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**LAND MANAGEMENT ON THE PATH TO EUROPEAN INTEGRATION:
TOWARD ESTABLISHING A NEW SCIENTIFIC PARADIGM WITHOUT
LOSING NATIONAL IDENTITY**

Y. Dorosh, *Doctor of Economic Sciences, Professor, Academician of NAAS*

E-mail: yosypdorosh@lmi.org.ua

ORCID ID: 0000-0002-1764-6188

Institute of Land Use of the National Academy of Agrarian Sciences of Ukraine

Sh. Ibatullin, *Doctor of Economic Sciences, Professor, Academician of NAAS*

E-mail: shamilibatullin@lmi.org.ua

ORCID ID: 0000-0002-4032-6182

Institute of Land Use of the National Academy of Agrarian Sciences of Ukraine

O. Dorosh, *Doctor of Economic Sciences, Professor*

E-mail: dorosh_o@nubip.edu.ua

ORCID ID: 0000-0003-2906-4174

National University of Life and Environmental Sciences of Ukraine

A. Tarnopolskyi,

E-mail: atarnopolskyi@lmi.org.ua

ORCID ID: 0000-0001-5313-6380

Institute of Land Use of the National Academy of Agrarian Sciences of Ukraine

Abstract. *In light of global challenges – climate change, soil degradation, the digitalisation of the economy, biodiversity loss, the intensification of urbanisation processes, and the growing anthropogenic pressure on land resources—there is an*

urgent need to rethink the conceptual foundations of land management science in Ukraine. With this objective in mind, a retrospective analysis was conducted of the development of land management thought by Ukrainian scholars over a long historical period, which made it possible to establish the need for a critical reevaluation of the accumulated body of scientific work and its adaptation to contemporary realities, without losing its methodological value. The study also examined and substantiated the integration of the classical theoretical and methodological approaches of the domestic scientific school with current international standards and land management technologies. The analysis revealed conceptual points of convergence between established scientific traditions and the latest global practices and identified avenues for their mutual enrichment. At the same time, the researchers emphasise a fundamental point: the integration of domestic land management science into the international scientific discourse should be viewed not as a reason to lose the unique achievements accumulated over the long history of land management thought in Ukraine, but as a compelling argument for their preservation, updating, and recognition at the international level. Researchers argue that it is precisely this approach that forms the methodological foundation for a comprehensive comparative analysis of the development of land management science in the Ukrainian and global academic spheres, conducted in light of current global challenges and based on a balanced combination of national scientific traditions and international best practices.

Keywords: *land management, classical land management, theoretical and methodological approaches, domestic scientific school, scientific traditions of land management science, requirements of European integration, international scientific discourse.*

Problem statement. Despite its long history of development, land management science in Ukraine requires rethinking in today's realities in light of global challenges – climate change, soil degradation, the digitalisation of the economy, biodiversity loss, the intensification of urbanisation processes, and growing anthropogenic pressure on land resources – which highlight the need for scientific substantiation of sustainable land use, the integration of geospatial technologies into land resource management

processes, and the formation of adaptive spatial-planning mechanisms based on combining classical theoretical and methodological approaches with modern international standards and technologies. At the same time, integration into the international scientific discourse should be viewed as a means of preserving the unique scientific achievements of the domestic land management school, rather than a reason to lose its distinctive body of work accumulated over the long development of land management thought in Ukraine. The relevance of the study stems from the need to form a coherent system of scientific views on land management as a science suited to contemporary land relations in Ukraine. Despite the considerable number of scientific works in this field, the theoretical and methodological foundations of land management under conditions of global challenges remain insufficiently studied, which calls for further research that maintains a balance between the national scientific tradition and leading global practices.

Review of recent research and publications. In order to substantiate the conceptual foundations for transforming the land management system as a classical scientific field, it is appropriate to examine the scientific work accumulated by scholars over the decades. This makes it possible to trace how the development of land management ensures the preservation of the domestic scientific school and its active integration into international scientific discourse. With this in mind, let us turn to a review of the scientific contributions of domestic and foreign scholars who laid the theoretical and methodological groundwork for the contemporary understanding of land management as a science.

