

LAND USE POLICY AND LAND MANAGEMENT IN ESTONIA

V. L. Bogdanov^{*}

Yu. V. Ryabov^{**}

M. K. Burlakova^{*}



The authors study the impact of a land reform on the current land policy and land resource management in the Republic of Estonia. Information is given on the new land policy, and the resource management and land use system. The land reform is aimed at municipalisation, privatisation and denationalisation of property.

The authors describe mechanisms of the Roman-Germanic land management model, which replaced the former Soviet model in Estonia. The paper demonstrates that this model proves to be beneficial for developing Estonia's land market and enhancing land use efficiency, especially in the agrarian sector. The positive trends noted in land market development, and production and investment activities for land use purposes indicate that Estonia's land resources are a reliable strategic target for investment.

Key words: Estonia, land policy, land reform, land management mechanism, land use, land tax

Introduction

Management of land resources for the purpose of their rational and effective use is a great challenge, and a nation's well-being depends on it in many respects. As land resources are simultaneously a natural asset, a means of production, and a basis of economic and other activities, the improvement of land resource management is of special importance.

Social environment, sustainability of agriculture, climate change, technological conditions and other factors affect the land management system [1]. The structure of land use is a non-linear system. It responds to both socio-economic and biophysical changes [2]. Following the establishment of the Republic of Estonia as an independent state in 1991, a new constitution was

^{**} Saint-Petersburg State University
7—9, Universitetskaya nab.,
St. Petersburg, 199034, Russia

^{**} Saint-Petersburg Scientific
Research Centre for the Ecological
Safety RAS,
18 Korpusnaya str.,
Saint Petersburg, 197110, Russia

Submitted on November 15, 2015

doi: 10.5922/2079-8555-2017-1-8

© Bogdanov V. L., Ryabov Yu. V.,
Burlakova M. K., 2017



adopted in this country in 1992. Thus, Estonia's legal system changed from the Soviet one to the Roman-Germanic system, which resulted in a land reform. Principal moves of the land reform were to create legal, administrative, economic and other conditions for redistribution of land amongst landowners as well as to solve problems in managing land as the most important national resource.

Nowadays the basic laws governing land relations or legal relations in real estate in Estonia include «On the Land Reform», «On Property», «On Immovable Property» and «On Restrictions on the Assignment of Ownership of Immovable Property to Aliens, Foreign States and Legal Entities».

Methods

The research focused on studying the system and mechanisms of land resource management and land use in the Republic of Estonia. The following research methods were applied: comparative-historical approach; method of analysis and synthesis, dealing with absolute and relative quantities, time series, detailed and generalised data; comparative-geographical and cartographic methods.

The informational base consisted of laws and regulations by the Republic of Estonia's Government; materials of cadastral registration of land; data released by the Statistics Department, the Land Board and the Ministry of the Environment; materials provided in literary and cartographic sources; internet publications.

The comparative-historical method was applied to highlight the essence of the new land reform caused by a transition from the Soviet legal system to the Roman-Germanic one.

The analysis-and-synthesis method was used to explore Estonia's systems of land resource management and accounting as well as to analyse mechanisms of economic regulation of land use.

The comparative-geographical, cartographic and analysis-and-synthesis methods have revealed some trends in the changes in land areas of different categories, land transactions and market value of 1 hectare of land (in euro) by land use category in Estonia.

Directions and content of the land reform

The main directions of the land reform were foreseen in the above-mentioned laws as follows: *municipalisation* — gratuitous transfer of state property to municipal ownership, *privatisation* — transfer of state or municipal property, for a fee or for free, to private ownership, and *re-nationalisation* — return of property into the ownership of the Republic of Estonia from the ownership of co-operative, state co-operative or non-profit organizations [3].

Based on Roman-Germanic law, the contemporary Civil Code of Estonia describes such kinds of proprietary rights as a right of ownership and limited proprietary rights (the latter including *real obligation (encumbrance)*, *development right*, *servitude*, *lien (mortgage)* and *right of pre-emption*) [4].

