THE CONSTITUTIONAL COURT OF THE REPUBLIC OF LITHUANIA

IN THE NAME OF THE REPUBLIC OF LITHUANIA

RULING

ON THE COMPLIANCE OF THE PROVISIONS OF PARAGRAPHS 2 AND 4 OF ARTICLE 11 (WORDING OF 30 MAY 2013) OF THE REPUBLIC OF LITHUANIA'S SUBSURFACE LAW WITH THE CONSTITUTION OF THE REPUBLIC OF LITHUANIA

16 December 2015 No. KT33-N21/2015

Vilnius

The Constitutional Court of the Republic of Lithuania, composed of the Justices of the Constitutional Court: Elvyra Baltutytė, Vytautas Greičius, Danutė Jočienė, Pranas Kuconis, Gediminas Mesonis, Vytas Milius, Egidijus Šileikis, Algirdas Taminskas, and Dainius Žalimas

The court reporter—Daiva Pitrėnaitė

The Constitutional Court of the Republic of Lithuania, pursuant to Articles 102 and 105 of the Constitution of the Republic of Lithuania and Article 1 and 53^1 of the Law on the Constitutional Court of the Republic of Lithuania, at the Court's public hearing, on 24 November 2015, considered under written procedure constitutional justice case No. 23/2013 subsequent to the petition (No. 1B-32/2013) of a group of members of the Seimas of the Republic of Lithuania requesting an investigation into whether Paragraph 2 of Article 11 (wording of 30 May 2013) of the Republic of Lithuania's Subsurface Law, insofar as it establishes a reservation regarding the cases provided for in Paragraph 4, as well as Paragraph 4 of the same article, is in conflict with Paragraph 3 of Article 53 and Paragraph 2 of Article 54 of the Constitution of the Republic of Lithuania.

The Constitutional Court

has established:

I

1. The petition of the group of members of the Seimas, the petitioner, is substantiated by the following arguments.

1.1. Paragraphs 2 and 4 of Article 11 (wording of 30 May 2013) of the Subsurface Law consolidate the legal regulation whereby the prohibition established in Paragraph 2 against the use of subsurface voids for burying radioactive or toxic substances and the prohibition on leaving such substances in subsurface voids in the course of exploring the subsurface and/or exploiting subsurface resources is not applied in the cases provided for in Paragraph 4, i.e. when hydraulic fracturing operations are carried out. Thus, this legal regulation means that it is allowed to leave, i.e. to bury waste generated as a result of the exploration or extraction of unconventional hydrocarbons (shale oil and shale gas) in artificial subsurface voids created as a result of hydraulic fracturing (it does not matter whether this will done under procedure established by the Government or an institution authorised by it) even if such waste is radioactive, toxic, or, due to its other properties, dangerous for the environment and human health and welfare, and where heed is not paid to the amount of such waste.

1.2. The wide use of hydraulic fracturing in horizontal wells where fracturing fluids, consisting of water, sand or ceramic materials (proppant), and chemicals (including toxic chemicals), are injected under high pressure into the rock means that most of such fracturing fluids remain in the subsurface, the rock is irreversibly fractured and is contaminated with chemicals, i.e. it is devastated. According to the petitioner, since in each well huge amounts of the aforesaid technological fluid—from 15 thousand m^3 to 30 thousand m^3—is used for either exploring or extracting unconventional hydrocarbons, the layer of rocks of several hundred metres deep could be devastated after millions of cubic metres of such liquid are buried in it.

In the opinion of the petitioner, the movement of substances used for hydraulic fracturing and left in the subsurface may result in the contamination of the mineral or fresh drinking water that is situated in the layers above. In addition, the environment is also threatened by naturally occurring radioactive substances moved to the surface during hydraulic fracturing operations.

1.3. In the course of burying mining waste in the subsurface, no prevention or control is ensured in determining a possible negative impact made by such waste on the subsurface, groundwater, other subsurface resources, and on the whole environment and human health, thus, no possibilities are created in order to avoid a possible threat to the environment and people, thus, damage is not prevented. Therefore, the aforesaid provisions of the Subsurface Law are in conflict with Paragraph 3 of Article 53 and Paragraph 2 of Article 54 of the Constitution.

2. The 18 March 2013 assessment conclusions made by the Commission of the Academy of Sciences of Lithuania for the Impact of the Prospection and Extraction of Shale Gas on the Environment and Human Health attached to the petitioner’s petition points out that during hydraulic fracturing operations fracturing fluid consisting of 99.9 percent of water and sand as well as 0.1–2 percent of

chemicals is injected into the well. After hydraulic fracturing operations are finished, a certain part (according to various estimates, 9–75 percent) of such fracturing fluid reaches the surface, and the other part remains in the subsurface artificial voids created as a result of hydraulic fracturing activity. It should be emphasised that this commission drew the conclusion that "the prospection of shale gas in Lithuania's subsurface is possible, since this is the only measure to explore the resources of shale gas and shale oil by strictly abiding by the environment protection provisions" and formulated certain environment protection requirements to be applied in the course of shale gas extraction from Lithuania's subsurface.

II

In the course of the preparation of the case for the Constitutional Court's hearing, written explanations were received from Andrius Mazuronis, the member of the Seimas acting as the representative of the Seimas, the party concerned, in which it is maintained that the impugned legal regulation is not in conflict with Paragraph 3 of Article 53 and Paragraph 2 of Article 54 of the Constitution. The position of the representative of the party concerned is substantiated by the following arguments.

1. In the context of implementing the provisions of Articles 53 and 54 of the Constitution, the measures of the protection of the subsurface have been established in the impugned Subsurface Law, as well as in the Law on Environmental Protection, the Law on Territorial Planning, the Law on Environmental Impact Assessment of the Proposed Economic Activity, the Law on Protected Areas, the Law on Water, and in other laws.

1.1. After the Subsurface Law, *inter alia,* Articles 12, 14, 18–22 thereof, and substatutory legal acts, such as the Description of the Procedural Control over the Burial of Mining Waste and Other Waste Generated During Hydraulic Fracturing in Subsurface Voids Created as a Result of Extraction of Subsurface Resources and the Description of the Procedural Control over the Use of Radioactive or Toxic Substances, or Substances Dangerous to Human Health or the Environment Used for the Exploration of the Subsurface and Exploitation of Subsurface Resources as approved by the respective orders Nos. D1-688 and D1-689 of 16 September 2013 issued by the Minister of Environment of the Republic of Lithuania, had established the procedure for issuing permits for an activity of subsurface exploration and/or the exploitation of subsurface resources, the mechanism of control over such activity, the procedure for preparing and approving projects for drilling wells for exploration, prospection, and exploitation (extraction) of hydrocarbons, the control over burying and managing mining waste, including radioactive and toxic waste, generated during hydraulic fracturing, the measures ensuring the protection of groundwater and surface water from a possible harmful impact as well as measures regarding subsurface protection in protected areas and sanitation protection zones of water bodies, measures (suspension or revocation of permits) for violations of environment protection requirements during such activity, the compulsory territorial planning and subsurface monitoring, the preconditions were created making it possible to avoid the input of radioactive or toxic substances into the environment and to protect human

health from a possible harmful impact of such substances, as well as to protect the soil, deeper layers of earth and groundwater from possible pollution.

1.2. The Republic of Lithuania's Law on Environmental Impact Assessment of the Proposed Economic Activity provides that permits for direct exploration and/or extraction of unconventional hydrocarbons by applying hydraulic fracturing may be issued only after a compulsory assessment of environmental impact of such activity is conducted (Paragraph 2.5 of Annex 1) and the respective institution adopts a decision permitting the pursuit of proposed economic activity (Paragraph 4 of Article 3, Paragraph 9 of Article 10). Under the same law, the objectives of environmental impact assessment are to identify, assess, and minimise the likely direct and indirect impact of the proposed economic activity on public health and the environment, or to prevent this impact, and to ascertain whether the proposed economic activity may be permitted in the selected location upon evaluating the nature and environmental impact thereof (Article 4); not only state and municipal institutions but also the public takes part in the procedure of the assessment of environmental impact, since the public has the right to receive information about a possible impact of proposed economic activities, to submit proposals and take part in discussing them, as well as to apply to court for the protection of a public interest in the sphere of environmental impact assessment (Paragraph 1 of Article 13, Paragraph 3 of Article 15).

2. Paragraph 1 of Article 47 of the Constitution consolidates the exclusive ownership right of the state to the subsurface, thus emphasising the state importance of subsurface resources that can be used by people where such use results in changes in the amount or quality of such resources. Implementing the Republic of Lithuania's Law on the Basics of National Security, by its resolution No. X-1186 of 14 June 2007, the Seimas approved the Programme for the Sustainable Use and Protection of Natural Resources which provides that natural resources, including subsurface resources, have an enormous economic and social significance and are of utmost importance in ensuring national security, and that natural resources are the basis both for raw materials for economic development and for recreational and energy resources. The abundance of mineral resources and the ability to use them determine the speed of development of a country, its standard of living, energy independence etc. The European Union has imposed an essential requirement for the economic sector that raw materials should be supplied from its own sources. Thus, having consolidated the possibility of extracting unconventional hydrocarbons in the territory of the Republic of Lithuania, the legislature made an attempt to ensure Lithuania's energy independence and the economic growth of this country, as well as to create the preconditions for competition in the market of energy resources and for a fall in prices for such resources.

