of Ukraine dated 28.06.1996, the Law of Ukraine "On Environmental Protection" dated 25.06.1991, "On Land Conservation" dated June 19, 2003, "On Waste" dated 05.03.1998, "On Licensing Types of Economic Activity" dated 02.03.2015, "On Natural Monopolies" dated 20.04.2000, "On State Regulation in the Field of Utilities" dated 09.07.2010, "On Housing and Communal Services" dated 09.11.2017, "On the Improvement of Human Settlements" dated 06.09.2005, "On Ensuring Sanitary and Epidemiological Well-Being of the Population" dated 24.02.1994, "On Environmental Impact Assessment" dated 23.05.2017, Licensing Terms for Domestic Waste Disposal Activity, approved by the decision of the National Commission on State Regulation in the Field of Energy and Utilities dated 04.04.2017 No. 467, Procedure for Keeping the Register of Waste Disposal Sites, approved by the Cabinet of Ministers of Ukraine from 03.08.1998 № 1216; Rules for Operation of Municipal Waste Landfills, approved by the Order of the Ministry of Housing and Communal Services of Ukraine dated 01.12.2010 No. 435; state construction norms SCN V.2.4-2-2005 "Solid Domestic Waste Landfills. Fundamentals of Design", approved by the order of the State Construction Committee of Ukraine dated 17.06.2005, No. 101 (hereinafter referred to as SCN V.2.4-2-2005 "SDW Landfills"), SCN V.2.4-2-2005. Amendment No. 1 "SDW Landfills. Fundamentals of Design", approved by the order of the Ministry of Regional Development, Construction and Housing and Utilities of Ukraine dated 06.06.2016 No. 139 (hereinafter referred to as SCN V.2.4-2-2005 Change No. 1 "SDW Landfills"), etc.

2. Decisions on allocation of land parcels for construction of SDW Landfill are taken by municipal bodies.

3. The site for the placement of solid waste landfills should be selected on a territorial basis in accordance with the scheme of sanitary cleaning of the city or region and a project of district planning or general layout of settlement. In case of SDW landfill design, in particular, decisions providing for the minimum alienation of land and other natural resources and the obligatory return of temporarily alienated lands for further economic use should be provided as well as development of materials for environmental impact assessment in accordance with the procedure in accordance with the Law of Ukraine "On Environmental Impact Assessment" and other subordinate acts; engineering measures that ensure the stability of the landfill as a building, its durability and environmental safety; safety requirements for people's life and health. The project should provide for remediation of land plots that may be provided for placement of landfills.

4. For placement of SDW landfills non-agricultural land parcels that are unsuitable for agriculture of degraded quality and not occupied by greenery (especially forests of the 1st group) are provided along with land plots where it is possible to take measures and implement engineering decisions that exclude pollution of the environment, the development of dangerous geological processes or other negative processes and phenomena; land areas characterized by natural protection of groundwater from pollution; land plots with consideration of wind pattern in relation to residential districts, recreation areas and other places of mass residence outside the sanitary protection zone.

5. Establishment of an exclusive list of land plots where the placement of SDW landfills is allowed: a) on earthen soils, provided that the earthen soil properties are completely eliminated; b) in potentially flooded territories, provided the drainage is constructed with the arrangement of the anti-filtration screen in accordance with pp. 3.22, 3.22 of SCN V.2.4-2-2005 "SDW Landfills" in the basis and on the slopes of the landfill and disinfection of water in the event of an emergency; c) in Zone 3 of the sanitary protection zone of water intakes with available natural protection (containing sufficiently strong and sustained water-resistant rocks in the lithological section) with the installation in the bowl of a reliable screen in accordance with pp. 3.22, 3.22 of SCN V.2.4-2-2005 "SDW Landfills"; d) in seismic areas for compliance with the relevant regulatory requirements of SCN V.1.1-12-2006 "Construction in Seismic Areas of Ukraine"; e) on areas distant from tectonic faults and active zones of geodynamic tension, which are detected by means of engineering surveys.

