

3rd Panel Shale gas – Prospects in Europe (EU, Poland, Ukraine, Lithuania, Latvia)

Speakers:

Moderator: Vanessa Edwards, Partner, K&L Gates London and Brussels office

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Irina Paliashvili - RULG, Ukrainian Legal Group, P.A., Co-Chair, CIS Local Counsel Forum

Konrad Szymański - PiS member of the European Parliament, deputy coordinator of the European Conservatives and Reformists Group in the ITRE Committee

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SECOND ANNUAL



Introduction of our speakers

- Vanessa Edwards, Partner, K&L Gates London and Brussels office
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EU

- REACH (Regulation 1907/2006)
- Registration, Evaluation, Authorisation and Restriction of Chemicals
- Substances manufactured or imported above one tonne p.a must be registered by given deadline
- Unregistered substances cannot be manufactured or placed on market
- Registration must include information on all registrant's identified use(s) and chemical safety report (10 tonnes p.a.)
- Supplier of substance/mixture must provide safety data sheet for substances of very high concern
- Exemptions for polymers (currently) and biocides



EU

- Downstream user may make use known to registrant
- Downstream user may instead prepare chemical safety report for own use and report certain information (including use) to ECHA
- Within 12/6 months of receiving safety data sheet
- Disclosure and confidentiality
- September 2011 Commission reported that no company had registered any of 10 chemicals typically used for shale gas extraction for that use
- 2012 review of REACH



LITHUANIA: prospects

NATIONAL ENERGY INDEPENDENCE STRATEGY (2012):

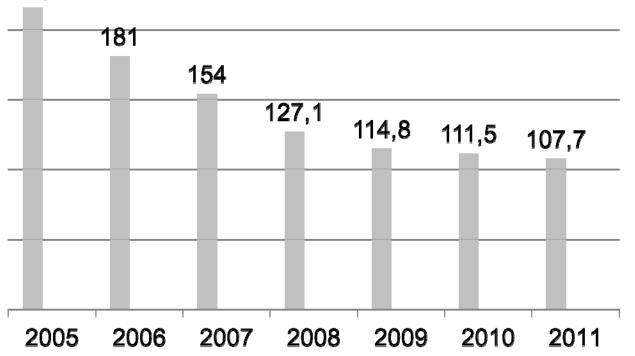
- Lithuania has 500 bcm of shale gas in western part of the country
- 100 bcm could be technically recoverable volumes (this amount would fulfil Lithuania's natural gas demand for about 30-40 years)
- Lithuania will support exploration of shale gas in the country and will support economically viable shale gas extraction and import in consistency with environmental principles



LITHUANIA: production of conventional oil

OIL PRODUCTION VOLUMES IN LITHUANIA (THOUSANDS OF TONES, Lithuanian Geological Survey))







LITHUANIA: Regulations

- LAW ON SUBSOIL:
 - No differentiation between conventional and unconventional
 - Subject to a permit (for exploration and production) and the agreement on production
 - Separate permit available only for prospection
 - Production is not limited in time (subject to production work program)
- TENDER RULES:
 - Technical pre-qualification (financial, technical)
 - Signature fee
- NO DISCUSSION so far on the need of special regulation for unconventional exploration& production



LITHUANIA: New tender

- CURRENT TENDER FOR THE EXPLORATION OF HYDROCARBON S
 - Šilutė-Tauragė block (about 1 800 km²) both conventional and unconventional
 - Min investment about EUR 23.2 million
 - Exploration period up to 7 yrs (unconventional) or 10 yrs (conventional)
 - Kudirka-Kybartai block (about 280 km²) conventional only
 - Min investment about EUR 4.5 million
 - Exploration period up to 10 yrs



LATVIA: Shale gas prospects

- Energy independence in gas sector is driven by two strategic lines:
 - LNG terminal in Riga and
 - Shale gas opportunities
- No comprehensive study on potential amounts of shale gas in Latvia
- News2biz in Oct 2012: Latvian authorities admitted that it is likely that shale gas volumes are not commercially viable
- 3 licencees for onshore oil&gas activities
- 1 licencee for offshore



LATVIA: Regulation

- LAW ON SUBTERRANEAN DEPTHS:
 - General legislation governing exploration and production of natural resources
 - Onshore prospection, exploration and production
- LAW ON MARINE ENVIRONMENT PROTECTION AND MANAGEMENT
 - Offshore prospection, exploration and production, including construction of artificial islands and structures necessary for such activities



LATVIA: Draft regulation

- DRAFT REGULATION ON HYDROCARBONS
 - Consolidated piece of legislation governing exploration and production of hydrocarbons
 - Licencing regulation, including rules for changing the licencees
 - Prospection licence is not subject to tender
 - Exploration and production licence is subject to tender
 - One licence to one area (block)
 - Stamp duties
 - Rules of protection of environment
 - Expected to be enacted by the end of 2012 (consultations with stakeholders is ongoing)
- NO SPECIFIC REGULATION FOR SHALE GAS
 - Explanatory notes to draft regulation only mentions that it is applicable to shale gas activities as well



UKRAINE

According to international experts Ukraine may hold the largest Shale Gas reserves in Europe.

The legislation of Ukraine and the Government were not prepared for this opportunity, but are now catching up!

Until recently Shale Gas was not even included in the list of natural resources of national significance, but now it is added to this list. It is also added, along with other Unconventional Hydrocarbons, to the list of natural resources eligible for Production Sharing Agreements (PSAs).



UKRAINE

There is no special legislation applicable to Shale Gas (and to other Unconventionals), but recently special provisions were added to the oil & gas, subsoil use and PSA legislation. In particular, in a PSAs made for Unconventional Hydrocarbons the parties can establish specific provisions, which may differ from the legislation applicable to conventionals, and which will prevail in case of a conflict.

At the same time not much attention is paid to the environmental aspects of Shale Gas development.



UKRAINE

The Government is hoping that Shale Gas development will contribute to energy independence of Ukraine and encourages foreign investment. Two PSA Tenders already took place in 2012, and PSAs are now being negotiated for the Olesska area with Chevron and for Yuzivska area with Shell. The announcement of a new PSA Tender for Slobozhanska area is expected soon.

A joint project between NAC Nadra and Eni and Cadogan is under way for Shale Gas development in Western Ukraine for the total area of 3.8 square kilometers.





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22 May 2012

Overview of Ukraine's Legal Regime for Upstream Oil & Gas Sector in 2011-2012

May 2012 - RULG-Ukrainian Legal Group is a full-service law firm based in Kiev and Washington, D.C. that provides comprehensive legal support to international corporate clients doing business in Ukraine and other CIS countries. One of the RULG's key practice areas is upstream oil & gas, both under Licensing Regime and under the PSA Regime. RULG coauthored the production sharing legislation (two laws and a number of regulations) for Ukraine, which provided the legislative basis for the first ever Ukrainian PSA signed in October 2007. Detailed information about RULG practice is available at www.rulg.com. Dr. Paliashvili can be contacted at irinap@rulg.com

We have been reporting on the new developments in Ukraine's upstream oil & gas sector for many years, and 2011-2012 turns out to be the most eventful period to date. It was signified by substantive legislative changes and by regulatory reform in the area of Subsoil use, as well as by two tenders held for production sharing agreements ("**PSA**").

The legal regime for upstream activities in Ukraine continues to be divided into more traditional **Licensing Regime**, with Subsoil Licenses (referred to in legislation as "special permits" to use Subsoil) generally offered at auctions, and the alternative **PSA Regime** under which the investor obtains the rights to use Subsoil under a production sharing agreement concluded with the State.

We note that Ukrainian laws and regulations, including in the area of Subsoil use, are drafted in such a complicated and legalistic language that for international investors it is sometimes very hard to understand the simplest provisions. We probably need a glossary of simplified terms, and in this article we sacrifice some accuracy in terminology for the sake of describing the current legal regime in comprehensible language.

The legislation governing the Licensing Regime remains confusing, conflicting and archaic. As to the PSA Regime, which is strongly favored by IOCs as the most investor-friendly and stable, a number of cardinal changes have occurred, some of them in favor of the State, including mandatory imposition on investors in selected PSAs of the "local partner" chosen by the State.

Nevertheless, the sheer scope and depth of developments and the ongoing political and economic complications related to energy supplies, suggest that this time around the Ukrainian Government ("GOU") is serious about opening up the upstream sector for international investors. All these developments were accompanied by frequent (and not always well-coordinated) statements by various senior government officials and active positioning of international oil companies ("IOCs") and local private-sector companies, as well as State-owned national oil companies ("NOCs") in anticipation of new projects, most notably in Shale gas and the Black Sea Shelf areas.

With regards to the Licensing Regime, however, it is still not clear how and on what conditions IOCs would be allowed to participate in exploration and production activities in Ukraine. In practice no attractive Subsoil areas have been offered to investors at auctions for years, if offered at all, while the legal instruments for investing in the existing Subsoil Licenses, such as joint activity agreements ("JAAs") and joint companies ("JVs"), remain severely restricted and vulnerable to intervention by GOU and courts.

PSA Regime looks much more attractive: not only it underwent cardinal changes at the legislative level, but what is even more important, the GOU, after several uneventful years (first PSA tender was held back in 2006 for the Prikerchenska area on the Black Sea Shelf), finally held two PSA tenders. 2011 culminated in the adoption of two Cabinet of Ministers Resolutions on preparing PSA tenders for Yuzivska and Olesska Subsoil areas (shale gas an other hydrocarbons), and the tenders were announced in February 2012. The results of the tenders were announced on 16 May 2012 and met the predictions of most experts: Yuzivska tender was won by Shell and Olesska — by Chevron. Although GOU's expectation of active bidding by IOCs (at some point GOU mentioned 15 potential bidders) has not materialized, both PSA tenders attracted very respectable IOCs: the bids were submitted by three more IOCs: Eni — for Olesska and ExxonMobil and TNK-BP for Yuzivska.

It is interesting to note that Russian national companies ignored the above PSA tenders. Gazprom, in particular, was not amused. As it was reported, Gazprom, following the analysis of both Olesska and Yuzivska opportunities, decided that these projects are not economically viable.¹ At the same time, Gazprom remains interested in traditional, based on a JV or a JAA, cooperation with Ukraine's NOCs on the Subsoil areas on the Black Sea Shelf, and seems to be

¹ news.zn.ua/ECONOMICS/gazprom_schitaet_yuzovskiy_i_olesskiy_uchastki_ekonomicheski_neeffektivnymi-101139.html

annoyed that the long pending Palace project on the Black Sea Shelf has not sufficiently progressed.²

It is expected that GOU will announce three more PSA tenders in 2012: Forosska and Skiphska Subsoil areas on the Black Sea Shelf and Slobozhanska onshore area (shale gas and other hydrocarbons). Informally GOU made it known that for the first two projects on the Black Sea Shelf no "local partner" will be imposed on the investor, but instead a large signing bonus will be required. The onshore Slobozhanska tender will probably look similar to Olesska and Yuzivska tenders and will feature the "local partner" requirement.

Investors very closely watch the developments with both Licensing Regime and PSA Regime, and by now it is clear that GOU's key strategic goals have shaped up, while the details are still being worked out:

- Favoring State-owned companies at the expense of private-sector companies: for the
 Licensing Regime giving State-owned companies (in which the State has a stake of as
 little as 25%) clear advantages for obtaining Subsoil Licenses under a non-competitive
 and non-transparent procedure; and for the PSA Regime imposing on investors a "local
 partner" (a fully or partially State-owned company with a yet unidentified stake by the
 State) for selected PSAs.
- The long awaited measure on allowing transfer or pledge of Subsoil Licenses (still with significant caveats) thus creating real market conditions for investment in exploration and production, failed at the Parliament. Moreover, a new bill was introduced at the end of 2011 reconfirming the already existing ban on transfer or pledge of Subsoil Licenses, further undermining investors' trust in such instruments as JVs and JAAs.
- Increasing the fiscal pressure on the oil & gas industry. There are bills pending at the Parliament (for example № 9661-д и №10331) introducing amendments to the Tax Code that would sharply increase taxes for the oil & gas sector, including a huge increase in payments for the use of subsoil.

In short the GOU is in the process of replacing the old relatively liberal regime but no action, with a new, less favorable regime, which carries real opportunities. IOCs respond with numerous complains, but readiness to invest. To this end GOU announced that in 2011 Ukraine reached an agreement with 21 IOCs on exploration and production of hydrocarbons, but most of them still on the level of MOUs or Joint Study Agreements, which are largely of declarative nature. Last announcement came on 22 May 2012 from Interfax-Ukraine, reporting, based on interview of President of Ukraine, that Ministry of Ecology and ExxonMobil Exploration Company had signed a memorandum of cooperation. There were also several reports on the above-mentioned Palace area on Black Sea Shelf to be developed jointly by Naftogaz and Russia's Gazprom with the 50-50 split, on a basis of some "joint venture". Negotiations also were reported between Naftogaz and Brazil's Petrobras on development of Black Sea Shelf.

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www.geonews.com.ua/index.cgi?a=45462

At the same time, it is hard to imagine an active flow of investments under the Licensing Regime until GOU makes critical improvements. As to the PSA Regime, the actual opportunities have been already offered, but traditionally this regime is used only for large, expensive and long-term projects (sea shelf, Shale gas, etc.). Finally, there is also a theoretical possibility to convert existing Subsoil Licensing into PSAs, but so far there is only a brief provision in the PSA Law. No regulations were developed and no precedents occurred based on this provision. Below we offer a more detailed summary of the current legal regime for upstream sector, which consists of the following sections:

I. Subsoil Licensing Regime

- (A) Reform of the Regulatory Bodies
- (B) New Licensing Regulations
- (C) Transfer of rights to use Subsoil

II. Joint Companies (JVs) and Joint Activity Agreements (JAAs)

III. Production Sharing Agreements ("PSA") Regime

- (A) Changing the Rules of the Game
- (B) Amendments to the PSA Law: stabilization clause restored; the PSA List removed
- (C) Practical Opportunities for PSAs: PSA tenders for Yuzivska and Olesska Subsoil areas

IV. Shale Gas: Legal Status Changed

I. Subsoil Licensing Regime

(A) Reform of the Regulatory Bodies

GOU has been known to regularly rename the government bodies without any substantive changes, in particular those in charge of regulating Subsoil use. The long standing key regulator (often referred to as "Authorized Body") was the Ministry of Ecology with some secondary and technical functions assigned to the Geological Service, which for the past few years was integrated into the Ministry. In 2011, however, a substantive reform occurred in regulatory bodies: the Geological Service was given a separate independent status, was renamed (again!) "State Service for Geology and Subsoil" (known by its Ukrainian abbreviation "Derzhgeonadra") and became the key regulator: the Authorized Body in the area of Subsoil use and in charge of issuing Subsoil Licenses.

The Ministry of Ecology retained some secondary functions, including under the strange formula that the activity of the Derzhgeonadra is "directed and coordinated by the Cabinet of Ministers of Ukraine through the Minister [not the Ministry, but the Minister!] of Ecology and Natural Resources". The Ministry of Ecology quickly adopted a number of regulations highlighting its regulatory role, including the procedure for granting clearance by the Ministry for issuance of Subsoil Licenses by Derzhgeonadra, but the new reality is that Derzhgeonadra, and no longer the Ministry, is the key Authorized Body.

While the industry was getting used to the new regulator, an interesting shift occurred with regards to the leadership of Derzhgeonadra and the Ministry of Ecology: in April 2012 GOU appointed Mr. Eduard Stavitsky, the Head of Derzhgeonadra, the Minister of Ecology, and right away appointed him the Head of the Inter-Departmental PSA Commission (until then this position was occupied by the First Vice-Prime Minister). Mr. Oleg Proskuryakov, who was the Chairman of the Board of the NOC "Nadra of Ukraine", became the new Head of Derzhgeonadra. The investors are guessing how these significant shifts will reflect on the regulatory reform, which now all of a sudden seems far from being completed.

(B) New Licensing Regulations

The GOU adopted in 2011 the long-awaited measure on replacing the annual procedures for granting Subsoil Licenses and holding subsoil auctions ("Licensing Regulations") with permanent Licensing Regulations. Of course even the latter can be amended, but in general the chaos of changing the rules of the Licensing Regulations every year has ended. The new Licensing Regulations were adopted on 30 May 2011 by two GOU Resolutions: No. 615 "On Approving the Procedure for Granting Special Permits to Use Subsoil" ("Licensing Procedure") and No. 594 "On Approving the Procedure for Holding Auctions for Sale of Special Permits to Use Subsoil" ("Auction Procedure").

The new Licensing Regulations have a major significance for the upstream sector and deserve a separate detailed analysis, but in this article we highlight only the most important negative and positive trends.

Negative Trends:

- Despite declaring equal regime for national and foreign investors, including in the Program of Economic Reforms for 2010-2014, the GOU reaffirmed the unfair preferences for State-owned companies (in which the State has the stake of as little as 25%) allowing Subsoil Licenses to be granted to them without an auction or tender (i.e. on a non-compete and non-transparent basis).
- There is a confusion in the Licensing Procedure as to extension of various Subsoil Licenses, in particular it is not clear how many times the Production License or a single Exploration/Production License can be extended (the extension of Exploration License is expressly limited to two times).
- The procedure and specifics of issuing Subsoil Licenses for areas located on the Shelf was not clarified.
- Although the Licensing Regulations do not list the categories of Subsoil users, the
 reference is made to the respective Article 13 of the Subsoil Code, which expressly
 includes foreign (non-resident) legal entities and physical persons. At the same time, the
 list of documents that need to be submitted with the Subsoil License application (Annex
 1 to the Licensing Procedure) makes it clear that non-residents cannot apply for a
 Subsoil License directly (i.e. outside of the auction procedure) because they cannot
 possess the required documents.

