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Aspects of Formation of Legal Status of Subterranean Depths

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Abstract

The aim of the study is to identify and investigate ownership trends in exploration and use of subterranean depths of Latvia, by examining aspects of legal status of subterranean depths. The following methods were used as part of the study: (1) analytical method used for gaining and analysing the amount of information obtained, as well as for structuring research work; (2) comparative method for analysis and comparison of legal frameworks between European continent countries for the use of subterranean depths in regulatory enactments; (3) empirical method based on facts obtained objectively and systematically through collection of information.

The main results of the study include:

1. Today, when society's demand for energy is growing rapidly to ensure the well-being of society, and technology is evolving more rapidly so that energy resources can be used in an increasingly economic way, it is important to be able to separate the public's common interest and private interest in energy resources located in the subterranean depths.
2. In the 21st century Latvia, legal framework for the ownership of subterranean depths has not carried out the introduction of a legal framework corresponding to the needs of modern society and technological capabilities to be able to perform systematically both the search and exploration of new mineral resources and other resources of subterranean depths and the establishment of a national strategy for the exploitation of subterranean depths.

Keywords: legal status, ownership, property, subterranean depths.

Introduction

The rights to property are essential rights of an individual, because a person's well-being is largely dependent on them. The right to property is one of the oldest and best developed sectors of the law (Reine, 1999).

The aim of this article is to look at ownership trends in the research and use of Latvian subterranean depths, describing aspects of formation of subterranean depths` legal status. In the framework of the study, the main methods used were 1) analytical method that is used for gaining and analysing the amount of information obtained, as well as structuring the research work, 2) comparative method, with the help of which legal frameworks in relation to the use of subterranean depths that are determined in regulatory enactments were analysed and compared, 3) and empirical method based on facts obtained objectively and systematically through collection of information.

Subterranean layers or subterranean depths are part of the earth's crust, located under the soil and surface waters unto the depth, where geological studies, mineral extraction or their use is economically and technically possible. In practice, the owner's right to the subterranean depths is mainly important from the point of view of the (positive) use of the property (Grutups & Kalnins, 2002).

Although modern society lives in the industrial age, the climate, natural resources and land and its useful properties, as a type of resources, are gaining an increasing attention and importance.

In land management "land" is described as a physical object to which specific rights are attributed, and which has a certain value. Land is considered a business object in the real estate market, which has a certain economic, social, ecological, and cultural value (real estate), and as an object for specific use (Auziņš, 2009). In turn, the term "ownership" in the term explanatory dictionary (https://tezaurs.lv) is understood as legal norms that govern affiliation of items to the owners.

Latvian subterranean depths cannot be compared to countries that are rich in natural resources such as Russia or Norway, but it possesses underground waters, sand, gravel, clay, dolomite, gypsum, limestone, amber, possibly diamonds, iron ore and petroleum deposits that have become an apple of discord within last ten years (Gavena, 2001).

The process of the use of beneficial properties of subterranean depths in Latvia has not been widely used in the country so far, because no energy resources or other chemical elements in Latvia, were widely obtained, or, for example, geothermal heat, was not used, because there has not been a sufficient public interest and there has not been any sufficient research base on the relevant interests of Latvian subterranean depths, which could be used or industrially developed in the near future, but there is a great potential for transparent future and national economic development.

Comprehension of Subterranean Depths

Ownership of subterranean depths is different from the rights on the use of land considering the actual way of their use. However, looking at the evolution of the concept of ownership of subterranean depths, land laws were originally established and consequently, in the process of development of technology and chances to use the subterranean depths, ownership aspects of subterranean depths started to develop.

Throughout Europe and majority of the world, with an exception of the US, people have realised that wealth of subterranean depths, which has not been fully comprehended, is not human made, but it has gradually appeared in each place in the Earth's development process that hs taken millions of years. Minerals have been formed in subterranean depths independently of different administrative or property borders, and to ensure their rational use and protection based on the interests of all national citizens, they should not belong to landowners. Restoring and developing Latvian legislative systems, unfortunately, opinions of geologists and environmental professionals have not been considered; the rule of Civil law of 1937 is still in force, which determines that subterranean depths and all minerals are owned by the landowner. The same legislators, despite the opposition of the association of geologists, kept the same norm in the adopted law of 1996 "On subterranean depths" (Gavena, 2001).

