

# CONTEMPORARY ECOLOGICAL ISSUES IN THE FUNERAL INDUSTRY

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*This article reviews the use of cemeteries in Ukraine, reflecting an almost critical shortage of burial space in all cities. Legislation on the maintenance of cemeteries and other burial sites is considered. An attempt is made to move away from traditional burials towards conducting eco-friendly funerals and opening "green cemeteries" to preserve the planet's ecological balance.*

**Key words:** *burial site, cemetery, funeral industry, traditional burial, eco-friendly burial, green cemeteries.*

In recent years, there has been a sharp change in climatic weather conditions associated with global warming on the planet, leading to massive catastrophes such as tornadoes, hurricanes, floods, snowstorms, tsunamis, landslides, and forest fires. The diversity of landscapes in Ukraine often signifies a high degree of vulnerability to natural disasters, which can lead to numerous human casualties both during the natural catastrophe itself and afterwards due to the improper use of state infrastructure objects (nuclear power plants, sewage treatment plants, landfills, solid waste disposal sites, as well as cemeteries) not designed to withstand such natural calamities during construction.

The issue of natural disasters can significantly affect the funeral industry, particularly concerning the construction and maintenance of existing cemeteries. As shown by the experience of foreign countries, in the Arctic region, on the archipelago of Svalbard in Norway, due to global warming, which is disrupting the landscape, coffins have begun to rise from the ground in the cemetery of the town of Longyearbyen. The abbot of the local church, Ivar Smedsred, says that the rising temperature is causing permafrost thawing, which leads to objects buried rising to the surface. *"This is happening more or less continuously, so we can see coffins are literally rising"*, the priest said in an interview [1].

The current situation regarding the use of cemeteries in Ukraine has been repeatedly emphasized in the media as practically critical (existing cemeteries are already overcrowded, and there is no available space to open new ones). Currently, economic

activities on cemeteries are conducted in accordance with the "Procedure for maintaining cemeteries and other burial sites" [2] developed in 2003 by the State Committee of Ukraine for Housing and Communal Services. According to paragraph 1.1 of this procedure, a land plot is provided for the placement of burial sites to a specialized communal enterprise, institution, or organization for permanent use under the requirements of land legislation and hygienic norms for the arrangement and maintenance of cemeteries in settlements of Ukraine (State Sanitary Norms and Standards 2.2.2.028.99). The availability of burial space is foreseen by the planning and development project of the settlement, considering the further expansion of its territory.

The area of the plot allocated for traditional burial sites is determined at a rate of 0.24 hectares per 1000 inhabitants in urban areas and 0.1 hectares per 1000 inhabitants in rural areas. For organizing the burial of urns containing the ashes of the deceased, this norm is set at 0.02 hectares per 1000 inhabitants. The sizes of land plots allocated for burial may be adjusted depending on the ratio of spaces for traditional burial and spaces for urn burial, taking into account local conditions. Considering the specified norms, it is evident that the size of the space allocated for urn burial differs by 12 times from that allocated for traditional burial. According to this procedure, for burying urns containing the ashes of the deceased in the ground (paragraph 2.7), it is indicated that a space measuring 0.8 x 0.8 meters is allocated, where multiple urns can be placed vertically. Burial depth is not regulated [2].

The State Sanitary Rules and Norms "Hygienic Requirements for the Arrangement and Maintenance of Cemeteries in Settlements of Ukraine" (2.2.2.028-99), [3] developed by the Ukrainian Scientific Hygienic Centre of the Ministry of Health of Ukraine, were established in 1999 and have not been revised since then.

Paragraph 3.5 of the State Sanitary Rules and Norms stipulates that cemeteries should be located in the suburban zone of urban settlements and near the locations of villages. The sanitary protection zone from the territory of traditional burial grounds and crematorium to residential and public buildings, recreational areas, as well as collective gardens and orchards, should be no less than 300 meters (State Sanitary Rules and Norms No. 379/1404 (z0379-96)). For the territory of cemeteries for the burial of urns, there

should be at least 100 m to residential and public buildings and objects equated to them. In practice, municipal enterprises responsible for managing cemeteries often ignore these rules and norms. Due to a lack of space in cemeteries, the boundaries of cemeteries often extend beyond the allocated territory, creating an environmental threat to the population even without natural disasters.

The area allocated for a traditional burial plot per grave is 5 square meters, with a soil layer thickness above the body of at least 1 meter. For the burial of ashes in urns, the designated area after cremation is 2 square meters, and burial depth is not regulated. This means that the size of land allocated for urn burial is reduced by 2.5 times (which may reduce the size of cemeteries or the planning and allocation of land for new cemeteries), while the ecological component factor in such burials increases to 100 percent.