The objective of the land reform is to transform land relations based on state ownership into relations primarily based on private property, with re-

turning land plots to their former owners or their successors to ensure more efficient land use. In conformity with the law, it is possible to grant development rights or usufruct rights on plots of land to the owners of buildings affixed to them [3].

Currently, the Common Agricultural Policy in the Republic of Estonia aims to keep agricultural regions populated and developing, which can be ensured by constant growth of profitability and competitiveness among agricultural producers; development of alternative forms of entrepreneurship for diversification of rural life; increase in investments to environmentally friendly production.

The land reform in Estonia is based on the restitution principle. Land parcels (including agricultural grounds nationalized during the Soviet era) are returned to former owners or their successors and in some cases compensation is paid. Many of the descendants of former owners live in large cities and do not need these agricultural grounds so they tend to sell them at the first opportunity. Members of former collective farms were given the right to re-purchase the land plots allocated to them during the Soviet era in perpetuity. This right to re-purchase a land plot does not mean that one should buy it. For a fee, citizens can use the returned land plots for 99 years under condition of paying a land tax. A common practice adopted by most of former collective farmers is to have their land privatised. Local authorities are entitled to sell free lands suitable for agricultural activities. However, they can be sold only to physical and legal persons who already own land plots and receive income from the sale of agricultural products. Persons who received land in perpetuity on the basis of a certificate during the period of the Estonian SSR as well as gardeners' partnerships have rights to purchase and privatise land plots using the right of pre-emption. The Law on Land Valuation governs this process. If a land plot has not been returned to citizens for whatever reason, in accordance with the Law on Land Valuation compensation should be paid. Most of the privatised land was privatised under the right of pre-emption in 1997—1999. The restitution of ownership rights brought about 60 % of the private grounds registered in 2012 (table 1).

Table 1

Dynamics of registration of private land areas in the land registry in 2002—2012

Years	Area, ha	Restitution of ownership rights, %	Pre-emption right, %	Auctions, %	Privatisation of rural grounds, %
2002	2,007,364	62	25	4	5
2003	2,177,800	62	25	4	6
2004	2,298,297	62	25	4	6
2005	2,360,413	62	25	4	6
2006	2,408,699	61	25	4	6
2007	2,440,745	61	25	4	6
2008	2,459,698	61	26	4	6
2009	2,472,003	61	26	4	6

End of table 1

Years	Area, ha	Restitution of ownership rights, %	Pre-emption right, %	Auctions, %	Privatisation of rural grounds, %
2010	2,478,946	60	26	4	6
2011	2,483,938	60	26	4	6
2012	2,487,604	60	26	4	6

Note: Based on data provided by the Statistics Department of the Republic of Estonia.

Foreign physical and legal persons have the same rights to purchase land as Estonian citizens do. The Land Reform Act permits them to buy land under and adjacent to their houses. With the permission of the county authorities, foreign individuals and legal entities can take ownership on the basis of the Act on Restrictions on the Assignment of Property Rights to Real Estate to Aliens, Foreign States and Legal Entities.

Land management system

The following bodies are responsible for land management in Estonia: Riigikogu (the Parliament of Estonia), Government of Estonia, Ministry of the Environment, Ministry of Justice, Land Board, Land Cadastre and local land administrations (fig. 1).

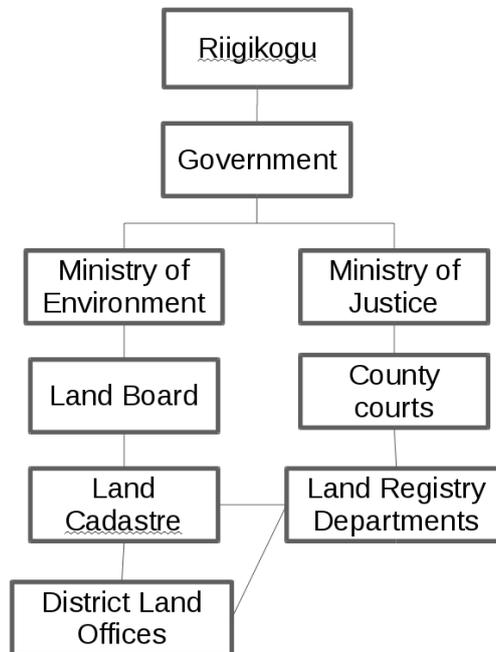


Fig. 1. System of land resource management in the Republic of Estonia



The Riigikogu is responsible for all important issues related to the life of the state: in addition to its legislative activities, the Riigikogu appoints top officials, including the Prime Minister and the President of the State Court.