Also, now, in 2021, in Latvia, the ownership of the subterranean depths is stipulated in the Civil Law and in several special sector laws such as the Energy Law, the Law "On subterranean depths". Latvia has introduced a model of ownership when the energy resources in the subterranean depths are owned by such a landowner who owns the surface layer of the land. Such a model is very rare at the level of both the European Union and globally.

Various theories, where the American Law recognises ownership of the Earth's centre can be seen up to 1766, when W. Blackstone declared his famous doctrine on England laws (Commentaries on the Laws of England). Although it was not the principle of law contained in the laws of Rome, despite the used Latin in the word "Maxim", nor it was the theory that was recognised in the early regulations. Rather, it should be perceived as a hyperbole that was made up by W. Blackstone, without any previous basis in English legal acts. While being ignorant of geology of subterranean depths, English and American courts repeated this geocentric theory for decades and often there were cases when rights on subterranean depths were not even the object of disputes. The authors and disciples of scientific works, as well as legal dictionaries took over the geocentric theory, widely using it to help to define the meaning of the word "land", to explain the amount of property rights that were granted with the help of different documents. In the end of the nineteenth century, the frequent repetition of this theory has transformed W. Blakstone's non-argumented claim into an independent legal norm of the American law (Sprenching, 2008).

Over the past centuries, practical functions and land use rights of land and subterranean depths have changed significantly, technologies, which also contribute to

the acquisition and use of subterranean depths not just a primitive use and processing of the land surface, have developed.

The idea that the landowner has also become the owner to heaven for corresponding period could be a hyperbole of harmless theory, until it began to threaten development of the aviation industry. Given today's modern scientific knowledge and new achievements in subterranean depth technologies, an equally foolish view can be encountered that the landowner can also call themselves the owner of the earth's central part, including the earth's molten core part. Without the written rights or general logic support, such a theory nowadays is just a strange relic from past times (Sprankling, 2008).

Unlike with land, there is no doctrine of personal property. The reason is that property doctrine is rooted in feudalism. In addition, at a time when the doctrine was developed, there was no requirement for other things as for the land, namely that the law would facilitate transactions over the time. Indeed, the purchase and sale of daily items would be devastatingly disturbed if the law recognised that it can be invisibly exposed to a number of interests of this kind (Burrows & Feldman, 2017).

The starting point is that the person's interests, for example, for a car or a coat are uniform and indivisible, namely, the rights to their exclusive belonging for a lifetime. In relation to land, these rights include the term "ordinary fee". It must be admitted, though, there is no similar proportional term for equivalent goods. Some use the word "property", others – "ownership", although neither is suitable. It is better to have the title that is obtained from the rights – the rights are such rights to the exclusive item that are in force in relation to it forever. Such a title is often a grossly abused word and is applied in relation to the interests that give its holder the rights to other items that are not in their exclusive possession. For example, sometimes it is a word that is suitable for debts which are not an ownership at all. In order to help to think clearly, its use is limited to exclusive item management rights. And as far as it refers to goods, it is the only title that can be used without any time limit. Thus, it is being said that "a present for one hour is a present for life" (Burrows & Feldman, 2017).

Rights as a way of exercising power over the Earth is a solution of legal type and nature, on how to determine boundaries so that people can develop during their lifetime in a certain unit of land, which existed and will still exist for millions of years. Thus, the ownership of land and subterranean depths cannot be attributed to the same value as ownership, for example, to personal property.

Although the exact unit of land depends on relevant rights, these rights, for a better understanding of the term, can be called "quasi-ownership", as they only have provisional or incomplete characteristics which are usually associated with property in a particular land area. However, many rights in this category have at least one of the attributes of ownership, namely, they include the rights to land that have different land ownerships. Most of these "quasi-property" rights include public rights which everyone can exercise regardless of whether they own the land, just because they are a member of a particular association. Some public rights are similar to profit a prendre (for example, public rights to fishing). Other public rights are similar to easements (for example, public rights in

relation to highway). However, the rights of all society differ from easements because they do not provide for a dominant rent and a special grant is never given to any individual (Gray K. J., Gray S. F., 2005).

