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Legal regulation of soil information support

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Abstract

This paper considered the issues of legal regulation of information support on soils. The article describes large-scale soil studies in Ukraine that were conducted during 1957-1961. The reasons for the inconsistency of the available information on the structure and condition of the soil cover were found. It was proved that environmental impact assessment data from environmental monitoring, soil surveys, cadastral documentation, etc., can be sources of environmental Information. The conducted legal analysis suggested that the Draft Law of Ukraine "On Conservation of Soil and Protection of Their Fertility" should prescribe that documented information on the state of soils and implemented measures for soil protection should be open, publicly available, since it is of public interest, except for information that is classified as restricted access

Keywords: land, soil, soil cover, land use, soil protection, soil information, soil survey, monitoring, cadastral documentation

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Introduction

The new method of production in the 21st century is informational. This is understandable, since Article 50 of the Constitution of Ukraine [1] enshrined the right to access to environmental information, which is an essential component of citizens' environmental rights, the protection of which is guaranteed. However, the country still lacks a full-fledged information system on the state of the natural environment and its main component of the soil cover. In this context, the study of the legal regulation of information support on soils is of interest.

The purpose of this paper is to find out the essence of information support about soils and solve the currently urgent issues concerning the reliability of information about soil resources in terms of environmental indicators and agronomic qualities of soils.

Over a lengthy period of research, a considerable amount of information about the soils of Ukraine has been accumulated. In recent decades, increasingly more attention has been paid to the problems of legal support of information on the country's soil cover and soils. Issues of legal support of soil information are discussed in the papers of V.I. Andreitsev, V.M. Yermolenko, I.I. Karakash, M.V. Krasnova, P.F. Kulinich, T.V. Lisova, V.L. Muntian, V.V. Nosik, N.I. Tytova, M.V. Shulha, and others.

Results and Discussion

There are many sources of information about soils in Ukraine. Large-scale soil studies in Ukraine were conducted during 1957-1961 on an area of more than 45 million hectares. The work was organized and coordinated by specialists of the Ministry of Agriculture of the Ukrainian SSR, and then, after the completion of expedition works on their generalization, by the soil research departments of Ukrzemproekt. The soil survey of Ukraine was conducted on a scale of 1:10000 and 1:25000. Based on the conducted soil studies, a map of the soils of Ukraine (1:750000), as well as soil maps of administrative regions (1:200000) and soil plans of agricultural enterprises were compiled [2, p. 10].

Currently, information on the qualitative state of the soil cover of Ukraine and its condition is based on the materials of a large-scale survey of 1957-1961 and their correction during the 1960-1980s. At one time, they were a world-class achievement and provided a powerful impetus to develop agrarian science and agriculture. On their basis, the agro-soil (1969), natural-agricultural (1985) zoning of Ukraine, and soil grading were developed. Although these materials are outdated, they are still widely used. However, it is impossible to solve general agricultural issues of rational use of soil resources, since they do not reflect their real state.

As for the structure and state of the soil cover, the available information does not correspond to reality for the following reasons: the structure of the soil cover according to the genetic status of a large-scale survey is only 35-50% reliable; a large area of zonal saline soils on loess rocks (typical, ordinary, southern chernozems), determined by morphological indicators, is not related to saline, they did not pertain to the group of particularly valuable ones. Their genetic nature is not related to salinity and reclamation measures are ineffective, which requires a different strategy for their rational

use; environmental parameters of soils do not have a proper reflection in soils of different genetic nature, which complicates the assessment of their agricultural production potential; the diagnosis of soil cover erosion development has not been determined; microrelief formations on slopes have not been considered upon developing and implementing modern flow control measures; there are difficulties in developing a scientific justification for the technology of providing plants with nutrients; transparent real agro-economic and agricultural production status of irrigated and de-irrigated lands has not been determined; no large-scale research of drained land soils has been conducted; the area of acidic and salinized soils requiring chemical reclamation has not been determined; there is no complete information on technogenic contamination of the soil cover; studies of contaminated territories regarding the influence of radionuclides in soils by ecological and genetic status have not been conducted; studies of soils of the territory of settlements, namely household plots, woodlands, and numerous special-purpose objects, primarily military landfills, have not been fully covered [3, p. 7-8].

Examples of the discrepancy between the materials of a large-scale study of the soil cover of 1957-1961 on information about its qualitative composition, transformation under various anthropogenic loads to the real state of soil resources of Ukraine reduce the effectiveness of measures for their protection, improvement and rational use are given. This creates an urgent need for a new large-scale survey of the soil cover.

Reliable information about soil resources on environmental indicators and agronomic qualities of soils will allow solving the currently urgent tasks: to ensure proper soil protection, reproduction of their productive and ecological functions, to solve socio-economic problems of food security of the state, to improve the investment attractiveness of the territory of Ukraine, to scientifically substantiate strategies for balanced use of land resources based on farming systems through optimization of the range of crops matching their soil and environmental conditions; to develop targeted measures to eliminate particular types of soil degradation and increase their fertility; real ecological and agro-industrial status of soil resources is the basis for development measures of land protection and implementation of agricultural land reclamation; creation of erosion-safe land use on sloping territories; provision of scientifically sound systems and technologies for the use of fertilizers and chemical meliorants. It is necessary to review the available differentiation of soils into particularly valuable ones, to establish their diagnostic criteria legislatively to eliminate speculation regarding the allocation of lands for non-agricultural use and their value; to justify the regulatory monetary estimation of agricultural land and the tax on it according to productivity; to improve the doctrine of land optimization, which is related to determining the ratio of arable land and natural, coral, and forest land to reduce the degree of ploughing, to limit the intensity of use of ecologically dangerous sloping land, and conserve degraded and unproductive soils; to use the materials of large-scale soil research of soil cover by management structures of different levels to manage the development of agricultural production

through long-term planning, specialization, concentration, preferential tax policy, etc. The results of soil research constitute the basis for organizing conservation, recreation, monitoring the state of soils and the environment, drafting soil maps of various scales, developing and improving zoning of agronomic and environmental areas, developing technologies towards creating reference and information and expert assessment systems to meet the needs concerning various issues of land use, agriculture, and soil resource protection [3, p. 8-9].