6. Establishing a specific distance between individual objects and SDW landfill: 15 km from the airports; 3 km from the border of a resort city, open water reservoirs of economic purpose, objects used for cultural purposes, resorts, resting places for migratory birds, seaside; 1 km from the border of cities;

0,5 km from residential and public buildings (sanitary protection zone); 0.2 km from agricultural land and from the road and rail network of the general network; 0,050 km from the border of the forest and forest plantations not intended for recreation purposes.

7. Determination of an exclusive list of land plots where the placement of SDW landfills is prohibited: a) in areas of occurrence of minerals and territories with mining operations without the consent of the state mining supervisory authorities; b) in hazardous zones of dumps of different mines or concentrating factories breeds; c) in zones of active karst; d) in zones of development of tectonic faults, landslides, mudflows, snow avalanches, flooding and other dangerous geological processes, as well as in areas of seasonal flooding; in wetlands; in the areas of replenishment and exit to groundwater surface; e) in zones of formation and use of mineral waters; on the territories of zones 1, 2 of the sanitary protection zone of water intakes of drinking and mineral waters; e) in the protection zones of reservoirs; e) in the zones of sanitary protection of resorts and reserves; g) on lands, seized or designated for the use of forests, forest parks, other green plantations, using protective functions and are places of mass recreation of the population.

8. Internal zoning of lands for SDW landfills. The main elements of the landfill are: 1) an access road connecting the public road with the storage area; 2) SDW storage area, which occupies, as a rule, 85-95% of the total area of SDW landfill and which is divided into queues of operation, taking into account the provision of waste acceptance in each queue for 3-5 years; 3) the economic zone of SDW landfill that consists of zones for industrial and administrative purposes, which are separated by a band of not less than 25 m in width; 4) engineering structures and communications

9. Limitation of the territory of SDW landfill by a hilly ditch to prevent the outflow of contaminated surface water beyond boundaries of the landfill.

10. Establishment of sanitary protection zone at distance of 50, 100, 200 and 500 meters around lands for SDW landfills and conducting soil research at least twice a year, both on the territory of SDW landfills and within the sanitary protection zone.

11. Inclusion of all environmental and sanitary measures that are carried out during the year in the Passport of waste disposal site in accordance with the Procedure for Keeping the Register of Waste Disposal Sites.

12. The multiplicity of management in the field of SDW landfills use and protection is the Ministry of Ecology and Natural Resources of Ukraine, the Ministry of Housing and Communal Services of Ukraine, National Commission on State Regulation in the Field of Energy and Utilities, the State Ecological Inspection of Ukraine, the State Service Ukraine for Geodesy, Cartography & Cadastre, etc.

13. Remediation of land after termination of SDW landfill in accordance with the developed project.

This feature of legal regime of lands for SDW landfills shall be analyzed in more detailed way, as according to the National Strategy in Ukraine 1646 landfills (30 percent) do not comply with environmental safety standards, therefore, are worth of termination with subsequent land remediation.

According to Article 46 (1) of Law of Ukraine "On Waste" it is provided that, while carrying out economic activities related to storage, processing, utilization and disposal of waste, it is ensured, in particular, firstly, removal of the fertile soil layer, its storage and use for land remediation ...; and secondly, remediation of land plots after the elimination of waste management facilities.

Today the main normative acts concerning the land remediation of closed SDW landfills are SCN V.2.4-2-2005 "SDW Landfills" and SCN V.2.4-2-2005 Change No. 1 "SDW Landfills". It is worth pointing out that changes to state construction norms regarding land remediation of landfills were introduced due to international and national experience gained during their validity for transforming the land occupied by SDW landfills into an optimally organized and environmentally balanced stable landscape after their remediation.

For different climatic zones of Ukraine, according to Table 3.4. SCN V.2.4-2-2005 "SDW Landfills" in the new edition, the following terms of remediation of closed SDW landfills are recommended depending on the type of remediation: perennial grass seed - the southern region - 1 year, northern region - 2 years; planting shrubs, seedlings of ornamental trees (except fruit trees), trees with a superficial root system (except fruit) - 2 years irrespectively of region. Comparing the previous version

of Table 3.4 with the new edition it is expedient to note that removal from the table of such a type of remediation as the creation of gardens is a positive measure.