Land is a word with a very broad meaning. The breadth of the meaning of this word is reflected in a number of definitions set out in English legislation, which, although far from the uniform or consistent definition, points to a surprisingly versatile understanding of the term "land" in English legal acts. In the basic rules of the English law, contained in the 1925 general legislation, "land" is described as:

> "Ownership of the land, as well as mines and mineral resources, regardless of surface, building or the parts of the building (horizontal, vertical or any other form) and other material benefits; also manor, rent and other intangible goods, as well as easement, rights, a certain privilege or benefit on the surface of the land or in its depths." (Law of Property Act 1925 (I) (IX)) (Gray K. J., Gray S. F., 2005)

It can be seen that in the early 20th century, an understanding of ownership and various forms of use for different land units has only began to develop. Such a rapid development also took place because the world's dominant colonies of previous centuries had collapsed, and more and more countries and democratic societies since have developed, and, respectively, more and more people were able to gain ownership of a certain personal property and real estate, which, accordingly, required a certain legal framework to avoid potential disputes and uncertain situations.

Potential of Use of Subterranean Depths

Useful properties of subterranean depths in Latvia have so far not been widely used, as so far neither energy resources nor other chemical elements have been widely obtained there, or there has not been used geothermal heat, for example, because of the lack of public interest, economic incentive, and there is insufficient study base on valuable properties of Latvian subterranean depths that could be used for the purposes of economic development. Consequently, legal framework in relation to the use of subterranean depths has not been practically used in Latvia so far, and, it has led to a situation when the first discussions arise; society has already reached the level of misunderstanding and conflicts and come to various interpretations. However, as can be seen from Figure 1, there is actual potential of geothermal energy in Latvia, and it would be necessary to improve legal framework to ensure better research and potential extraction.

Technology is developing, and mining of ore that was not known before because of the strategic location of Latvia is becoming possible and beneficial; however, legal framework is yet to be established, created at the same time with a Jules Verne Book "Journey to the Center of the Earth", to also meet the progress. For example, Finland has set a modern regulation of mineral mining, advertising itself as one of the best places for use of subterranean depths in Europe. Such a possibility is there in Latvia as well, the question is whether this opportunity will be used (Pastars, 2017).

In Latvia there are several groundwater horizons that can be used to supply heat and hot water, agriculture, fisheries, and balneology. The most significant geothermal resources (earth heat) for practical use are associated with groundwater in Cambrian and Devon-age sediments. The temperature of the groundwater in these sediments is determined mainly by the intensity of the Earth's internal underground heat flow, which is very different in the various regions of Latvia (see Figure 1). The highest ground water temperature (marked in more red color in Figure 1) has been found to be in Cambrian sediments in the south-west of Kurzeme region, as well as in the neighborhood of Eleja-Jelgava.

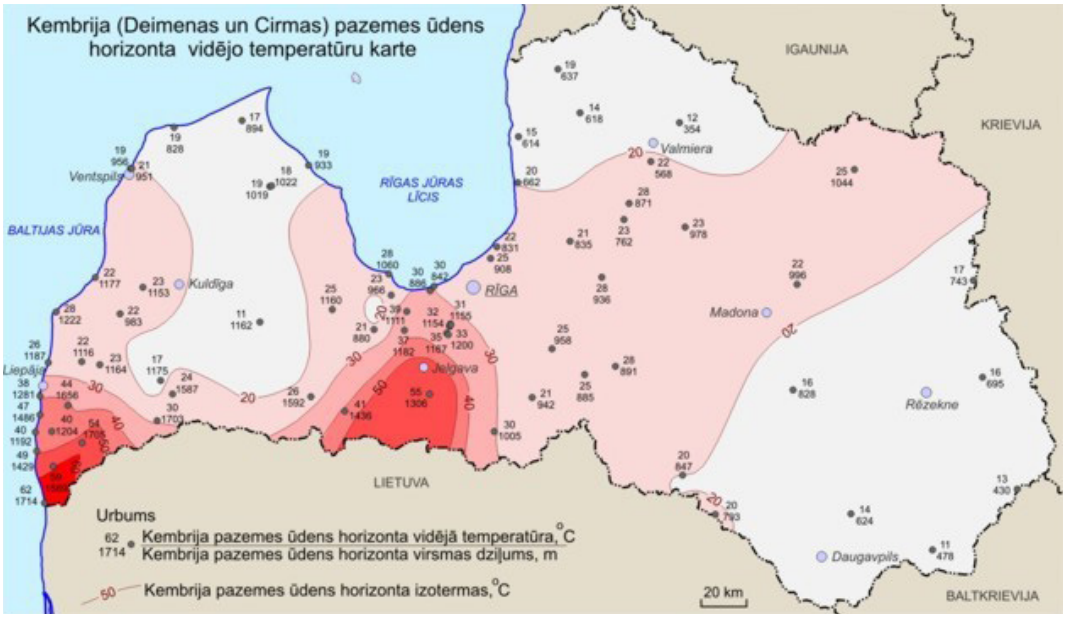

Figure 1. Potential for geothermal resources in Latvia (source: Latvian Environment, Geology and Meteorology Centre)