3. During the extraction of subsurface resources every attempt is made to ensure that as much fracturing fluid flows to the surface as possible, since the amount of such fluid determines the amount of extracted unconventional hydrocarbons.

III

1. In the course of the preparation of the case for the Constitutional Court's hearing, written opinions were received from Ministers of Environment of the Republic of Lithuania Valentinas Mazuronis and Kęstutis Trečiokas, as well as from Director of the Vilnius Public Health Centre Rolanda Lingienė.

2. In the course of the preparation of the case for the Constitutional Court's hearing, written explanations were presented by the specialists—Tadas Gauronskis, Head of the Legal and Personnel Division of the Lithuanian Geological Survey under the Ministry of Environment, Dr. Jurga Lazauskienė, Head of the Division of Bedrock Geology of the Lithuanian Geological Survey, and Prof. Habil. Dr. Saulius Šliaupa of the Department of Geology and Mineralogy of the Faculty of Natural Sciences of Vilnius University.

The explanations presented by the specialists make it clear that:

– conventional hydrocarbons (oil) are extracted in Lithuania by using the hydraulic fracturing technology;

– in the course of high volume hydraulic fracturing, in an attempt either to explore or extract unconventional hydrocarbons (shale oil or shale gas), fracturing fluid consisting of 90 percent water (about 10 thousand m^3), 9.5 percent of sand and 0.5 percent of chemicals (chosen from 12 main components that are used in households and are neither toxic nor carcinogenic) is injected into the well which, in Lithuania, would be about two kilometres deep;

– in order to achieve a more efficient process of hydraulic fracturing, toxic substances can also be added, however, the composition of all chemical additives is under control; all such chemicals must have safety data sheets available and comply with the Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) that was amended by the Commission Regulation (EC) No. 134/2009 of 16 February 2009;

– no radioactive substances are injected into the well during hydraulic fracturing operations; such substances may be released from clay slate where such rock contains higher-than-average amount of natural uranium, however, such amount is very low, therefore, such substances do not require neutralising; research shows that the amount of natural radioactive elements found in Lithuania's subsurface shale layers is not high and it does exceed natural background radiation;

– after hydraulic fracturing operations both a part of fluids previously injected into the well and mixtures of natural elements released from the rock in the subsurface reach the surface; the other part of substances both used during hydraulic fracturing operations and generated in the subsurface during such fracturing do not reach the surface, i.e. they remain in subsurface voids artificially created as a result of such operations;

– in Lithuania (its southwestern part), the rocks possibly containing unconventional hydrocarbon resources with regard to which hydraulic fracturing operations could be carried out are found two kilometres deep; such rocks and the deepest layer of underground water is separated by a kilometre deep layer of impermeable rocks; conducted research shows that the application of hydraulic fracturing for the extraction of unconventional hydrocarbons poses neither a threat of water pollution nor a threat for human health if technological requirements are followed.

The Constitutional Court

holds that:

I

1. A group of members of the Seimas, the petitioner, requests an investigation into whether Paragraph 2 of Article 11 (wording of 30 May 2013) of the Subsurface Law, insofar as it establishes a reservation regarding the cases provided for in Paragraph 4, as well as Paragraph 4 of the same article, is in conflict with the Constitution.

2. On 5 July 1995, the Seimas adopted the Republic of Lithuania's Subsurface Law, which came into force on 2 August 1995. This law has been amended or supplemented on more than one occasion. The Subsurface Law was set forth in its new wording by means of the Republic of Lithuania's Law Amending the Subsurface Law, which was adopted by the Seimas on 10 April 2001 and came into force on 25 April 2001.

Prior to the entry into force of the impugned legal regulation, Article 11 of the Subsurface Law (wording of 10 April 2001; hereinafter—the Subsurface Law) used to provide:

"1. Subsurface resources or voids can be exploited only under procedure established by the laws and other legal acts of the Republic of Lithuania.

2. It shall be prohibited to utilise natural underground voids for storing or burying radioactive or toxic substances."

In the context of the constitutional justice case at issue, it should be noted that the exploration of hydrocarbons, *inter alia,* unconventional hydrocarbons, and the exploitation of subsurface resources by means of hydraulic fracturing was not mentioned *expressis verbis* in the said law.

The Subsurface Law has subsequently been amended and supplemented on more than one occasion, *inter alia,* by the laws adopted by the Seimas on 2 November 2004, 30 May 2013, 27 June 2013, 11 June 2015, and 18 June 2015 establishing the legal regulation relevant in the case at issue.

3. On 30 May 2013, the Seimas adopted the Republic of Lithuania's Law Amending and Supplementing Articles 1, 2, 3, 4, 5, 6, 8, 9, 11, 12, 13, 14, 15, 18, 19, 21, 22, 27 of the Subsurface Law and Supplementing This Law with Article 6^1, which came into force on 1 July 2013 and established the legal regulation impugned in the case at issue. The explanatory note to the draft of the said law pointed out that this draft had been prepared in an effort to regulate in more detail the exploration and exploitation of unconventional hydrocarbons as specific resources by means of hydraulic fracturing, thus separating them from the other (traditional) hydrocarbons.

3.1. Article 11 "The Procedure for the Exploitation of Subsurface Resources and Voids" (wording of 30 May 2013), the constitutionality of the provisions of Paragraphs 2 and 4 whereof is impugned in the case at issue, prescribes:

"1. Subsurface resources or voids can be exploited only under procedure established by the laws and other legal acts of the Republic of Lithuania.

2. It shall be prohibited to use subsurface voids for burying radioactive or toxic substances. With the exception of the cases provided for in Paragraph 4 of this Article, it shall also be prohibited to leave such substances in the subsurface during subsurface exploration and/or the exploitation of subsurface resources. Storing radioactive or toxic substances shall be permitted only in artificial repositories built for this purpose by ensuring the insulation (separation) of such facilities from the environment and the possibility of re-using or recycling such substances.

3. It shall be prohibited to use natural subsurface voids for burying or storing mining waste or any other waste with the exception of carbon dioxide.

4. Mining waste generated during hydraulic fracturing may be left under procedure established by the Government or an institution authorised by it in artificial subsurface voids created as a result of exploiting (extracting) subsurface resources."

Article 11 (wording of 30 May 2013) of the Subsurface Law has not been amended and/or supplemented later.

3.2. Thus, Paragraph 2 of Article 11 (wording of 30 May 2013) of the Subsurface Law consolidates the prohibition on using subsurface voids for burying radioactive or toxic substances, and the prohibition on leaving such substances in subsurface voids during subsurface exploration and/or the exploitation of subsurface resources, i.e. this prohibition is applied to both subsurface exploration and the exploitation of subsurface resources; in addition, this paragraph consolidates the impugned provision providing for an exception to the said prohibition and making reference to Paragraph 4 (also impugned in the case at issue) of the same article.

It should be mentioned that, according to Article 3 (wording of 30 May 2013) of the Subsurface Law, burying in the subsurface means either storing the waste generated in the course of the exploration or exploitation of subsurface resources or during other industrial activities, or leaving such waste in subsurface voids without creating a possibility of controlling the state thereof or moving the entire amount of such waste to the surface in order to use or recycle it (Paragraph 5); the waste generated during subsurface exploration or subsurface exploitation, including the substances used during subsurface exploration or subsurface exploitation, is mining waste (Paragraph 3).

Consequently, under Paragraph 2 of Article 11 (wording of 30 May 2013) of the Subsurface Law, it is prohibited to bury, i.e. either to store or leave, in the subsurface only the mining waste or other industrial waste containing radioactive or toxic substances; this prohibition does not cover all possible mining or other industrial waste; it is not prohibited to bury in subsurface voids other substances (which could also be dangerous to human health or the environment), *inter alia,* to leave such substances in such voids during subsurface exploration and/or the exploitation of subsurface resources.

As mentioned before, the provision providing for an exception to the prohibition against leaving radioactive or toxic substances in subsurface voids in the course of subsurface exploration and/or exploitation of subsurface resources makes reference to Paragraph 4 of the same article.

3.3. Under the impugned Paragraph 4 of Article 11 (wording of 30 May 2013) of the Subsurface Law, mining waste produced by hydraulic fracturing may be left under procedure established by the Government or an institution authorised by it in artificial subsurface voids created in the process of using (extracting) subsurface resources. Thus, it is allowed leave all mining waste, including toxic or radioactive waste, in artificial subsurface voids created as a result of hydraulic fracturing.