A land remediation project should include either agricultural or forestry area of remediation after termination of SDW landfill and completion of collection and utilization processes of biogas. The method of construction is possible after 25-30 years after remediation in the absence of filtrate. The method of construction is exercised only after the removal of all the landfill soil and implementation of appropriate sanitary-epidemiological studies.

For implementation of land remediation project for SDW landfill the main source data include the area where the landfill is located (land, field, yard, quarry); departmental affiliation of adjoining lands; assigned use of this territory; distance from the place of plant soil loading to the closed SDW landfill, km; self-growth of SDW landfill, %; kind of plants, shrubs, trees; density of grass, %; age of trees, years.

Remediation of land after termination of SDW landfill is carried out in technical and biological stages. The processes of technical stage of remediation include stabilization, settling and terracing, the construction of a degassing system, the creation of a rehabilitation multifunctional coating, the transfer of the site for the biological stage of reclamation.

The protective (permanent) screen of SDW landfill surface is arranged after its termination and the end of SDW landfill body's settling, that is, achieving a stable state. According to para. 3.113. SCN V.2.4-2-2005 "SDW Landfills" the protective screen is arranged on top of technological screen that was constructed during the operation of SDW landfill and usually consists of different layers. According to the previous wording of this paragraph, for example, the reclamation layer should have been at least 1 m thick, including a layer of fertile soil 30 ... 50 cm thick. The new wording of this paragraph stipulates that the reclamation layer must be at least 0,5 m thick, including a layer of fertile soil of a thickness of not less than 30 cm.

After the technical stage of remediation, land parcel for SDW landfill is transmitted for the biological stage of remediation. This stage lasts 4 years and includes the following works: selection of assortment of perennial herbs, preparation of soil, sowing and care of crops. After 4 years after the grass sowing, the territory of reclaimed land for landfills is transmitted to the appropriate department for the next intended use in agricultural, forestry or other areas.

According to SCN V.2.4-2-2005 Change No. 1 "SDW Landfills" SCN V.2.4-2-2005 "SDW Landfills" were supplemented by new addenda including:

Appendix K "Form of Sanitary-Technical Passport of Solid Waste Landfill" (hereinafter referred to as Sanitary-Technical Passport), which, in particular, provides for "Data on the Land Plot" comprising data on the allocation of land, its area, the smallest distances from the boundaries of the city, residential and public buildings, agricultural lands, forest plantations or forest areas, as well as special conditions for proximity to spa areas, protected areas, resting places for migratory birds, seaside, etc. (clause 5 of the sanitary and technical passport); "System of Indicators of Landfill Impact on the Environment" comprising data on landfill protective zone and system of monitoring its environmental impact, describing the means of control, methods, sampling modes, controlled indicators (para. 15 of the Sanitary-Technical Passport); Appendix M "Norms for Seeding Perennial Herbs", where the seed rates - (kg / ha) depend on the type of perennial grasses;

Appendix N "Norms of Fertilizing during Remediation", where the rules for the introduction of the active substance (kg / ha) depend on the type of mineral fertilizers (nitrogen, phosphorus, potassium, wood ash).

The abovementioned features reveal special legal regime of lands under SDW landfills, that is the basis for their separation via introducing amendments to Art.19 (1, g) 65 of the LCU, as well as a separate new article to the LCU.

At the legislative level, there is no definition of land parcels for SDW landfills. Taking into account the definition of landfill in the Rules for Operation of Municipal Waste Landfills, the following definition may be proposed: land parcels for SDW landfills include land provided for placement and operation of engineering structures associated with a single technological process, which are intended

for disposal of domestic wastes and must prevent the negative impact on the environment and comply with sanitary, epidemiological and environmental standards.