The Government implements domestic and foreign policies of the state, passes laws and approves the state budget. It directs and coordinates the work of ministries, departments, inspectorates and other institutions of the executive power [6].

The activities of the Ministry of the Environment are aimed at ensuring balanced development of nature management and nature protection, national economy and the social sphere by means of uniting them in a well-functioning system.

The Ministry of the Environment is responsible for the following issues:

- organization of environmental protection and nature conservation;
- maintenance of land and space databases;
- organization of use, conservation, reproduction and accounting of natural resources;
- protection from radiation;
- monitoring of the environment;
- weather observation, natural and marine research, and geological, cartographic and geodetic work;
- maintenance of the register of the environment and the land cadastre;
- organization of the use of foreign funds for environmental protection and development of relevant strategic documents and legal acts [7].

The Estonian Land Board is a government agency under the jurisdiction of the Ministry of the Environment. It develops and implements the national land policy. The Board's task is to collect information on lands and their spatial features and to render it to the interested legal entities and citizens. To ensure efficient management and use of land, the Land Board performs geodetic and cartographic surveys, conducts land assessment, controls land tax execution, etc. Major areas of the Board's activities include the land policy, the land cadastre and geo-information systems.

The functions of the Land Board involve land cadastre management and cadastral survey organization; supervision, coordination and control of the implementation of the land reform; execution of spatial planning; supervision, organization and coordination of activities in the fields of geoinformatics, cartography, geodesy, geology and land valuation; organization of activities for the development of spatial data infrastructure; collection of data for describing topographic objects; issuance of licences for land valuation; use, accounting and protection of state-owned land managed by the Ministry of the Environment; creation of a state land reserve.

The Land Board arranges public sales of state-owned land. The alienation of state property takes place on the basis of the Law on State Property and the regulation by the Ministry of the Environment "The Procedure for Granting for Use and Alienation of Property Owned by the Ministry of the Environment". The Land Board, pursuant to § 20 of the Law on Nature Protection and the decree of the Government of the Republic of Estonia "The Procedure for Acquiring and Considering Proposals for the Acquisition of Real Estate", carries out procedures for acquisition of lands under nature protection restrictions to the state ownership.

The Board coordinates land assessment with the help of a database that provides information on country-wide alienation of real estate received directly from notaries. The Board's website contains statistics on land transactions and price.

The Land Cadastre is a technical registry that presents findings of surveying the natural status, value and use of land areas. This information is available to the public use [8]. The Land Cadastre performs the function of supervision of land management. It provides documented land-cadastral information on land resources and their assessment and carries out activities to collect, compile, register, store and disseminate respective information [9]. The chief processor of the Cadastre is the Ministry of the Environment, and the authorised processor of the Cadastre is the Land Board. Maintenance of the inventory is financed from the state budget. The purpose of the cadastre is to record information and keep statistics on land value, its condition and land use as well as to ensure quality of such information and its public availability. Cadastral data serve as a basis for creation and development of information systems containing spatial data. A cadastral individual number of a land plot consists of 12 digits and is divided into three parts.

In the counties, land issues are administered by land registry departments, governors and district land offices [10]. Since 1997, the Law on Land Registration obliges all owners to register their land. If plots of land had been acquired before the law came into force, the owners register them on a voluntary basis.

As of January 1, 2012, the State Cadastre accounted for about 93% of the total area; of which 37% was the land returned to former owners. To date, approximately 7% of land has not been registered yet as the land reform is still going on. These are some land plots waiting for their owners, or the land transferred to municipal ownership or left in the possession of the state and not recorded in the land register as local governments and the state are not required to include their land in the land register. Most of the unregistered lands belong to owners on the basis of pre-emption right. Typically, land and buildings located on it are owned by the same owner. Buildings located on a different or unregistered land plot cannot participate in transactions.