Positive Trends:

- While the Licensing Regulations in previous years deprived the holders of Exploration Licenses from an opportunity to convert them into Production License without an auction, the current Licensing Procedure allows a holder of Exploration Subsoil License, which conducted geological exploration and calculated and approved the reserves, to obtain Production Subsoil License without the need to compete for it at an auction.
- The single Exploration/Production License is now included in the Licensing Procedure, the term of which is 20 years on-shore and 30 years off-shore.
- The Licensing Procedure introduced an interesting new language with regards to reformulation and transfer of a Subsoil License. It divides such cases into (i) "reformulation", which only includes technical grounds such as change of license-holders name, address, etc.; and (ii) "introducing amendments" to the Subsoil License, which allows actual transfer of Subsoil License in case the license-holder creates a new joint company where it owns at least 50% stake. This latter transfer provision, however, contradicts the Subsoil Code and the Law "On Oil and Gas" and therefore its legality is questionable (the legislative amendments, which would have allowed transfer of Subsoil License, were rejected at the Parliament as described in sub-Section (C) below).
- Article 6 of the Auction Procedures stipulates that the auction organizers must obtain all approvals and clearances with regards to the Subsoil areas offered at auctions.

In practice, as in previous years, the GOU offered negligible number of Subsoil License for hydrocarbons at auctions. In 2011 only one auction was held on 27 December and only one oil & gas area was included, the Exploration and Test Production License, which was purchased by a local private company Golden Derrick. At the same time, the GOU continued to grant Subsoil Licenses on a preferential basis to State-controlled companies under a non-competitive procedure, i.e. without an auction and continued to adopt decisions to this effect.

(C) Transfer of rights to use Subsoil

Subsoil Code (Article 16) and the Law "On Oil and Gas" (Article 14) contain an expressed flat ban on any alienation/transfer by the license-holder of the rights to use Subsoil (i.e. the Subsoil License), including expressed ban on contributing these rights to JAAs or JVs, and implied ban on pledging such rights. This ban in effect deprives investor in a JAA and a JV (in case JV itself is not the license-holder) from any rights to the Subsoil License making these instruments unattractive to strategic investors, and deprives the license-holders from the possibility to seek outside financing because they cannot secure their obligations by pledging their rights. An attempt in the Licensing Regulations to stipulate limited possibility for license-holder to transfer the Subsoil License to a JV (in which the license holder has at least 50% stake) is illegal and cannot be relied upon because it contradicts the above ban.

GOU understood that the ban was a serious obstacle for attracting investors, and in 2011 supported a Bill at the Parliament that would have lifted the ban on alienation/transfer of the rights to use subsoil and allowed mortgaging/pledging of such rights under certain conditions. Without going into detail on various conceptual and drafting shortcomings of the Bill, one of its

key problems was that the license-holder would be obliged to offer the rights first to the State, and a 100% State-owned company (presumably an oil & gas company, which would be a direct competitor to the investor who originally intended to acquire the rights) would have a preemptive right to acquire them.

The initiative to lift the ban was long overdue and absolutely necessary to create market conditions for investment in exploration and production of natural resources. However, this Bill (which still required substantial improvement) was simply rejected by the Parliament, and a new bill was introduced at the end of 2011 reconfirming the already existing ban on transfer or pledge of Subsoil Licenses, bringing this issue back to square one.

II. Joint Companies (JVs) and Joint Activity Agreements (JAAs)

Any partnership with the license-holder, which is a State-controlled company (in which the State has a majority stake), either a JAA or a JV, is subject to a number of special restrictions and requirements, including *inter alia*:

(A) For JVs:

Specific GOU and various other approvals must be obtained for forming a JV with a Statecontrolled company, and in case the JV is formed outside Ukraine, an individual license of the National Bank of Ukraine will be also required. In addition a provision exists in Article 11.7 of the Law on Management of State Property that in any company newly created on the basis of objects of State property, the corporate rights of the State must exceed 50% of the authorized fund. This provision, although not entirely clear, has been generally interpreted to mean that the State-controlled company must have a stake in the JV exceeding 50%. Some legal experts take a position that this requirement can be avoided by the State-controlled company making a contribution to the JV, which would not qualify as "objects of State property", but in addition to ambiguous legality, the question would arise what exactly the State-controlled company will be able to contribute in this case, since it will not be contributing any property nor the rights to use subsoil, which are restricted too. Moreover if this position could be solidly defended, we would see JVs being formed with State-controlled companies holding minority stakes, which is not occurring in practice. Finally, another obstacle for forming a JV with a State-controlled company is that in practice the latter will not be liable with its assets in case of any dispute because the law imposes a moratorium on compulsory sale of the property of State-owned companies, and there are also additional "temporary" immunities imposed by law for certain energy companies.

(B) For JAAs:

An investor will have no stake in and no control of the Subsoil License and such investor's rights will be based exclusively on its civil-law agreement (JAA) with the State-controlled company, which will be the exclusive license-holder. Same as for JV, such JAA will require a specific individual approval by the GOU and a number of other approvals. Until recently there was no legal requirement as to what stake a State-controlled company must have in a JAA, but in 2011 the new legislation was enacted with regards to JAAs, establishing such stake at 50% or more. This legislation also stipulated further restrictions, such as prohibiting contribution into JAAs of fixed assets of State-controlled companies that cannot be privatized (such as NAC Naftogaz), and requiring a tender for attracting investors into JAAs. Finally, same as with JVs, a State-

controlled company in practice will not be liable with its assets in case of any dispute because the law imposes a moratorium on compulsory sale of the property of State-owned companies, and there are also additional "temporary" immunities imposed by law for certain energy companies.

One known practical example of GOU's approval of a JAA is the Cabinet of Ministers Ordinance dated 10 December 2010 (and only published more than a month later) approving a JAA between State-owned joint stock company Chornomornaftogaz (a subsidiary of NAC Naftogaz) and Lukoil with regard to three subsoil areas on the Black See shelf: Odesskoe, Bezimennoye and Subbotinskoye. The share of Chornomornaftogaz in this JAA must be no less than 50% and the JAA, after it is signed, must be submitted to the GOU for the final approval. Then it took more than a year to get this draft JAA approved by the Ministry of Energy, and only now it was reported that the JAA is ready for singing, but needs yet one more approval of the GOU!

In general the JAAs, which in practice have been the main investment vehicle in the Subsoil sector for years, were seriously compromised by various attacks by GOU and courts. In particular, the tax authorities keep insisting on their long-standing position that the **rights of ownership** to the extracted minerals may belong only to the license-holder, and such rights cannot be contributed (assigned) under the JAA to the investor.

The confusing and inconsistent attitude of GOU towards JAAs, as well as significant restrictions, in particular the new once enacted in 2011, remain a serious risk factor for using JAAs as a legal instrument for investment in oil & gas sector.

III. Production Sharing Agreements ("PSA") Regime

(A) Changing the Rues of the Game

Ukraine's PSA Regime was often praised by the investment community as being liberal and investor-friendly, and in particular letting investors conclude PSAs directly with the State without the need for a local partner. In practice the only PSA Tender so far held in Ukraine for the Prikerchenska area was won by an IOC that had no local partner. Then, the GOU repeatedly warned the investment community that it was not happy that local partners were not imposed on investors in the PSAs, citing the example of Turkey where the national company Turkish Petroleum Corporation (TPAO) has 50% stake in every project.

Finally in 2011, GOU changed the rules of the game, enacting Amendments to the PSA Law that in effect allow GOU to impose a local partner on the winner of the PSA tender, with the presumed obligation to fund the involvement of such local partner. The investors are not required to bid with the local partner, they can bid alone or in a consortia, with the local partner conveniently waiting for a winner to impose its involvement. An interesting aspect is that this local partner is not identified in the law. It is vaguely defined as "commercial partnership [company], 100% of the authorized capital of which belongs to the State, or commercial partnership [company] created with its participation". This awkward formula means that any company with any State-owned stake can qualify as the local partner.

The above Amendments to the PSA Law do not establish the size of the interest of the local partner in the PSA, but provide that the investor, which won the PSA tender, not the local

partner, will be the operator of the PSA. Other than that the Amendments lack crucial details on how the relationship with the local partner will be structured.

These Amendments to the PSA Law also undermined one more essential right of an investor, which was granted under the original PSA Law: to freely use its share of production, including exporting it outside of Ukraine. This right was important to investors because Ukraine is known to impose restrictions and price controls on domestic sales, in particular of natural gas. Amendments to the PSA Law, however, provide that "in selected instances" the PSA tender conditions may contain the investor's obligation to sell its share of production exclusively at the domestic market.

(B) Other Amendments to the PSA Law: stabilization clause restored; the PSA List removed.

Two other important Amendments to the PSA Law were also enacted in 2011:

- The so called "stability clause" allowing the investor to rely on the legislation in effect at
 the time of signing the PSA throughout the term of the PSA, which was removed from
 the PSA Law in 2010, was restored back. This development was unanimously welcomed
 by the investors, which consider guarantees against changes in the legislation for the
 duration of the PSA essential for such long-term and high-cost investment.
- The PSA Law contained a requirement that the Subsoil areas eligible for PSAs must be included in the list adopted from time to time by the Cabinet of Ministers (the "PSA List"). The PSA List had to be agreed in advance with local authorities, which were not always happy to unconditionally grant their agreement. In practice the GOU reportedly encountered strong resistance from the local authorities when it was trying to include the Olesska Shale gas area located across several regions in Western Ukraine into the PSA List. In response, the Amendments to the PSA Law were enacted eliminating the PSA List altogether. This may seem as a liberalization measure, removing an extra approval, but although the local authorities can be removed from the stage of tendering Subsoil areas, which will make this stage easier for GOU, in practice they are not going anywhere. The investor will face them immediately as soon as it signs the PSA and starts its activities in the area, and will have to deal with them directly and find a compromise. Basically GOU shifted the burden of dealing with local authorities from itself to the investor.

(C) Practical Opportunities for PSAs: tenders for Yuzivska and Olesska Subsoil areas

Although the PSA Regime may be applied to any subsoil areas on-shore and off-shore, in practice it is understood that the PSA mechanism will be offered mostly for Black and Azov Sea Shelf (both shallow-water and deep-water) and for some Shale gas areas. The current GOU chose to prepare the PSA tenders first for two on-shore areas, Yuzivska and Olesska ("PSA Tender Areas"), aiming at exploration and production of primarily Shale gas. Two relevant GOU Resolutions on preparing PSA Tenders were adopted on 30 November 2011 ("PSA Tender Resolutions") and the Tenders were announced in February 2012.

In fact originally GOU planned to designate these PSA Tender Areas strictly for Shale gas, depriving potential investor of an opportunity to develop other types of hydrocarbons. The investors, however, convinced the GOU otherwise, and the PSA Tender Resolutions provide for development of various hydrocarbons that may be found in these areas (Shale gas, natural gas, CBM, crude oil and condensate), with the common understanding, however, that Shale gas would remain a priority.

Not surprisingly the GOU took advantage of the recently enacted Amendments to the PSA Law (described in sub-Section (A) above) on local partner and included the provision in the PSA Tender Resolutions imposing a local partner on the winner of the PSA tender. The GOU went further by requiring the winner to fund the involvement of such local partner and establishing its stake at 50%.

This "local partner" was later identified through a two-level tender process: first a tender determined the State company: NAC Nadra of Ukraine, and then another tender was held among private companies, which was won by a small geological company SPK Geoservice. A joint venture between NAC Nadra of Ukraine and SPK Geoservice (in which NAC Nadra of Ukraine has a 90% stake) became the "local partner" to the winners of both PSA Tenders. As it is known, Yuzivska tender was won by Shell, and Olesska tender by Chevron.

These winners will have 120 days to conclude with the local partner a joint operation agreement or another agreement based on international oil and gas exploration/production practices. It is not clear what happens if the parties fail to reach an agreement within this timeframe, or in general. Moreover, such an agreement appears to be a pre-condition for concluding the actual PSA with the State, so the winners will have to negotiate on two fronts: with the local partner and with the State. It should be kept in mind that the PSA Law establishes the 12-months term (with one possible 6-month extension) for negotiating the PSA with the State, and negotiations with the local partner may deduct 120 days (4 months) from the 12-months timeframe for the actual PSA negotiation with the State.

The PSA Tender Resolutions stipulate that the bidders must propose the ratio for the production sharing with the State in their applications, but do establish some parameters: the cost-recovery production is limited to 70%; the State share in the profit production must be at least 15% for Olesska area (16.5% for Yuzivska) of the total production, which if calculated together with the 50% share of the local partner, leaves the investor with 42.5% share in profit production (out of 100% of the total profit production the first 15% goes to the State, and the remaining 85% is evenly split between the investor and the local partner). The PSA Tender Resolutions also contain the minimal scope of investment required separately for the exploration and production stages.

The above terms and conditions of the PSA Tender Resolutions caused protests from the investment community and relevant letters were sent to the GOU, simultaneously listing the industry's other requests, such as international arbitration, waiver of the sovereign immunity by the State, etc.

The Olesska and Yzivska PSA tenders and the subsequent process of negotiating and concluding PSAs (including handling the "local partner") are an important test of how serious GOU is in terms of attracting investors and what level of GOU-favored conditions investors are willing to tolerate.

IV. Shale Gas: Legal Status Changed

Shale Gas became a focus of attention in Ukraine's upstream sector and many IOCs are looking into these opportunities or even announcing their shale gas plans. The GOU initially was caught unprepared for this active interest and is eager to learn from the experience of other countries, most notably the US and Poland. To this end Memorandum of Understanding between GOU and the US Government on Unconventional Gas Resources was signed in 15 February, 2011. The purpose of the Memorandum is the exchange of knowledge and expertise in the fields of assessment and qualification of shale gas resources in Ukraine.

The GOU in 2011 has also fixed a loophole in the legislation, specifically designating Shale gas as a mineral of national significance by including it in the relevant GOU-approved list.





Climate impact of potential shale gas production in the EU

Final Report







Report for European Commission DG CLIMA

AEA/R/ED57412 Date 30/07/2012 Issue 2





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Executive Summary

As readily accessible oil and gas reserves are becoming progressively limited the energy supply industry is increasingly turning to unconventional reserves which were previously too complex or too expensive to extract. In particular there has been a growing interest in Europe in the exploitation of gas reserves trapped within shale rock. This is commonly referred to as 'shale gas'.

As with any drilling and extraction process shale gas extraction may bring environmental and health risks which need to be understood and addressed. In particular the potential contribution of shale gas production to greenhouse gas (GHG) emissions is a key area of interest. These impacts are the subject of this report. The report has been commissioned by DG Climate Action of the European Commission and delivered by AEA, in collaboration with CE Delft and Milieu.

Drawing upon existing research this report provides an examination of the potential climate impacts of shale gas production in the EU. It begins with a review of existing estimates of GHG emissions from shale gas production and of the potential options for abating emissions from shale gas processes. This evidence is then used to estimate the potential emissions that might be associated with shale gas exploitation in the EU. A brief review is also provided of the current legislative framework in the EU for controlling GHG emissions from shale gas operations. Finally the report provides an examination of the current GHG emissions reporting framework and explores the extent to which emissions from shale gas operations would be captured within the existing reporting requirements. Where there are identified gaps the report addresses the need for further reporting guidelines.

The report does not explore the potential role of shale gas in the future energy supply mix, or any potential implications of the exploitation of indigenous shale gas resources on the development of renewable or other energy sources in Europe. These issues are important considerations for energy and climate policy makers but are beyond the scope of this study. However, the results provided here can be used as inputs to discussions around these issues.

Shale gas exploitation

In the U.S. there has been a rapid growth in the exploitation of shale gas reserves, with production increasing by 48% between 2006 and 2010. Despite there being significant shale gas reserves in Europe, with technically recoverable shale gas resources estimated at approximately 18 trillion cubic metres (m³), exploitation of shale gas to date has been limited and there is no commercial production at present.

The recent combination of higher natural gas prices, and the development of shale gas production in the U.S., has increased interest in shale gas exploitation within Europe. As a result permission is now being sought in several EU Member States for exploratory works with the explicit aim of bringing forward sites / projects for the extraction of shale gas.

A number of the key processes involved in the extraction of shale gas reserves are similar to conventional natural gas. However, certain process steps are more specific to unconventional gas extraction and the scale and complexity of operations differ from conventional practices. In particular, the extraction of shale gas typically involves a process known as hydraulic fracturing (fracking) where water, chemicals and proppants are pumped at high pressure into the well in order to open fractures in the rock and release the shale gas.

Other aspects of shale gas extraction differ from conventional natural gas. For example, additional drilling is required for horizontal wells, along with much greater volumes of water required in the hydraulic fracturing process.

Once production begins at the well the subsequent process steps in the exploitation of shale gas (processing, transportation, distribution) are largely comparable with conventional natural gas.

GHG emissions from shale gas production

The GHG emissions from shale gas production have been the subject of a number of studies since 2010. These studies have yielded a large variation in the estimated impacts of shale gas. Some studies, which have received a lot of media attention, have concluded that the lifecycle GHG emissions from shale gas may be larger than conventional natural gas, oil, or coal when used to generate heat and viewed over the time scale of 20 years (Howarth et al, 2011). However the majority

Ref: AEA/ED57412/Issue 2



of studies suggest that emissions from shale gas are lower than coal, but higher than conventional gas, based on other assumptions. These estimates are discussed further in this report.

