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SOIL PROTECTION LEGAL FRAMEWORK IN EU

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Sarkisova T.B. Soil protection legal framework in EU.

The article focuses on the comprehensive and in-depth study of the legal regulation of soil protection relations within the European Union. In order to provide analysis of the regulatory framework in the field of soil protection, the author defines common feature and main specifics of EU legislation, classifies it in order to understand the system and fundamental pillars of legal soil protection at the EU level, as well as to identify the main directions of its development that will impact the integration into Ukraine's legal system.

Special attention is focused on the role of the European Green Deal (January, 2020), that implements "null tolerance" through its Zero Pollution Action Plan, aiming for soil pollution to be reduced to levels no longer harmful to health by 2050. Given the significant role of this document, it is proposed to distinguish two periods of formation and development in EU soil protection legislation: before and after the adoption of the European Green Deal. In addition, it is proposed to distinguish differentiated and integrated EU legal acts in the field of soil protection.

It has been established that the first period is characterized by a set of mostly integrated legal acts, which only indirectly and fragmentarily contained and/or contain provisions on soil protection and, above all, were adopted within the framework of various policies on the agricultural sector, waste, industry, ecology, etc. The lack of special legislation focused on the problem of soil protection has resulted in low efficiency and high rates of land degradation.

Regarding the second period – after the approval of the so-called Green Deal – it is noted that the EU works toward adopting the differentiated legislative acts, which conceptualise soil issues. At the same time the author underlined that the newly adopted pieces of EU legislation on soils (a new Soil Monitoring Law, Soil Strategy for 2030) provides mostly non-binding objectives and serve more as a vision and a general direction.

The conclusion is made about the undeniable necessity of a comprehensive policy framework for soil protection, binding requirements and concrete measures for sustainable soil management.

Key words: European Union, soil protection, EU law, European Green Deal, legislation.

Саркісова Т.Б. Охорона ґрунтів за законодавством ЄС: загальна рамка.

Стаття присвячена дослідженню правового забезпечення охорони ґрунтів за законодавством Європейського Союзу. З метою проведення комплексного аналізу регуляторної рамки в сфері охорони ґрунтів наведено перелік та характеристику окремих документів, які склали та (або) продовжують складати основу ґрунтоохоронного правового врегулювання в ЄС, здійснюється класифікація та оцінка їх ефективності.

Акцентовано увагу на ролі Європейського зеленого курсу (січень, 2020 рік) для забезпечення охорони ґрунтів, завдяки вперше закріплених принципів та положень, що безпосередньо стосуються правового регулювання використання та охорони невідновлюваного природного ресурсу. Зважаючи на визначну роль цього документу, робиться висновок про можливість виділення двох періодів становлення та розвитку в ґрунтозахисному законодавстві ЄС: до та після прийняття Європейського зеленого курсу. Крім того, пропонується виділяти диференційовані та інтегровані правові акти ЄС в сфері охорони ґрунтів.

Констатовано, що перший період характеризується сукупністю переважно інтегрованих правових актів, які лише побічно та фрагментовано містили та/або містять норми щодо охорони ґрунтів та, передусім, приймалися в рамках різноманітних політик щодо агросектору, відходів, промисловості, екології тощо. Відсутність спеціального законодавства, сфокусованого на проблемі охорони ґрунтів, позначилась низькою ефективністю та високим показниками деградації земель.

Щодо другого періоду – після затвердження т. зв. Зеленого курсу – виснується поява в правовому полі ЄС вузькогалузевих актів (Стратегії охорони ґрунтів до 2030 р. та Директиви щодо моніторингу ґрунтів та їх стійкості). Підкреслюючи позитивність нового вектора у правовій

регламентації проблем охорони ґрунтів, водночас відмічається, що прийняті нормативно-правові акти в більшій мірі визначають напрямки правого регулювання, а не являють собою норми прямої дії, зважаючи на існуючий в праві ЄС принцип субсидіарності.

Зроблено висновок про беззаперечну потребу у відведенні досліджуваному об'єкту самостійного місця у праві Європейського Союзу, що потребує комплексного підходу та закріплення конкретних заходів.

Ключові слова: Європейський Союз, охорона ґрунтів, право ЄС, Європейський зелений курс, законодавство.

Problem Statement. Ukraine's receipt of candidate status for EU membership on June 23, 2022, put on the agenda the achievement of legal compatibility of Ukraine's national legislation with the EU acquis. Despite the absence of direct requirements for Ukraine to implement EU legal acts in the field of land and soil protection the cross-border nature of the problem requires taking into account the existing EU mechanism and effective practices in soil protection. Therefore, it is important to conduct comprehensive research of the legal framework for land and soil protection, especially the new concepts of soil health and soil-based ecosystem services adopted in EU strategies and directives supporting the European Green Deal.