The ownership rights on subterranean depths in Latvia are stipulated in the Civil Law and several special sector laws, namely, the Energy Law, Law "On subterranean depths". Latvia has introduced a model of ownership when energy resources in subterranean depths are owned by the land owner who owns the surface layer of the land. Such a model is very rare in the European Union.

Article 1042 of the Civil Law provides that the land owner owns not only the surface of the land, but also the airspace above it, as well as the layers of the land that are under it and all the minerals which are in them. In turn, Article 1043 of the Civil Law determines that the land owner may, at his own discretion, manage the land's surface, the airspace above it, as well as the layers of the land underneath it on his own, unless those actions

affect foreign borders. The first part of Article 3 of the Law "On subterranean depths" determines that subterranean depths and all minerals in them are owned by the landowner.

Subject to the rules contained in the Civil Law, components of the land plot (land area) are:

1) subterranean depths and Minerals (Article 1042 of the Civil Law);
2) buildings that are tightly bonded with the land (Article 968 of the Civil Law);
3) trees and other plants that lay their roots in the ground, sown seed (Articles 973 and 976 of the Civil Law);
4) newly emerged island, seabed, and alluvial deposit (Article 960 of the Civil Law) (EN Portal, October 2017).

Legal affiliation of subterranean depths and minerals in the territory of Latvia has been unchanged at least since the 19th century. Article 1042 of the Civil Law is the same as Article 877 of the Baltic states civil law collection. This legal norm is interpreted that without the consent of the land owner, any actions in subterranean depths are unacceptable, regardless of the depths in which they are carried out (Bukovskij, 1914). On the other hand, in the doctrine of law there is an indication that the rights to subterranean depths are attributable directly to minerals that are inside them not on subterranean depths at all (Tjutrjumov, 1927). In addition, it is emphasised that "the essence of the land owner's rights is to ensure his rights to the content of the subterranean depths only to the extent that the opportunities can reach to act on them" (Tjutrjumov, 1927).

In contrast, soviet civil laws on cases that are withdrawn from overall circulation considered land, its depths, waters, and forests as the property of the land owner (Vebers, 1979; Grutups & Kalnins, 2002).

As is follows from the literal meaning of Article 1042 of the Civil Law, the owner of the land plot owns not only the surface of the land (by which, *inter alia*, the soil and surface waters are defined), but also the "air pole" above this land plot and "land cone" that extends from the land surface to the centre of the land (Sinajskij, 1926). Based on this understanding, the legal literature recognises that the Civil Law "does not recognise the limits of height or depth" (respectively, vertical borders), and in the case if any owner would have an interest in defending his rights at a high height or depth, according to the Civil Law, it is always possible" (Čakste, 1937). However, every subjective right means not only legal, but also physical possibility of using this right (Sinajskij, 1926; Sinaiskis, 1935). In addition, the purpose of subjective right is to meet (protect) certain interests; in addition, this purpose has a decisive role in determining the limit of the use of particular right (crox. Brox, RN 571; Larenz / Wolf, § 14 RN 18 f) (Grutups & Kalnins, 2002).

It can only be concluded that after reinstating Latvian independence on May 4, 1990, the Civil Law, including the legal framework in relation to the ownership of subterranean depths required significant modernisation, since more than 50 years had passed since the Civil Law had entered in force on 1 January 1938, but the Civil Law was reinstated in its historical version, sequentially resulting in conflicts, taking into account

the values of the modern society and opportunities of perspective use of technological equipment.

The regulation of the Latvian Civil Law has not developed over time and has not been adapted to modern trends. Approach of the Civil Law in the issue of property's physical unity, as well as lack of regulation of the law "On subterranean depths", which is also influenced by the Civil Law's approach to the issue of subterranean depths, is an important obstacle to attracting investment for the research and extraction of the minerals. Therefore, the regulatory framework should be improved to provide opportunities for modern and economically efficient development of the mining sector (Cabinet of Ministers of the Republic of Latvia, 2016).