In particular, Novakovskiy, L.Ya., Tretiak, A.M., and Dobriak, D.S. (2001) argue that land management is a key mechanism for ensuring the territorial organization of production, taking into account the qualitative characteristics of soils, the spatial arrangement of land plots, and the specialization of farms. In their view, this instrument has acquired particular importance amid the active development of private landownership and the emergence of new agrarian entities [1].

Dorosh, Y.M. (2011) demonstrates that the transformation of land relations turns land management into a system-forming factor of this process, one that must go beyond

its traditional functional content: alongside the basic engineering-technical, economic, and managerial functions, the social, legal, ecological, urban-planning, innovative, investment, and informational functions are gaining increasing weight. Of particular importance among these is the forecasting-and-planning function, designed to guarantee the population a territorial space for residence and livelihood, with the efficiency of land use being a derivative of achieving this strategic goal [2].

Dobriak, D.S., Martyn, A.H., Yevsiukov, T.O., and Kuzin, N.V. (2017) substantiate the need to transform land management from a technical procedure into an instrument of economic and environmental governance. Accordingly, they propose implementing this through the following tasks: forming market-based agrarian structures; developing the land cadastre (conducting economic, monetary, and quality-rating valuations using GIS technologies); establishing restrictions and encumbrances in land surveying; creating ecologically stable agrolandscapes; and rehabilitating degraded land. Completing the land reform and transitioning to sustainable land use are identified as a strategic priority of the state [3].

Tretiak, A.M., Tretiak, V.M., Hetmanchyk, I.P., and Hunko, L.A. (2021) argue that the economic efficiency of land management should be examined in three dimensions – with respect to the environment, material production, and society as a whole – implemented through the following blocks: 1) economic – economic (commercial), budgetary, and social efficiency; 2) social – institutional efficiency; 3) ecological – ecological and eco-economic efficiency. They argue for granting the economics of land management and land surveying the status of a fundamental scientific field. In applied terms, the economics of land management should be regarded as a sphere of scientific-technical, production, and managerial activity of state authorities, local self-government bodies, and legal and natural persons, aimed at implementing state land policy, improving land relations, achieving a scientifically substantiated allocation of land by designated purpose, and forming a rational system of landownership and land use [4].

Dorosh, Y.M., Martyn, A.H., and Novakovska, I.O. (2021) conducted a retrospective analysis of the development of land management science in Ukraine, on

the basis of which they substantiated that the foundation for its further transformation in line with new global challenges is the 60-year experience of institutional development, beginning with the establishment of specialized research and design-survey institutions. Within this analysis, the historical preconditions for the formation of land management science as an independent scientific field were clarified, and the evolution of its priority tasks at different historical stages was traced. The scholars established that the creation of a specialized institution laid the foundation for the domestic land management scientific school, capable of solving land-use problems. Medium-term tasks were also outlined: the digitalization of land management and the development of planning and land-protection tools under market relations [5].

Tretiak, A.M., Tretiak, V.M., and Tretiak, N.A. (2024) identify three stages in the evolution of land management concepts in Ukraine: 1991-2000 – the stage of land denationalization and privatization; 2001-2010 – the stage of establishing land-parcel boundaries; and the current stage, associated with the spatial planning of land use in territorial communities, based on zoning land by type (subtype) of use. This evolution demonstrates the transformation of land surveying from a purely technical procedure into a fully-fledged institution. They have shown that the conceptual core of the modern land-surveying system is the methodological chain: ‘space – territory – land-use system – land-use regime – land parcel,’ implemented through the territorial-spatial planning of land use in territorial communities [6].