3.3.1. In this context, it should be noted that hydraulic fracturing of rock formations is a way of exploring or using subsurface resources (most often, conventional hydrocarbons, unconventional hydrocarbons, or subsurface heat energy) where high pressure is created in the well drilled in the rock so as to force open rock fractures, after which such fractures are filled with fluids consisting of water, sand or ceramic substances, and chemicals in order to boost the permeability and productivity of the rock (Paragraph 2 of Article 3 (wording of 30 May 2013) of the Subsurface Law).

It is clear from the material of the constitutional justice case at issue that a characteristic feature of the technology of hydraulic fracturing of rock formations is the fact that after hydraulic fracturing operations both a part of fluids previously injected into the well and mixtures of natural elements released from the rock in the subsurface reach the surface, and the other part of substances both used during hydraulic fracturing operations and generated in the subsurface during such fracturing remain in subsurface voids created as a result of such operations and cannot be moved to the surface; in order to achieve a more efficient process of hydraulic fracturing, toxic substances can also be added to the fluids used in hydraulic

fracturing operations; no radioactive substances are injected into the well during hydraulic fracturing operations; such substances may only be released from subsurface rock formations.

Thus, mining waste generated during subsurface exploration and/or exploitation of subsurface resources by means of hydraulic fracturing is composed of substances used for such fracturing; such substances may include toxic substances as well as substances naturally occurring in the subsurface where they may possibly include natural radioactive substances. A characteristic feature of the hydraulic fracturing technology is the fact that a certain part of produced mining waste (substances both used during hydraulic fracturing operations and generated in the subsurface during such fracturing) remain in subsurface voids and lifting it to the surface is impossible.

3.3.2. The impugned Paragraph 4 of Article 11 (wording of 30 May 2013) of the Subsurface Law provides *expressis verbis* for a possibility of leaving mining waste generated during hydraulic fracturing where such waste is left under procedure established by the Government or an institution authorised by it in artificial subsurface voids created as a result of exploiting (extracting) subsurface resources; it has been mentioned that Paragraph 2 of the same article has imposed the prohibition on leaving radioactive or toxic substances in subsurface voids during subsurface exploration or the exploitation of subsurface resources. In view of the fact that, under Paragraph 1 of Article 15 of this law, it is allowed to use subsurface resources or subsurface voids only after exploring them, and that hydraulic fracturing is not only a way of using subsurface resources, but also a way of exploring them, and that in conducting hydraulic fracturing operations a certain part of substances both used during hydraulic fracturing operations and generated in the subsurface during such fracturing inevitably remain in the subsurface, the impugned provision of Paragraph 2 of Article 11 (wording of 30 May 2013) should be interpreted as meaning that it is allowed to leave mining waste in artificial subsurface voids not only when subsurface resources are exploited by means of hydraulic fracturing, but also when subsurface exploration is conducted by using this method.

3.3.3. It should be noted that, under Paragraph 4 of Article 11 (wording of 30 May 2013) of the Subsurface Law, the Government or an institution authorised by it must establish a procedure to be followed when mining waste generated during hydraulic fracturing is left in artificial subsurface voids.

3.3.4. With regard to the specific feature of the hydraulic fracturing technology where a certain part of substances both used during hydraulic fracturing operations and generated in the subsurface during such fracturing remain in the subsurface and cannot be lifted to the surface, it should also be noted that the impugned legal regulation permitting leaving, in artificial subsurface voids, mining waste generated during hydraulic fracturing means that the application of hydraulic fracturing is allowed for both subsurface exploration and exploitation of subsurface resources and that a characteristic feature of hydraulic fracturing is the fact that a certain part of substances both used during hydraulic fracturing operations and generated in the subsurface during such fracturing inevitably remain in the subsurface.

3.4. Thus, when interpreting the impugned legal regulation laid down in Paragraphs 2 and 4 of Article 11 (wording of 30 May 2013) of the Subsurface Law whereby mining waste generated during conducting subsurface exploration and/or exploiting subsurface resources by means of hydraulic fracturing may be left in artificial subsurface voids under procedure established by the Government or an institution authorised by it, it should be held that, according to this legal regulation, the application of hydraulic fracturing is allowed for both subsurface exploration and the exploitation of subsurface resources under procedure established by the Government or an institution authorised by it (a characteristic feature of hydraulic fracturing is the fact that a certain part of mining waste produced from substances both used (where such substances may contain toxic substances) during hydraulic fracturing operations and generated (where such substances may include radioactive substances) in the subsurface during such fracturing inevitably remain in the subsurface).

4. As mentioned before, the petitioner requests an investigation into whether Paragraph 2 of Article 11 (wording of 30 May 2013) of the Subsurface Law, insofar as it establishes a reservation regarding the cases provided for in Paragraph 4, as well as Paragraph 4 of the same article, is in conflict with the Constitution.

Thus, in the constitutional justice case at issue, subsequent to the petitioner's petition the Constitutional Court will investigate the constitutionality of Paragraphs 2 and 4 of Article 11 (wording of 30 May 2013) of the Subsurface Law insofar as they provide that mining waste generated during hydraulic fracturing in the course of subsurface exploration and/or the exploitation of subsurface resources may be left in artificial subsurface voids under procedure established by the Government or an institution authorised by it.

Alongside, it needs to be noted that the doubts of the petitioner regarding the constitutionality of the impugned legal regulation are related to the application of hydraulic fracturing to the exploration or extraction of unconventional hydrocarbons (more specifically, these doubts are related to the fact that a huge amount of technological fluids is used in hydraulic fracturing operations and that such fluids contain a significant amount of chemicals).

5. In this context, it needs to be mentioned that Paragraph 7 (wording of 30 May 2013) of Article 3 of the Subsurface Law provides that unconventional hydrocarbons are subsurface mineral resources—natural substances found in the subsurface—which may be used in industry or for other purposes. Under Paragraph 13 of the same article, subsurface resources are a part of natural resources and include the elements of the subsurface structure—solid bodies, fluids, gases or energy fields possible to be used by humans where such use exerts changes in the amount or quality of such resources. It should be noted that, under the Republic of Lithuania's Law on Energy, "energy resources" mean natural resources and/or products of processing thereof used to produce energy or in transport, and "energy activities" mean

economic activities that include, among other things, the prospection and extraction of energy resources (Paragraphs 13 and 15 (wording of 7 November 2013) of Article 2).

Thus, according to the legal regulation established in the aforesaid laws, unconventional hydrocarbons for exploring and extracting which hydraulic fracturing is used are subsurface natural resources that may be used, *inter alia,* for the generation of energy, and the economic activities including, among other things, the prospection and extraction of such resources, are energy activities. In this context, it should be noted that, under Chapter 4 (wording of 19 February 2004) of the Appendix "Basics of National Security of Lithuania" to the Law on the Basics of National Security, the energy sector is among the sectors of the Lithuanian economy which are of strategic importance to national security, and the Government is in charge of ensuring possibilities of obtaining the raw materials necessary for national security from sources independent of the monopolist supplier.

6. It has been mentioned that, under Paragraph 1 of Article 11 (wording of 30 May 2013) of the Subsurface Law, subsurface resources (including unconventional hydrocarbons) or subsurface voids (including those created during hydraulic fracturing) can be exploited only under procedure established by means of laws and other legal acts. Thus, the provisions of the Subsurface Law and other laws regulating the procedure for subsurface exploration and the exploitation of both subsurface resources and subsurface voids, *inter alia,* limitations on such activities in order to protect both human health and the environment are relevant for the constitutional justice case at issue.

7. The Subsurface Law provides for certain duties for legal and natural persons, as well as for groups of such persons, acting on the basis of contracts of joint activities (hereinafter—persons (their groups)), willing to engage in activities of subsurface exploration and the exploitation of subsurface resources, *inter alia,* the exploitation of unconventional hydrocarbons. The same law also provides for the conditions of such activity.

7.1. Paragraph 1 of Article 19 (wording of 30 May 2013) of the Subsurface Law provides that in order to ensure a rational use of the subsurface, the measures protecting the subsurface are implemented as prescribed by this Law and other laws in the following manner: 1) by carrying out territorial planning; 2) by making an assessment of the impact of economic activities and the consequences of extreme accidents or events on the state of the subsurface; 3) by exploring and monitoring the state of the subsurface in a systematic manner; 4) by establishing protected areas.

7.2. It should be noted that Paragraph 1 of Article 22 (wording of 11 June 2015) of the Subsurface Law provides that the protection of both the subsurface and its valuable characteristics must be ensured in protected areas and that limitations on using the subsurface must be established both in the regulations of such areas and in other legal acts. Under Paragraph 2 of this article, in protected areas, the protection zones

of groundwater well fields, and territories on which equipment for preparing drinking water is situated, any exploration of unconventional hydrocarbons by applying hydraulic fracturing is prohibited.