In practice most of the existing studies have drawn upon a narrow set of primary data from shale gas operations in the U.S. Differences in the estimated emissions frequently arise from the interpretation by the authors of the primary data, in addition to the different underlying assumptions used in their GHG assessments. As new information sources have come to light this has led to new and improved estimates of the GHG impacts. However a number of uncertainties remain including: the level of emissions associated with the well completion stage; about levels of water re-use and treatment of waste water. Overall, the emissions from shale gas are dominated by the combustion stage. Significant emissions also arise from the well completion, gas processing and transmission stages, but the overall significance of these pre-combustion stages is less. Emissions from exploration have not been taken into account in any previous studies.

Drawing upon these studies, and their underlying data sources, a hypothetical analysis has been carried out of the potential lifecycle GHG emissions that may arise from shale gas exploitation within Europe. In our base case, which does not represent a preferred scenario, we have estimated the GHG emissions per unit of electricity generated from shale gas to be around 4% to 8% higher than for electricity generated by conventional pipeline gas from within Europe. These additional emissions arise in the pre-combustion stage, predominantly in the well completion phase when the fracturing fluid is brought back to the surface together with released methane. If emissions from well completion are mitigated, through flaring or capture, and utilised then this difference is reduced to 1% to 5%. This finding is broadly in line with those of other U.S. studies which found that generation from shale gas had emissions about 2% to 3% higher than conventional pipeline gas generation.

This study also considered sources of gas outside of Europe which make a significant contribution to European gas supply. Based on our hypothetical analysis, and drawing upon existing LCA studies for conventional gas sources, the analysis suggests that the emissions from shale gas generation (base case) are 2% to 10% lower than emissions from electricity generated from sources of conventional pipeline gas located outside of Europe (in Russia and Algeria), and 7% to 10% lower than that of electricity generated from LNG imported into Europe.

However, this conclusion is far from clear-cut. Under our 'worst' case shale gas scenario, where all flow back gases at well completion are vented, emissions from electricity generated from shale gas would be similar to the upper emissions level for electricity generated from imported LNG and for gas imported from Russia. This suggests, where emissions from shale gas are uncontrolled, there may be no GHG emission benefits from utilising domestic shale gas resources over imports of conventional gas from outside the EU¹. In fact, for some pipeline sources emissions from shale gas may exceed emissions from importing conventional gas.

The relative comparison with coal is clearer cut. In our analysis, emissions from shale gas generation are significantly lower (41% to 49%) than emissions from electricity generated from coal. This is on the basis of methane having a 100 year GWP of 25. This finding is consistent most other studies into the GHG emissions arising from shale gas.

These conclusions are based on experiences drawn largely from the U.S. Whilst attempts have been made to take into account the different circumstances in Europe, and how this may influence overall emissions, this comparison is still largely hypothetical. Where the shale gas industry develops in Europe this information should be used to update the results of the analysis.

Best available technologies for reducing GHG emissions

One of the key assumptions which can influence the scale of emissions estimated in the life cycle analysis is the assumed management practices and technologies employed at the shale gas extraction site. The use of best practice techniques has the potential to significantly reduce emissions relative to other practices.

A large proportion of the best practice techniques that have been identified include measures which have been demonstrated, and are a regulatory requirement, in specific regions in North America (and will be a regulatory requirement in the U.S. from 2015). It is reasonable to assume that these techniques will be applicable in Europe with the following caveats:

-

¹ When reporting emission on a production basis (as is the case with national emissions inventories under the United Nations Framework on Climate Change), emissions arising from shale gas operation within Europe will be captured within the EU's GHG emission inventory. However, emissions from e.g. conventional gas processing outside of Europe will not be accounted for in the EU's GHG inventory – and instead will be captured in the inventory of the regions in which they are produced



- Geology: the effectiveness of certain techniques requires sufficient gas pressure, which may not be the case at all locations in Europe.
- Infrastructure: at least initially any captured gas which doesn't meet the required natural gas specification would need to be processed further. This may be a constraint if the pipeline or processing infrastructure is not in place and suitable connections available for transferring captured gas do not exist.
- Availability and experience in equipment / technology: to capture the gas released on well
 completion and re-fracturing activity. This may be an issue in initial stages of development
 until vendors develop suitable solutions.

With respect to emissions resulting from flow back from well completions, the application of Reduced Emissions Completions has the potential to reduce emissions by around 90%. These technologies have been used extensively in the U.S. both in response to regulations and existing drivers (e.g. economic value of captured methane). While there are some restrictions on the sites where these measures can be used, in principle, they have the potential to deliver significant reductions in emissions from this stage in the process.

Further emissions reductions can be achieved at other stages in the gas cycle. These measures are not specific to shale gas and are also applicable to conventional gas sources. These include measures such as: more efficient compressors; improved leak detection or utilisation of gas stemming from production testing.

Legislation controlling GHG emissions from shale gas production

The overview analysis of the EU legal acts identified as relevant to shale gas has shown that there are very few requirements applicable specifically to GHG emissions from shale gas projects.

The EIA Directive (85/337/EEC; 2011/92/EU (codified)) is the most relevant as it sets requirements as to the consideration of climate change effects and air emissions as part of a full EIA. It requires Member States to ensure that developers supply certain information, such as a description of estimated air emissions and significant environmental impacts resulting from the project, including air and climatic factors. Furthermore, the Directive provides for competent authorities to give an opinion on the information supplied which, as a minimum, should include a description of the measures envisaged in order to avoid, reduce and if possible, remedy significant adverse side effects.

However, despite these requirements, many uncertainties remain as to whether Member States would require an EIA for shale gas operations and if so how Member States should implement the EIA. For example the way in which they would implement the methodology to be used to quantify GHG emission baseline scenarios.

Directive 92/91/EEC concerning minimum requirements for improving the health and safety of workers in the mineral-extracting industries through drilling does not contain any provisions specifically relating to GHG emissions. It does, however, set requirements to protect workers from harmful and / or explosive substances. This would primarily apply to methane present in such concentration that it could represent a risk in terms of flammability for workers.

With regard to the Directive on Industrial Emissions (2010/75/EU) it is not clear in which circumstances it would apply to shale gas exploration and exploitation activities and whether its measures on air emissions would cover methane contained within flow back.

It is beyond the scope of this report to make specific recommendations on how to overcome the potential shortfalls identified above.

Finally, the EU ETS Directive (Directive 2003/87/EC) could provide precedents for the regulation of shale gas emissions, through its treatment of venting and flaring, and emissions related to carbon capture and storage processes.

In order to encourage the application of best available techniques the following could be further investigated:

- Consideration of the issues identified related to the scope of the EIA Directive with regard to shale gas exploration and exploitation activities (Annex I or II);
- Consideration of information requirements on measures taken by developers to limit GHG emissions under the EIA Directive, or other pieces of relevant legislation;
- Consideration of the need for measures to limit GHG emissions for shale gas exploration and exploitation;



- Consideration of the issues identified related to the scope of the Industrial Emissions Directive with regard to shale gas exploration and exploitation activities;
- Consideration of the application of the emission limit values requirements under the Industrial Emissions Directive to methane emissions from exploration and exploitation activities.

Consideration could also be given to the application of emission limit values for methane emissions from exploration and exploitation activities.

However, in principle the legislation described above could provide a good approach with which to enforce best shale gas technologies, although this would likely need to be supplemented by BAT reference documents, guidance specific to shale gas technologies and clarification on the applicability of key directives. Alternatives, such as voluntary agreements could also be considered, but additional measures would be required to ensure they are rigorously applied.

Assessment of the current GHG emissions reporting framework

In order to ensure the effective control of GHG emissions from potential shale gas development in Europe it is important to ensure that emissions, where they arise, are reported. This information is important for understanding the net impact of any shale gas installations, and for assessing the impacts of control measures, and the potential for further controls.

A review has been carried out of the adequacy of current GHG emissions reporting frameworks, under the auspices of the UNFCC and IPPC, with the view to identifying areas where improvements may be needed in relation to shale gas production.

The review has identified no emission factors, GHG estimation methods, industry activity or emissions data specific to shale gas Exploration and Production (E&P) sources within the EU. However, information and reporting protocols from regulators in Canada and the U.S. provide estimation methods and indicative emission factors for these sources that are specific to shale gas E&P which could be developed for application in the EU.

IPCC Guidelines do not provide emission estimation methodology details or emission factors that are applicable to calculate emissions from sources specific to shale gas E&P such as well completions, well work-overs and the related management of flow back fluid.

The UNFCCC reporting format (CRF) does not require that countries specify GHG emissions from shale gas E&P, or from any other specific technology or sub-sector. Emissions and activity data are typically reported by countries at an aggregated level across all gas E&P sectors, with additional methodological detail provided within National Inventory Reports (NIRs). The level of detail provided regarding emission estimations within the NIRs is subject to the discretion of the inventory agency.

Several process stages in shale gas E&P, including processing and compressing the gas for distribution, require the same steps as with conventional gas. Therefore the current IPCC Guidelines and national GHG inventory methodologies should be adaptable to allow inventory agencies to derive complete and accurate estimates for these sources. Development of appropriate emission factors (ideally at the gas-basin level) through gas sampling and compositional analysis will be required to ensure that emission factors reflect the local shale gas composition.

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Support to the identification of potential risks for the environment and human health arising from hydrocarbons operations involving hydraulic fracturing in Europe

Report for European Commission DG Environment

AEA/R/ED57281 Issue Number 17 Date 10/08/2012







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Executive summary

Introduction

Exploration and production of natural gas and oil within Europe has in the past been mainly focused on conventional resources that are readily available and relatively easy to develop. This type of fuel is typically found in sandstone, siltstone and limestone reservoirs. Conventional extraction enables oil or gas to flow readily into boreholes.

As opportunities for this type of domestic extraction are becoming increasingly limited to meet demand, EU countries are now turning to exploring unconventional natural gas resources, such as coalbed methane, tight gas and in particular shale gas. These are termed 'unconventional' resources because the porosity, permeability, fluid trapping mechanism, or other characteristics of the reservoir or rock formation from which the gas is extracted differ greatly from conventional sandstone and carbonate reservoirs.

In order to extract these unconventional gases, the characteristics of the reservoir need to be altered using techniques such as hydraulic fracturing. In particular high volume hydraulic fracturing has not been used to any great extent within Europe for hydrocarbon extraction. Its use has been limited to lower volume fracturing of some tight gas and conventional reservoirs in the southern part of the North Sea and in onshore Germany, the Netherlands, Denmark and the UK.

Preliminary indications are that extensive shale gas resources are present in Europe (although this would need to be confirmed by exploratory drilling). To date, it appears that only Poland and the UK have performed high-volume hydraulic fracturing for shale gas extraction (at one well in the UK and six wells in Poland); however, a considerable number of Member States have expressed interest in developing shale gas resources. Those already active in this area include Poland, Germany, the Netherlands, the UK, Spain, Romania, Lithuania, Denmark, Sweden and Hungary.

The North American context

Technological advancements and the integration of horizontal wells with hydraulic fracturing practices have enabled the rapid development of shale gas resources in the United States at present the only country globally with significant commercial shale gas extraction. There, rapid developments have also given rise to widespread public concern about improper operational practices and health and environmental risks related to deployed practices. A 2011 report from the US Secretary of Energy Advisory Board (SEAB) put forward a set of recommendations aiming at "reducing the environmental impact "and "helping to ensure the safety of shale gas production."

Almost half of all states have recently enacted, or have pending legislation that regulates hydraulic fracturing. In 2012, the US Environmental Protection Agency (EPA) has issued Final Oil and Natural Gas Air Pollution Standards including for natural gas wells that are hydraulically fractured as well as Draft Permitting Guidance for Oil and Gas Hydraulic Fracturing Activities Using Diesel Fuels. The EPA is also developing standards for waste water discharges and is updating chloride water quality criteria, with a draft document expected in 2012. In addition, it is implementing an Energy Extraction Enforcement Initiative, and is involved in voluntary partnerships, such as the Natural Gas STAR program. The US Department of the Interior proposed in April 2012 a rule to require companies to publicly disclose the chemicals used in hydraulic fracturing operations, to make sure that wells used in fracturing operations meet appropriate construction standards, and to ensure that operators put in place appropriate plans for managing flowback waters from fracturing operations).



The general European context

In February 2011, the European Council concluded that Europe should assess its potential for sustainable extraction and use of both conventional and unconventional fossil fuel resources. A 2011 report commissioned by the European Parliament drew attention to the potential health and environmental risks associated with shale gas extraction.

At present, close to half of all EU Member States are interested in developing shale gas resources, if possible. Member States active in this area include Poland, Germany, Netherlands, UK, Spain, Romania, Lithuania and Denmark. Sweden, Hungary and other EU Member States may also be interested in developing activity in this area. However, in response to concerns raised by the general public and stakeholders, several European Member States have prohibited, or are considering the possibility to prohibit the use of hydraulic fracturing. Concurrently, several EU Member States are about to initiate discussions on the appropriateness of their national legislation, and contemplate the possibility to introduce specific national requirements for hydraulic fracturing.

The recent evolution of the European context suggests a growing need for a clear, predictable and coherent approach to unconventional fossil fuels and in particular shale gas developments to allow optimal decisions to be made in an area where economics, finances, environment and in particular public trust are essential.

Against this background, the Commission is investigating the impact of unconventional gas, primarily shale gas, on EU energy markets and has requested this initial, specific assessment of the environmental and health risks and impacts associated with the use of hydraulic fracturing, in particular for shale gas.

Study focus and scope

This report sets out the key environmental and health risk issues associated with the potential development and growth of high volume hydraulic fracturing in Europe. The study focused on the net incremental impacts and risks that could result from the possible growth in use of these techniques. This addresses the impacts and risks over and above those already addressed in regulation of conventional gas exploration and extraction. The study distinguishes shale gas associated practices and activities from conventional ones that already take place in Europe, and identifies the potential environmental issues which have not previously been encountered, or which could be expected to present more significant challenges.

The study reviewed available information on a range of potential risks and impacts of high volume hydraulic fracturing. The study concentrated on the direct impacts of hydraulic fracturing and associated activities such as transportation and wastewater management. The study did not address secondary or indirect impacts such as those associated with materials extraction (stone, gravel etc.) and energy use related to road, infrastructure and well pad construction.

The study has drawn mainly on experience from North America, where hydraulic fracturing has been increasingly widely practised since early in the 2000s. The views of regulators. geological surveys and academics in Europe and North America were sought. Where possible, the results have been set in the European regulatory and technical context.

The study includes a review of the efficiency and effectiveness of current EU legislation relating to shale gas exploration and production and the degree to which the current EU framework adequately covers the impacts and risks identified. It also includes a review of risk management measures.

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¹ European Council, Conclusions on Energy, 4 February 2011 (http://www.consilium.europa.eu/uedocs/cms Data/docs/pressdata/en/ec/119141.pdf)

Preliminary risk assessment

The main risks were assessed at each stage of a project (well-pad) development, and also covered the cumulative environmental effects of multiple installations. The stages are:

- 1. Well pad site identification and preparation
- 2. Well design, drilling, casing and cementing
- 3. Technical hydraulic fracturing stage
- 4. Well completion
- 5. Well production
- Well abandonment.

The study adopted a risk prioritisation approach to enable objective evaluation. magnitude of potential hazards and the expected frequency or probability of the hazards were categorised on the basis of expert judgement and from analysis of hydraulic fracturing in the field where this evidence was available to allow risks to be evaluated. Where the uncertainty associated with the lack of information about environmental risks was significant. this has been duly acknowledged. This approach enabled a prioritisation of overall risks.

The study authors duly acknowledge the limits of this risk screening exercise, considering notably the absence of systematic baseline monitoring in the US (from where most of the literature sources come), the lack of comprehensive and centralised data on well failure and incident rates, and the need for further research on a number of possible effects including long term ones. Because of the inherent uncertainty associated with environmental risk assessment studies, expert judgement was used to characterise these effects.

The study identified a number of issues as presenting a high risk for people and the environment. These issues and their significance are summarised in the following table.



Table ES1: Summary of preliminary risk assessment

	Project phase							
Environmental aspect	Site identification and preparation	Well design drilling, casing, cementing	Fracturing	Well completion	Production	Well abandonment and post- abandonment	Overall rating across all phases	
			Individ	ual site				
Groundwater contamination	Not applicable	Low	Moderate- High	High	Moderate- High	Not classifiable	High	
Surface water contamination	Low	Moderate	Moderate- High	High	Low	Not applicable	High	
Water resources	Not applicable	Not applicable	Moderate	Not applicable	Moderate	Not applicable	Moderate	
Release to air	Low	Moderate	Moderate	Moderate	Moderate	Low	Moderate	
Land take	Moderate	Not applicable	Not applicable	Not applicable	Moderate	Not classifiable	Moderate	
Risk to biodiversity	Not classifiable	Low	Low	Low	Moderate	Not classifiable	Moderate	
Noise impacts	Low	Moderate	Moderate	Not classifiable	Low	Not applicable	Moderate – High	
Visual impact	Low	Low	Low	Not applicable	Low	Low-moderate	Low - Moderate	
Seismicity	Not applicable	Not applicable	Low	Low	Not applicable	Not applicable	Low	
Traffic	Low	Low	Moderate	Low	Low	Not applicable	Moderate	
			Cumi	ılative				
Groundwater contamination	Not applicable	Low	Moderate- High	High	High	Not classifiable	High	
Surface water contamination	Moderate	Moderate	Moderate- High	High	Moderate	Not applicable	High	
Water resources	Not applicable	Not applicable	High	Not applicable	High	Not applicable	High	
Release to air	Low	High	High	High	High	Low	High	
Land take	Very high	Not applicable	Not applicable	Not applicable	High	Not classifiable	High	
Risk to biodiversity	Not classifiable	Low	Moderate	Moderate	High	Not classifiable	High	
Noise impacts	Low	High	Moderate	Not classifiable	Low	Not applicable	High	
Visual impact	Moderate	Moderate	Moderate	Not applicable	Low	Low-moderate	Moderate	
Seismicity	Not applicable	Not applicable	Low	Low	Not applicable	Not applicable	Low	
Traffic	High	High	High	Moderate	Low	Not applicable	High	

Not applicable: Impact not relevant to this stage of development

Not classifiable: Insufficient information available for the significance of this impact to be assessed



General risk causes

In general, the main causes of risks and impacts from high-volume hydraulic fracturing identified in the course of this study are as follows:

- The use of more significant volumes of water and chemicals compared to conventional gas extraction
- The lower yield of unconventional gas wells compared to conventional gas wells means that the impacts of HVHF processes can be greater than the impacts of conventional gas exploration and production processes per unit of gas extracted.
- The challenge of ensuring the integrity of wells and other equipment throughout the development, operational and post-abandonment lifetime of the plant (well pad) so as to avoid the risk of surface and/or groundwater contamination
- The challenge of ensuring that spillages of chemicals and waste waters with potential environmental consequences are avoided during the development and operational lifetime of the plant (well pad)
- The challenge of ensuring a correct identification and selection of geological sites, based on a risk assessment of specific geological features and of potential uncertainties associated with the long-term presence of hydraulic fracturing fluid in the underground
- The potential toxicity of chemical additives and the challenge to develop greener alternatives
- The unavoidable requirement for transportation of equipment, materials and wastes to and from the site, resulting in traffic impacts that can be mitigated but not entirely avoided.
- The potential for development over a wider area than is typical of conventional gas fields
- The unavoidable requirement for use of plant and equipment during well construction and hydraulic fracturing, leading to emissions to air and noise impacts.