Dombrovska, O.A. (2024) examined the role of intellectual property in the field of land management, geodesy, and cadastre, which consists in providing legal protection for innovative technical solutions, technologies, and data. The author analysed the existing regulatory mechanisms and the legal framework for protecting intellectual activity in Ukraine. It was established that the introduction of modern technologies requires the improvement of standards and technical regulations. At the same time, the digitalization of land resource management is accompanied by new challenges related to protecting data, software, and geodetic information systems from cyber threats. The considerable innovative potential of land management is emphasised: each project is a unique result of the developer's creative thinking, while

land-surveying documentation is an important investment in the socio-economic transformation of a territory, which necessitates its legal protection. The author proposed approaches to protecting intellectual property in the latest technologies and research methods in the field of land management, geodesy, and cadastre [7].

Priadka, T.M., and Hrymailo, M.O. (2026) conducted a comprehensive historical analysis of the evolution of land management, indicating a long and complex path of development of scientific discourse on rational land use. Many principles now associated with sustainable development have deep historical roots, shaped by the practical experience of previous generations in balancing land productivity with its long-term preservation. The study established that the evolution of land management was shaped by economic, ecological, social, and technological factors – from the primitive forms of land use of ancient civilizations to complex systems of spatial planning. Prospects for further research are seen in adapting traditional land-use practices to modern conditions and developing innovative land management methods based on digital technologies and artificial intelligence [8].

Dorosh, Y.M., Ibatullin, Sh.I., Dorosh, O.S., Sakal, O.V., and Tarnopolskyi, A.V. (2026) thoroughly elaborated the theoretical and methodological foundations of land management science in the context of the transformation of land relations in Ukraine, paying particular attention to disclosing its subject and object of research, substantiating the methodological foundations of land management as a science, and forming its theoretical system in the context of sustainable development. Land management emerges as a fundamental interdisciplinary science and an applied field of knowledge that studies the patterns and principles of land allocation, as well as the methods and mechanisms for organizing its use and protection in a multidimensional space, the object of which is a multilevel system: the country's land fund; the processes of organizing territories and land uses; the market turnover of land parcels; the territories of territorial communities; and land damaged as a result of military actions [9].

Graciela Metternicht (2018), in her work, reconciles competing and sometimes conflicting forms of land use while promoting options for sustainable land use. The

researcher examines spatial planning, land-use planning, territorial (regional) planning, and ecosystem-based land-use planning as a set of tools that strengthen the land resource management system, and demonstrates how these types of planning can be applied to enhance economic opportunities on the basis of sustainable land resource management. Growing competition for land (food security, renewable energy, urbanization, biodiversity) highlights the need for effective spatial planning for the allocation of land resources [10].

Joachim Thomas's (2021) study reveals the current state of science and technology in the field of land management and land consolidation in the rural areas of Germany at the stage of transforming land relations. The author systematically presents the German experience in its methodological, legal, and engineering-technical aspects, treating land consolidation as a comprehensive instrument for the spatial development of rural areas. The study examines the instruments of formative land management, which serve as a means of ensuring social, economic, and infrastructural development. In the author's view, the German model of land management is distinguished by combining well-established legal mechanisms with flexible engineering-technical solutions, which allows it to respond promptly to new challenges without a radical restructuring of the institutional system. The methodological value of this approach for domestic land management science lies in the fact that it reveals the possibility of transforming the classical instruments of land consolidation into a multifunctional mechanism of spatial planning [11].

Eduardo Gomes, Eduarda Marques da Costa, and Patrícia Abrantes, drawing on case studies from Europe, South America, and Asia, substantiated the role of spatial planning and land-use management in ensuring sustainable territorial development in order to achieve a balance between the quality of life of communities, environmental protection, and sustainable development, while also contributing to the development of alternative land-use scenarios capable of meeting the socio-economic, cultural, and environmental demands of society. They substantiated the need for inclusive, system-oriented territorial-development instruments capable of forming the basis for informed management decisions on shaping resilient land-use practices [12].