National legal science and practice of such a small nation as Latvia will never be sufficiently large enough to create a base for serious, deep jurisprudence in all spheres of the law. Therefore, Latvian authorities and judicial practice (as prior to 1940) should follow the model of other small nations and should not only use national law science and legal reports in its daily work, but should also be connected to large national systems with a wide range of traditional science and practice (Levits, 1998).

Unique or outdated are some of the assessments of the Latvian existing regulatory framework, according to which land owners own all subterranean depths even to the centre of the land (earth). It is possible that amendments to the regulatory enactments will take place soon, which will determine restrictions on the rights of use of subterranean depths in case of the research (LV portal, November 2017).

Modern private rights on ownership of natural resources are increasingly narrowing in favour of the overall public interest. Individual rights on the use of land or acquirement of mineral resources have no more advantage over the general public interest in protection of the environment (Mcharg, et al., 2010).

With the development of the nation and society, its consumption and demands on energy resources and energy to meet different national economy needs, increase. In recent years, the issue of energy independence for the European Union and, in particular, Latvia has become relevant considering both the global energy market trends and the Ukrainian-Russian crisis, which created negative indications on provision of national energy needs and energy independence as a whole.

Research of local resources and assessment of mineral resources is very important for development of national economy. This information is very necessary not only for development of existing mineral processing industry, but also to introduce new technologies through researched mineral resources. Only in this way their full and rational use is possible. The further research and economic evaluation of new minerals, including energy resources (oil, thermal water, peat fuel) is also important (Latvian Environment, Geology and Metrology Center, 2021). In order to effectively obtain and qualitatively process such an information on existence of potential resources in subterranean depths would require such a legal framework in Latvia that would allow such research

of subterranean depths also in real estate of other persons. Information in Figure 2 shows that peat potential in Latvia is progressive with a significant opportunity to be developed.

In Figure 2 appears that peat potential in the Republic of Latvia is progressive with a significant opportunity to develop it. There have been a lot of potential peat harvesting sites throughout the Latvia territory, mainly in the south-east of Latgale region.