Analysis of Recent Research and Publications. The issue of legal regulation for soil protection in EU and its impact on national legislation of its member states has been repeatedly highlighted in academic circles. It has become a research subject by scientists such as I. Heuser [1], L. Montarella and P. Panagos [2], A. Jones, E. Lugato, C. Ballabio [3], S. Montaldo [4], M. Petersen, S. Affolter and others. In Ukraine, EU standards of legal regulation of soil protection within the framework of the EU were analyzed in the dissertation by Khomyk N. [5]. However, the EU legislation in the sphere of soil protection requires further doctrinal research in the context of its decisive reforming in recent years.

The article's purpose is to conduct a comprehensive legal analysis of the regulatory framework for soil protection in EU, defining common feature and main specifics, to provide its systematization in order to understand the system and fundamental pillars of legal soil protection at the EU level, as well as to identify the main directions of its development that will impact the integration into Ukraine's legal system.

Main Findings. The issue of soil deterioration appeared on the European agenda in the last century, and since then a number of legal regulations have been introduced at the European level to protect soils and remediate environmental damage. Nevertheless according to the Review of the evidence on the status of soil health across Europe in 2020 about 60 to 70% of EU soils were in an unhealthy state. All Member States were facing the problem of soil degradation [6]. The lack of effective legal regulation is one of the reasons for such state of affairs.

Despite the importance of soil protection, in 2022 Dr. Irene Lucia Heuser stated, that "compared to air and water, which have been protected by Union law for many years, soil is still regarded as the "poor cousin" within the European environmental policy framework" [1]: EU legislators have not adopted a normative act that would comprehensively address soil protection at the EU level. There is also a lack of a targeted policy framework in this area [7].

Instead, it can be stated that the EU policy for quite a long time addressed soils in a fragmented way considering either the agricultural perspective (e.g., Nitrates and Pesticide Directive, Common Agricultural Policy, etc.) or from a more environmentally oriented one (e.g., NATURE 2000, Water Framework Directive, Sewage Sludge, etc.). It did not target explicitly soil degradation and soil health. The only exception was the Soil Strategy 2006 and the draft of Soil Framework Directive, 2006, which resulted in political failure [4, p. 530-531]. Rather, there were several legislations that indirectly refer to some aspects of soil health.

The first legal instrument partly indirectly contributing to the protection of soils is considered the Council Directive 80/68/EEC of 17 December 1979 on the protection of groundwater against pollution caused by certain dangerous substances (no longer in force), nowadays – Directive 2006/118/EC of the European Parliament and of the Council of 12 December 2006 on the protection of groundwater against pollution and deterioration. Commission Directive 2008/41/EC of 31 March 2008, amending Council Directive 91/414/EEC to include chloridazon as an active substance in plant protection products (no longer in force), took into account the impact on both soil and water. These Directives were aimed at protecting water quality, while another one – Sewage Sludge Directive of 1986 (in force) – primarily concerns soil by regulating the use of sewage sludge in agriculture in such a way that takes the plants' nutrient requirements and the quality of the soil into account.

In the following years, the EU took action to protect soil through another indirectly affecting legislation concerning pesticides, nitrates, waste, emissions from industry and agriculture.

The first-edition of the Directive on Integrated Pollution and Prevention Control (1996) contained trans-medial requirements on the operation of certain industrial plants. It has been replaced in 2010 by the Directive 2010/75/EU on Industrial Emissions (IED), revised in 2024 and is the main EU instrument regulating pollutant emissions from industrial plants and enshrines commitments to use the Best Available Techniques (BATs) to limit emissions to soil.

One of the most important role in preventing soil contamination has the waste management. The Nitrates Directive (1991) protects water quality from nitrate pollution caused by agricultural sources, promoting good farming practices and requires EU member states to monitor water, identify areas at risk (Nitrate Vulnerable Zones), and implement Action Programmes with measures like limiting fertilizer application and manure spreading, and setting rules for manure storage. The Pesticide Directive (2009) establishes a framework to achieve a sustainable use of pesticides by reducing the risks and impacts of pesticide use on human health and the environment, including soil. As EU chemicals law and water protection law prevent the entry of dangerous substances into the soil, the «REACH» system of registration, evaluation, authorisation and restriction of chemicals a comprehensive life cycle analysis is to be carried out for highly soil-damaging harmful substances in the future (Regulation 1907/2006).