Land registry departments of the county courts maintain a land register as a legal register of property right to real estate. Real estate in Estonia is considered to be land, housing ownership and development rights, including rights to housing construction. Land registry departments of the county courts also keep a register of martial property.

Land fund and its structure

To establish a legal framework for land use with regard to land purpose, Governmental Regulation no.155 of October 23, 2008 "Categories of Intended Use of Cadastral Units and the Procedure for Designation thereof" defines 13 categories of specific purposes of land [11] (table 2). The total area of the territory of the Republic of Estonia comprises 45,226 km². The

structure of the Estonian land fund is dominated by forest lands. In 2008, they occupied 60.8% of the total area, by 2012 the area of forest lands decreased to 55.2%. This tendency is associated with partial transfer of forest lands to agricultural land.

Agricultural land use in Europe has changed significantly over the past decade. Observations in the European countries show that areas of agricultural land vary and can increase or decrease depending on the applied system of land management, landscape transformation, the mode of agricultural land use and specialization [12].

In the Republic of Estonia, the land intended for agriculture is of great importance. Every year the area of land in this category increases. In 2012, this category made up about 34.4% of the total land fund, increasing by 4.2% compared to 2008. Much attention is also paid to the nature reserves in the country. In 2012, they contributed about 4.1% to the land fund. In 2008—2012, the area of land under the military land category significantly increased by 8,350 ha.

Table 2

**The structure of the land fund and the dynamics
of land areas by land categories**

Land category	Year					
	2008		2010		2012	
	ha	%	ha	%	ha	%
Residential land	72980	1,92	77241	1,97	79999	2,0
Commercial land	6073	0,16	6958	0,18	7478	0,18
Industrial land	22363	0,59	24014	0,61	25138	0,62
Mining land	42323	1,11	42450	1,08	42345	1,0
Public land	15666	0,41	19117	0,49	21481	0,53
Inland water area	4412	0,12	4796	0,12	5585	0,14
Road land	41153	1,08	44980	1,15	47881	1,18
Landfills	5041	0,13	5658	0,14	5852	0,14
Military land	10216	0,26	17947	0,46	18556	0,46
Nature reserves	138777	3,54	142191	3,63	164968	4,07
Agricultural land	1235652	30,2	1311298	33,5	1392508	34,40
Forest land	2197400	60,8	2212000	56,5	2233900	55,16
Not classified land	5265	0,14	4110	0,11	3998	0,12
Total	3797485	100	3912759	100	4049689	100

Note: Based on data provided by the Statistics Department of the Republic of Estonia.

Mechanisms of Land Management

Land as a factor in the effective development of the state is considered in two ways: as a condition for the economic development of the state and as an object of economic relations. Mechanisms of land management can be divided into three groups: economic, administrative and social. Currently,



the role of land as an economic factor has significantly increased. The main objective of effective management of land relations is implementation of economic and social interests of property owners, land users and society as a whole.

A mechanism of economic regulation of land management rests on a system of economic measures aimed at implementing the national land policy and safeguarding the rights of land owners and land users [13].

Management of land and land relations is the primary task of the state.

The economic land management regulatory system includes:

- land tax;
- rent for land;
- market price of land;
- collateral price of land;
- compensatory payments for the seizure of land;
- compensatory payments under land conservation;
- payments for improving the quality of land;
- penalty payments for environmental damage.

The economic mechanism of land management should be based on the use of ground rent as a basis for developing a system of economic regulators and other economic levers (prices, loan interest, income taxes, etc.) [14].

In 1993, the Republic of Estonia adopted the Law on Land Tax, which levies land tax on all land [15]. This tax is calculated on the basis of information provided by local governments. The Law on Land Valuation sets the tax rate ranging from 0.1 to 2.5% of the annual taxation value determined by a local government council. The rate of land tax on land used for agricultural production is 0.1—2.0%. If any economic activity on the ground is forbidden, the land tax is defined by the Estonian Government in the amount of 75%, 50% or 25% of the tax rate. The land tax is charged three times a year: on April 15, July 15 and 15 October.