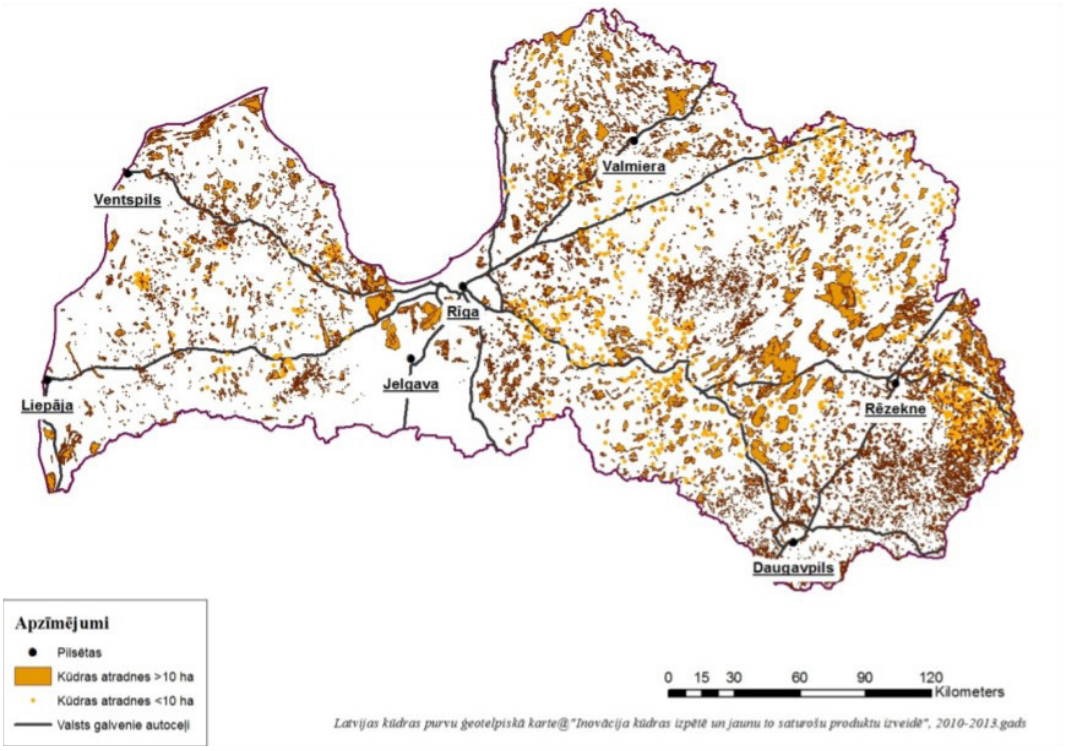

Figure 2. Latvian peat resources (source: Project "Latvian peat deposit data quality analysis, preparation of recommendations for improvement and use in the preparation of national strategy's basic documents" results)

Challenges of Legal Scope of Subterranean Depths

Regarding the use of subterranean depths in Latvia, there is a peculiar situation; according to the Civil Law, subterranean depths, including mineral resources, belong to the land owner. However, to ensure sustainable use of resources, the government determines its own requirements. Using the regulation of the Law "On subterranean depths", the Law "On Environmental protection" and other regulatory enactments, a compromise between the interests of land owners, development needs and environmental protection

requirements is being achieved (Ministry of Environmental Protection and Regional Development of the Republic of Latvia, 2021).

Property rights as human rights are part of international laws. In national laws, they are a part of public laws, including constitutional laws. This means that property rights as human rights include general theoretical and dogmatic knowledge of both international laws and national laws. The international historical development of property rights shows that the right to property in international laws is primarily localised in contract laws, but they may also be found in customary laws and general law principles. In national laws, they are mainly found in the composition of public laws, including the composition of constitutional laws (Article 105 of the Constitution (*Satversme*) of the Republic of Latvia) (Neimane, 2005).

The right to property as a development of the human rights is one of the most important prerequisites for the property rights that are guaranteed by Article 105 of the Constitution and the European Convention on Human Rights to be practically applied and to become the practical rights in Latvia. The main function of human rights is to provide human rights toward the government. So, they are the rights of an individual to require some certain course of action from the government (Neimane, 2005). Thus, it can be understood that ownership nowadays is developing an increasingly closer comprehension also in the context of general human rights.

Some human rights are not subject to restrictions from the state. They are absolute human rights which must not be restricted under any circumstances (for example, rights on life). However, most human rights, including the right to property, must be reasonably limited to harmonise the various rights of many individuals (Neimane, 2005).

In democratic, legal, liberal state and in general human rights theories of public apparatus, institutional and judicial task is to form the human rights in a way to preserve the highest possible individual room for freedom with least restrictions and thus prevent the individual human rights' conflicts with common interests and other individuals' human rights (Neimane, 2005).

The state can restrict a large part of human rights, including the right to property. Such public powers are contained in the human rights system itself. Restrictions imposed by the state are legal only if they are within the limits of these mandates that are named as The *limits of human rights limits in* the *general theory of human rights* (Neimane, 2005).

Although ownership is inviolable, the state may restrict it, while such restrictions can only be regarded as legal only if they are within the limits of these mandates that are named The *limits of human rights limits in* the *general theory of human rights*. The same principle of ownership can be attributed to the principles of land property and determining the ownership of subterranean depths. In order to ensure that the state does not violate the permissible mandates of restrictions on property rights, and, consequently, to ensure effective implementation of human rights in property laws, the legal state must provide following three functions:

1) create a criterion to determine the limits of how far the country may restrict the property rights. Initially, it is the task of the legislator. The Latvian legislator has set such criteria in Article 105 of the *Satversme*, and its appropriate interpretation guarantees that the country adheres to the human rights limits. However, the criteria set in Article 105 of the *Satversme* contain only such guidelines that can be interpreted with the interpretation methodology;
2) organise state activities in a way to observe the specific boundaries of human rights theory and dogma in its action without violating its authorised mandates of restrictions on human rights in the field of property rights;
3) ensure an effective mechanism for contesting the state's action in protection of property rights (Neimane, 2005).

Observing the general human rights theory, checking whether the state-specific restriction of property rights is justified, should be carried out in three logical steps (Neimane, 2005):

1) determination of the rights to the content of property (which is protected);
2) determination whether national action is qualified as infringement of property rights;
3) ascertaining whether infringement of property rights is justified.