According to the National Research Centre "Sokolovskyi Institute of Soil Science and agrochemistry", the estimated cost of a large-scale study of the soil cover of Ukraine is 6 billion UAH. Funding should come from three sources: one third – from the state budget, the second – from the local budget, and the rest to be compensated by the landowner. This approach is justified by the need for triple control of the quality of works by the state and immediate land users, who will be interested in obtaining modern agricultural information about soils for the implementation of measures to preserve and increase fertility of said lands, depending on their state, to compensate for costs. The effectiveness of the results of large-scale studies depends not only on the reliability, but also on the duration of their implementation. The experience of their successful implementation indicates the optimal intermediate time of 5-7 years. The extension of this period is unjustified either in economic or research-to-practice aspects [3, p. 13].

Thus environmental impact assessment data of environmental monitoring, soil survey, cadastral documentation, etc. can be sources of environmental information (Article 25 of the Law of Ukraine "On Environmental Protection" [4]). The main sources of information about the state of the natural environment are also data from registers, automated databases, archives, as well as certificates issued by authorized state authorities, local self-government bodies, public organizations, and individual officials [4]. The bodies of state power, local self-government, enterprises, institutions, organizations, their officials, and employees must provide environmental information in the manner prescribed by current legislation (Article 25.1 of the Law of Ukraine "On Environmental Protection" [4]). The main form of environmental information is the annual National Report on the State of the Natural Environment in Ukraine. Information about the state of soil fertility in Ukraine is formed through soil monitoring, the main component of which is the survey of agricultural land, conducted by the state institution "Institute of soil protection of Ukraine" (SI "Derzhgruntokhorona"), authorized by the Ministry of Agrarian Policy. Surveys are conducted cyclically every 5 years. Thus, in 2014, the 4th year of the 10th round of agrochemical survey was completed. The research materials obtained for the corresponding year are processed, stored, and used for further generalization of the qualitative state of the soil cover during the full round of surveys. In 2014, 4.0 million hectares of agricultural land were surveyed, which corresponds to the tasks defined by the budget classification program 2801050 "Research, applied scientific and technological developments, implementation of works under state target programs and state orders in the field

of development of the agro-industrial complex, preparation of scientific personnel, scientific developments in the field of standardization and certification of agricultural products, research and experimental developments in the field of agro-industrial complex". On the surveyed lands, more than 373.7 thousand samples were taken, and 2 million analytical studies of the soil were conducted to establish the content of hazardous substances in it [5, p. 137].

As V.V. Medvediev notes, Ukraine has created artificial barriers to the exchange of information and, consequently, its use. In recent years, the closure of departments and institutions has even increased. Thus, it has become extremely difficult to use hydrometeorological information and materials of agrochemical certification of fields. Furthermore, in both cases, it was also obtained with budget funds. Notably, there is no culture of information exchange due to possible violation of its sovereignty, there is no mutual trust between co-executors. Such a situation, admittedly, is harmful, limits the final value of the obtained data both in theoretical and especially in applied aspects [6, p. 98-99].

Conclusions

Thus, the proposed Draft Law of Ukraine "On Conservation of Soils and Protection of Their Fertility" should prescribe that documented information on the state of soils and implemented measures for soil protection should be open, publicly available, since it is of public interest, except for information that is classified as restricted access. Documented information about the condition of soils located on lands and land plots, information about which is classified or may be classified as a state secret, constitutes documented information with limited access. The procedure for providing information on the state of soils is established by the legislation of Ukraine. This provision refers to the norms of the Constitution of Ukraine (Article 50.2) and the Law of Ukraine "On Information" (Article 5).

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Правове регулювання нформаційного забезпечення про ґрунти

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Анотація

Розглянуто питання правового регулювання інформаційного забезпечення про ґрунти. Надається характеристика великомасштабним дослідженням ґрунтів в Україні, які були проведені впродовж 1957–1961 рр. Встановлено причини не відповідності наявної інформації щодо структури і стану ґрунтового покриву. Обґрунтовано, що дані оцінки впливу на довкілля екологічного моніторингу, обстеження ґрунтів, кадастрової документації, інших можуть бути джерелами екологічної інформації. На основі проведеного правового аналізу зроблено висновок, що в проекті закону України «Про збереження ґрунтів та охорону їх родючості» необхідно закріпити, що документована інформація про стан ґрунтів та здійснювані заходи щодо охорони ґрунтів має бути відкритою, загальнодоступною, оскільки є такою, що становить суспільний інтерес, за винятком інформації, яку зачислено до категорії інформації з обмеженим доступом

Ключові слова: земля, ґрунт, ґрунтовий покрив, землекористування, охорона ґрунтів, інформація про ґрунти, обстеження ґрунтів, моніторинг, кадастрова документація