7.3. Under this law, persons (their groups) willing to explore the subsurface, *inter alia,* unconventional hydrocarbons:

– must obtain a permit from a competent institution (either the Government or the Lithuanian Geological Survey) to carry out concrete exploration of the subsurface where such a permit is issued only to persons holding respective qualification or enjoying the right granted by the Lithuanian Geological Survey to engage in certain types of research, or conclude an agreement on carrying out such exploration with persons holding such a permit (Articles 6 and 6^1 (wording of 30 May 2013));

– must reach an agreement with the owners or users of land regarding the place or the land area in which subsurface exploration will be conducted; before beginning direct subsurface exploration, must inform about this the municipal executive institution on whose territory the exploration is intended (Paragraph 2 of Article 7);

– must prepare a project (or a technical task); if the use of subsurface resources is intended during subsurface exploration, the project must provide for cases when this will be done, the amounts of extracted resources, and the manner of such extraction (Paragraph 1 (wording of 2 November 2004) of Article 8);

– must submit to a competent institution an exhaustive list of radioactive or toxic substances, or substances dangerous to human health or the environment, the amount of such substances expressed in percentage terms and the manner of their intended use if the use of such substances is intended for exploring the subsurface (Paragraph 5 (wording of 30 May 2013) of Article 8);

– under procedure established by legal acts, must prepare a project for drilling wells related to the exploration, prospection, and exploitation (extraction) of unconventional hydrocarbons if the exploration of such hydrocarbons is intended (Paragraph 3 (wording of 30 May 2013) of Article 19).

7.4. Under the same law, persons (their groups) willing to exploit subsurface resources, including unconventional hydrocarbons, and to use subsurface voids:

– must obtain a permit to exploit subsurface resources of the indicated types or to use subsurface voids within an established time-period; the Government issues permits to exploit unconventional hydrocarbons by tender (Paragraph 2 (wording of 30 May 2013), Paragraph 4 (wording of 2 November 2004), Paragraph 6 (wording of 30 May 2013) of Article 12, Item 1 of Paragraph 1 (wording of 18 June 2015) of Article 13);

– must conclude an agreement with an institution authorised by the Government on exploiting such resources or using such voids by defining either the area of land in which such exploitation or use are allowed, or a mining plot, together with the conditions of such exploitation or use, and estimated amounts of subsurface resources that will be extracted (Paragraph 2 (wording of 30 May 2013), Paragraph 4 (wording of 2 November 2004) of Article 12, Paragraph 3 (wording of 2 November 2004) of Article 15);

– must have a prepared and adjusted plan of using the subsurface—a special document of territorial planning—that must be approved by the Lithuanian Geological Survey and must provide for the following: the manner and means of employing subsurface resources and using subsurface voids, measures of protecting groundwater well fields from a possible negative impact, the ways and measures of the management of mining and other waste as well as waste of natural radioactive substances (Paragraphs 1 and 2 (wording of 11 June 2015) as well as Paragraphs 3 and 4 (wording of 27 June 2013) of Article 14);

– must submit to a competent institution an exhaustive list of radioactive or toxic substances, or substances dangerous to human health or the environment, the composition of such substances expressed in percentage terms and the manner of their intended use if the use of such substances is intended for using subsurface resources (Paragraph 6 (wording of 30 May 2013) of Article 15);

– under procedure established by legal acts, must prepare a project for drilling wells related to the exploration, prospection, and exploitation (extraction) of unconventional hydrocarbons if the exploitation of such hydrocarbons is intended (Paragraph 3 (wording of 30 May 2013) of Article 19).

7.5. The Subsurface Law has also established the duties of the persons (their groups) holding the respective permits to carry out subsurface exploration and/or the exploitation of subsurface resources, *inter alia,* unconventional hydrocarbons and conducting such activities. Such duties are as follows:

– to carry out subsurface exploration as defined by a project (or a technical task) by ensuring work quality and following the requirements for environmental protection, safety at work, etc.; to exploit subsurface resources in the course of subsurface exploration only in the cases, amounts, and manner provided for in the project (Paragraph 1 (wording of 2 November 2004) of Article 8);

– to exploit subsurface resources and to use subsurface voids only before investigating them, making related approvals, and assessing the impact of their extraction on the environment (Paragraph 1 of Article 15);

– to exploit subsurface resources and use subsurface voids (except fresh drinking or technical groundwater, or heat energy) only according to the plan of using the subsurface and without exceeding the amounts of subsurface resources whose extraction is allowed in an agreement on using resources or voids (Paragraph 1 (wording of 11 June 2015) of Article 14, Paragraph 3 (wording of 2 November 2004) of Article 15);

– to carry out the exploration and/or exploitation of unconventional hydrocarbons according to a project for drilling wells related to the prospection, exploration and exploitation (extraction) of unconventional hydrocarbons (Paragraph 3 (wording of 30 May 2013) of Article 19); when conducting an activity related to the exploration or exploitation of unconventional hydrocarbons, not to violate the requirements laid down in legal acts regulating the protection of groundwater or surface water; when conducting the same activity, to ensure that the substances used for the exploration and/or exploitation of unconventional hydrocarbons do not reach either groundwater and/or surface water, or the environment, and that such substances do not contaminate them (Paragraphs 2 and 4 (wording of 30 May 2013) of Article 19);

– when holding a permit to investigate unconventional hydrocarbons, to inform competent institutions under procedure and conditions established by the Government about every instance of using radioactive or toxic substances, or substances dangerous to human health or the environment, when such substances are meant specifically for exploring unconventional hydrocarbons, and to specify the amount of such substances and their precise composition expressed in percentage terms (Paragraph 6 (wording of 30 May 2013) of Article 8);

– when holding a permit to exploit unconventional hydrocarbons, to inform competent institutions under procedure and conditions established by the Government about every instance of applying hydraulic fracturing, the precise composition, expressed in percentage terms, of substances used in such operation and the amount of such substances (Paragraph 8 (wording of 30 May 2013) of Article 15);

– to use subsurface resources in a rational and integral manner, by protecting the non-used subsurface resources in the same deposit or within the area affected by such a deposit (Paragraph 2 of Article 15);

– when exploiting subsurface resources, to observe their state, to predict changes in their amount and quality, to keep the records of the extracted resources and those remaining in the deposit, to monitor the subsurface (in the cases of the exploration and/or exploitation of unconventional hydrocarbons if this is provided for in an agreement on exploiting resources or using voids) and to provide the Subsurface Register with the respective data (Paragraph 4 (wording of 18 June 2015) of Article 15);

– fulfilling the requirements laid down in legal acts, to manage the mining waste and other waste generated during the exploration and/or exploitation of subsurface resources, *inter alia,* unconventional hydrocarbons, as well as to manage natural radioactive waste, where such waste is accumulated on the surface (Paragraph 9 (wording of 30 May 2013) of Article 12, Paragraph 4 of Article 19 (wording of 30 May 2013));

– when burying mining waste and other waste in the subsurface with a permit, to present the institutions authorised by the Government with an exhaustive list of the mining waste and other waste as well as the amount thereof (Paragraph 7 (wording of 30 May 2013) of Article 15);

– to enable competent institutions to be in control of using radioactive or toxic substances, or substances dangerous to human health or the environment (Paragraph 5 (wording of 30 May 2013) of Article 8, Paragraph 6 (wording of 30 May 2013) of Article 15) and to be in control of monitoring the subsurface (Paragraph 4 (wording of 18 June 2015) of Article 21);

– to compensate for any damage inflicted during exploring or exploiting subsurface resources on the state, environment, public health, or property (Article 27 (wording of 30 May 2013)).

It also needs to be mentioned that persons who violate provisions of the Subsurface Law are held liable under procedure established by law (Article 26 (wording of 2 November 2004) of the Subsurface Law).

7.6. The Subsurface Law consolidates the duties of the competent state institutions and establishments related to the observation of the state of environment and to the supervision of exploring or using subsurface resources, *inter alia,* unconventional hydrocarbons:

– to conduct state research of the subsurface, to carry out geological mapping and state subsurface monitoring, to establish the limits and conditions for exploring and exploiting subsurface resources, and to control the exploration or exploitation of subsurface resources (Article 4 (wording of 30 May 2013), Article 10);

– to control subsurface monitoring carried out by economic subjects (Paragraph 4 (wording of 18 June 2015) of Article 21);

– to ensure the protection of the subsurface and its valuable characteristics in protected areas, not to grant permission for exploring and/or exploiting unconventional hydrocarbons by way of hydraulic fracturing in protected areas, the protection zones of groundwater well fields, and territories on which equipment for preparing drinking water is situated (Article 22 (wording of 11 June 2015));

– to control the use of radioactive or toxic substances, or substances dangerous to human health or the environment in the course of subsurface exploration or the exploitation of subsurface resources (Paragraph 5 (wording of 30 May 2013) of Article 8, Paragraph 6 (wording of 30 May 2013) of Article 15);

– to control the management of mining and other waste (Paragraph 7 (wording of 30 May 2013) of Article 15);

– to suspend permits to explore subsurface resources or to exploit subsurface resources or subsurface voids, or to revoke such permits if, *inter alia:* a project (or a technical task), the conditions of an agreement on using subsurface resources or subsurface voids, or the requirements of a plan of using subsurface resources are not fulfilled; the requirements related to environmental protection, safety at work or public health, as well as other requirements laid down in this law or other legal acts are violated; generated mining waste or other waste, as well as natural radioactive waste, is not managed under procedure established in legal acts (Article 9 (wording of 30 May 2013), Paragraphs 1 and 2 (wording of 27 June 2013) of Article 18);

– to exact damage inflicted on the state, the environment, or public health during exploring or exploiting subsurface resources (Paragraphs 1 and 2 of Article 27 (wording of 30 May 2013)).