Land taxes go into the budget of respective local governments. The land is periodically assessed for taxation, its value is determined, and relevant changes are introduced to the database. The assessment is done on the basis of land registry data for each territorial area (parish), taking into account its individual characteristics, the price level, purpose and quality of land.

The land tax is not assigned and a tax notice is not sent if the value is less than 5 EUR [15].

The amount of tax is calculated by multiplying the price of the land and the land tax rate. Land tax is imposed on all the land. Land tax is paid by the owner of the land, and in some cases by the land user. Land tax is the second largest source of revenue for municipalities and cities after income tax. The average amount earned by municipalities and cities from land tax in 2007—2011 was as large as 46.9 million EUR or up to 4% of their gross income or 7% of tax revenues. An important land management mechanism seems to be organization and coordination of land valuation.

Exemption from land tax is applied to:

- land adjacent to the buildings or parts thereof associated with diplomatic missions and consular offices of foreign states;

- land which is being used by another state or an international organization;
- land in municipal ownership;
- cemetery grounds and land under churches and cathedrals;
- recipients of pensions may be exempted from the payment of land tax, provided that the land is used for residential purposes and the owner does not receive income from renting out the land, and if the given land area does not exceed 0.1 ha in urban areas and 1 ha in rural areas;
- local authorities may decide not to levy a tax on public land [16].

Land tax feeds only the municipal budget of local authorities and is governed by the Board of Tax and Customs. At present, the state sector in Estonia has the lowest tax burden across the entire EU, and this situation is not expected to change in the future.

In Estonia, favorable conditions have been created for the acquisition of immovable property by foreign citizens. They own about 40,900 ha of land, which is less than one percent of the total territory of the country.

Pursuant to the Law on State Property, state property may be transferred to another person for a fee to rent or usufruct or encumbered with the development right at public auctions. The right to development is public. The amount of remuneration and the basis of its calculation shall be established by agreement between the parties and may be predetermined for the entire term. In addition, the developer shall pay all taxes and bear all the public-law obligations encumbering the land plot. Today, the right to development is one of the most popular institutions of civil law. Large construction projects are being deployed in Estonia mainly by the right to development, as Estonia's accession to the EU resulted in a significant rise in land prices and attracted major foreign investors. Encumbrance of a land plot with the right to development is profitable for the land owner as he retains the right of ownership and generates revenue. Extensive legislation has been adopted in this area, but most of the regulations are far from being perfect. These issues need to be further addressed in order to enhance the effectiveness of land management mechanisms.

The land market

The landowner can use their land or transfer the right of use to the land rent entrepreneur. According to the terms of the lease, the latter acquires the right of temporary monopoly of using the land, for which he pays a rent to the landlord. Transformation of the landowner's profit into a ground rent is due precisely to this monopoly [13; 14].

To increase revenues to the national budget and to find potential land owners, the Republic of Estonia sells out the state-owned land. To stimulate the market of public lands, the start selling price is reduced by 30% against the original one. Most of the land is covered by forestry and the plots are sold at the highest prices. The Land Board also conducts land acquisition procedures for the needs of the Republic. In Estonia, the purchase of land is a reliable strategic investment target, which is attractive to many customers.



The land market is part of the real estate market, and it includes numerous objects, subjects and legal rules governing land relations. Effective land market management requires constant monitoring, which involves monitoring price levels, market conditions, availability and liquidity of the land, effectiveness of investments in land, etc.

The Land Board collects information on the real estate market and statistics on all land transactions over the country. Deals are made with land and associated facilities (i.e. residential buildings, garages, other structures) and involve different procedures such as purchase and sale, exchange, and donation. The structure of land turnover in the Republic of Estonia is presented below.

Estonia's real estate market is expanding due to a large number of foreign and local customers, with prices getting higher too. In 2013, the turnover of land in Estonia amounted to 52,160 transactions over the area of 144,695 ha and was worth 2,35 billion EUR (fig. 2).