Environmental pressures

Land-take

The American experience shows there is a significant risk of impacts due to the amount of land used in shale gas extraction. The land use requirement is greatest during the actual hydraulic fracturing stage (i.e. stage 3), and lower during the production stage (stage 5). Surface installations require an area of approximately 3.6 hectares per pad for high volume hydraulic fracturing during the fracturing and completion phases, compared to 1.9 hectares per pad for conventional drilling. Land-take by shale gas developments would be higher if the comparison is made per unit of energy extracted. Although this cannot be quantified, it is estimated that approximately 50 shale gas wells might be needed to give a similar gas yield as one North Sea gas well. Additional land is also required during re-fracturing operations (each well can typically be re-fractured up to four times during a 40 years well lifetime). Consequently, approximately 1.4% of the land above a productive shale gas well may need to be used to exploit the reservoir fully. This compares to 4% of land in Europe currently occupied by uses such as housing, industry and transportation. This is considered to be of potentially major significance for shale gas development over a wide area and/or in the case of densely populated European regions.

The evidence suggests that it may not be possible fully to restore sites in sensitive areas following well completion or abandonment, particularly in areas of high agricultural, natural or cultural value. Over a wider area, with multiple installations, this could result in a significant loss or fragmentation of amenities or recreational facilities, valuable farmland or natural habitats.



Releases to air

Emissions from numerous well developments in a local area or wider region could have a potentially significant effect on air quality. Emissions from wide scale development of a shale gas reservoir could have a significant effect on ozone levels. Exposure to ozone could have an adverse effect on respiratory health and this is considered to be a risk of potentially high significance.

The technical hydraulic fracturing stage also raises concerns about potential air quality effects. These typically include diesel fumes from fracturing liquid pumps and emissions of hazardous pollutants, ozone precursors and odours due to gas leakage during completion (e.g. from pumps, valves, pressure relief valves, flanges, agitators, and compressors).

There is also concern about the risk posed by emissions of hazardous pollutants from gases and hydraulic fracturing fluids dissolved in waste water during well completion or Fugitive emissions of methane (which is linked to the formation of recompletion. photochemical ozone as well as climate impacts) and potentially hazardous trace gases may take place during routeing gas via small diameter pipelines to the main pipeline or gas treatment plant.

On-going fugitive losses of methane and other trace hydrocarbons are also likely to occur during the production phase. These may contribute to local and regional air pollution with the potential for adverse impacts on health. With multiple installations the risk could potentially be high, especially if re-fracturing operations are carried out.

Well or site abandonment may also have some impacts on air quality if the well is inadequately sealed, therefore allowing fugitive emissions of pollutants. This could be the case in older wells, but the risk is considered low in those appropriately designed and constructed. Little evidence exists of the risks posed by movements of airborne pollutants to the surface in the long-term, but experience in dealing with these can be drawn from the management of conventional wells.

Noise pollution

Noise from excavation, earth moving, plant and vehicle transport during site preparation has a potential impact on both residents and local wildlife, particularly in sensitive areas. The site preparation phase would typically last up to four weeks but is not considered to differ greatly in nature from other comparable large-scale construction activity.

Noise levels vary during the different stages in the preparation and production cycle. Well drilling and the hydraulic fracturing process itself are the most significant sources of noise. Flaring of gas can also be noisy. For an individual well the time span of the drilling phase will be quite short (around four weeks in duration) but will be continuous 24 hours a day. The effect of noise on local residents and wildlife will be significantly higher where multiple wells are drilled in a single pad, which typically lasts over a five-month period. Noise during hydraulic fracturing also has the potential to temporarily disrupt and disturb local residents and wildlife. Effective noise abatement measures will reduce the impact in most cases, although the risk is considered moderate in locations where proximity to residential areas or wildlife habitats is a consideration.

It is estimated that each well-pad (assuming 10 wells per pad) would require 800 to 2,500 days of noisy activity during pre-production, covering ground works and road construction as well as the hydraulic fracturing process. These noise levels would need to be carefully controlled to avoid risks to health for members of the public.

Surface and groundwater contamination

The study found that there is a high risk of surface and groundwater contamination at various stages of the well-pad construction, hydraulic fracturing and gas production processes, and during well abandonment. Cumulative developments could further increase this risk.

Runoff and erosion during early site construction, particularly from storm water, may lead to silt accumulation in surface waters and contaminants entering water bodies, streams and groundwater. This is a problem common to all large-scale mining and extraction activities. However, unconventional gas extraction carries a higher risk because it requires high-volume processes per installation and the risks increase with multiple installations. Shale gas installations are likely to generate greater storm water runoff, which could affect natural habitats through stream erosion, sediment build-up, water degradation and flooding. Mitigation measures, such as managed drainage and controls on certain contaminants, are well understood. Therefore the hazard is considered minor for individual installations with a low risk ranking and moderate hazard for cumulative effects with a moderate risk ranking. Road accidents involving vehicles carrying hazardous materials could also result in impacts on surface water.

The study considered the water contamination risks of sequential as well as simultaneous (i) well-drilling and (ii) hydraulic fracturing.

- Poor well design or construction can lead to subsurface groundwater contamination arising from aguifer penetration by the well, the flow of fluids into, or from rock formations, or the migration of combustible natural gas to water supplies. In a properly constructed well, where there is a large distance between drinking water sources and the gas producing zone and geological conditions are adequate, the risks are considered low for both single and multiple installations. Natural gas well drilling operations use compressed air or muds as the drilling fluid. During the drilling stage, contamination can arise as a result of a failure to maintain storm water controls, ineffective site management, inadequate surface and subsurface containment, poor casing construction, well blowout or component failure. engineering controls are insufficient, the risk of accidental release increases with multiple shale gas wells. Cuttings produced from wells also need to be properly handled to avoid for instance the risk of radioactive contamination. Exposure to these could pose a small risk to health, but the study concluded that this would only happen in the event of a major failure of established control systems. No evidence was found that spillage of drilling muds could have a significant effect on surface waters. However, in view of the potential significance of spillages on sensitive water resources, the risks for surface waters were considered to be of moderate significance.
- ii. The risks of surface water and groundwater contamination during the technical hydraulic fracturing stage are considered moderate to high. The likelihood of properly injected fracturing liquid reaching underground sources of drinking water through fractures is remote where there is more than 600 metres separation between the drinking water sources and the producing zone. However, the potential of natural and manmade geological features to increase hydraulic connectivity between deep strata and more shallow formations and to constitute a risk of migration or seepage needs to be duly considered. Where there is no such large depth separation, the risks are greater. If wastewater is used to make up fracturing fluid, this would reduce the water requirement, but increase the risk of introducing naturally occurring chemical contaminants and radioactive materials into aquifers in the event of well failure or of fractures extending out of the production zone. The potential wearing effects of repeated fracturing on well construction components such as casings and cement are not sufficiently understood and more research is needed.

In the production phase, there are a number of potential effects on groundwater associated however with the inadequate design or failure of well casing, leading to potential aquifer contamination. Substances of potential concern include naturally occurring heavy metals, natural gas, naturally occurring radioactive material and technologically enhanced radioactive material from drilling operations. The risks to groundwater are considered to be moderate-high for individual sites, and high for development of multiple sites.



Inadequate sealing of a well after abandonment could potentially lead to both groundwater and surface water contamination, although there is currently insufficient information available on the risks posed by the movement of hydraulic fracturing fluid to the surface over the long term to allow these risks to be characterised. The presence of high-salinity fluids in shale gas formations indicates that there is usually no pathway for release of fluids to other formations under the geological conditions typically prevailing in these formations, although recently published research indicates that pathways may potentially exist in certain geological areas such as those encountered in parts of Pennsylvania, emphasising the need for a high standard of characterisation of these conditions.

Water resources

The hydraulic fracturing process is water-intensive and therefore the risk of significant effects due to water abstraction could be high where there are multiple installations. A proportion of the water used is not recovered. If water usage is excessive, this can result in a decrease in the availability of public water supply; adverse effects on aquatic habitats and ecosystems from water degradation, reduced water quantity and quality; changes to water temperature; and erosion. Areas already experiencing water scarcity may be affected especially if the longer term climate change impacts of water supply and demand are taken into account. Reduced water levels may also lead to chemical changes in the water aguifer resulting in bacterial growth causing taste and odour problems with drinking water. The underlying geology may also become destabilised due to upwelling of lower quality water or other Water withdrawal licences for hydraulic fracturing have recently been suspended in some areas of the United States.

Biodiversity impacts

Unconventional gas extraction can affect biodiversity in a number of ways. It may result in the degradation or complete removal of a natural habitat through excessive water abstraction, or the splitting up of a habitat as a result of road construction or fencing being erected, or for the construction of the well-pad itself. New, invasive species such as plants, animals or micro-organisms may be introduced during the development and operation of the well, affecting both land and water ecosystems. This is an area of plausible concern but there is as yet no clear evidence base to enable the significance to be assessed.

Well drilling could potentially affect biodiversity through noise, vehicle movements and site operations. The treatment and disposal of well drilling fluids also need to be adequately handled to avoid damaging natural habitats. However, these risks are lower than during other stages of shale drilling.

During hydraulic fracturing, the impacts on ecosystems and wildlife will depend on the location of the well-pad and its proximity to endangered or threatened species. Sediment runoff into streams, reductions in stream flow, contamination through accidental spills and inadequate treatment of recovered waste-waters are all seen as realistic threats as is water depletion. However, the study found that the occurrence of such effects was rare and cumulatively the risks could be classified as moderate.

Effects on natural ecosystems during the gas production phase may arise due to human activity, traffic, land-take, habitat degradation and fragmentation, and the introduction of invasive species. Pipeline construction could affect sensitive ecosystems and re-fracturing would also cause continuing impacts on biodiversity. The possibility of land not being suitable for return to its former use after well abandonment is another factor potentially affecting local ecosystems. Biodiversity risks during the production phase were considered to be potentially high for multiple installations.

Traffic

Total truck movements during the construction and development phases of a well are estimated at between 7,000 and 11,000 for a single ten-well pad. These movements are temporary in duration but would adversely affect both local and national roads and may have



a significant effect in densely populated areas. These movements can be reduced by the use of temporary pipelines for transportation of water.

During the most intensive phases of development, it is estimated that there could be around 250 truck trips per day onto an individual site - noticeable by local residents but sustained at these levels for a few days. The effects may include increased traffic on public roadways (affecting traffic flows and causing congestion), road safety issues, damage to roads, bridges and other infrastructure, and increased risk of spillages and accidents involving hazardous materials. The risk is considered to be moderate for an individual installation, and high for multiple installations.

Visual impact

The risk of significant visual effects during well-pad site identification and preparation are considered to be low given that the new landscape features introduced during the well pad construction stage are temporary and common to many other construction projects. The use of large well drilling rigs could potentially be unsightly during the four-week construction period, especially in sensitive high-value agricultural or residential areas. Local people are not likely to be familiar with the size and scale of these drills, and the risk of significant effects was considered to be moderate in situations where multiple pads are developed in a given area.

The risk of visual effects associated with hydraulic fracturing itself is less significant, with the main changes to the landscape consisting of less visually intrusive features. For multiple installations, the risk is considered to be moderate from the site preparation to the fracturing phases. During the post-abandonment phase, it may not be possible to remove all wellhead equipment from the site; however, this is considered to pose a low risk of significant visual intrusion, in view of the small scale of equipment remaining on site.

Seismicity

There are two types of induced seismic events associated with hydraulic fracturing. The hydraulic fracturing process itself can under some circumstances give rise to minor earth tremors up to a magnitude of 3 on the Richter Scale, which would not be detectable by the public. An effective monitoring programme can be used to manage the potential for these events and identify any damage to the wellbore itself. The risk of significant induced seismic activity was considered to be low.

The second type of event results from the injection of waste water reaching existing geological faults. This could lead to more significant underground movements, which can potentially be felt by humans at ground level. This would not take place at the shale gas extraction site.

European Legislation

The objectives of the review of the current EU environmental framework were threefold:

- To identify potential uncertainties regarding the extent to which shale gas exploration and production risks are covered under current EU legislation
- To identify those risks not covered by EU legislation
- To draw conclusions relating to the risk to the environment and human health of such operations in the EU.

An analysis of all EU 27 Member States' legislation and standards was outside the scope of this study, as was the consistency of Member States' implementation of the EU legislation reviewed.

In all, 19 pieces of legislation relevant to all or some of the stages of shale gas resource development were identified and reviewed.



A number of gaps or possible inadequacies in EU legislation were identified. These were classified as follows:

- Inadequacies in EU legislation that could lead to risks to the environment or human health not being sufficiently addressed.
- Potential inadequacies –uncertainties in the applicability of EU legislation: the potential for risks to be insufficiently addressed by EU legislation, where uncertainty arises because a lack of information regarding the characteristics of high volume hydraulic fracturing (HVHF) projects.
- Potential inadequacies –uncertainties in the existence of appropriate requirements at national level: aspects relying on a high degree of Member State decision-making for which it is not possible to conclude under this study whether or not at EU level the risks are adequately addressed.

The legislative review identified the following gaps or potential gaps in European legislation (please see the discussion of limitations of the analysis in Section 3.1):

Table ES2: Summary of gaps and potential gaps in European legislation

One or metantial man	I	Diele and sisted with war (not extint you			
Gap or potential gap	Impact	Risk associated with gap/potential gap			
Gaps in legislation					
Environmental Impact Assessment Directive (2011/92/EU) Annex I threshold for gas production is above HVHF project production levels. Result: no compulsory EIA.	All, especially relevant to key impacts from landtake during preparation, noise during drilling, release to air during fracturing, traffic during fracturing and groundwater contamination	A decision on the exploration and production may not be based on an impact assessment. Public participation may not be guaranteed, permits may not be tailor-made to the situation Impacts may not be known and assessed. Measures to mitigate possible impacts may not be applied through consent process or permitting regime.			
Environmental Impact Assessment Directive (2011/92/EU) Annex II no definition of deep drilling; exploration phase would not be covered under Annex II classification "Surface industrial installations for the extraction of coal, petroleum, natural gas and ores, as well as bituminous shale". Result: no compulsory EIA	All, especially relevant to key impacts from landtake during preparation, noise during drilling, release to air during fracturing, traffic during fracturing and groundwater contamination	A decision on the exploration and production may not be based on an impact assessment. Public participation may not be guaranteed, permits may not be tailor-made to the situation HVHF project involving shallow drillings not covered by EIA. For these projects, impacts may not be known and assessed. Measures to mitigate possible impacts may not be applied through consent process or permitting regime. Preventative measures may not be undertaken. Aquifers in surroundings not known, leading to unanticipated pollution.			
Environmental Impact Assessment Directive (2011/92/EU) No explicit coverage of geomorphological and hydrogeological aspects, no obligation to assess geological features as part of the impact assessment	Especially relevant for groundwater contamination, seismicity, land impacts, release to air	No assessment of geological and hydrogeological conditions (e.g. natural and manmade faults, fissures, hydraulic connectivity, distance to aquifers, etc) in the frame of the impact assessment or screening, resulting in sub-optimal site selection and risks of subsequent pollution Monitoring of groundwater quality of aquifers in surrounding of the site may not be done and preventative measures not undertaken. Aquifers in surroundings not known, leading to unanticipated pollution.			
Water Framework Directive (2000/60/EC) WFD programmes of measures are not required to be enforced until	Abstraction of water and impacts due to water contamination	Inadequate monitoring and measures to prevent these impacts			