8. It has been mentioned that, according to Item 2 of Paragraph 1 of Article 19 (wording of 30 May 2013) of the Subsurface Law, the measures protecting the subsurface are implemented, among other things, by making an assessment of the influence of economic activities on the environment. In this context, it should be mentioned that the assessment of the impact of economic activities on the environment is regulated by the Republic of Lithuania's Law on Environmental Impact Assessment of the Proposed Economic Activity (wording of 21 June 2005; hereinafter—the Law on Environmental Impact Assessment of the Proposed Economic Activity).

The Law on Environmental Impact Assessment of the Proposed Economic Activity provides that, before undertaking an economic activity related to using (extraction) of certain subsurface resources, taking account of the planned amount of resources to be extracted, an assessment of the impact of economic activities on the environment must be made (Paragraph 2 (wording of 11 June 2011) and Paragraph 4 (wording of 27 June 2013) of Article 3, Paragraphs 2.1–2.4 of Annex 1, and Paragraph 2 of Annex 2). It needs to be emphasised that, under Paragraph 2.5 (wording of 30 May 2013) of Annex 1 to the same law, before starting the exploration and/or extraction of unconventional hydrocarbons by way of hydraulic fracturing, an environmental impact assessment must always be made.

Article 4 (wording of 9 June 2011) of the Law on Environmental Impact Assessment of the Proposed Economic Activity points out the objectives of environmental impact assessment, which are as follows: to identify, describe and assess the likely direct and indirect impact of the proposed economic activity on public health, wildlife and plants, soil, surface and the subsurface, air, water, climate, the landscape and biodiversity, the socio-economic environment and material assets, immovable cultural properties as well as interaction between these components of the environment; to minimise or avoid the negative impact of the proposed economic activity on public health and other components of the environment or to prevent this impact; to ascertain whether the proposed economic activity may be permitted upon evaluating the nature and environmental impact thereof.

It should be noted that where the competent authority adopts a decision that the proposed economic activity may not be permitted in a selected location by reason of violations of certain provisions of laws or other legal acts and/or a possible negative impact on the environment, a permit to engage in the respective economic activity may not be issued and the proposed economic activity may not be conducted (Paragraph 4 (wording of 27 June 2013) of Article 3, Paragraph 9 (wording of 9 June 2011) of Article 10 of the Law on Environmental Impact Assessment of the Proposed Economic Activity).

Thus, the results of an environmental impact assessment which are invoked by the competent institution when it adopts a decision on the proposed economic activity determine the fact whether a permit may be issued at all regarding the exploration and/or exploitation of certain subsurface resources, including unconventional hydrocarbons, and the fact as to what should be done in order to avoid or minimize as much as possible a negative impact on the environment or human health.

9. It has been mentioned that, according to Paragraph 2 of Article 3 (wording of 30 May 2013) of the Subsurface Law, in the course of hydraulic fracturing, high pressure is created in the well drilled in the rock so as to force open rock fractures, after which such fractures are filled with fluids consisting of water, sand or ceramic materials, and chemicals. In this context, it should be mentioned that the Republic of Lithuania's Law on Chemical Substances and Preparations (wording of 17 June 2008) establishes the general requirements for manufacturing chemical substances and chemical preparations, as well as the placing on the market, use, or other management of such substances and preparations. Such requirements also apply during hydraulic fracturing, *inter alia,* when unconventional hydrocarbons are explored and/or exploited by such a method.

The Law on Chemical Substances and Preparations provides that the persons placing on the market and/or using chemical substances and preparations must, *inter alia:*

– provide for and apply measures eliminating or reducing to the minimum the negative impact of chemical substances and preparations upon human health and the environment; classify, mark, register such substances and preparations and authorise their use; have available information on the properties and amount of chemical substances and preparations and provide persons concerned with such and other required information, as well as applicable risk management and safety measures; properly exercise control over the risk posed by chemical substances and preparations and, where it is economically and technically expedient, consistently replace them with alternative chemical substances and preparations or technologies (Paragraph 2 of Article 4);

– present other supply chain actors or consumers with safety data sheets (i.e. formal information on the respective chemical substance or preparation enabling taking necessary measures related to health protection, safety at work or environmental protection) and with other available and important information

on the respective chemical substances or preparations in order to ensure their safe use (Paragraph 11 (wording of 14 December 2010) of Article 2 and Article 9 (wording of 14 December 2010)).

10. To sum up the discussed legal regulation consolidated in the Subsurface Law and other laws, it should be noted that such laws establish the measures for protecting human health and the environment (including the subsurface, groundwater or surface water, as well as drinking water), *inter alia,* when the subsurface is explored and/or subsurface resources are exploited by means of hydraulic fracturing. From among them, the following measures should be mentioned:

– the use of the subsurface is subject to limitations in protected areas; the exploration and/or exploitation of unconventional hydrocarbons is prohibited in protected areas and in certain territories related to water protection;

– it is required to carry out the assessment of impact on the environment where the exploitation (extraction) of certain subsurface resources is planned (before starting the exploration and/or extraction of unconventional hydrocarbons by way of hydraulic fracturing, an environmental impact assessment must always be made); the results of such assessment determine the fact whether such activity may be allowed at all, and the fact as to what should be done in order to avoid or minimize as much as possible the negative impact on the environment or human health;

– the activity of subsurface exploration and/or exploitation of subsurface resources, *inter alia,* unconventional hydrocarbons, is only allowed with a permit;

– before starting such activity, it is necessary to adjust the required project documents with competent institutions and to inform them about the intention to use the respective radioactive or toxic substances, or substances dangerous to human health or environment;

– when pursing such activity, it is necessary to fulfil both the conditions laid down in project documents (a project, an agreement on using subsurface resources or subsurface voids, a plan for using the subsurface, a project for drilling wells) and the requirements, as regulated in legal acts, regarding work quality, the protection of the environment, *inter alia,* groundwater or surface water, and the safety of work; it is necessary to inform the competent institutions about the substances that are used during such activity, including radioactive or toxic substances, or substances dangerous to human health or environment, the precise composition and amount of such substances, as well as about every instance of exploiting unconventional hydrocarbons by way of hydraulic fracturing and the precise composition and amount of substances used for such fracturing; it must be ensured that the substances used in exploring and/or exploiting unconventional hydrocarbons do not enter into groundwater and/or surface water or the environment, and that such substances do not contaminate them; subsurface monitoring must be carried out (such monitoring is mandatory in exploring and/or exploiting unconventional hydrocarbons); it is

necessary to manage generated mining waste and other waste, as well as surface waste composed of natural radioactive substances;

– the competent state institutions must establish the limits and conditions of exploring or exploiting subsurface resources, must supervise such activity in all its phases, *inter alia,* in certain situations they must suspend the validity of issued permits or revoke such permits.

11. It has been mentioned that the impugned Paragraph 4 of Article 11 (wording of 30 May 2013) of the Subsurface Law consolidates the duty of the Government or an institution authorised by it to establish a procedure according to which mining waste generated as a result of hydraulic fracturing is left in artificial subsurface voids created as a result of the exploitation (extraction) of subsurface resources. Thus, in this context, the respective provisions of the legal acts adopted by the Government or an institution authorised by it should be mentioned.

11.1. On 24 July 2013, the Government adopted the Resolution (No. 677) "On Granting the Powers Related to the Implementation of the Republic of Lithuania's Subsurface Law", which came into force on 31 July 2013 (this resolution was set forth in its new wording by government resolution No. 1278 of 19 November 2014, which came into force on 21 November 2014), and by which it authorised the Ministry of Environment to approve, *inter alia,* the following:

– the Description of the Procedural Control over the Use of Radioactive or Toxic Substances, or Substances Dangerous to Human Health or Environment Used for the Exploration of the Subsurface and Exploitation of Subsurface Resources;

– the Description of the Procedure for Leaving Mining Waste and Other Waste Generated During Hydraulic Fracturing in Subsurface Voids Created as a Result of Extraction of Subsurface Resources;

– the Description of the Procedural Control over Managing Mining Waste and Other Waste Buried in the Subsurface.