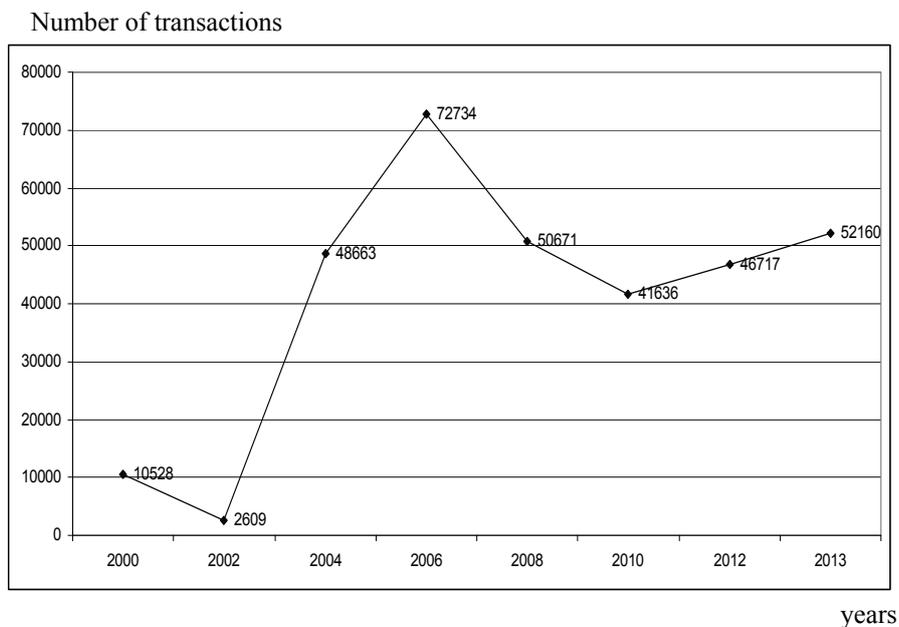


Fig. 2. Dynamics of transactions of land turnover in Estonia

Note: Based on data provided by the Land Board (2000—2013).

Purchase and sale of land is the most common civil transaction in Estonia. According to the Land Board, data for 2013 included 41,357 purchase-and-sale transactions with a total area about 2 billion ha of developed and undeveloped grounds, concluded by citizens, legal persons and foreigners; 7,404 donation transactions for a total area of 15,446 ha; 575 exchange transactions for a total area of 1,225 ha.

The share of transactions on purchase and sale of land by citizens and legal entities in 2013 amounted to 79% of the total number of registered transactions.

The area of land sold annually in transactions constitutes more than 70% of the total land area in circulation. The average price of 1 hectare of state land is about 31,000 EUR.

In 2013, the land area sold from the state and municipal ownership was as small as 0.1% of the total land area in circulation.

In Estonia, the average price of 1 hectare of land of special use types starts from 2,101 EUR for agricultural land. It should be noted that the average price of 1 hectare of commercial land is one of the highest in the country and is 680,873 euro, despite the fact that it has dropped by 30% compared to 2012.

Average prices for the following types of special use land are considerably lower. A little more than 10,000 EUR per 1 ha constitutes the average price in transactions with residential land and industrial land (fig. 3).

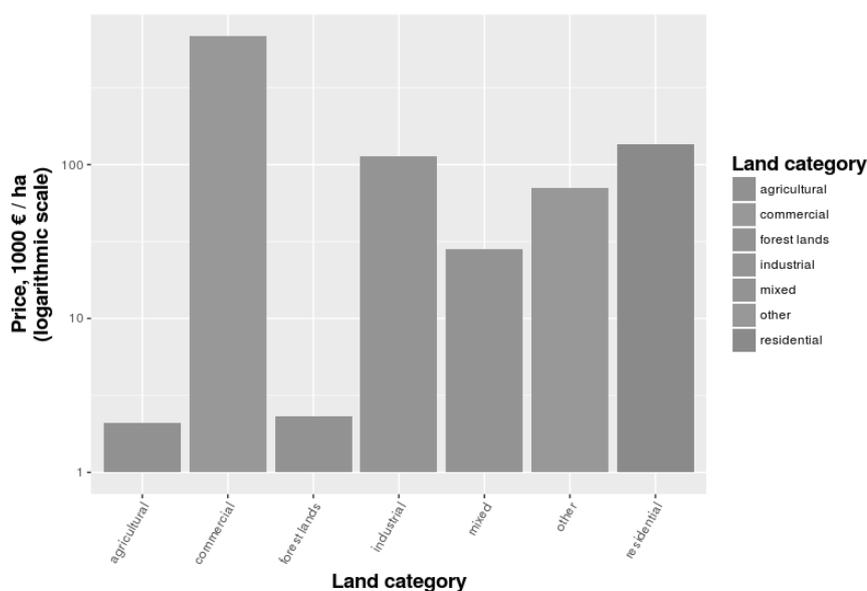


Fig. 3. Average market price of 1 hectare by land categories

Note: Based on data provided by the Land Board (2013).