According to the research of Verena Lehmbruck, the innovative concept of 'rational agriculture' (Rationale Landwirtschaft), proposed by the German scholar Albert Thaer (1752-1828), became a benchmark reference point for many European countries, demonstrating the possibility of combining the economic efficiency of scientifically substantiated land use with social and environmental balance, which is consistent with the modern triune principles of sustainable development and confirms the continuity of scientific ideas from historical practices to contemporary conceptual approaches in land management science [13].

Asef Darvishi, Maryam Yousefi, Seyed Mohsen Mousavi, Khadijeh Borhani, and Michael Schirrmann (2026) substantiate a model for the spatial planning of agricultural landscapes based on GIS technologies and the Analytic Hierarchy Process (AHP), which reflects the transition to the full digitalization of land management. Based on integrated indicators of soil quality, relief, and the ecological sensitivity of territories, they developed a methodology for constructing digital land-suitability maps for sustainable agricultural use, which ensures the prevention of soil degradation and precise zoning of territories at the level of territorial communities [14].

A synthesis of these scientific views makes it possible to view land management not only as a practical tool for organizing land use but also as an independent scientific discipline that requires systemic updating in line with the transformation processes in Ukraine's land relations. To ensure the broadest possible coverage of relevant literature sources, the language model Claude Sonnet 5 was used for their search.

The aim of the study is to substantiate the need to form a modern paradigm of land management that integrates the principles of sustainable development, the requirements of European integration, and the standards of international organizations, viewing them as a tool for mutual scientific enrichment rather than a reason to lose the distinctive scientific achievements of domestic land management science.

Materials and methods. The methodological basis of the study is the dialectical method of scientific cognition, applied to comprehensively examine the state and development trends of contemporary land management science. Methods of systematic review and conceptual analysis were used to process scientific works on land

management issues. The monographic method was applied in analysing scientific works, scientific-technical publications, statistical data, and the regulatory and legal framework. The historical-genetic method was used to study the evolution of land management science and its theoretical system. Theoretical generalizations regarding the subject, object, and methodology of land management science were formed on the basis of the abstract-logical method, while the systematization of the research results and the formulation of conclusions and proposals were carried out using the method of generalization.

Results and discussion. The preservation and development of land management science under present-day conditions are determined by the interaction of two complementary processes: maintaining the continuity of the domestic scientific school, on the one hand, and its integration into the international scientific space, on the other. Let us analyse the nature of the interaction between these processes and their significance for shaping the modern concept of land management.

Drawing on the existing scholarly work in this field, an attempt was made at a holistic comparative analysis of the development of land management science within the Ukrainian scientific space and its integration into the international context, taking into account current global challenges. The analysis is structured into nine interrelated sections, each of which constitutes an independent area of scientific research in the field of land management while simultaneously forming a coherent system of knowledge on the organization of land use:

A holistic comparative analysis of the development of land management science within the Ukrainian scientific space and its integration into the international context, taking into account current global challenges, is presented in Table 1.

The presented structure of the development of land management science within the Ukrainian and international scientific space reflects the authors' vision, formed as of the time of writing this article, and serves as a basis for further systematic study of its components. The results of such studies will make it possible to expand, refine, and elaborate the proposed structure and the substantive content of its individual elements.

Table 1.

**Comparative structure of the development of land management science in the Ukrainian and international scientific space
in light of current global challenges**

Ukraine	International analogue	Note
1. THEORY AND METHODOLOGY		
1.1 General theory of land management		
Subject and object of land management	Land Management Theory, Property Theory	A holistic theory of land management is a distinctive feature of the post-Soviet school
Principles of land management	Land Management Principles	Principles partially coincide, but the Ukrainian ones are normative in character
Conceptual and terminological apparatus	Land Terminology (FAO, FIG glossaries)	International unification of terminology through FAO and FIG
1.2 History of land management		
Land relations	Land Relations, Tenure History	
Land reforms	Land Reform Studies, Agrarian History	Substantial international experience in comparative research
Evolution of institutions	Property History, Institutional Analysis	
1.3 Methodology of land management design		
Design methods	Design Science, Planning Methodology	
Scientific approaches	Research Methods in Land Studies	
Standardization	ISO/TC 211, OGC Standards	International standards for geospatial data
2. CADASTRE		
2.1 Land cadastre		