Carrying out this task, by the respective orders Nos. D1-688 and D1-689 of 16 September 2013, the Minister of Environment approved the Description of the Procedural Control over the Burial of Mining Waste and Other Waste Generated in the Process of Hydraulic Fracturing in Subsurface Voids Created as a Result of the Extraction of Subsurface Resources and the Description of the Procedural Control over the Use of Radioactive or Toxic Substances, or Substances Dangerous to Human Health or the Environment Used for the Exploration of the Subsurface and Extraction of Subsurface Resources.

These Descriptions provide, among other things, that a project for exploring resources or a plan of exploiting subsurface resources must indicate the amount of fluids to be used in the process of hydraulic fracturing consisting of water, sand or ceramic materials, and chemicals, the composition of such fluids,

the exhaustive description of generated waste by indicating its physical and chemical composition, the likely addition of dangerous substances and their actual concentration (respectively, Paragraphs 7–8 and 8–9).

The Description of the Procedural Control over the Burial of Mining Waste and Other Waste Generated During Hydraulic Fracturing in Subsurface Voids Created as a Result of Extraction of Subsurface Resources also provides that in the process of hydraulic fracturing control must be exercised over the amount of the injected fluids, their properties, and their dangerousness to the environment; in cases where violations posing a threat to the environment are established, the said activity is immediately suspended until the violations are removed (Paragraphs 11 and 16).

11.2. The procedure of subsurface exploration and/or the exploitation of subsurface resources, *inter alia,* unconventional hydrocarbons, by way of hydraulic fracturing is also regulated in more detail in other substatutory legal acts, including the Government Resolution (No. 34) "On the Procedure and Conditions of Informing the Competent Institutions about Using Radioactive or Toxic Substances, or Substances Dangerous to Human Health or Environment When Such Substances Are Meant for the Exploration of Unconventional Hydrocarbons, about Hydraulic Fracturing of Rock Formations, and about the Composition and Amount of Substances Used During Such Fracturing" of 14 January 2015 and the Rules of Exploration, Prospection, or Exploitation (Extraction) of Hydrocarbon Resources in the Republic of Lithuania as approved by order No. D1-578 (wording of 25 August 2015) of 30 November 2005 issued by the Minister of Environment.

II

1. In the context of the constitutional justice case at issue, it should be mentioned that the Annex "The Implemented Act of EU Law" (wording of 2 November 2004) to the Subsurface Law states that this Law implements the Directive 94/22/EC of the European Parliament and of the Council of 30 May 1994 on the conditions for granting and using authorisations for the prospection, exploration and production of hydrocarbons.

According to this Directive, Member States retain the right to determine the areas within their territory to be made available for the exercise of the activities of prospecting, exploring for and producing hydrocarbons (Paragraph 1 of Article 2). In addition, Member States may, to the extent justified by national security, public safety, public health, security of transport, protection of the environment, protection of biological resources and of national treasures possessing artistic, historic or archaeological value, safety of installations and of workers, impose conditions and requirements on the exercise of the activities of prospecting, exploring for and producing hydrocarbons (Paragraph 2 of Article 6).

2. The environmental protection principles applicable to Member States of the European Union in the sphere of exploration and production of unconventional hydrocarbons are formulated in the

Commission Recommendation 2014/70/EU of 22 January 2014 on minimum principles for the exploration and production of hydrocarbons (such as shale gas) using high-volume hydraulic fracturing (hereinafter—the Recommendation).

2.1. The Recommendation is aimed to ensure that appropriate environmental and climate protection measures are applied when producing unconventional hydrocarbons using high-volume hydraulic fracturing. The Recommendation lays down the principles that support Member States in the exploration and production of natural gas from shale formations and ensure that the climate and environment are safeguarded, resources are used efficiently, and the public is informed (Recital 5 of the Preamble, Paragraph 1.1). The Preamble to the Recommendation emphasises that Member States have the right to determine the conditions for exploiting their energy resources, as long as they respect the need to preserve, protect and improve the quality of the environment (Recital 1).

2.2. The Recommendation specifies several measures that should be applied by Member States in order to ensure that the economic activity of the exploration and production of hydrocarbons is conducted in an appropriate manner: before granting licenses for exploration and/or production of hydrocarbons which may lead to the use of high-volume hydraulic fracturing, Member States should prepare a strategic environmental assessment to prevent, manage and reduce the impacts on, and risks for, human health and the environment (Paragraph 3); Member States should ensure that the conditions and the procedures for obtaining exploration and production permits are fully coordinated (Paragraph 4); exploration and production sites must be selected responsibly: Member States should take the necessary measures to ensure that the geological formation of a site is suitable for the exploration or production of hydrocarbons using high-volume hydraulic fracturing, they should ensure that operators carry out a characterisation and risk assessment of the potential site and surrounding surface and underground area and assess the risk of leakage or migration of drilling fluids, hydraulic fracturing fluids, naturally occurring material, hydrocarbons and gases from the well or target formation as well as of induced seismicity (Paragraph 5); before high-volume hydraulic fracturing operations start, Member States should carry out a baseline study: the quality of local water, air, and the ground must be checked so that changes can be monitored and identified dangers might be averted (Paragraph 6); the appropriate infrastructure of a production area must be ensured (Paragraph 8); Member States should ensure that operators fulfil the established respective operational requirements, *inter alia,* that operators: develop project-specific water-management plans to ensure that water is used efficiently, develop transport management plans to minimise air emissions, capture gases for subsequent use, carry out the high-volume fracturing process in a controlled manner and with appropriate pressure management, ensure well integrity, develop risk management plans and measures, etc. (Paragraph 9); Member States should ensure that using chemical substances in high-volume hydraulic fracturing is minimised (Paragraph 10); Member States should ensure that the operator regularly monitors the installation and the surrounding surface and underground area (the composition of the fracturing fluid, the volume of water used, the pressure, the composition of the fluids that emerge at the surface, air emissions) and in particular before, during and after high-volume hydraulic fracturing, and that

the monitoring results are reported to the competent authorities (Paragraph 11); Member States should ensure that the operator provides a financial guarantee covering potential liabilities for environmental damage (Paragraph 12); the public should be informed through the regular publication of information concerning the conducted operation (Paragraph 15).

2.3. The provisions of the Recommendation are not mandatory, however, Member States, having chosen to explore or exploit unconventional hydrocarbons using high-volume hydraulic fracturing, are invited to annually inform the European Commission about the measures they put in place in response to this Recommendation, and the European Commission will closely monitor the Recommendation's application (Paragraph 16).

III

1. In the constitutional justice case at issue, the petitioner impugns the compliance of the provisions of the Subsurface Law permitting leaving, in the subsurface, waste generated during the subsurface exploration and/or the exploitation of subsurface resources by way of hydraulic fracturing with Paragraph 3 of Article 53 and Paragraph 2 of Article 54 of the Constitution.

2. Paragraph 3 of Article 53 of the Constitution provides that the state and each person must protect the environment from harmful influences. Under Article 54 of the Constitution, the state shall take care of the protection of the natural environment, wildlife and plants, individual objects of nature, and areas of particular value, and shall supervise the sustainable use of natural resources, as well as their restoration and increase (Paragraph 1); the destruction of land and subsurface, the pollution of water and air, radioactive impact on the environment, as well as the depletion of wildlife and plants, shall be prohibited by law (Paragraph 2).

2.1. When interpreting the provisions of the Constitution consolidating the constitutional grounds of environmental protection, the Constitutional Court has noted that:

– these provisions express one of the objectives of the activities of the state, i.e. to ensure people's rights to a healthy and clean environment; environmental protection is the concern and obligation of the state and every resident, and both public and private interests must be devoted to improve the quality of the environment (the Constitutional Court's rulings of 1 June 1998, 31 January 2011, and 9 May 2014); these provisions give rise to the duty of all persons to preserve nature and to compensate for any harm (losses) inflicted by them on the natural environment (the Constitutional Court's rulings of 29 October 2003 and 9 May 2014);

– under the Constitution, the natural environment, wildlife and plants, individual objects of nature, and areas of particular value are national values of universal importance; protecting such values and

ensuring their rational use and increase are a public interest; the state is under the constitutional obligation to guarantee such an interest (the Constitutional Court's rulings of 13 May 2005 and 14 March 2006);

– all persons in the territory of the Republic of Lithuania must refrain from any action that would inflict damage on the land, the subsurface, water, air, plants, or wildlife; the legislature must prohibit any actions that inflict damage on the natural environment and its objects, and must establish legal liability for such actions; while such prohibitions and legal liability for disregarding them must be established only by means of a law, the procedure of implementing these prohibitions may also be regulated in substatutory legal acts (the Constitutional Court's ruling of 13 May 2005);

– the state, being under the constitutional obligation to act so that the protection of the natural environment and its individual objects, the rational use of natural resources, their restoration and increase would be ensured, may establish, by means of a law, such legal regulation under which the use of individual objects (natural resources) of the natural environment would be limited and certain subjects of legal relations would be obliged to act accordingly or refrain from certain actions; in doing so, the state is bound by the constitutional imperative of social harmony, and by the principles of justice, reasonableness and proportionality which are consolidated in the Constitution (the Constitutional Court's rulings of 13 May 2005 and 14 March 2006).