Gap or potential gap	Impact	Risk associated with gap/potential gap
22.12.2012		
Water Framework Directive (2000/60/EC)	Pollution of groundwater	"Pollutants" are defined as "any substance liable to cause pollution, in particular those listed in Annex VIII."
For substances which are not pollutants, the WFD does not prevent direct fracturing into groundwater that may ultimately impact aquifers		Permit conditions may not require monitoring or measures to prevent hydraulic fracturing leading to impacts on aquifers
Mining Waste Directive (2006/21/EC)	Waste management as covered by MWD –	No shared opinion on Best Available Techniques nor enforcement of those techniques
No reference document on Best Available Techniques (BREFs)	treatment of hydraulic fracturing fluids during and after fracturing	Higher levels of pollution arising from the management of mining waste
Directives on Emissions from Non-Road Mobile Machinery (Directive 97/68/EC as amended) Lack of emission limits for off-road combustion plant above 560 kW	Air pollution especially during drilling and fracturing	Measures may not be taken to prevent high emissions to air, leading to localised increased air pollution, although purpose of legislation is to regulate machine standards not emissions during use.
IPPC Directive (2008/1/EC)	Air pollution especially	Measures may not be taken to prevent high
and IED (2010/75/EC) No BREF for drilling equipment	during drilling and fracturing	emissions to air, leading to localised increased air pollution. This potential gap arises because of uncertainty over the hazardous character of fracturing fluids which would determine the applicability of the IPPC Directive (2008/1/EC) to hydraulic fracturing installations
The Outdoor Machinery Noise Directive2000/14/EC Gaps in limits to prevent noise for specific equipment	Noise during drilling	Drilling equipment used in HVHF processes however is not included in the equipment cited in this directive. Compressors used for drilling have a power capacity over 350 kW, which is the limit for this directive
Air Quality Directive (2008/50/EC) Not specific about remedial measures or prohibition of polluting activities	Air pollution during drilling and fracturing and traffic impacts	No measures to reduce emissions to air. Levels of air pollution may be above impact levels or air quality standards.
Environmental Liability Directive (2004/35/EC) Damage caused by non Annex III activities not covered unless it is damage to protected species and natural habitats resulting from a fault or negligence on part of operator. Impacts caused by diffuse pollution are not covered, unless a causal link can be established	Landtake, air impacts during drilling and fracturing and traffic	Some environmental impacts may not be covered.
	Uncertainties in	n application
IPPC Directive (2008/1/EC) and IED (2010/75/EC)	Emissions to air, water and soil	No permit obligation under IPPC and no BREF under IPPC or IED .This potential gap arises
Activity not mentioned or may not be covered under hazardous waste or combustion capacity		because of uncertainty over the hazardous character of fracturing fluids which would determine the applicability of the IPPC Directive (2008/1/EC) to hydraulic fracturing installations

		F
Gap or potential gap	Impact	Risk associated with gap/potential gap
		The monitoring requirements as mentioned in IPPC directive may not be applied. Integrated measures designed to prevent or to reduce emissions in the air, water and land, including measures concerning waste, in order to achieve a high level of protection of the environment may not be taken. Monitoring of emissions to air might not take place.
Mining Waste Directive (2006/21/EC) Uncertainty over classification of Category A waste facility	Major accidents, groundwater and surface water pollution, air impacts	The classification may be inadequately performed Major accidents might occur without proper prevention and emergency plans.
Seveso II Directive (96/82/EC) Uncertainty over whether the Directive covers high volume hydraulic fracturing (HVHF), subject to storage of natural gas or of specific chemical additives on-site.	Major accidents involving dangerous substances (e.g. water pollution events)	Major accidents might occur without proper prevention and emergency plans.
Iss	sues currently at the disc	retion of Member States
The Strategic Environmental Assessment Directive (2001/42/EC) Remains up to Member States to decide whether or not a plan or programme might have significant effects	All	No SEA would be made Information on possible environmental effects would not be available and therefore would not be used in an authorisation/consent process or permits
Environmental Impact Assessment Directive (2011/92/EU) Member States must decide whether an EIA is required (Article 4(2)) for activities covered by Annex II.	All	No EIA would be made. The environmental impacts would not be assessed and properly described. The measures that can prevent or mitigate the impacts will not be presented
Hydrocarbons Authorization Directive (94/22/EC) No compulsory account of environmental aspects	All	Member States may not take account of environmental impacts during the authorisation process
Mining Waste Directive (2006/21/EC) Member States decide on the permit and the control measures	Waste management as covered by MWD – treatment of hydraulic fracturing fluids during and after fracturing	There may be inadequate measures for the monitoring and control of impacts related to management of mining waste
IPPC Directive (2008/1/EC) Member State decisions on monitoring and inspection	Emissions to air, especially during drilling and fracturing, and releases to water during fracturing	There may be inadequate measures for the monitoring and control of impacts related to air and water emissions
Air Quality Directive(2008/50/EC) Member States responsible for making	Emissions to air, especially during drilling, fracturing and traffic, and releases to	No specific measures for emission abatement may be required. Air pollution may not be prevented or mitigated

Gap or potential gap	Impact	Risk associated with gap/potential gap
plans to meet the AQ standards	water during fracturing	
Water Framework Directive (2000/60/EC)	Water use during fracturing	There may be unmitigated or poorly controlled impacts arising from water use during abstraction
Member State determination of control measures related to abstraction		
Noise Directive (2002/49/EC) Up to Member States to set noise levels and to make plans to meet these levels	Noise during drilling and fracturing and traffic during fracturing	No specific measures for noise abatement may be required. Noise may not be prevented or mitigated

Study recommendations

As highlighted above, the risks posed by high volume hydraulic fracturing for unconventional hydrocarbon extraction are greater than those of conventional extraction. A number of recent reports have looked at opportunities and challenges of unconventional fossil fuels and shale gas developments, and found that developing unconventional fossil fuel resources generally poses greater environmental challenges than conventional developments. Robust regulatory regimes would be required to mitigate risks and to improve general public confidence (e.g. the "Golden Rules for a Golden Age of Gas" special report from the International Energy Agency, or an independent German study on shale gas entitled "Empfehlungen des Neutralen Expertenkreis" ("Recommendations of the neutral expert group").

Measures for mitigation of these risks were identified from existing and proposed legislation in the US and Canada where shale gas extraction is currently carried out. Measures set out in industry guidance and other publications were also reviewed and included where appropriate.

A number of the recommendations made by the US Department of Energy (SEAB 2011a NPR) are relevant for regulatory authorities in Europe. In particular, it is recommended that the European Commission should take a *strategic* overview of potential risks. This will require consideration of aspects such as:

- Undertaking science-based characterisation of important landscapes, habitats and corridors to inform planning, prevention, mitigation and reclamation of surface effects.
- Establishing effective field monitoring and enforcement to inform on-going assessment of cumulative community and land use effects
- Restricting or preventing development in areas of high value or sensitivity with regard to biodiversity, water resources, community effects etc.

As set out in Section 3.17 and in the table above, it is recommended that the European Commission considers the gaps, possible inadequacies and uncertainties identified in the current EU legislative framework. It is also recommended that Member States' interpretation of EU legislation in respect of hydraulic fracturing should be evaluated.

This study has identified and made recommendations on specific risk management measures for a number of aspects of hydrocarbon developments involving HVHF, and in particular:

 The appropriate siting of developments, to reduce above and below-ground risks for specified projects

- - Measures and approaches to reduce land disturbance and land-take
 - Measures to address releases to air and to effectively reduce noise during drilling, fracturing and completion
 - Measures to address water resource depletion
 - Measures to reduce the negative effects caused by increased traffic movements
 - Measures to improve well integrity and to reduce the risk of ground and surface water contamination
 - Measures to reduce the pressure on biodiversity

A number of recommendations for further consideration and research are made with regard to current areas of uncertainty. These include:

- Consideration and further research over relevant provisions of the Carbon Capture and Storage Directive (2009/31/EC) covering aspects such as: site characterisation and risk assessment, permitting arrangements, monitoring provisions, transboundary co-operation, and liability.
- The use of micro-seismic monitoring in relation to hydraulic fracturing
- Determination of chemical interactions between fracturing fluids and different shale rocks, and displacement of formation fluids
- Induced seismicity triggered by hydraulic fracturing
- Development of less environmentally hazardous drilling and fracturing fluids
- Methods to improve well integrity through development of better casing and cementing methods and practices
- Development of a searchable European database of hydraulic fracturing fluid composition
- Research into the risks and causes of methane migration to groundwater from shale gas extraction
- The development of a system of voluntary ecological initiatives within sensitive habitats to generate mitigation credits which could be used for offsetting future development.



The *Saeima*¹ has adopted and the President has proclaimed the following Law:

Marine Environment Protection and Management Law

Chapter I General Provisions

Section 1. Terms Used in This Law

The following terms are used in this Law:

- 1) **ecosystem approach** comprehensive, scientifically substantiated and integrated approach to management of human activity to identify adverse impacts on the marine ecosystem and perform efficient measures for reduction of such impacts preserving integrity and sustainability of the ecosystem;
- 2) **marine ecosystem** a dynamic complex of marine plants, animals and communities of micro-organisms and their habitat in the sea interacting as a functional unit;
- 3) marine waters of Latvia, as well as natural marine resources, the seabed and the subsoil (hereinafter also the sea) waters of the Baltic Sea, natural marine resources, the seabed and subsoil in the territory which in accordance with the national and international legislation is under the jurisdiction of Latvia, namely, internal marine waters, territorial sea and exclusive economic zone of Latvia;
- 4) **maritime spatial planning** a long-term process for development planning aimed at protection of marine environment, rational use of the sea and integrated management, as well as balancing the social welfare and economic development with the environmental protection requirements;
- 5) **use of the sea** use of the sea for need of public persons and private persons, also in economic activity, including performing polluting activities which may affect the marine environmental status;
- 6) marine environmental status overall state of the marine environment which is determined, taking into account the structure, function of the marine ecosystem and processes occurring in the sea or outside it, natural physiogeographic, biological, geological and climatic factors, as well as physical, acoustic and chemical conditions, including those resulting from human activities.

Section 2. Purpose and Scope of Application of This Law

- (1) The purpose of this Law is to ensure the protection and management of the marine environment of Latvia in order to:
 - 1) achieve and preserve good marine environmental status;
 - 2) facilitate sustainable use of the sea and marine ecosystem;
- 3) promote integration of the environmental protection requirements and measures necessary for achievement of good marine environmental status in the policy planning documents and regulatory enactments of those fields which affect marine environment; and
- 4) facilitate achievement of the objectives of marine environment protection and preservation and sustainable use of marine resources specified in the international agreements binding on Latvia.

¹ The Parliament of the Republic of Latvia

- (2) This Law determines:
- 1) the continental shelf and exclusive economic zone of Latvia, as well as sovereign rights and jurisdiction in the continental shelf and exclusive economic zone thereof, taking into account the provisions of the international agreements;
- 2) procedures by which Latvia shall co-operate with other countries in the Baltic Sea region, i.e., in the region the boundaries of which are determined in Article 1 of the Convention on the Protection of the Marine Environment of the Baltic Sea Area (hereinafter Helsinki Convention), in the development and implementation of the marine strategy;
- 3) procedures by which the marine strategy shall be developed and implemented, taking into account ecosystem approach and general environmental protection principles, as well as possible transboundary impact on the marine environmental status in the Baltic Sea region; and
 - 4) the rights and obligations of the sea users.
- (3) This Law shall not be applied for the activities which are performed in the sea within the framework of the state defence or state security safeguarding. Such activities shall be performed in the sea taking into account the purpose of this Law as possible.

Section 3. The Continental Shelf and the Exclusive Economic Zone of Latvia

- (1) The continental shelf of Latvia (hereinafter the continental shelf) is the seabed and the subsoil in submarine areas which are natural prolongation of the land territory of Latvia, are located immediately beyond the boundaries of the territorial sea and extend to the boundaries determined in Paragraph three of this Section.
- (2) The exclusive economic zone of Latvia (hereinafter exclusive economic zone) is the territory of the Baltic Sea which is located immediately beyond the territorial sea boundaries and which extends to the boundaries determined in Paragraph three of this Section.
- (3) The boundaries of the continental shelf and of the exclusive economic zone of Latvia with the Republic of Estonia, the Republic of Lithuania and the Kingdom of Sweden shall conform to the international agreements entered into by Latvia with the Republic of Estonia, the Republic of Lithuania and the Kingdom of Sweden.
- (4) Latvia has sovereign rights to explore the continental shelf and use the natural resources thereof in compliance with the requirements of this Law and other regulatory enactments. The natural resources of the continental shelf are the property of Latvia.
- (5) In the exclusive economic zone Latvia has:
- 1) sovereign rights to explore, protect, use and manage the natural resources of the exclusive economic zone located in the seabed, in the subsoil and waters thereof, and manage the use of such resources, as well as to perform other actions necessary for exploration and use of the exclusive economic zone, including to produce wave, current and wind energy;
- 2) exclusive rights to construct and establish artificial islands, structures and installations necessary for exploration, extraction of natural resources and for other actions, as well as to supervise construction, establishment and use of such artificial islands, structures and installations;
- 3) exclusive jurisdiction in respect of protection and preservation of the marine environment, marine scientific research, construction, establishment and use of artificial islands, as well as structures and installations; and
- 4) other rights provided for in this Law and the United Nations Convention on the Law of the Sea of 1982.
- (6) The constructed and established artificial islands, structures and installations, the installed cables, pipelines and the operation of such, as well as customs, fiscal, health protection, external and internal security and immigration provisions on the continental shelf and in the exclusive economic zone shall be under the jurisdiction of Latvia.

- (7) Latvia, in exercising its rights and fulfilling its obligations in the exclusive economic zone, shall take into account the rights and obligations of other states provided for by the United Nations Convention on the Law of the Sea of 1982, as well as the requirements of other international agreements binding on Latvia.
- (8) Latvia may allow a public person or private person to perform activities on the continental shelf or in the exclusive economic zone in compliance with this Law or special laws which regulate extraction of natural resources and performance of other activities in the marine waters of Latvia, by issuing a permit or licence appropriate for the relevant type of activity.

Chapter II Regional Co-operation

Section 4. General Provisions for Regional Co-operation

- (1) Latvia shall co-operate with European Union Member States and, if possible, with other states having jurisdiction over the marine waters of the Baltic Sea region, in order to:
- 1) facilitate coherent and co-ordinated development and implementation of marine strategy in the entire Baltic Sea region;
- 2) co-ordinate assessment methods of the marine environmental status, determination of marine environment targets and indicators related thereto, as well as monitoring programme of the marine environment, thus facilitating co-ordinated use of monitoring methods and comparability of the monitoring results in the entire Baltic Sea region; and
- 3) promote co-ordinated development and introduction of the Programme of Measures for Achievement of Good Marine Environmental Status (hereinafter Programme of Measures) in the Baltic Sea region.
- (2) If it is necessary for the achievement of the objectives determined in this Law, Latvia shall co-operate with the states in the catchment area of the Baltic Sea region, including land-locked countries.

Section 5. Co-operation Within the Framework of International Organisations and Regional Co-operation Institutions

- (1) Regional co-operation shall take place within the framework of the Baltic Marine Environment Protection Commission (*HELCOM*) and other regional co-operation institutions, also with countries other than European Union Member States.
- (2) The Ministry of Environment and other competent institutions shall ensure the participation of Latvia in the co-operation occurring within the framework of international organisations and regional co-operation institutions in the field of marine environment protection and use of the sea and, if the measures provided for in the European Union or other international development planning documents may significantly affect the marine environment of Latvia, including marine protected areas, shall address the referred to organisations and institutions in order that the decisions regarding measures necessary for preservation or restoration of marine ecosystem are taken.

Section 6. Co-operation Outside International Organisations and Regional Co-operation Institutions

(1) Regional co-operation, if necessary, shall take place outside international organisations and regional co-operation institutions in compliance with intergovernmental co-operation agreements regarding environmental protection.

- (2) In performing co-ordinated development of marine strategy and taking into account transboundary impact, the Ministry of Environment shall co-operate with the competent institutions of the countries:
 - 1) with which Latvia has a joint sea border; and
- 2) other than European Union Member States including the states in the catchment area of the Baltic Sea region, including land-locked countries, in order to assess and prevent transboundary pollution in compliance with intergovernmental co-operation agreements regarding environmental protection.

Chapter III

General Provisions for Development and Implementation of Marine Strategy

Section 7. Preparation of Marine Strategy

- (1) Marine strategy is a comprehensive aggregate of systematic measures which is developed and implemented in order to:
- 1) achieve good marine environmental status in the Baltic sea region in accordance with the procedures specified in this Law and other regulatory enactments;
- 2) protect and preserve marine environment and prevent deterioration of the marine environmental status or, where practicable, restore marine ecosystem in areas where it has been adversely affected; and
- 3) prevent or reduce pollution of the sea, to ensure that the pollution does not significantly affect or endanger marine biodiversity, marine ecosystem, human health or legitimate use of the sea.
- (2) Marine strategy shall be developed in the following order:
- 1) an initial assessment of the marine environmental status of the waters shall be performed including impact assessment of human activities and transboundary pollution on the marine environment;
 - 2) good marine environmental status shall be defined;
 - 3) marine environment targets and indicators related thereto shall be determined;
 - 4) monitoring programme of the marine environment shall be developed; and
- 5) Programme of Measures for Achievement of Good Marine Environmental Status shall be developed.
- (3) The Marine Environment Council (hereinafter Council) shall be established for coordination of development and implementation of the marine strategy. Representatives of State administration institutions, self-governments, as well as associations and foundations shall be included in the composition of the Council. The Cabinet shall approve the composition and by-law of the Council, the Minister for Environment – the personnel.

Section 8. Assessment of the Marine Environmental Status

- (1) Latvian Institute of Aquatic Ecology shall perform initial assessment of the marine environmental status (hereinafter marine assessment) on the basis of data, information and studies at the disposal thereof, including studies regarding impact of climate change on the marine ecosystem. The marine environmental status shall be characterised and socioeconomic analysis of use of the sea, as well as geospatial information and thematic maps, shall be included in the marine assessment.
- (2) In performing marine assessment, the following shall be taken into account:
- 1) the requirements of the Water Management Law and other regulatory enactments in respect of coastal, transitional and territorial waters; and
- 2) the newest scientific conclusions and assessment methods, assessments and studies which have been included in the management plans of river basin districts developed in

accordance with the Water Management Law, European Union legislation in the fields of environment, fishery, maritime and other fields related to protection of marine environment and the use of the sea, as well as with international agreements, including assessments developed jointly for the Baltic Sea region within the framework of the Baltic Marine Environment Protection Commission (*HELCOM*).