The basic principles of public laws of national legal apparatus, which also prevail in the comprehension of the European Convention on Human Rights, are proportionality, equality and the principle of prohibition of discrimination or the principle of legitimate expectation, the principle of legal defense, the principle of legality, the principle of efficiency, etc. (Neimane, 2005).

The principles of law are derived from the written norms which specify the content of the written norms more closely, and, in turn, where the written norms have left white spots, they act as a direct and unmediated source of law that institutions and courts apply in the same manner as regulatory enactments. The principles of law in mutual interaction are developed both in legal practice and legal science (Levits, 2000).

The state has an obligation to respect property rights as well as human rights. It is determined by Article 89 of the *Satversme*. This constitutional norm is applicable on the entire Latvian state authority – legislator, executive, and judiciary. It includes human rights regardless of their location in the *Satversme*, laws or Latvian contracts and gives them a constitutional rank (Levits, 2000).

The task of the state is to organise its work not violating the property rights and so that these rights would become self-realizing in the daily practice of a country. If the state is unable to provide a person's right to property, protection of its rights also follows from the first Article of the first protocol of European Convention on Human Rights. It is therefore important to know and be able to correctly apply the translation of the first Article of the first protocol of European Convention in accordance with the practice of the European Court of Human Rights that is related to the protected spectrum of property and state

intervention permissible criteria (Neimane, 2005). Consequently, the country must have determined clear action and legal framework in relation to ownership aspects, including those relating to subterranean depths and restrictions on the use of subterranean depths.

There is no strategy for the use of subterranean depths in Latvia in national and municipal lands. There are no systematic actions on the search and research of new mineral resources and other subterranean depth resources, as well as additional research work on known mineral deposits, to provide their more rational use (Ministry of Environmental Protection and Regional Development of the Republic of Latvia, 2013).

In 2016, the concept of improvement of the legal framework for use of subterranean depths to attract potential investments was enacted. All these years the work to improve the regulatory framework and encourage the more efficient use of subterranean depths and involvement of land owners in their research has continued. The *Saeima* (the Parliament of the Republic of Latvia) completed the work on amendments to the Law "On subterranean depths" in 2021 (*Saeima* of the Republic of Latvia, 2021). The law is complemented by a new term – geological research of national importance – determining that its aim is to obtain important information on the geological structure of the territory, geological processes and minerals that can play a particularly important role in national economy, defense, and other areas. Currently, any actions of the use of subterranean depths are directly dependent on the land owner, so that geological mapping or other research works are often not possible. The investor or scientific institution must agree with each land owner on the use, exploration, or mining work of minerals even before the license for the use of subterranean depths has been received, state the authors of the amendments. The geological mapping that was carried out in the second half of the last century shows that mineral resources that are potentially available in Latvia include hydrocarbons, different metal ores, and others that are located not only in sedimentary rocks but also in the ancient crystal platform. Prospective mineral resources require additional detailed research, so was stated in the assessment report (annotation) on initial impact of the Law "Amendments to the Law "On subterranean depths"".

The stated documents (annotation and legal norms contained in recent amendments to the Law on the subterranean depths) lead to a conclusion that, although the legal framework has been improved and should contribute to the provision of geological research in Latvia, the land owner will still have legal opportunities to delay the research of subterranean depths and extraction of minerals, which would not be in the interests of the national economic development and general public.

Conclusions

The principle of the Civil Law that the person who owns the land owns everything that extends even to the sky and depths of the earth has originated in a medieval era and it would be necessary to modernize the legal norms contained in the Civil Law and determine that subterranean depths belong to the Republic of Latvia as a legal entity.

Nowadays, when the public demand for energy is growing rapidly and technologies are increasingly developing, it is important to separate the overall interest and private legal interest in energy resources and minerals in subterranean depths to ensure the well-being of the public, and that energy resources could be gained in an increasingly economical way.

In the 21st century, the Latvian legal framework in relation to the ownership of subterranean depths has not introduced relevant legal framework to meet the needs of modern society and technological opportunities, to consequently make quality performance both on the search of new minerals and other subterranean depth resources and systematic research works, and already identifying them, and, accordingly, a state-level strategy on the use of subterranean depths would be developed.

Although the *Saeima* in the early 2021 has completed the work on amendments to the Law "On subterranean depths" and those have entered into force, which will improve the legal situation in the issues of subterranean depths, it would be necessary to perform more conceptual and radical changes in the Latvian legal framework in relation to subterranean depths and their useful properties.

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