2.2. When interpreting the provisions of Paragraph 3 of Article 53 and Article 54 of the Constitution in conjunction with both Paragraph 3 of Article 46 thereof, according to which the state regulates economic activity so that it serves the general welfare of the nation, and the provision of Paragraph 1 of Article 53 thereof whereby the state takes care of the health of people, the Constitutional Court has noted in its jurisprudence that:

– in order to ensure the protection and rational use of both natural environment and individual objects of nature, their restoration and increase, and while regulating economic activity, the state can establish specific conditions and procedures of, and means of control over economic activity, as well as certain limitations or prohibitions on the economic activity related to the use of the respective natural resources (the Constitutional Court's rulings of 13 May 2005 and 14 March 2006);

– when the legislature regulates economic activity, it faces the requirement stemming from the Constitution, *inter alia,* Paragraph 3 of Article 46, Paragraphs 1 and 3 of Article 53, and Article 54 thereof, to establish such limitations on such activity which would aim to ensure the general welfare of the nation, *inter alia,* to protect against harmful impacts on human health and the environment, to use natural resources in a rational manner, and to remedy the damage caused to the natural environment (the Constitutional Court's ruling of 9 May 2014).

In this context, it should also be noted that the duty of the state consolidated in Paragraph 3 of Article 46 of the Constitution to regulate, by taking account of the resources of the state, its material and

financial possibilities and other important factors, the economic activity so that it would serve the general welfare of the nation implies the requirement for the legislature, when it regulates such activity, to balance different constitutional values, *inter alia,* those protected under Articles 46, 53, and 54 of the Constitution: freedom of individual economic activity and economic initiative, freedom of fair competition, the protection of the interests of consumers, the protection of human health and environment (the Constitutional Court's rulings of 5 March 2015, 3 April 2015, and 29 October 2015).

It should be mentioned that, in interpreting the constitutional obligation of the state to promote the general welfare of the nation, the Constitutional Court has held that the general welfare of the nation is a rather general and broad criterion and in its application both the concept of general welfare and the arguments of expediency may be invoked (the Constitutional Court's rulings of 13 February 1997, 13 May 2005, and 21 June 2011); the content of the notion "general welfare of the Nation" is revealed in each concrete case by taking account of economic, social and other important factors *(inter alia,* the Constitutional Court's rulings of 6 October 1999, 26 January 2004, and 4 December 2008); the welfare of the nation may not be understood only in a material (financial) sense; in addition, it would hardly be fair or moral to seek material welfare in a way harmful to human health (the Constitutional Court's rulings of 13 February 1997, 13 May 2005, 29 September 2005, and 21 June 2011).

The Constitutional Court has also noted that the public interest is dynamic and subject to change and, due to this, the state may and, in certain cases, must change (expand, narrow, or otherwise correct) the regulation of economic activity (the Constitutional Court's rulings of 30 June 2008, 6 January 2011, 2 April 2013, and 5 March 2015); due to a specific character, variety and dynamism of economic activity, the regulation of concrete relations in this sphere cannot be the same all the time, the ratio of prohibitions and permissions is subject to change, *inter alia,* in an attempt to ensure the public interest *(inter alia,* the Constitutional Court's rulings of 31 May 2006, 2 March 2009, and 21 June 2011).

The Constitutional Court has also emphasised in its acts on more than one occasion that the institutions of legislative and executive powers, as state political powers, are independent (according to their competence) in establishing the content *(inter alia,* priorities), measures and methods of the state policy (the economic policy as well); under the Constitution, the Seimas, as the legislative state institution, and the Government, as a state institution of the executive, have a very broad discretion to form and pursue the state economic policy (each according to its competence) as well as to regulate the economic activity by means of legal acts in the respective manner, certainly, without violating the Constitution and laws under any circumstances *(inter alia,* the Constitutional Court's rulings of 31 May 2006, 21 December 2006, and 11 June 2015).

3. The subsurface is among the objects of natural environment directly mentioned in Article 54 of the Constitution; thus, the state is under the constitutional obligation to ensure the protection and rational use of the subsurface.

3.1. In this context, it should be mentioned that, under Paragraph 1 of Article 47 (wording of 23 January 2003) of the Constitution, the subsurface belongs by right of exclusive ownership to the Republic of Lithuania. The subsurface is a special object of natural environment, it belongs by right of exclusive ownership to the state and may never become anyone else's property. The fact that the subsurface is under the exclusive ownership of the state provides a constitutional ground for establishing a special and specific legal regime of the protection and exploitation of the subsurface in comparison with other objects of the nature.

Thus, the constitutional obligation of the state to ensure a proper protection and rational use of the subsurface as a national value of universal importance that belongs to the state by right of exclusive ownership implies a special legal regulation of the protection and use of the subsurface, *inter alia,* the special conditions of as well as limitations and prohibitions on the economic and other activity related to the use of the subsurface.

3.2. As mentioned before, the duty, consolidated in Paragraph 3 of Article 46 of the Constitution, for the state to regulate economic activity so that it serves the general welfare of the nation implies the requirement that the legislature, when it regulates such activity, should balance different constitutional values, *inter alia,* those protected under Articles 46, 53, and 54 of the Constitution: freedom of individual economic activity and economic initiative, freedom of fair competition, the protection of consumer interests, and the protection of human health and the environment.

In the context of the constitutional justice case at issue, it should be noted that, in regulating the economic activity related to the use of the subsurface, account should be taken, *inter alia,* of the economic interests of the state, *inter alia,* the necessity to ensure the security and reliability of the energy system as a constitutionally important objective and a public interest. Under the Constitution, *inter alia,* Paragraph 3 of Article 46 thereof, when regulating the economic activity in the sphere of energy so that it serves the general welfare of the nation, the legislature is obliged to establish such legal regulation which would ensure the security, stability, and reliability of the energy system, *inter alia,* an opportunity to receive energy supplies from multiple sources (the Constitutional Court's rulings of 3 April 2015 and 29 October 2015). Thus, under the Constitution, in an attempt to ensure, among other things, the security and reliability of the energy system, *inter alia,* an opportunity to receive energy resources from various sources, the legal regulation governing the economic activity related to the use of the subsurface should be established whereby the conditions could be created for appropriate exploration of the subsurface and for rational use of the resources thereof.

3.3. Alongside, it needs to be emphasised that, under the Constitution, *inter alia,* under the provisions of Paragraph 3 of Article 46, Paragraphs 1 and 3 of Article 53, and Article 54 thereof, while regulating the economic or other activity related to the exploitation of the subsurface, the state must ensure the protection of the subsurface, other objects of the natural environment (land, water, air, wildlife, and

plants), and human health against harmful impacts, must prevent the destruction and pollution of the environment, must prevent both radioactive impact on the environment and the depletion of wildlife and plants, and must ensure the rational use of natural resources.

3.4. Since the economic or other activity related to the use of the subsurface may pose a threat to the environment and human health, therefore, according to the provisions of Paragraph 3 of Article 46, Paragraphs 1 and 3 of Article 53 and Article 54 of the Constitution, when implementing its discretion to form the state economic policy, *inter alia,* the policy of using the subsurface, the legislature must regulate this activity so that different constitutional values might be balanced and, in an effort to ensure the state economic interests, *inter alia,* the security and reliability of the energy system, must alongside create the necessary legal preconditions for protecting the environment and human health against any possible harmful impact caused by such activity, and prevent the emergence of any possible damage on the environment and human health. In addition, the legislator has the powers to ban completely a certain activity related to the subsurface, as, for instance, the use of subsurface specific resources or the application of a certain method (technology) of the exploration and/or extraction of such resources.

In the context of this case, it should be noted that, under the Constitution, *inter alia,* the provisions of Paragraph 3 of Article 46, Paragraphs 1 and 3 of Article 53, and Article 54 thereof, the legal regulation of economic activity is also possible, which is established by the legislature and is designed for ensuring the general welfare of the nation as well as related to using the subsurface, whereby it is allowed to apply the ways (technologies) of researching the subsurface and extracting its resources where such ways (technologies) might pose a threat to the environment or human health. Alongside, it needs to be emphasised that the legislature, when regulating the possibility of applying such methods (technologies) for exploring and/or extracting subsurface resources, must also establish effective measures that could create preconditions for a proper protection of the environment or human health, and which would not allow any such economic activity by which inevitable harm could be inflicted on the environment or human health. The said measures must ensure, among other things, that the economic activity related to the exploitation of the subsurface is assessed in terms of its possible impact on the environment, also that this economic activity is subject to the conditions aimed at protecting the environment and human health, as well as that an effective supervision is carried out over such activity *(inter alia,* its compliance with the technological requirements).