Ukraine	International analogue	Note
Registration of land uses and rights to land parcels	Land Registration, Title Registration	Torrens system vs deed registration
Recording of the quantity and quality of land and land uses	Land Administration, Cadastral Systems	Key term used by FAO/World Bank/FIG
2.2 Land inventory for populating cadastral records		
Identification of land parcels not registered in the land cadastre	Land Inventory, Land Resource Assessment	
Updating of land cadastre data	Cadastral Update, Data Maintenance	
2.3 Land valuation		
Statutory (normative) monetary valuation of land parcels	Statutory Valuation, Mass Appraisal	
Expert valuation of land parcels	Property Valuation, Market Valuation (IVSC)	IVSC, RICS standards
Mass valuation of land parcels	Mass Appraisal, CAMA	IAAO standards
2.4 Land use restrictions and encumbrances on rights		
Encumbrances on rights to a land parcel	Encumbrances	
Restrictions on land use	Land Use Restrictions, PLR Cadastre	PLR is a modern European approach
Servitudes	Easements, Servitudes	
Protection zones	Buffer Zones, Protection Zones	
Zones with special conditions	Special Condition Zones, Overlay Zones	
2.5 Land classification and zoning		
Natural-agricultural zoning	Agro-Ecological Zoning (AEZ), Agricultural Land Classification	AEZ is an FAO methodology, widely applied globally

Ukraine	International analogue	Note
Agro-production soil groups	Soil Classification, WRB, Soil Taxonomy (USDA)	WRB is an international standard, Soil Taxonomy is the American one
Land suitability for growing agricultural crops	Land Suitability Assessment, Crop Suitability Analysis, Land Capability Classification	FAO Framework for Land Evaluation (1976, updated 2007)
Soil quality rating (bonitation)	Soil Quality Rating, Soil Productivity Index	The post-Soviet soil-rating system is unique in its level of detail
3. LAND MANAGEMENT PLANNING AND SCHEMES		
3.1 National level		
General scheme for planning the territory of Ukraine	National Spatial Strategy, National Land Use Framework	
National programme for land use and protection		
National land policy	National Land Policy	FAO VGGT recommendations, AU Land Policy Initiative
Strategic priorities	Strategic Land Planning	
3.2 Regional level		
Regional land management schemes	Regional Land Use Planning, Regional Spatial Strategy	
District land management schemes	Sub-regional Planning	
Regional programmes for land use and protection	Strategic Spatial Planning, Land Use Master Plans	
Land zoning		
3.3 Local level		

Ukraine	International analogue	Note
Programmes for land use and protection	Municipal Land Use Planning, Local Spatial Planning	
Land management schemes of territorial communities	Municipal Land Use Planning, Local Spatial Planning	
Comprehensive plans for the spatial development of a territorial community	Comprehensive Plans, Local Development Plans	Integration of land management and urban planning
General (master) plan of a settlement		Does not correspond to the purpose of land management
Detailed territory plans	Detailed Development Plans, Site Planning, Zoning	Does not correspond to the purpose of land management
	Spatial Planning (general framework)	An EU umbrella term for all planning levels
4. LAND MANAGEMENT DESIGN		
4.1 Inter-farm land management		
Allocation of land by category	Land Allocation, Land Distribution	
Formation of land uses	Land Reallocation, Parcel Formation	
Establishment of boundaries	Boundary Demarcation, Delimitation	
4.2 Intra-farm land management		
Organization of the territory of land uses	Farm Planning, Farm Layout Design, Farm Unit Organization	Partial correspondence
Organization of the territory: crop rotations	Crop Rotation Planning	In the West, this is an agronomic decision made by the farmer
Arrangement of land plots (land use types)	Land Use Arrangement	No direct analogue – a unique feature of the Ukrainian school
4.3 Land management of irrigated and drained lands		