Art. 65 (2) of the LCU defines that the procedure for using lands of industry, transport, communications, energy, defense and for other purpose is provided by law. As in fact ways to use special non-agricultural lands are provided by both laws and secondary legislation it is necessary to introduce amendments to Art. 65 (2) of the LCU, stipulating that the procedure for using lands of industry, transport, communications, energy, defense, domestic waste landfills and for other purpose is provided by law. Summarizing the study some conclusions may be drawn.

### 3. CONCLUSIONS

Having analyzed doctrinal approaches and legal norms features of legal regime of lands for solid domestic waste landfills and peculiarities of their remediation are indicated. Analysis of enacted state construction norms SCN V.2.4-2-2005 Change No. 1 "SDW Landfills", approved by the Ministry of Regional Development, Construction and Housing dated 06.06.2016 №138 provides that their implementation regarding remediation of lands under landfills will lead to their transformation in course of remediation to optimally organized and environmentally balanced sustainable landscape.

The study of general and special features of legal regime of lands for solid waste landfills provides an opportunity for doctrinal substantiation of their legalization by introducing amendments to the Land Code of Ukraine. We suggest introducing amendments to Art. 19 of the Land Code of Ukraine and lay down Art. 19 (1, g) in the following wording: "lands of industry, transport, communications, energy, defense, domestic waste landfills and for other purpose".

The same amendments shall be introduced to Art. 65 of the Land Code of Ukraine, laying it down in the following wording:

"Article 65. Definition of lands of industry, transport, communications, energy, defense, domestic waste landfills and for other purpose.

1. Lands of industry, transport, communications, energy, defense, domestic waste landfills and for other purpose are granted in the established manner to enterprises, institutions and organizations to perform the respective activities.

2. The procedure for using lands of industry, transport, communications, energy, defense, domestic waste landfills and for other purpose is provided by law".

The suggested definition of lands for solid domestic waste landfills shall be legalized as well via introducing new article 77-1 to the Land Code of Ukraine in the following wording:

"Article 77-1. Lands for Solid Domestic Waste Landfills

Land parcels for solid domestic waste landfills include land provided for placement and operation of engineering structures associated with a single technological process, which are intended for disposal of domestic wastes and must prevent the negative impact on the environment and comply with sanitary, epidemiological and environmental standards".

### REFERENCES

- [1] Andreytsev V.I. *Land Law and Legislation of Sovereign Ukraine: Actual Problems of Practical Theory*. Znannia, Kyiv, 2005. (in Ukrainian)
- [2] Balyuk G.I., Kovalenko T.O., Nosik V.V. et al. *The Land Law of Ukraine: handbook*. Publishing and Printing Center "Kyivskyi Universytet", Kyiv, 2008. (in Ukrainian)
- [3] Miroshnychenko A.M. *The Land Law of Ukraine*. Alerta, Kyiv, 2013. (in Ukrainian)
- [4] Miroshnychenko A.M., Marusenko R.I. *Scientific and Practical Commentary to the Land Code of Ukraine*. Pravova Yednist, Kyiv, 2009. (in Ukrainian)

- [5] Pogribnyi O., Karakash I. et al. *Land Law of Ukraine*. Istyna, Kyiv, 2003. (in Ukrainian)
- [6] Semchyk V.I., Kulynych P.F. et al. *Land Law*. Publishing House "In Yure", Kyiv, 2001. (in Ukrainian)
- [7] Shulga M.V., Anisimova G.V., Bahai N.O., Hetman A.P. et al. *Land Law of Ukraine*. Yurincom Inter, Kyiv, 2004. (in Ukrainian)

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У статті досліджено поняття та юридичні ознаки правового режиму земель полігонів твердих побутових відходів, у тому числі правовідносини у сфері рекультивациі земель полігонів твердих побутових відходів після закриття таких полігонів. На підставі аналізу спеціальної літератури та чинного законодавства України запропоновано внести доповнення до чинного Земельного кодексу України, що дає можливість на практиці реалізувати цілі і завдання сучасної державної, регіональної, місцевої, об'єктної екологічної політики.

**Ключові слова:** екологічна політика, землі полігонів твердих побутових відходів, рекультивациа земель полігонів твердих побутових відходів, правове регулювання.