IV

On the compliance of the provisions of Paragraphs 2 and 4 of Article 11 (wording of 30 May 2013) of the Subsurface Law with the Constitution

1. As mentioned before, in the case at issue, the Constitutional Court investigates whether Paragraphs 2 and 4 of Article 11 (wording of 30 May 2013) of the Subsurface Law, insofar as they provide that mining waste generated during hydraulic fracturing in the course of subsurface exploration and/or the

exploitation of subsurface resources may be left in artificial subsurface voids under procedure established by the Government or an institution authorised by it, are in conflict with Paragraph 3 of Article 53 and Paragraph 2 of Article 54 of the Constitution.

The doubts of the petitioner regarding the constitutionality of the impugned legal regulation are related to the application of hydraulic fracturing for the purpose of exploring or extracting unconventional hydrocarbons. In the opinion of the petitioner, the prevention of and control over a possible negative impact on the environment or human health are not ensured when such subsurface resources are being explored or extracted by way of hydraulic fracturing, thus, there are no possibilities of avoiding a possible threat to the environment and people, and nothing is done to preclude the emergence of damage.

2. When deciding whether the impugned legal regulation laid down in Paragraphs 2 and 4 of Article 11 (wording of 30 May 2013) of the Subsurface Law is in conflict with Paragraph 3 of Article 53 and Paragraph 2 of Article 54 of the Constitution, it should be noted that, as mentioned before, the duty, consolidated in Paragraph 3 of Article 46 of the Constitution, for the state to regulate economic activity so that it serves the general welfare of the nation implies the requirement for the legislature, when it regulates such activity, to balance different constitutional values, *inter alia,* those protected under Articles 46, 53, and 54 of the Constitution: freedom of individual economic activity and economic initiative, freedom of fair competition, the protection of consumer interests, and the protection of human health and the environment; in regulating the economic activity related to the use of the subsurface, account should be taken, *inter alia,* of the economic interests of the state, *inter alia,* the necessity to ensure the security and reliability of the energy system as a constitutionally important objective and a public interest; since the economic or other activity related to the use of the subsurface may pose a threat to the environment and human health, the legislature, when implementing its discretion to form the state economic policy, *inter alia,* the policy of using the subsurface, must, according to the provisions of Paragraph 3 of Article 46, Paragraphs 1 and 3 of Article 53 and Article 54 of the Constitution, regulate this activity so that different constitutional values might be balanced and, in an effort to ensure the state economic interests, *inter alia,* the security and reliability of the energy system, including the possibility of receiving energy resources from multiple sources, must alongside create the necessary legal preconditions for protecting the environment and human health against any possible harmful impact caused by such activity, and prevent the emergence of any possible damage on the environment and human health. In addition, the legislator has the powers to ban completely a certain activity related to the subsurface, as, for instance, the use of subsurface specific resources or the application of a certain method (technology) of the exploration and/or extraction of such resources.

It has also been mentioned that, under the Constitution, *inter alia,* the provisions of Paragraph 3 of Article 46, Paragraphs 1 and 3 of Article 53, and Article 54 thereof, the legal regulation of economic activity is also possible, which is established by the legislature and is designed for ensuring the general welfare of the nation as well as related to using the subsurface, whereby it is allowed to apply the ways

(technologies) of researching the subsurface and extracting its resources where such ways (technologies) might pose a threat to the environment or human health; when regulating the possibility of applying such methods (technologies) for exploring and/or extracting subsurface resources, the legislature must also establish effective measures which would create preconditions for a proper protection of the environment or human health, and which would not allow any such economic activity by which inevitable harm could be inflicted on the environment or human health; the said measures must ensure, among other things, that the economic activity related to the exploitation of the subsurface is assessed in terms of its possible impact on the environment, also that this economic activity is subject to the conditions aimed at protecting the environment and human health, as well as that an effective supervision is carried out over such activity *(inter alia,* its compliance with the technological requirements).

3. It has been mentioned that, according to the impugned legal regulation, the application of hydraulic rock fracturing for exploring the subsurface and exploiting subsurface resources, including unconventional hydrocarbons, is allowed under procedure laid down by the Government or an institution authorised by it; the fact characteristic of hydraulic rock fracturing is that a certain part of the generated mining waste, i.e. substances (possibly including toxic substances) used for such fracturing and substances (possibly including radioactive substances) generated in the subsurface during such fracturing, remains in artificial subsurface voids.

4. As mentioned before, the Subsurface Law (wording of 10 April 2001 with subsequent amendments and supplements) and other laws have laid down the measures for protecting human health and the environment, *inter alia,* in the process of exploring the subsurface and/or exploiting subsurface resources, including unconventional hydrocarbons. From among them, *inter alia,* the following measures have been mentioned: the exploration and/or exploitation of unconventional hydrocarbons is prohibited in protected areas and in certain territories related to water protection; it is required to make an assessment of environmental impact of the proposed activity of extracting certain subsurface resources (exploring and/or extracting unconventional hydrocarbons); depending on the results of such an assessment, such activity may not be allowed at all in certain situations, or it may be allowed on the condition that specific measures of the protection of human health and the environment are applied; such an activity may be carried out only upon the receipt of the appropriate permit and only where this activity is in line with the conditions established in the project documents coordinated with the competent institutions and complies with the requirements of the legal acts regulating the quality of work, the protection of the environment, *inter alia,* the protection of groundwater and surface water, and the safety of work; it is required to inform the competent institutions about the substances to be used or used during such activity, including radioactive or toxic substances, or those that are dangerous to human health or the environment, as well as the precise composition and amount of such substances; it must be ensured that the substances used in exploring and/or exploiting unconventional hydrocarbons do not enter into groundwater and/or surface water or the environment, and that such substances do not contaminate them; subsurface monitoring must be carried out (such monitoring is mandatory in exploring and/or exploiting unconventional hydrocarbons); the

competent state institutions must supervise such activity in all its phases and, *inter alia,* in certain situations, must suspend the validity of issued permits or revoke such permits.

It should be noted that by means of such measures the preconditions have been created for avoiding inflicting harm on human health and the environment (including the subsurface, groundwater and surface water, as well as drinking water) during subsurface exploration and/or the exploitation of subsurface resources, including unconventional hydrocarbons, by means of hydraulic fracturing and by leaving the waste generated during such fracturing in artificial subsurface voids; there are no grounds for stating that these measures are not sufficiently effective.

Alongside, it needs to be noted that if it transpires that the measures for protecting human health and the environment as established in laws are not effective enough, the Constitution, *inter alia,* the provisions of Paragraph 3 of Article 46, Paragraphs 1 and 3 of Article 53, and Article 54 thereof, would give rise to the legislature's duty to establish additional measures for the protection of human health and the environment, and, should it prove impossible to do so, the legislature would have to prohibit conducting certain activity related to the subsurface, as, for instance, using certain subsurface resources or applying a certain method (technology) for exploring or extracting such resources.

5. Thus, it should be held that the impugned legal regulation, if it is interpreted in conjunction with the provisions of the Subsurface Law (wording of 10 April 2001 with subsequent amendments and supplements) and other laws in which measures for protecting human health and the environment are consolidated, does not violate the requirements for protecting the environment and human health which arise from Paragraph 3 of Article 53 and Paragraph 2 of Article 54 of the Constitution.

6. In the light of the foregoing arguments, the conclusion should be drawn that, because of the fact that laws have established the measures that create the preconditions for avoiding inflicting harm on the environment and human health, Paragraphs 2 and 4 of Article 11 (wording of 30 May 2013) of the Subsurface Law, insofar as they provide that the mining waste resulting from subsurface exploration and/or the exploitation of subsurface resources by means of hydraulic fracturing may be left in artificial subsurface voids under procedure established by the Government or an institution authorised by it, are not in conflict with Paragraph 3 of Article 53 and Paragraph 2 of Article 54 of the Constitution.

Conforming to Articles 102 and 105 of the Constitution of the Republic of Lithuania and Articles 1, 53, 53^1, 54, 55, and 56 of the Law on the Constitutional Court of the Republic of Lithuania, the Constitutional Court of the Republic of Lithuania gives the following

ruling:

To recognise that Paragraphs 2 and 4 of Article 11 (wording of 30 May 2013; Official Gazette *Valstybės žinios,* 2013, No. 64-3176) of the Republic of Lithuania's Subsurface Law, insofar as they provide that the mining waste resulting from subsurface exploration and/or the exploitation of subsurface

resources by means of hydraulic fracturing may be left in artificial subsurface voids under procedure established by the Government or an institution authorised by it, are not in conflict with the Constitution of the Republic of Lithuania.

This ruling of the Constitutional Court is final and not subject to appeal.

Justices of the Constitutional Court: Elvyra Baltutytė

Vytautas Greičius

Danutė Jočienė

Pranas Kuconis

Vytas Milius

Egidijus Šileikis

Algirdas Taminskas

Dainius Žalimas