- (3) The content and type of the information to be included in the marine assessment shall be determined by the Cabinet.
- (4) The marine assessment shall be approved by the Minister for Environment.
- (5) The marine assessment shall be reviewed and, if necessary, updated at least once in a six-year period.

Section 9. Good Marine Environmental Status

- (1) Good marine environmental status is such a status where ecological diversity and dynamics, cleanness, healthiness and productivity of the sea within the conditions intrinsic to the relevant sea is ensured, and the use of the marine environment is at the level that is sustainable, thus safeguarding the potential for uses of the marine waters by current and future generations. The following features indicate on good marine environmental status:
- 1) the structure, functions and processes of the constituent marine ecosystem, together with the associated physiogeographic, geological and climatic factors, allow such ecosystem to function fully and to maintain its resilience to human-induced environmental change. Marine species and habitats are protected, human-induced decline of biodiversity is prevented and diverse biological components function in balance;
- 2) hydro-morphological, physical and chemical properties of the marine ecosystem, including those properties which result from human activities in the sea, ensure the processes referred to in Clause 1 of this Paragraph, and inputs of substances and energy (including noise) into the marine environment do not cause pollution effects.
- (2) The qualitative descriptors of good marine environmental status, as well as the list of features, pressures and impacts characterising marine environmental status, shall be determined by the Cabinet.
- (3) On the basis of the results of the marine assessment referred to in Section 8 of this Law, the Latvian Institute of Aquatic Ecology shall develop and the Minister for Environment shall approve the criteria of good marine environmental status which shall be co-ordinated in the Marine Environment Protection Commission (*HELCOM*). Criteria distinctive technical features, also those expressed in figures, that are closely linked to the qualitative descriptors referred to in Paragraph two of this Section, shall be determined taking into account:
- 1) physical and chemical properties, types of habitats, biological features and hydromorphology of the sea; and
 - 2) human-induced pressures or impacts in the Baltic Sea region.
- (4) The Latvian Institute of Aquatic Ecology shall, at least once in a six-year period, review criteria of good marine environmental status and, if necessary, prepare recommendations for adjustment thereof in compliance with the criteria co-ordinated in the Baltic Sea region.
- (5) Good marine environmental status shall be achieved by 2020.

Section 10. Marine Environment Targets

(1) The Latvian Institute of Aquatic Ecology shall, on the basis of the results of the marine assessment, develop and, taking into account provisions of Section 4 of this Law, co-ordinate in respect of the Baltic Sea region, but the Minister for Environment shall approve marine environment targets, that are qualitative or quantitative characterisation of the desirable status of the components, as well as of pressures and impacts on the sea, of the marine ecosystem,

and set of indicators related to these targets. In determining marine environment targets and indicators related thereto, the following shall be taken into account:

- 1) environmental targets determined for the waters of the Baltic Sea region in accordance with regulatory enactments of the European Union and international agreements binding on Latvia, including Helsinki Convention;
 - 2) transboundary impacts and transboundary features; and
- 3) environmental quality objectives determined for coastal and transitional waters in compliance with the Water Management Law.
- (2) The Latvian Institute of Aquatic Ecology shall develop the marine environment targets and indicators related thereto so as they are comparable with the relevant targets and indicators determined in the entire Baltic Sea region and so as it would be possible to assess the progress achieved towards good marine environmental status.
- (3) The Latvian Institute of Aquatic Ecology shall, at least once in a six-year period, review marine environment targets co-operating with the competent institutions of the Baltic Sea region countries and, if necessary, prepare recommendations for updating thereof.
- (4) Marine environment targets shall be achieved by implementing the Programme of Measures
- (5) Requirements in respect of development of marine environment targets and indicators related thereto shall be determined by the Cabinet.

Section 11. Monitoring Programme of Marine Environment

- (1) The Latvian Institute of Aquatic Ecology shall, on the basis of the marine assessment and in accordance with the marine environment targets determined in Section 10 of this Law, as well as taking into account transboundary impact, develop and the Minister for Environment shall approve the monitoring programme of the marine environment. The monitoring programme shall be developed and implemented in compliance with the requirements of the Environmental Protection Law.
- (2) The monitoring programme of the marine environment shall be developed in order to ensure generation, accumulation and analysis of comprehensive information, as well as to:
- 1) assess marine environmental status on the regular basis and the trends of such status, as well as of characteristic features thereof;
- 2) in reviewing the marine environment targets referred to in Section 10 of this Law, determine suitable indicators for them;
- 3) determine significant changes and potential changes of the marine environmental status, reasons thereof and possible improvement measures for achieving or restoration of good marine environmental status;
- 4) assess the efficiency of implemented improvement measures and Programme of Measures, as well as social and economic impacts; and
- 5) obtain information regarding contaminants in fish caught in commercial fishing areas and used for human consumption.
- (3) In developing the monitoring programme of the marine environment, the Water Management Law, regulatory enactments regarding protection of nature and resources thereof, as well as legal norms of the European Union and international legal norms binding on Latvia in the field of environmental protection, preservation of marine natural resources and maritime shall be taken into account.
- (4) The Ministry of Environment shall, at least once in a six-year period, review the monitoring programme of the marine environment co-operating with the competent institutions of the Baltic Sea region countries and, if necessary, update it.
- (5) The implementation of the monitoring programme of the marine environment shall be coordinated and organised by the Latvian Institute of Aquatic Ecology in co-operation with the competent institutions of the relevant sector.

Chapter IV

Programme of Measures for Achieving Good Marine Environmental Status

Section 12. General Provisions for Development of the Programme of Measures

The Ministry of Environment shall, on the basis of the marine assessment and marine environment targets, develop the Programme of Measures in order to achieve and maintain good marine environmental status.

Section 13. Requirements for the Programme of Measures

- (1) The Programme of Measures shall include the measures which will be performed in order to fulfil the requirements of the regulatory enactments of the European Union and Latvia or international agreements regarding:
- 1) reduction of pollution of surface waters caused by municipal waste water, hazardous and priority substances and water management;
 - 2) integrated pollution prevention and control;
- 3) reduction of pollution of priority fish waters and bathing waters and ensuring the quality thereof;
 - 4) flood risk prevention and management;
- 5) protection of water and soil from pollution with nitrates caused by agricultural activity;
 - 6) protection of specially protected nature territories, species and biotopes;
 - 7) protection and preservation of fish resources;
 - 8) reduction of the impact of climate change and adaptation to climate change;
 - 9) reduction of emissions of air polluting substances;
- 10) protection of marine environment in the field of maritime activity and maritime safety; and
- 11) prevention of the impact of incidental marine pollution (also emergencies) and reduction of damage caused to marine ecosystem as a result of accidents.
- (2) In developing the Programme of Measures, the impact of envisaged measures on social and economic environment shall be assessed and in addition to the measures referred to in Paragraph one of this Section at least the following management measures related to the use of the sea shall also be included:
 - 1) management measures of the use of the sea, including:
- a) maritime spatial planning and other measures in order to regulate human activity and impact in time and space in a certain part of the marine ecosystem;
- b) control measures for fulfilment of the requirements of this Law and other regulatory enactments, and
 - c) measures which ensure co-ordinated and coherent use of the sea;
- 2) measures facilitating economic interest in achievement of good marine environmental status;
 - 3) measures necessary in order to study the trends of changes of marine pollution;
 - 4) risk reduction and marine ecosystem remediation measures; and
 - 5) public participation and information measures.
- (3) In developing the Programme of Measures, the Baltic Sea Action Plan of the Baltic Marine Environment Protection Commission (*HELCOM*), as well as other action plans and programmes of measures developed jointly by the Baltic Sea region countries, shall be taken into account.

- (4) The Ministry of Environment shall assess the efficiency of the measures envisaged in the Programme of Measures also by performing cost-benefit analysis in order to ensure that the planned measures are cost-effective and technically feasible.
- (5) In order to assess the risk of possible transboundary pollution and threat and ensure favourable impact of the Programme of Measures on the Baltic Sea region waters, the Ministry of Environment shall perform the assessment of transboundary impact of those measures which are intended to be included in the Programme of Measures.

Section 14. Maritime Spatial Planning Measures for Marine Environment Protection

- (1) In order to promote sustainable use of the sea, ecosystem approach shall be applied in the maritime spatial planning process, the principles of the environmental protection and territorial development planning shall be observed, as well as the following shall be taken into account:
- 1) common principles for maritime spatial planning recommended by the European Commission and developed jointly by the Baltic Sea region countries;
- 2) information regarding marine environmental status and trends of changes thereof, including the marine assessment referred to in Section 8 of this Law; and
- 3) specially protected nature territories in the coastal area, marine protected areas, as well as protection zones determined in compliance with regulatory enactments, thus ensuring preservation of biodiversity and economic and recreational capacity of the marine ecosystem in the Baltic Sea region.
- (2) Features characteristic to the relevant part of the marine ecosystem shall be observed in maritime spatial planning.

Section 15. Approval and Introduction of the Programme of Measures

- (1) Programme of Measures shall be approved by the Cabinet and the implementation thereof shall be commenced not later than a year after approval.
- (2) Programme of Measures shall be introduced applying ecosystem approach, using achievements of scientific and technological developments, as well as adaptive management methods, in order to take the decisions which most efficiently would ensure achieving of good marine environmental status.
- (3) The Ministry of Environment shall, at least once within a six-year period, review the Programme of Measures and, if necessary, update it.

Section 16. Exceptions to Be Indicated in the Programme of Measures

- (1) Exceptional cases shall be specified in the Programme of Measures, when even after implementation of necessary measures the marine environment targets cannot be achieved or good marine environmental status cannot be fully achieved within the time schedule specified in this Law, if at least one of the following reasons exists:
 - 1) action or inaction for which Latvia is not responsible;
- 2) natural causes, including natural disasters, accidents or circumstances caused by unfavourable climatic phenomena;
 - 3) force majeure; or
- 4) modifications or alterations to the physical characteristics of the sea brought about by actions taken for reasons of overriding public interest which outweigh the negative impact on the environment, including any transboundary impact.
- (2) It shall be specified in the Programme of Measures, if it is impossible to improve marine environmental status because of natural conditions of the sea and marine environment targets

cannot be achieved or good marine environmental status cannot be fully achieved within the time schedule specified in this Law.

- (3) Temporary measures to be performed in order to prevent further deterioration of the marine environmental status due to the reasons referred to in Paragraph one, Clauses 1, 2 and 3 of this Section and mitigate the adverse impact thereof on the marine waters of the Baltic Sea region and of other countries, shall be included in the Programme of Measures. The measures to be performed in order to ensure that the modifications and alterations do not preclude or compromise the achievement of good marine environmental status of the marine waters of the Baltic Sea region or of other countries shall be included in the Programme of Measures in the cases referred to in Paragraph one, Clause 4 of this Section.
- (4) The measures, which are not necessary because the marine environment is not significantly endangered or the costs of which are unjustifiably high in comparison to threat to the marine environment, shall not be included in the Programme of Measures, if the marine environment will not deteriorate in the future.
- (5) The Ministry of Environment shall characterise in the Programme of Measures exceptional cases specified therein and submit to the European Commission a justification for application of exceptions and non-performance of the measures referred to in Paragraph four of this Section.

Chapter V Public Participation and Information Thereof Regarding Development and Implementation of the Marine Strategy

Section 17. Public Participation and Information

- (1) The Ministry of Environment and the Latvian Institute of Aquatic Ecology shall ensure the access to the information related to the development and implementation of the marine strategy, as well as public participation in the development and implementation of the marine strategy, and also the Programme of Measures, in compliance with the Environmental Protection Law and regulatory enactments regarding freedom of information and public participation in the development planning process.
- (2) Summaries regarding the marine assessment, criteria for good marine environmental status, marine environment targets, as well as a report regarding implementation of the marine environment monitoring and the Programme of Measures after development thereof shall be published by the Ministry of Environment and the Latvian Institute of Aquatic Ecology on the Internet homepages thereof.
- (3) The Ministry of Environment and the Latvian Institute of Aquatic Ecology shall facilitate active involvement of the public in the development, public hearing, reviewing and adjustment of the marine assessment, criteria for good marine environmental status, marine environment targets, as well as the marine environment monitoring and the Programme of Measures.
- (4) The Ministry of Environment and the Latvian Institute of Aquatic Ecology shall provide the geospatial information included in the marine assessment and obtained in the course of the implementation of the marine environment monitoring programme to public persons and private persons using the State united geospatial information portal in compliance with regulatory enactments regarding the availability of geospatial data sets and metadata thereof.

Section 18. Provision of Information to other Countries and the European Commission

(1) The Ministry of Environment shall, within three months after approval and publication of the relevant documents, submit to the European Commission, the Baltic Marine Environment Protection Commission (*HELCOM*) and all European Union Member States in the Baltic Sea region:

- 1) the marine assessment referred to in Section 8 of this Law;
- 2) the criteria of good marine environmental status referred to in Section 9 of this Law:
 - 3) the marine environment targets referred to in Section 10 of this Law;
- 4) the monitoring programme of the marine environment referred to in Section 11 of this Law; and
 - 5) the Programme of Measures referred to in Section 12 of this Law.
- (2) The Latvian Institute of Aquatic Ecology shall submit to the European Environment Agency the information included in the marine assessment and obtained in the course of implementation of the monitoring programme of the marine environment not later than six months after such information has become available.
- (3) The Ministry of Environment shall, within three years after publication of the Programme of Measures, submit to the European Commission an interim report regarding implementation of the Programme of Measures.
- (4) The holders of data necessary for marine environment protection shall provide to the European Commission the geospatial information taking into account the Commission Regulation (EU) No 268/2010 of 29 March 2010 implementing Directive 2007/2/EC of the European Parliament and of the Council as regards the access to spatial data sets and services of the Member State by Community institutions and bodies under harmonised conditions.
- (5) The information referred to in this Section which Latvia has provided to the European Commission shall be freely available for the public in accordance with Section 17 of this Law.

Chapter VI Basic Provisions for Use of the Sea

Section 19. Rights of Public Persons and Private Persons to Use the Sea

- (1) A public person and private person (hereinafter user of the sea) shall use the sea in compliance with regulatory enactments regulating the relevant type of activity and this Law, taking into account the objectives thereof, environment protection principles, public interests, as well as maritime spatial planning.
- (2) A permit or licence shall be necessary for the following activities in the sea:
- 1) exploration of natural resources, except subterranean depths, including for the purpose of scientific research, as well as exploration of underwater cultural and historical heritage, ship wrecks and other sunken property in compliance with regulatory enactments regarding fishery and procedures for use of Latvian waters;
- 2) use of subterranean depths in compliance with regulatory enactments regarding subterranean depths;
 - 3) fishing in compliance with regulatory enactments regarding fishery;
- 4) construction, establishment of artificial islands, structures and installations, including platforms and installations necessary for energy production (hereinafter structures), also exploration related thereto and operation of structures, except for construction of structures necessary for operation of ports, as well as establishment and maintenance of navigation means and systems, in accordance with the requirements of this Law and of regulatory enactments regulating construction;
- 5) disposal of dredged soil, which is extracted during the cleaning and dredging activities, in the soil disposal sites in the sea in compliance with regulatory enactments regarding water management; and

- 6) construction of hydrotechnical structures necessary for operation of ports in compliance with regulatory enactments regarding construction.
- (3) The Cabinet shall, prior to the issue of a permit or licence for use of the sea, determine a certain territory of the sea (hereinafter permit or licence area in the sea) by the each time order for performance of the activities determined in Paragraph two, Clause 4 of this Section taking into account the provisions of Section 14 of this Law. The right to use a permit or licence area in the sea shall obtain a person who has won a tender regarding the right to use the permit or licence are in the sea.

(4) The Cabinet shall regulate:

- 1) the procedures by which a permit or licence area in the sea referred to in Paragraph three of this Section shall be determined;
- 2) the procedures by which a tender regarding the right to use a permit or licence area in the sea shall be organised;
- 3) the procedures by which a permit or licence for use of permit or licence area in the sea for the actions referred to in Paragraph two, Clause 4 of this Section shall be issued, suspended or cancelled; and
- 4) requirements in respect of establishment, construction of structures in the sea and operation thereof, as well as the requirements in respect of destruction or disassembly thereof after complete termination of the activity.
- (5) A user of the sea shall pay an annual State fee in the State basic budget for the use of a permit or licence area in the sea for performance of the activities referred to in Paragraph two, Clause 4 of this Law. The Cabinet shall determine the procedures for payment of the fee and amount thereof, as well as exemptions from payment of the fee.
- (6) A permit or licence for the use of the specified permit or licence area in the sea shall be issued for a period of time not exceeding 30 years.
- (7) None of the activities referred to in Paragraph two of this Section, also exploration, is prohibited in the sea, if a user of the sea or his or her authorised person performs it without a permit or licence issued by a competent institution of Latvia, and such activity shall be immediately interrupted, if the user of the sea or his or her authorised person fails to observe the provisions of the permit or licence or does not notify regarding changes in the planned activity or exploration programme.
- (8) The State Environment Service or issuer of a permit or licence shall, in co-operation with the National Armed Forces and the State Border Guard, control the use of the sea and marine environment protection in accordance with regulatory enactments regarding environmental protection, fishery, maritime administration and maritime safety, as well as border guard. The control of construction of the structures referred to in Paragraph two, Clauses 4 and 6 of this Section shall be performed in compliance with regulatory enactments regarding construction.