The indirect aim of preventing pollution of the soil also has The Water Framework Directive (2000) with its quality standard of surface and groundwater status, and the Directive on flood risk management policy (2007) that aims to reduce the impact of floods.

The important role in soil protection of agricultural lands plays the Common Agricultural Policy (here and after CAP). For example, the CAP 2023-2027 sets GAEC system – Good agricultural and environmental conditions – refers to a set of EU standards (described in Annex II of Council Regulation № 1306/2013 defined at national or regional level), aiming to achieve a sustainable agriculture by keeping land in good agricultural and environmental conditions. The most relevant for soil health are GAEC 1: Maintenance of permanent grassland based on a ratio of permanent grassland in relation to agricultural area; GAEC 2: Appropriate protection of wetland and peatland; GAEC 3: Ban on burning arable stubble, except for plant health reasons; GAEC 6: Tillage management reducing the risk of soil degradation, including slope consideration; GAEC 7: No bare soil in most sensitive period(s); GAEC 8: Crop rotation and GAEC 9: Ban on converting or ploughing permanent grassland in Natura 2000 sites. These standards are to be respected by European farmers receiving direct payments (Pillar 1) or some of the rural development payments (Pillar 2).

The abovementioned group of acts could be named as integrated by analogy with the existed classification of legal acts in Ukrainian law doctrine [7, p. 19]. This type of legislation is strongly fragmented, with the topic at issue mainly featuring as an ancillary element to other priorities: the issue of soil protection are not directly in the focus of regulation.

To sum up, one thing can be noted – integrated legislative acts partially impacting soil health through abovementioned various policies had low effect and was not adequate to address the scale of soil degradation. There was a strong necessity of the additional EU intervention to complement existing measures and bridge policy gaps comprehensively.

The European Green Deal (January, 2020) seemed to be a breathe of new life into the issue of soil protection. In order to achive the Green Deal`s aims the European Parliament called on the Commission to develop an EU legal framework for the sustanable use of soil which should include definitions and criteria for good soil status and sustainable use, objectives, harmonised indicators, a methodology for monitoring and reporting, targets, measures, and financial resources. The Council of the EU supported the Commission in stepping up efforts to better protect soils and reaffirmed its commitment to land degradation neutrality and requirements to prevent land deterioration. In these curcumstances appeared two important differentiated legislative acts – the Soil Strategy for 2030 and first-ever dedicated piece of EU legislation on soils – Soil Monitoring Law.

The **Soil Strategy for 2030 (November, 2021)** updates the 2006 EU Soil Thematic Strategy and for the first time focuses specifically on soil-oriented measures. The new strategy intends to address land and soil issues in a comprehensive way, emphasizes the necessity of prevention and restoration of soil degradation as well as provides management practices that sustain and enhance soil health and biodiversity.

The Strategy in the paragraf 2 sets medium-term objectives to be achieved by 2030 and long-term objectives to be achieved by 2050 for good soil health and effective implementation of EU Green Deal targets related to food security, climate change and biodiversity. It is underlined the importance of combating desertification, restoring degraded land and soil, striving to achieve a land degradation-neutral world; reducing nutrient losses by at least 50%, the overall using of chemical pesticides by 50% and using of more hazardous pesticides by 50% by 2030; reducing soil pollution to levels no longer considered harmful to human health and natural ecosystems; achieving land-based climate neutrality in the EU by 2035; achieving an EU net greenhouse gas removal of 310 million tonnes CO₂ equivalent per year for the land use, land use change and forestry etc.

It is also underlined the importance of mainatenance of carbon farming due its significant contribution to the EU`s efforts to tackle climate change as well as increasing biodiversity and the preservation of ecosystems and necessity of reduction net land take by 2030 and integrate the 'land take hierarchy' into their Urban Greening Plan.

The Soil Strategy in order to prevent soil and land degradation and restoring healthy soils in Paragrafe 4 enshrines the list of concrete measures: to make sustainable soil managment by preparing a set of `sustainable

soil management' practices, including regenerative farming in line with agro-ecological principles, adapted to the wide variability of soil ecosystems and types, and identify unsustainable soil management practices; to prevent desertification by adoption, in line with the actions envisaged in the EU climate adaptation strategy, appropriate long-term measures to prevent and mitigate degradation, notably by reducing water use and adapting crops to the local water availability, coupled with wider use of drought management plans and application of sustainable soil management; to prevent soil pollution by restriction intentionally used micro-plastics under the REACH Regulation and develop measures on the unintentional release of microplastics by 2022, development a policy framework on bio-based, biodegradable and compostable plastics by 2022); to restore degraded soils and remediating contaminated sites; to assess the feasibility of the introduction of a soil health certificate for land transaction to provide land buyers with information on the key characteristics and health of the soils in the site they intend to purchase; to develop an EU priority list for contaminants of major and/or emerging concern that pose significant risks for European soil quality, and for which vigilance and priority action at European and national level is needed etc.