Ukraine	International analogue	Note
Land management of irrigated land	Irrigation Land Management, Irrigated Agriculture Planning	
Land management of drained land	Drainage Land Planning, Polder Management	
4.4 Land management of erosion-hazardous lands		
Contour-reclamation organization of the territory	Contour Farming Design, Conservation Planning	
Anti-erosion organization of the territory of land uses	Soil Erosion Control, Integrated Watershed Management	IWM is an FAO/IWMI term
4.5 Working land management projects		
Land reclamation	Land Reclamation, Mine Land Rehabilitation	
Land conservation	Land Retirement, Set-aside Programs	
Improvement of agricultural land	Land Improvement, Land Amelioration	
Protection of land from erosion	Soil Conservation Projects, Erosion Control	
5. LAND CONSOLIDATION		
5.1 Comassation (land re-parcelling)		
Consolidation (merging) of land parcels	Land Consolidation	European tradition (Germany, the Netherlands, Poland)
Elimination of land fragmentation (strip farming)	Parcel Restructuring, Defragmentation	
Optimization of the configuration of land uses within land consolidation	Land Reallocation	

Ukraine	International analogue	Note
5.2 Exchange and redistribution		
Exchange of land parcels	Voluntary Land Exchanges	
Voluntary redistribution	Land Readjustment	Japanese/Korean model
Market mechanisms	Market-assisted Land Reform	World Bank model
	Land Pooling	An Asian mechanism, distinct from European comassation
5.3 Land reserve		
Reservation of land	Land Banking, Public Land Reserves	Land banking also refers to municipal buy-out for development
Formation of consolidated agricultural land massifs	Strategic Land Acquisition	
6. TOPOGRAPHIC-GEODETIC AND CARTOGRAPHIC WORKS IN LAND MANAGEMENT		
6.1 Land management surveys		
Topographic surveys	Topographic Surveying, Topographic Mapping	
Cadastral surveys	Cadastral Surveying	FIG standards
	Fit-for-Purpose Surveying	Simplified methods for developing countries
6.2 Geodetic support		
Coordinate systems	Reference Systems, Datum	
Geodetic networks	Geodetic Networks, CORS	
Measurement accuracy	Survey Accuracy, Positioning Standards	
6.3 GIS and cartography		

Ukraine	International analogue	Note
Geoinformation systems	GIS, Geographic Information Systems	
Cartographic materials	Cartography, Mapping	
Spatial databases	Spatial Databases, SDI	SDI – Spatial Data Infrastructure
	Geomatics, Geoinformatics	Umbrella terms for the entire section
7. LEGAL BASIS OF LAND MANAGEMENT		
7.1 Land legislation		
Land law	Land Law, Property Law	
Regulatory framework for land management	Legal Framework for Land	
Legal regulation of land management	Land Legislation, Real Estate Law	
7.2 Legal regime of land		
Land categories	Land Use Categories, Land Use Zoning	The Ukrainian system of land categories is specific
Designated (intended) use	Designated Land Use, Permitted Use	
Forms of ownership	Property Rights Regimes, Tenure Types	
	Land Tenure Systems	A general term for tenure systems
7.3 Protection of rights and land disputes		
Protection of rights	Property Rights Protection, Tenure Security	
Land disputes	Land Disputes, Land Conflicts	
Mediation	Land Mediation, ADR (Alternative Dispute Resolution)	

Ukraine	International analogue	Note
	Land Conflict Management	A broader term that also includes prevention
7.4 State and self-governance control over land management		
State control over land management		
Self-regulation in the field of land management		
7.5 Land management process		
Land management process in the field of land relations	Land Documentation, Land Records Management, Title Documents, Deeds, Survey Records, Technical Land Records	
7.6 Informal land use		
	Informal Settlements, Tenure Regularization	Relevant for peri-urban zones and dacha (garden-plot) settlements
	Customary Tenure	Less relevant for Ukraine, but important globally
8. ECOLOGICAL AND ENVIRONMENTAL COMPONENTS OF LAND MANAGEMENT		
8.1 Land protection and monitoring		
Land protection	Land Protection, Soil Conservation	
Monitoring of the qualitative state of land	Land Monitoring, Soil Monitoring	
Monitoring of soil degradation	Land Degradation, Soil Degradation (UNCCD)	UNCCD is the relevant UN convention
8.2 Land reclamation and conservation		
Land reclamation	Land Reclamation, Land Restoration	