Comparing market situations in different counties, we concluded that the undisputed leader in all positions is Harju County, where 1 hectare of commercial land costs 1,745,466 EUR on average; residential land and industrial land 500,000 EUR; agricultural land 3,532 euro. The highest prices for residential land are in the Tartu, Põlva, Rapla and Ida-Viru counties. Extremely expensive industrial land and commercial land are located in Ida-Viru County and Tartu County.

A separate category is presented by forest land, with an average price of 2,300 EUR per ha. The most expensive forest land is offered in Võru County. Prices below 2,000 EUR per ha are asked in the Jõgevamaa, Järvamaa and Läänemaa counties; in other counties prices for forest land vary from 2,000 to 3,000 EUR per ha.

Thus, in Estonia, land can be considered as a natural resource that is actively involved in the real estate market and is attractive for investment. Therefore, Estonia's experience in development of the land market mechanism is important for our country.

Conclusion

1. After the end of the Soviet period, the legal system in the Republic of Estonia changed from the Soviet model to the Roman-Germanic one. The subsequent land reform focused on municipalisation, privatization and rationalisation of land. In Estonia, there are the following types of property rights: the right of ownership and limited property rights, including real obligation (encumbrance), development right, servitude, lien (mortgage) and right of pre-emption.

2. The land management system in Estonia is administered by the following bodies: Riigikogu (Parliament), Government, Ministry of the Environment, Ministry of Justice, Land Board, Land Cadastre and county land departments. The Land Cadastre and the Land Register are the most important mechanisms for accounting lands as they provide an informational basis for territorial administration and economic regulation of land relations.

3. The economic land management regulatory system in Estonia includes: land tax; land rent; market land price; collateral land price; compensation payments for land seizure; compensation payments for land conservation; payments for improving land quality; penalty payments for environmental damage.

4. In compliance with the Law on the Land Reform, the land plots, including the agricultural grounds, nationalized during the Soviet regime were returned to former owners or their successors and, in some cases, compensation was paid. Members of former collective farms have the right to repurchase the land plots granted to them during the Soviet era in perpetuity. Real estate, owned by the state, can be transferred to another person for a fee to rent, usufruct or encumbered with the development right at public auctions by the decision of the State Property Management of the Republic or the Government's consent.

5. The Land Board of Estonia classifies 13 types of special purpose land: residential land, agricultural land, commercial land, industrial land, mining land, public land, inland water land, transport land, waste disposal land, national defence land, protected land, forest land and not classified land.

6. The development of the land market and revival of the production and investment activities in the sphere of land use is a noticeable trend in Estonia. There is a growing market of all types of land (except for the land that is



not designated for a specific purpose). Today, the right to development is one of the most popular institutions of civil law. Estonia's accession to the EU has resulted in a significant increase in land prices and attracted major foreign investors.

7. To increase inputs to the national budget, the Republic of Estonia sells public lands. The Land Board also conducts land acquisition procedures for the country's needs. In Estonia, land resources can be regarded as a reliable and appealing property for long-term investment.