Therefore, the Strategy provides the identification of clearer requirements for the sustainable use of soil, the imposition of progressive limits to this practice, more advanced rules on the restoration of contaminated sites and assessing the technical and political feasibility of introducing soil health certificates for land transactions, which already exist in some Member States.

At the same time it is worth emphasizing that due to mostly non-binding objectives and measures of the Strategy as a program document it serves more as a vision and a general direction of the EU soil protection policy. The actual achievement of the ambitious EU environmental goals is largely dependent upon a stronger common soil management policy at EU level.

In order to provide sustainable soil management unified for all EU Member States on 23 October 2025 the European Parliament voted the Soil Monitoring Law (SML) [9] – the first-ever dedicated piece of EU legislation on soils.

It for the first time provides a common definition of a healthy soil, lays down uniform rules on the assessment of soil health, based on a common definition of what constitutes healthy soils, and for restoring contaminated sites and harmonizes soil health indicators and data (indicators and thresholds that should be used for each soil type, ecosystem, and climatic zone).

It envisions a harmonized EU soil monitoring system by setting a common statistical framework to perform soil monitoring in the EU and gather data on physico-chemical and biological soil properties (are included in the annexes of the SML) with a stratified method. This maintains to avoid the biases that could arise from Member States implementing different monitoring schemes using different spatial sampling designs and create harmonized EU soil monitoring system [3, p. 5].

The SML also provides guidelines for sustainable soil management: data and insights on soil health can be used by stakeholders (land owners, farmers, policy makers etc.) to make better-informed decisions regarding sustainable soil management practices. For example, the new pan-European soil monitoring scheme will be a major gain for farmers to make better decisions for crop selection, fertilization, irrigation, and water management.

At the same time the law still includes as much flexibility for Member States as possible at the expense of better harmonisation of soil health monitoring and assessment. For example, Member States can define themselves the level at which the monitoring framework will be established (Art. 6 (1)). Member States can also use existing data and monitoring networks (Art. 8(2a)) and derogate from a monitoring cycle for soil descriptors expected to not evolve significantly (Art.8 (5)). In addition, the law leaves it to Member States to define the conditions for soil to be considered healthy (Art.7 (4) and (4a)). Ukraine already established the new approach of soil monitoring system and adopted the Resolution of the Cabinet of Ministers of Ukraine "On the Procedure for land and soil monitoring" on 23 July 2024 № 848, considering the main EU positions.

Conclusions. Conducted research allows to assert that the system of legal regulation for soil protection in EU consists of integrated and differentiated legal acts that differs by effectiveness and impact. For along time, the soil protection measures in EU were integrated through various policies, such as those concerning agriculture, industry, environment etc., providing indirect soil protection only. The legislation covered only some aspects of soil pollution and biological soil protection, but it remained fragmented. Therefore, the lack of comprehensive policy framework for soil protection in the EU was not sufficient to halt desertification and soil degradation.

To protect Europe's soils effectively, a holistic approach is needed, considering the multifaceted challenges posed by soil degradation. Analyzing policy framework for soil protection in the EU, in our opinion, in the formation of legal regulation on soil protection it is possible to distinguish two milestones – before and after Green Deal due to its pivotal role. The legislative acts adopted after Green Deal are featured as differentiated first – ever dedicated pieces of EU legislation on soils.

Nowadays, the EU work toward adopting the differentiated legislative acts, which conceptualise soil issues (including common definitions on good status), set out priorities and targets, define monitoring parameters and desired end points; and define the role of different policy instruments in delivering good soil status. At the same time the newly adopted pieces of EU legislation on soils (a new Soil Monitoring Law, Soil Strategy for 2030) providing mostly non-binding objectives and serve more as a vision and a general direction.

To ensure an adequate level of protection for all soils in Europe a comprehensive policy framework for soil protection, binding requirements and concrete measures for sustainable soil management are needed. Otherwise, due to the lack of a targeted policy framework for land and soil protection, regulatory issues of protection have been left to national legislators. As a result, the legal instruments adopted at the Member State level and the methods of protection differ from one another [10].

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