Ukraine	International analogue	Note
Conservation of degraded land	Land Retirement, Set-aside Programs	
Restoration of agricultural land	Land Rehabilitation, Ecosystem Restoration	UN Decade on Ecosystem Restoration
8.3 Special protected natural areas		
Nature reserve fund	Protected Areas, IUCN Categories	IUCN categories are the international standard
Water protection zones	Water Protection Zones, Riparian Buffers	
Coastal strips	Coastal Zone Management, Shoreline Protection	
Exclusion zones	Exclusion Zones, Restricted Areas	Specific to the Chornobyl exclusion zone
9. CLIMATE AND ECOSYSTEM COMPONENTS OF LAND MANAGEMENT		
9.1 Land-use change		
Land-use dynamics	Land Change Science	An interdisciplinary field
Land cover change	LULCC (Land Use/Land Cover Change)	Global monitoring programmes
Transformation of land plots	Land Transition Analysis	
9.2 Carbon accounting		
Carbon balance	LULUCF Accounting	Official UNFCCC/IPCC terminology
Carbon sequestration	Carbon Sequestration, Carbon Stock Assessment	
	Soil Organic Carbon (SOC) Monitoring	A relevant field for agricultural land
9.3 Ecosystem services		
Assessment of ecosystem services	Ecosystem Services Assessment (TEEB, SEEA)	TEEB, SEEA are international methodologies

Ukraine	International analogue	Note
Natural capital	Natural Capital Accounting	
Compensation mechanisms	Payment for Ecosystem Services (PES)	
	Nature-based Solutions (NbS)	A current term in EU policy
10. GOVERNANCE COMPONENT OF LAND MANAGEMENT		
10.1 State and local land administration		
Governing bodies in the field of land relations and land management	Land Agencies, Land Administration Institutions	
Powers of bodies in the field of land relations and land management, and maintenance of the State Land Cadastre in Ukraine	Mandates, Competencies	
Administrative services	Land Administration Processes	
Electronic services	E-Land Administration	Digitalization of administrative services
10.2 Land policy		
Strategies	Land Policy, Land Strategy	
Programmes	Land Programs	
Reforms	Land Reform	A large body of comparative research
	Land Governance	Umbrella term used by FAO VGGT, World Bank LGAF
	Responsible Land Governance	VGGT principles
10.3 Control over land use		
State control	Land Use Control, Enforcement	

Ukraine	International analogue	Note
Self-governance control	Municipal Land Use Enforcement	Abolished in Ukraine but still in effect in European countries
Public control	Compliance Monitoring, Public Oversight	
11. ECONOMIC COMPONENT OF LAND MANAGEMENT		
11.1 Economics of land use		
Efficiency of land use	Land Use Efficiency	
Land productivity	Land Productivity	
Optimization of structure	Land Use Optimization	
Economics of land use	Land Economics	An academic discipline
11.2 Land market		
Turnover of land parcels	Land Transactions, Land Transfers	
Price formation	Land Pricing, Price Formation	
Infrastructure of the land parcel market turnover	Land Market Infrastructure	
	Real Estate Economics	A broader real-estate context
	Land Price Analysis, Hedonic Pricing	Price analysis methods
11.3 Rent and taxation		
Land rent	Land Rent, Land Rent Theory	Classical economic theory
Payment for land	Land Fees, Land Charges	
Fiscal policy	Land Taxation	
	Land Value Capture	Mechanisms for capturing value increment
	Land Value Tax (LVT)	Georgist tradition

Ukraine	International analogue	Note
12. LAND MANAGEMENT OF WAR AFFECTED TERRITORIES		
Classification of war affected territories		It is necessary to develop a Concept for the Restoration of War Affected Territories, aimed at elaborating the theoretical foundations and methodological approaches to restoring, by land management methods, land affected by military actions, technogenic disasters, and other adverse impacts
Comprehensive assessment of damage caused		
Demining of land		
Rehabilitation of contaminated territories		
Reintegration into economic use		

Source: compiled by the authors.