The requirements for the closure and reconstruction of cemeteries are prescribed in the State Sanitary Rules and Norms of clause 7.2. The use of a closed cemetery or specific plots within an active cemetery for reburial (entombment of a coffin in a family grave) may be allowed only after the completion of the cemetery period (not earlier than 20 years after the last burial), subject to approval by local authorities of the state sanitary-epidemiological service. Burial of urns containing ashes into a family grave is permitted regardless of the time elapsed since the previous burial of a coffin into it.

If the burial grounds are fully used and re-burials are not possible, the cemetery is closed. Territories of closed cemeteries after the end of the cemetery period, with the appropriate level of arrangement, can be set aside for parks and squares, as a rule, this is 20 years after the last burial.

According to O. Stankov, a military historian, human rights activist, and public inspector for the protection of cultural and historical heritage in Kyiv, the problem lies in the fact that the Kyiv authorities practically lack the ability to manage cemetery territory. The main point from Stankov is that *“all Kyiv parks are planted on the territory of old cemeteries - there are simply destroyed graves. I saw these graves. For example, in the park where the monument to Volodymyr the Great stands, Yushchenko erected small steles of little-known artists, and before that, there were graves of monks from the Catholic*

*cathedral. There were many monk burials there. In this and other parks, external monuments, fences, and crosses were demolished, but the burials remained” [4].*

Another current ecological issue concerning cemetery maintenance is the use of cheap plastic (in the form of wreaths made from low-priced Chinese flowers) brought to cemeteries to place on graves. Artificial wreaths and flowers on graves retain their appearance much longer than live flowers, but after a year, all artificial items will be discarded as trash (due to being made of low-quality plastic, they are not recyclable). Therefore, all of these items will be taken to a landfill (where they will decompose for over 300 years) or, worse, be burned on the cemetery grounds, resulting in a significant release of harmful substances into the atmosphere.

From the above, several hazardous environmental issues created by the funeral industry in maintaining cemeteries are evident. Firstly, a shortage of burial space in cemeteries. Secondly, the ecological threat posed by cemeteries during traditional burials due to natural disasters. Thirdly, typically, after the closure of a cemetery, tombstones are demolished, while burials remain, and, in the best-case scenario, parks are created, while in the worst-case scenario, any type of construction occurs. Fourthly, the presence of many artificial items on cemetery graves and their disposal.

To address the mentioned issues in the funeral industry regarding the maintenance and construction of cemeteries, it is necessary to move away from traditional burial practices and begin creating so-called “green cemeteries”. An ecological cemetery is a plot of land provided to a municipal or private enterprise, where burial spaces are planned as part of the urban planning and development project, considering the future expansion of the settlement's territory. In this cemetery, only urns (made of degradable material) with the ashes of the deceased will be allowed to be buried, and instead of traditional tombstones to mark the burial sites, trees will be planted. Similarly, the rules of operation for the "ecological cemetery" must include a prohibition on artificial flowers at burial sites, as well as the installation of any above-ground structures. This way, we will put an end to disrespecting graves and honour the memory of the deceased while improving the environmental aspect of our country (by building cemeteries of a new model resembling parks).

Indeed, scientists from the Swiss Federal Institute of Technology in Zurich (ETH Zürich) suggest that reforestation on a global scale can not only halt the accumulation of carbon dioxide but also reduce its current levels in the atmosphere, thereby minimising the risk of global warming [5].

Likewise, it is essential to consider the wishes and rights of the deceased and their relatives during burial at an “ecological cemetery”, in accordance with Article 298 of the Civil Code of Ukraine [6]. R. Stefanchuk rightly suggests labelling such personal non-property rights as "*postthanatos*" (from Latin "*post*" - after, and "*thanatos*" - death), meaning subjective civil rights that arise or continue to exist after the death of a natural person. They seem to "outlive" their holders and continue to persist beyond their demise [7, p. 97].

In light of the aforementioned, it is necessary not only to demonstrate to people that these cemeteries will endure much longer but also to be significantly more ecologically clean and safer. Additionally, appropriate amendments need to be made to the legislation of Ukraine “On Burial and Funeral Affairs” [8].

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### ***Гриценко Григорій, Авершин Олександр. Сучасні екологічні проблеми в ритуальній галузі***

У статті проаналізовано використання кладовищ в Україні, що відображає майже критичну нестачу місць для поховання в усіх містах. Розглянуто законодавство щодо утримання кладовищ та інших місць поховання. Зроблено спробу відійти від традиційних поховань у бік проведення екологічних похоронів та відкриття "зелених кладовищ" задля збереження екологічної рівноваги на планеті.

Ключові слова: місце поховання, кладовище, похоронна індустрія, традиційне поховання, екологічне поховання, зелені кладовища.

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