References

1. Lambin, E. F., Meyfroidt, P. 2010, Land use transitions: Socio-ecological feedback versus socio-economic change, *Land Use Policy*, Vol. 27, no. 2, April, p. 108—118. DOI: 10.1016/j.landusepol.2009.09.003.
2. Lemmen, Chr., van Oosterom, P., Bennett, R. 2015, The Land Administration Domain Model, *Land Use Policy*, Vol. 49, December, p. 535—545. DOI: 10.1016/j.landusepol.2015.01.014.
3. *The law of the Estonian Republic "On land reform"*, 1991, 17.10.1991, available at: http://estonia.news-city.info/docs/sistemsf/dok_ierxoz/index.htm (accessed 10.05.2015).
4. *The law of the Republic of Estonia "On property right"*, 1993, 9.06.1993, available at: <https://www.riigiteataja.ee/akt/13322575?leiaKehtiv> (accessed 10.05.2015).
5. Anosova, L. A., Yaskina, G. S. 1996, Estonia's agrarian reform, *Vestnik Rossiiskoi akademii nauk. Seriya geograficheskaya* [Proceedings of the Russian Academy of Sciences. Geographical series], Vol. 66, no. 7, p. 645—650. (In Russ.)
6. *Encyclopedia about Estonia*, 2015, available at: <http://www.estonica.org/en/> (accessed 15.09.2015).
7. *The official website of the Ministry of Environment of the Republic of Estonia*, 2015, available at: <http://www.envir.ee/> (accessed 15.09.2015).
8. Varlamov, A. A. (ed.) 2006, *Teoriya i metody upravleniya zemel'nymi resursami v usloviyakh mnogoobraziya form sobstvennosti na zemlyu* [Theory and methods of land resources management in conditions of the variety of forms of land ownership], Moscow. (In Russ.)
9. Bogdanov, V. L., Garmanov, V. V., Zasyad'-Volk, V. V., Osipov, G. K. (eds.) 2010, *Upravlenie zemel'nymi resursami* [Land resources management], St. Petersburg. (In Russ.)
10. *The official website of the Food and Agriculture Organization of the United Nations*, 2015, available at: <http://www.fao.org/> (accessed 15.09.2015).
11. *"Categories of land and the use thereof"*, 2008, The decree of the Government of the Republic of Estonia №155, 23.10.2008, available at: <https://www.riigiteataja.ee/akt/13058153> (accessed 10.05.2015).
12. van Vliet, J., de Groot, H. L. F., Rietveld, P., Verburg, P. H. 2015, Manifestations and underlying drivers of agricultural land use change in Europe, *Landscape and Urban Planning*, Vol. 133, p. 24—36. DOI: 10.1016/j.landurbplan.2014.09.001.
13. Garmanov, V. V., Badenko, V. L., Trutnikov, V. E. 2013, Assessment of the rent of land in the land development projects, *Gornyi informatsionno-analiticheskii byulleten' (nauchno-tekhnicheskii zhurnal)* [Mining information and analytical bulletin (scientific and technical journal)], no. 8, p. 225—231. (In Russ.)
14. Mezenina, O. B., Lantanova, A. V., Rasskazova, A. A. 2012, *Upravlenie zemel'nymi resursami* [Land Management], Guidelines for the study of the discipline, Ekaterinburg. (In Russ.)

15. *Law of the Republic of Estonia on 06.05.1993 (ed. By 12.03. 2008) "On Land Tax", 2008*, available at: <https://www.riigiteataja.ee/akt/13255586?leiaKehtiv> (accessed 10.05.2015).

16. Okunev, Ju. 2015, *The tax system of the Baltic States — Latvia, Lithuania, Estonia*, available at: <https://wealthoffshore.net/offshore-tax/tax-systems-of-baltic-countries> (accessed 17.11.2015). (In Russ.)

The authors

Prof. Vladimir L. Bogdanov, Saint-Petersburg State University, Russia.
E-mail: Lab.naz.eco@gmail.com

Dr Yury V. Ryabov, Senior Research Fellow, Saint-Petersburg Research Centre for Ecological Safety, Russian Academy of Sciences, Russia.
E-mail: riabovvv@gmail.com

Maria K. Burlakova, Master's student, Institute of Earth Sciences, Saint-Petersburg State University, Russia.
E-mail: Lab.naz.eco@gmail.com

To cite this article:

Bogdanov, V.L., Ryabov, Yu. V., Burlakova, M.K. 2017, Land Use Policy and Land Management in Estonia, *Balt. reg.*, Vol. 9, no. 1, p. 91—104. doi: 10.5922/2079-8555-2017-1-8.