Conclusions and proposals. Thus, in light of the global challenges of our time – climate change, soil degradation, the digitalization of the economy, biodiversity loss, urbanization, and growing anthropogenic pressure on land resources – land management science in Ukraine requires a rethinking of the conceptual foundations of its further development. The retrospective analysis conducted provides grounds for asserting that the scientific work of domestic scholars has not lost its methodological value but requires adaptation to contemporary challenges through combining classical theoretical and methodological approaches with international standards and technological innovations. At the same time, the integration of domestic land management science into international scientific discourse should be regarded not as a reason to lose its distinctive achievements, but as an instrument for their preservation and affirmation at the global level. It is precisely the balance between the national scientific tradition and the best global practices that forms the methodological framework for a holistic comparative analysis of the development of land management science within the Ukrainian and international scientific space.

The presented structure of the development of land management science reflects the authors' vision as of the time of writing this article and serves as a basis for further systematic research. The results obtained will make it possible to expand, refine, and elaborate both the structure itself and the content of its individual components.

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Й.М. Дорош, Ш.І. Ібатуллін, О.С. Дорош, А.В. Тарнопольський
ЗЕМЛЕУСТРІЙ НА ШЛЯХУ ЄВРОІНТЕГРАЦІЇ: ДО
ОБҐРУНТУВАННЯ НОВОЇ НАУКОВОЇ ПАРАДИГМИ БЕЗ ВТРАТИ
ВІТЧИЗНЯНОЇ САМОБУТНОСТІ

***Анотація.** З огляду на глобальні виклики – зміну клімату, деградацію ґрунтів, цифровізацію економіки, втрату біорізноманіття, інтенсифікацію урбанізаційних процесів та зростання антропогенного навантаження на земельні ресурси – постає нагальна потреба переосмислення концептуальних засад науки землеустрою в Україні. З огляду на зазначену мету здійснено ретроспективний аналіз розвитку землевпорядної думки вітчизняними вченими протягом тривалого історичного періоду, що дало змогу встановити необхідність критичного переосмислення накопиченого наукового доробку та його адаптації до сучасних реалій, не втрачаючи при цьому своєї методологічної*

цінності. Дослідженню й обґрунтуванню підлягали також питання поєднання класичних теоретичних і методологічних підходів вітчизняної наукової школи із чинними міжнародними стандартами й технологіями землеустрою. Проведений аналіз дозволив виявити концептуальні точки дотику між усталеними науковими традиціями та новітніми світовими практиками та визначити напрями їхнього взаємного збагачення. Водночас дослідники наголошують на принциповому аспекті: інтеграція вітчизняної науки землеустрою в міжнародний науковий дискурс має розглядатися не як підстава для втрати самобутніх здобутків, накопичених протягом тривалого розвитку землевпорядної думки в Україні, а як вагомий аргумент для їх збереження, актуалізації та утвердження на міжнародному рівні. Науковці стверджують, що саме цей підхід формує методологічну основу цілісного порівняльного аналізу розвитку науки землеустрою в українському та світовому науковому просторі, здійсненого з огляду на актуальні глобальні виклики та на засадах виваженого поєднання національних наукових традицій із найкращими світовими практиками.

Ключові слова: землеустрій, класичний землеустрій, теоретико-методологічні підходи, вітчизняна наукова школа, наукові традиції землевпорядної науки, вимоги євроінтеграції, міжнародний науковий дискурс.