Section 20. Obligations and Responsibility of a User of the Sea

- (1) A user of the sea shall have the following obligations:
- 1) not to allow pollution of the sea and activities which may negatively affect the marine environmental status;
- 2) to perform environmental impact assessment for the intended activity to be performed in the sea in compliance with regulatory enactments regarding environmental impact assessment;
- 3) to receive permits and licences provided for in regulatory enactments for activities in the sea:
- 4) to perform measures in order to prevent threats of damage or damage to the marine environment in compliance with the Environmental Protection Law; and
- 5) to observe the rights of other users of the sea and of other states in the Baltic Sea region, as well as the requirements of the United Nations Convention on the Law of the Sea of

- 1982, the Helsinki Convention, other international agreements binding on Latvia and other regulatory enactments.
- (2) In addition to the obligations referred to in Paragraph one of this Section a ship of scientific research of a foreign state has an obligation to receive a special permit of the State Environmental Service, which is transmitted by the Ministry of Foreign Affairs through diplomatic channels, for the performance of scientific research works in the territorial sea, continental shelf and the exclusive economic zone of Latvia.
- (3) The procedures by which a special permit for performance of scientific research works is issued for a ship of scientific research of a foreign state shall be determined by the Cabinet.
- (4) A user of the sea shall be held liable for non-fulfilment of the obligations referred to in Paragraphs one and two of this Section in accordance with the procedures specified in regulatory enactments.

Transitional Provisions

- 1. With the coming into force of this Law, the Law On the Continental Shelf and the Exclusive Economic Zone of the Republic of Latvia (*Latvijas Republikas Augstākās Padomes un Valdības Ziņotājs*, 1993, No.7; *Latvijas Republikas Saeimas un Ministru Kabineta Ziņotājs*, 1998, No. 23) is repealed.
- 2. The Cabinet shall issue the regulations referred to in Section 8, Paragraph three, Section 9, Paragraph two and Section 10, Paragraph five of this Law by 30 December 2010.
- 3. The Cabinet shall issue the regulations referred to in Section 7, Paragraph three and Section 20, Paragraph three of this Law by 15 July 2011.
- 4. The Cabinet shall issue the regulations referred to in Section 19, Paragraphs four and five of this Law by 1 April 2011.
- 5. The initial assessment of the marine environmental status referred to in Section 8, Paragraph one of this Law shall be developed and approved not later than by 15 July 2012.
- 6. The monitoring programme of the marine environment referred to in Section 11, Paragraph one of this Law shall be developed and approved by 30 December 2013. Such a programme shall be commenced to be implemented to full extent not later than on 1 January 2014.
- 7. The Programme of Measures referred to in Section 15, Paragraph one of this Law shall be developed and approved by the Cabinet not later than by 15 December 2015.
- 8. Until the day of coming into force of the maritime spatial planning referred to in Section 19, Paragraph one of this Law, if other regulatory enactments do not specify otherwise, the Cabinet shall take a decision regarding permissibility of the activities referred to in Section 19, Paragraph two, Clause 4 of this Law in the relevant permit or licence area in the territorial sea, continental shelf and exclusive economic zone of Latvia, taking into account the provisions of Section 14 of this Law.
- 9. Permits which have been issued for performance of the activities referred to in Section 19, Paragraph two, Clause 4 of this Law until the day of coming into force of this Law shall be valid until the end of the term specified in the permit.
- 10. Section 19, Paragraph five of this Law comes into force concurrently with the relevant amendments to the Law On Taxes and Fees.

Informative Reference to European Union Directive

This Law includes legal norms arising from Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive) (Text with EEA relevance).

This Law shall come into force on the day following the proclamation thereof. This Law was adopted by the *Saeima* on 28 October 2010.

President V. Zatlers

Rīga, 17 November 2010

The *Saeima* ¹ has adopted and the President has proclaimed the following Law:

Law On Subterranean Depths

Chapter I General Provisions

Section 1. Terms Used in this Law

The following terms are used in this Law:

- 1) **soil** upper unconsolidated layer of the Earth's crust which has been formed under the effect of atmospheric and biological factors and which features natural fertility;
- 2) **widespread mineral resources** mineral resources spread throughout the territory of Latvia and present in sufficient amount;
- 2¹) an authorisation for the extraction of widespread mineral resources an administrative act that grants the right to the addressee thereof to use subterranean depths within the specified limits and for a specified period of time, taking into account the conditions of the authorisation;
- 3) **mineral resources** formations of non-organic or organic origin (also groundwater) the use of which is practically possible and economically viable;
- 4) **deposit of mineral resources** a natural set of mineral resources the amount, the quality and conditions of extraction of which have been assessed and the practical use of which is possible;
- 5) **register of deposits of mineral resources** –a set of data regarding the stocks of mineral resources in deposits and the quality thereof;
- 6) **extraction of mineral resources** a complex of activities for the separation of the mineral resources from their natural environment;
- 7) **exploration of mineral resources** the geological, geophysical, geochemical and technical activities at the licence area the aim of which is to determine the quality and stock of the mineral resources in a deposit, as well as to assess the commercial significance of the deposit of mineral resources;
- 8) **balance of the stock of mineral resources** the collection of data in respect to a certain period of time regarding the amounts of extraction of mineral resources, losses of stocks and remaining stocks of mineral resources;
- 9) **prospection of mineral resources** aim-oriented geological exploration in order to find perspective deposits of mineral resources for further exploration;
- 10) **concrete ring well** a water supply installation fixed with a concrete ring for the reception of groundwater;
- 11) **geological information** data regarding the construction, properties and resources of subterranean depths;
- 12) **geological exploration** geological works of all types, including geological research, the aim of which is to discover the structure, composition, properties, state of subterranean depths, as well as regularities of spread of useful properties and location of mineral resources and subterranean depths;
- 13) **borehole of water abstraction** a water supply installation fixed with pipes for the receiving of groundwater;

¹ The Parliament of the Republic of Latvia

- 14) **licence area** a district (block) or set of several districts (blocks) of subterranean depths intended for a certain purpose of use of subterranean depths, the frontiers of which are specified in the licence for use of subterranean depths or authorisation for the extraction of widespread mineral resources;
 - 15) **hydrocarbons** untreated petroleum (crude oil), natural gas and gas condensates;
- 15¹) **underground structures** tunnels, artificial caves, pits, shelters, as well as storage facilities for hydrocarbons and carbon dioxide in geological structures;
- 15²) **useful properties of subterranean depths** physical features of rocks (porosity, permeability, density, capacity of insulation, thermal energy etc.), as well as geological structures which may be used in the national economy;
 - 16) [16 December 2004];
- 17) **mineral resources of national significance** hydrocarbons *untreated petroleum* (*crude oil*), *natural gas* and groundwater (freshwater, mineral water, thermal water and water used in industry);
- 18) **deposit of mineral resources of national significance** a deposit specified by the Cabinet, which is located in the territory of Latvia or in the exclusive economic zone and the stocks of which ensure the needs for the relevant mineral resource of the State or several regions thereof;
- 19) **section of subterranean depths of national significance** districts of the Earth's crust specified by the Cabinet in the territory of Latvia or in the exclusive economic zone in which the properties of subterranean depths have been specified and the use of which may be of especially significant meaning in the national economic, protection and in other fields;
- 20) **subterranean depths** a part of the Earth's crust which is located under the soil, inland and sea water up to the depths in which the use thereof is economically and technically possible;
- 21) **use of subterranean depths** geological exploration, extraction of mineral resources and use of the useful properties of subterranean depths;
- 22) **licence for the use of subterranean depths** an administrative act, which grants to the addressee thereof the right to use the subterranean depth within the specified limits, in the specified form and for the specified period of time, taking into account the provisions of the licence:
- 23) **the Earth's crust** the outer, solid part of the Earth the thickness of which in Latvia is 40-64 km;
- 24) **subterranean depths fund** all usable and non-useable subterranean depths in the territory of Latvia and in the exclusive economic zone regardless of the possession (owner) thereof;
- 25) **monitoring of subterranean depths** the system of observation, control, analysis and forecasting of the state of subterranean depths;
- 26) State geological supervision of the subterranean depths fund the system of measures specified in regulatory enactments the task of which is to follow, how the procedures for the use of subterranean depths specified in regulatory enactments, normative documents and authorisations or licences (the programme of compliance of geological exploration of mineral resources and evaluation of results achieved, acceptance and record-keeping of stocks of mineral resources) are being complied with.

[11 February 1999; 16 December 2004; 5 October 2006; 17 June 2010]

Section 2. Purpose of this Law

The purpose of this Law is to ensure complex, efficient, environmentally-friendly and sustainable use of subterranean depths, as well as specify the requirements for the protection of subterranean depths.

[16 December 2004]

Section 3. Ownership

- (1) Subterranean depths and all mineral resources present therein shall be owned by the land owner.
- (2) The land owner or an accordingly authorised person thereof, if the land owner is the State or self-government (hereinafter authorised person), may deal with subterranean depths as far as this Law and other regulatory enactments do not restrict his or her rights.

 [17 June 2010]

Chapter II Supervision of Use of Subterranean Depths Fund

Section 4. Supervisory Bodies of Use of Subterranean Depths Fund

- (1) The supervision of the use of subterranean depths fund regardless of the possession (owner) thereof, in accordance with the procedures specified in regulatory enactments, shall be performed by:
- 1) the Ministry of Environment, institutions that are subordinate thereto and the State limited liability company "Latvian Environment, Geology and Meteorology Centre";
 - 2) the Ministry of Economics; and
 - 3) local governments.
- (2) The competence of the referred to authorities shall be determined by this Law and other laws, as well as by-laws and other regulatory enactments of the relevant ministries and bodies (authorities) approved by the Cabinet.
- (3) The Ministry of Environment shall ensure the geological supervision of the subterranean depths fund and the control of the efficient use thereof.
- (4) The Ministry of Economics shall issue licences for prospection, exploration and extraction of hydrocarbons in the licence areas specified by the Cabinet in accordance with the procedures specified by the Cabinet, as well as shall perform administrative supervision of the prospection, exploration and extraction of hydrocarbons.
- (5) Self-governments in the administrative territories thereof shall:
- 1) issue authorisations for the extraction of widespread mineral resources in accordance with the procedures specified by the Cabinet and in compliance with the limits specified by the State Environmental Service, except for the cases specified in Section 10, Paragraph one, Clause 3, Sub-clauses (a) and (b) of this Law; and
 - 2) supervise recovering of places of extraction of mineral resources.
- (6) Income from the State fee received regarding the authorisations for extraction of widespread mineral resources shall be used for covering the expenses for the fulfilment of functions assigned to self-governments.
- (7) [16 December 2004]
- [11 February 1999; 16 December 2004; 5 October 2006; 12 June 2009; 17 June 2010]

Section 5. Forms of Supervision of the Use of Subterranean Depths

- (1) The State limited liability company "Latvian Environment, Geology and Meteorology Centre" shall, in accordance with the procedures specified in this Law and other regulatory enactments:
 - 1) accept and record stocks of mineral resources;
- 2) draw up the register of deposits of mineral resources and balance of the stock of mineral resources;

- 3) [12 June 2009];
- 4) obtain and compile geological information and store it in the State Geology Fund; and
 - 5) organise the geological mapping of the State territory.
- (2) The Cabinet is entitled to burden the land owned by legal persons and natural persons and depths thereof with restrictions on ownership rights necessary for the State in the cases specified by the laws.
- (3) The land may be alienated from owners in accordance with the Law On the Expropriation of Immovable Property for the State or Public Needs for national security, environment and subterranean depths protection needs, use of mineral resources and deposits of national significance, as well as use of sections of subterranean depths of national significance, arrangement and exploitation of structures of national significance.
- (4) The Cabinet shall:
- 1) determine the procedures, by which the State limited liability company "Latvian Environment, Geology and Meteorology Centre" shall accept the stocks of mineral resources and co-ordinate the passport of the borehole of water abstraction and source; and
- 2) approve the price list of paid services related to the accepting of the stocks of mineral resources and the co-ordination of the passport of the borehole of water abstraction and source.

[11 February 1999; 16 December 2004; 12 June 2009; 17 June 2010]

Chapter III Use of Subterranean Depths

Section 6. Guiding Principles for the Use of Subterranean Depths

- (1) Subterranean depths are a non-renewable asset, which is to be used for the benefit of land owners, the State and public.
- (2) The value of subterranean depths shall not be included in the cadastral value of the land and tax on wealth shall not be paid for the subterranean depths. The land owner or his or her authorised person shall use the subterranean depths within the boundaries of his or her property free of charge in accordance with the provisions of Section 11 of this Law.
- (3) Users of subterranean depths shall use the subterranean depths, observing the requirements of regulatory enactments regarding the protection of cultural monuments, environmental impact assessment, the protection and use of specially protected nature territories, as well as the requirements of other regulatory enactments in the field of environmental protection.
- (4) In ensuring the rational use and protection of subterranean depths, the State and self-government may restrict, suspend or terminate any activity of legal persons and natural persons in the use of subterranean depths in the cases provided for in and in accordance with the procedures specified in this Law and other regulatory enactments.

[5 October 2006; 17 June 2010]

Section 7. Types of Use of Subterranean Depths

The types of use of subterranean depths shall be as follows:

- 1) geological, hydrogeological, engineering geological, geo-ecological or geophysical exploration;
- 2) establishment of a monitoring system of subterranean depths or performance of monitoring;
 - 3) prospection, exploration or extraction of mineral resources;
 - 4) use of useful properties of subterranean depths; and

5) establishment, conservation and liquidation of boreholes, except establishment of boreholes using the subterranean depths in the way referred to in Clauses 1 and 2 of this Section.

[16 December 2004; 17 June 2010]

Section 8. Users of Subterranean Depths

- (1) Subterranean depths may be used by:
 - 1) a land owner or legal possessor;
 - 2) an authorised person of the land owner;
- 3) a person who has entered into a contract with the land owner or his or her authorised person, in which the type of use of subterranean depths is indicated. This contract is a mandatory precondition for the receipt of the licence for the use of subterranean depths or the authorisation for the extraction of widespread mineral resources. If in cases specified by the Cabinet the licence for the use of subterranean depths is issued for the use of subterranean depths throughout the territory of Latvia, the contract with the land owner or authorised person thereof shall be entered into prior to the commencement of the use of subterranean depths;
- 4) in inland public water a person who has been issued the licence for the use of subterranean depths or the authorisation for the use of natural resources; and
- 5) in internal maritime water, territorial sea and exclusive economic zone of the Republic of Latvia in the licence areas specified by the Cabinet a person who has been issued the licence for the use of subterranean depths or the authorisation for the use of natural resources.
- (2) The Cabinet shall determine:
 - 1) the procedures for the use of subterranean depths in public water; and
- 2) the procedures for the use of subterranean depths in the territorial sea and exclusive economic zone of the Republic of Latvia.

[16 December 2004; 5 October 2006; 17 June 2010; 21 October 2010]

Section 9. Time Period for the Use of Subterranean Depths

A licence for the use of subterranean depths or an authorisation for the extraction of widespread mineral resources shall be issued, as well as State or self-government land shall be leased for the use of subterranean depths or transferred for the use for the following periods of time:

- 1) for geological, hydrogeological, engineering geological, geo-ecological or geophysical exploration, exploration of mineral resources, establishment of a monitoring system of subterranean depths or performing of monitoring thereof for the period of time up to 5 years;
 - 2) for exploration of hydrocarbons for the period of time up to 10 years;
 - 3) for prospection of mineral resources for the period of time up to five years;
- 4) for establishment, conservation or liquidation of a borehole for the period of time up to one year;
- 5) for the extraction of mineral resources or use of useful properties of subterranean depths for the period of time up to 25 years; and
- 6) for geological exploration and extraction of mineral resources or use of the useful properties of subterranean depths which follows thereto for the period of time up to 30 years.

[16 December 2004; 17 June 2010]

Section 10. Procedures for the Use of Subterranean Depths

- (1) The use of subterranean depths may be commenced only then, if in accordance with the procedures specified by the Cabinet (except for the cases referred to in Section11 of this Law) the following documents have been received:
- 1) an authorisation issued by the self-government in the cases specified in Section 4, Paragraph five of this Law;
- 2) a licence issued by the Ministry of Economics in the cases specified in Section 4, Paragraph four of this Law;
 - 3) a licence issued by the State Environmental Service:
 - a) in the case, when the deposit of widespread mineral resources is included in the administrative territory of several self-governments;
 - b) in the case, when in addition to widespread mineral resources in the deposit of mineral resources the stocks of other mineral resource has been accepted;
 - c) in the case, when mineral resources are extracted by a self-government;
 - d) in the case, when subterranean depths are used in public water, the territorial sea and exclusive economic zone of the Republic of Latvia; and
 - e) in all other cases.
- (2) In the cases specified by the Cabinet in respect of the lands owned by the State or self-governments the licence for the use of subterranean depths, except production of hydrocarbons, or the authorisation for the extraction of widespread mineral resources shall be issued to a person who has won in a competition or tender regarding the land lease rights and the receipt of the licence or authorisation.
- (2¹) The Cabinet shall determine the cases when a licence shall be issued for the use of subterranean depths throughout the territory of Latvia.
- (2²) For the use of subterranean depths in public water, the territorial sea and exclusive economic zone of the Republic of Latvia, the licences for the use of subterranean depths shall be issued in accordance with the competition procedures. If the licence for the use of subterranean depths is necessary for geological exploration related to the construction, establishment or operation of buildings in the sea, the competition shall not be organised and the referred to licence shall be issued to one of the following persons:
- 1) a person who, in accordance with the regulatory enactments regarding maritime environment protection and management, has received an authorisation or permit for the use of the relevant licence area for the construction, establishment, including the research related thereto, and operation of buildings in the sea; or
- 2) a person who has entered into a written contract regarding the performance of geological exploration with the person referred to in Clause 1 of this Paragraph.
- (3) For the use of subterranean depths of national significance, the licences for the use of subterranean depths shall be issued in accordance with the competition procedures. The bylaw of the competition shall be developed and approved by the State Environmental Service.
- (4) The State fee shall be paid for a licence for use of subterranean depths, an authorisation for the extraction of widespread mineral resources and a passport of the deposit. The amount for the State fee and procedures for payment shall be determined by the Cabinet.
- (5) If it is intended to use mineral resources extracted as a result of the use of subterranean depths for maintaining of roads of the self-government, for improvement of the territory or the maintaining of buildings owned by them, then on the basis of the request of the self-government and determining the extraction limits required for these works, the State fee for the issuance of the licence for use of subterranean depths to self-governments in respect of land owned by them or that is in their permanent use shall not be paid.
- (6) It is prohibited to pledge, sell, give as present, change or otherwise alienate licences for the use of subterranean depths and the authorisations for the extraction of widespread mineral resources. If the user of the subterranean depths changes, a licence or authorisation issued previously shall lose its effect, but the new user of the subterranean depths has the right to

receive a new licence or authorisation without competition (tender), if he or she undertakes the duties specified in the licence or authorisation issued previously. Licences for prospection, exploration and production of hydrocarbons may be alienated in accordance with Paragraph thirteen of this Section.

- (7) The procedures for the use of mineral resources of national significance, deposits of national significance and the procedures for prospection, exploration and extraction of hydrocarbons, as well as the provisions regarding environment protection in works of exploration and extraction of hydrocarbons carried out in the sea shall be regulated by the Cabinet. The Cabinet regulations shall also regulate the procedures for the use of mineral resources of national significance in the cases when the owner of the land and installation for the extraction of mineral resources of national significance is not the same person.
- (8) The provisions for the use of a section of the subterranean depths of national significance shall be determined by the Cabinet separately for each section.
- (9) Ground water may be used, if the passport of the borehole of water abstraction or sources has been co-ordinated or the stocks of the deposit of ground water have been accepted and the passport of the deposit has been received. In the cases specified in the regulatory enactments regarding environment protection an authorisation for the use of water resources or a relevant authorisation for the performance of polluting activity must be received prior to the commencement of water abstraction.
- (10) General procedures for competition or tendering of issuance of authorisations for the extraction of mineral resources and licences for the use of subterranean depths, as well as the procedures for licensing of works related to the prospection, exploration and production of hydrocarbons shall be determined by the Cabinet.
- (11) Mineral resources, except for hydrocarbons and ground water, shall be extracted, if the stocks of mineral resources have been accepted, the passport of deposit has been received and a project for extraction of mineral resources has been developed (if it is specified in the regulatory enactments regulating the use of subterranean depths that such project is necessary). The contents of the passport shall be determined by the Cabinet.
- (12) A State fee shall be paid for the production of hydrocarbons. The amount of the fee and the procedures for the calculation and payment thereof shall be determined by the Cabinet.
- (13) Licences for prospection, exploration and production of hydrocarbons may be alienated. The holder of the licence for prospection, exploration and production of hydrocarbons must conform to the requirements specified by the Cabinet and must undertake all the liabilities specified in the licence. The issuer of the licence shall issue the licence to the holder of the licence for prospection, exploration and production of hydrocarbons with the same conditions, without changing the period of validity of the previously issued licence. The procedures and conditions for the change of the licensee shall be regulated by the Cabinet.
- (14) A user of subterranean depths shall, in accordance with the procedures and the amount specified by the Cabinet, pay an annual State fee into the State basic budget for the right to use the subterranean depths in public water, the territorial sea and exclusive economic zone of the Republic of Latvia, except for the prospection, exploration and production of hydrocarbons, as well as geological exploration, which is related to the construction, establishment and operation of buildings in the sea and which takes place in accordance with the regulatory enactments in the field of maritime environment protection and management. [16 December 2004; 5 October 2006; 12 June 2009; 17 June 2010; 21 October 2010]

Section 11. Use of Subterranean Depths Without an Authorisation for the Extraction of Mineral Resources or a Licence for the Use of Subterranean Depths

(1) Land owners or their authorised persons shall use the subterranean depths, except hydrocarbons, within the boundaries of their property without a licence for the use of

subterranean depths or authorisation for the extraction of mineral resources in the following cases:

- 1) for the extraction of the widespread mineral resources specified in Annex to this Law in the total area up to 0.5 hectares and in depths up to 2 metres, if the mineral resources extracted are used within the boundaries of their land property; and
- 2) in installing and using concrete ring wells and boreholes of water abstraction in depths up to 20 metres, if it is intended to abstract not more than 10 cubic metres ground water per day.

(2) [17 June 2010]

[16 December 2004; 5 October 2006; 12 June 2009; 17 June 2010; 21 October 2010]

Section 11¹. Use of Subterranean Depths when Acquiring Mineral Resources as a Result of the Construction of Underground and Surface Structures

- (1) If as a result of the construction of underground and surface structures, including the installation ponds and other bodies of water, cleaning of surface bodies of water or deepening, mineral resources are obtained and it is intended to realise them, then an authorisation for the use of the natural resources issued by the regional Environmental Board shall be required.
- (2) Performing construction of surface and underground structures, cleaning and deepening works of surface bodies of water as a result of which mineral resources in an amount of less than 1 000 cubic meters are obtained, the authorisation specified in Paragraph one of this Section is not required.
- (3) If as a result of establishment, cleaning or deepening of surface water bodies mineral resources are extracted, the licence for the use of subterranean depths shall be received in cases when:
- 1) a surface water body is established, cleaned or deepened within a territory of a deposit of mineral resources included in the register of deposits of mineral resources;
- 2) during establishment of one or several surface water bodies it is intended to extract the mineral resources referred to in Annex to this Law in amount of not exceeding 20 000 cubic metres; and
- 3) during establishment of a surface water body it is intended to extract mineral resources, which are not referred to in Annex to this Law.

[16 December 2004; 17 June 2010]

Section 12. Servitude Rights Using Subterranean Depths

[16 December 2004].

Section 12¹. Restriction for Proprietary Rights of Subterranean Depths in the Sections of Subterranean Depths of National Significance

- (1) Restriction for proprietary rights of subterranean depth may be specified in the sections of subterranean depths of national significance, if it is necessary in the interests of public and State to use useful properties of subterranean depths or obtain ground water. The Cabinet shall decide separately regarding each restriction of proprietary rights and each case of the use of subterranean depths or properties thereof.
- (2) Procedures by which compensation regarding the restriction of proprietary rights specified in accordance with Paragraph one of this Section is to be calculated and disbursed to a landowner, shall be determined by the Cabinet. An agreement in writing regarding the amount of compensation to be disbursed regarding the restriction of proprietary rights shall be entered into.

- (3) The contract referred to in Section 8, Paragraph one, Clause 3 of this Law for the receipt of the licence for the use of subterranean depths for the performance of geological exploration works within the interests of the society and the State in sections of subterranean depths of national significance shall not be necessary, except for the cases when new boreholes are established for the needs of geological exploration or if, in performing works of geological exploration, losses to the land owner will be made. The user of subterranean depths shall inform the relevant land owner in writing regarding the time and place of performance of geological exploration works at least two weeks prior to the commencement of the works.
- (4) The compensation referred to in Paragraph two of this Section shall not be paid, if the user of subterranean depths, which has received the licence for the use of subterranean depths in accordance with the procedures specified in regulatory enactments, performs geological exploration within the interests of the society and the State in sections of subterranean depths of national significance.

[16 December 2004; 17 June 2010]

Section 13. Rights of Users of Subterranean Depths

The users of subterranean depth have the following rights:

- 1) to use the subterranean depths for the activity indicated in the licence for the use of subterranean depths or the authorisation for the extraction of widespread mineral resources;
- 2) utilise the obtained as a result of the use of subterranean depths in accordance with the authorisation or licence and regulatory enactments in force;
- 3) use by-products obtained during the extraction and processing of mineral resources, if restrictions have not been provided for in the authorisation or licence;
- 4) propose reviewing of provisions indicated in the authorisation or licence by the issuer of the authorisation or licence, if conditions, which significantly differ from the information indicated in the authorisation or licence, have arisen during the use of subterranean depths;
- 5) receive an extension of the term of the authorisation or licence or a new authorisation or licence, if the provisions of the previous authorisation or licence have been duly performed and if it is allowed by the contract of the use of subterranean depths entered into with the land owner or his or her authorised person.

[5 October 2006; 17 June 2010]

Section 14. Duties of the Users of Subterranean Depths

The users of subterranean depths have the following duties:

- 1) to observe the requirements of regulatory enactments, the licence for the use of subterranean depths, the authorisation for the extraction of widespread mineral resources or the licence for the extraction of natural resources in works connected with the use of subterranean depths;
- 2) to observe the procedures for the obtaining of mineral resources approved by the Cabinet:
- 3) to ensure preparation of geological documentation and take care of the storage thereof during the course of the geological exploration of subterranean depths;
- 4) to submit the geological information to the State limited liability company "Latvian Environment, Geology and Meteorology Centre" in accordance with the procedures and within the period of time specified in the authorisation or licence, as well as the data obtained regarding the stocks of mineral resources and properties thereof;
- 5) to submit reports required regarding the use of subterranean depths in accordance with the procedures specified in regulatory enactments;

- 6) to observe the standards, norms and regulations regulating environmental protection, protection of cultural monuments, land transformation, as well as protection of structures and other objects and to prevent that the use of subterranean depths leaves harmful effect to them; the users of subterranean depths shall not be liable regarding deviations from the relevant standards, norms and regulations committed by previous users;
 - 7) to remove and preserve the part of fertile soil for recovering;
- 8) to recover at their own expense damages caused as a result of the use of subterranean depths within the term indicated in the authorisation or licence;
 - 9) [17 June 2010];
- 10) to suspend or restrict the use of subterranean depths, if geological formations, meteorites, archaeological or other objects significant for science, culture and environmental protection have been discovered, as well as immediately notify the issuer of the authorisation or licence, if necessary the State Inspection for Heritage Protection, regarding the find. If further use of subterranean depths endangers or damages these objects, the use of subterranean depths shall be discontinued; and
- 11) to manage the waste from extraction in accordance with the procedures for the management of waste from extractive industries specified by the Cabinet. [16 December 2004; 5 October 2006; 12 June 2009; 17 June 2010]

Chapter IV Protection of Subterranean Depths

Section 15. Main Requirements in the Protection of Subterranean Depths

Main requirements in the protection of subterranean depths shall be as following:

- 1) the complete and complex exploration of subterranean depths;
- 2) the rational extraction of mineral resources, as well as use of the by-products present in deposits;
- 3) in the use of subterranean depths to not allow harmful effect on the stock of mineral reserves and the properties of subterranean depths;
- 4) use of subterranean depths preventing pollution with ecologically dangerous substances to be stored in underground and surface structures and storehouses, as well as waste water; and
 - 5) adjustment and control of subterranean depths.

Section 16. Limitation, Suspension of Use of Subterranean Depths, Cancellation of an Authorisation or Licence

- (1) The State Environmental Service shall take a decision regarding limitation or suspension of the use of subterranean depths if it detects that the requirements of a licence for the use of subterranean depths, an authorisation for the extraction of widespread mineral resources or the regulatory enactments regulating the use of subterranean depths are being violated, as well as if the use of subterranean depths results in threats to human health, the environment or property. The decision of the State Environmental Service may be contested to the Environment State Bureau. The decision of the Environment State Bureau may be appealed to a court in accordance with the procedures specified in the Administrative Procedure Law.
- (2) The State Inspection for Heritage Protection shall initiate the limitation or suspension of the use of subterranean depths to a holder of the licence for the use of subterranean depths or authorisation for the extraction of widespread mineral resources, if it may result in threats to cultural monuments.

- (3) The licence for the use of subterranean depths or authorisation for the extraction of widespread mineral resources shall be cancelled by the issuer thereof, if the addressee of the licence or authorisation:
- 1) has not commenced the use of subterranean depths within a year from the coming into effect of the licence for the use of subterranean depths (except the licence for the extraction of mineral resources);
- 2) has not commenced the extraction of mineral resources (except the production of hydrocarbons) within three years from the coming into effect of the relevant licence or authorisation;
- 3) uses the subterranean depths in a way not specified in the licence for the use of subterranean depths; or
- 4) systematically violates the requirements of regulatory enactments in relation to the use and protection of subterranean depths or the conditions of the licence for the use of subterranean depths or authorisation for the extraction of widespread mineral resources.
- (4) The decision of the State Environmental Service regarding the cancellation of the licence for the use of subterranean depths may be contested to the Environment State Bureau. The decision of the Environment State Bureau may be appealed to a court in accordance with the procedures specified in the Administrative Procedure Law.
- (5) A decision of a self-government regarding cancellation of the authorisation for the extraction of widespread mineral resources may be contested and appealed in accordance with the procedures specified in the Law On Local Governments and the Administrative Procedure Law.
- (6) The submitting of a submission for contesting of the decision referred to in this Section regarding the limitation or suspension of the use of subterranean depths or the cancellation of the licence for the use of subterranean depths or authorisation for the extraction of widespread mineral resources or the submitting of an application to the court regarding the revocation or validity of such decision or the recognition thereof as unlawful shall not suspend the operation of the decision.

[11 February 1999; 16 December 2004; 5 October 2006; 12 June 2009; 17 June 2010]

Section 17. Conditions for the Construction of Areas of Spread of Mineral Resources

- (1) In reviewing the projects for construction of populated areas, industrial or recreational complexes, as well as other objects, the environmental protection institutions shall evaluate, whether in the subterranean depths of the land to be constructed there are no deposits of mineral resources of national significance.
- (2) Construction of areas of deposits of mineral resources of national significance or areas of spread of subterranean depths sections of national significance, as well as designing and construction of underground structures shall be permissible only after the receipt of the authorisation of the State Environmental Service.

[16 December 2004; 12 June 2009]

Section 18. Control of the Use and Protection of Subterranean Depths

- (1) The control of the use and protection of subterranean depths shall be performed in accordance with the procedures specified in this Law and other regulatory enactments regulating the use of subterranean depths by the issuer of the authorisation for the extraction of mineral resources or the issuer of the licence for the use of subterranean depths or the State Environmental Service.
- (2) Self-government after the co-ordination with the State Environmental Service may perform measures for the protection of subterranean depths of local significance and for the control of the use thereof within the framework of this Law.

Chapter V

Liability for Violations in the Use of Subterranean Depths and the Recovery of Damages

Section 19. Liability for Violations in the Use of Subterranean Depths

Persons who, in using subterranean depths, have violated the requirements specified in this Law and in other regulatory enactments, as well as officials, which in contrary to the requirements of this Law and other regulatory enactments have issued authorisations for the extraction of mineral resources or licences for the use of subterranean depths shall be held liable in accordance with the laws.

[11 February 1999]

Section 20. [17 June 2010]

Section 21. Liability Regarding the Harm Caused by Previous Land Owners and Users of Subterranean Depths

- (1) A land owner for which the ownership rights have been restored to the land or to which the land has been handed over in the ownership anew in accordance with the Laws On Land Reform in the Cities of the Republic of Latvia and On Land Privatisation in Rural Areas, shall not be held liable regarding the harm caused by previous land owners or users of subterranean depths to the land and subterranean depths.
- (2) The owner of subterranean depths or the user of subterranean depths may eliminate harm caused to the land and subterranean depths by other persons prior the obtaining of ownership rights to the land, by performing recovering and purification at his or her own expense. In such case it shall be indicated in the authorisation for the extraction of widespread mineral resources or the licence for use of subterranean depths and the relief for the State fee for the receipt of the authorisation or licence shall be applied.
- (3) The land owners shall be exempted from the payment for court costs during the State reform, if they bring an action in court regarding the recovery of damages against institutions that have issued an unjustified authorisation for the use of subterranean depths or against persons who have used the subterranean depths owned by the land owners arbitrarily.

 [5 October 2006]

Section 22. Informative Basis for the Use and Protection of Subterranean Depths

- (1) Geological information shall be compiled and stored in the Geological Information System. It shall include the results of geological exploration, scientific research works, results of subterranean depths monitoring, as well as the data obtained as a result of the extraction of mineral resources and the use of other types of subterranean depths. The State Geological Information System belongs to the State, it shall be managed by the State limited liability company "Latvian Environment, Geology and Meteorology Centre".
- (2) Geological exploration, scientific research works and monitoring of subterranean depths shall be performed upon the procurement of the government, self-governments, or order of the users or owners of subterranean depths.
- (3) The geological exploration and scientific research in the lands owned by the State and self-governments shall be performed in accordance with the programmes for geological and scientific research or government and self-governments procurements received. In the land owned by legal persons and natural persons these works shall be performed in accordance

with the programmes for scientific research or the government, self-governments procurements, orders of the users of subterranean depths or land owners and within the period of time (terms) co-ordinated with the land owner or user of subterranean depths.

(4) Persons who perform geological exploration of subterranean depths, scientific research, as well as the monitoring of subterranean depths, shall ensure a careful and economical attitude towards the environment and land owner and the property of the user of subterranean depths.

(5) [17 June 2010]

[17 June 2010]

Section 23. Basic Provisions for the Creation and Use of the Geological Information System

[17 June 2010]

- (1) The information obtained as a result of geological exploration and scientific research, as well as the monitoring of subterranean depths or as a result of the use of other types of subterranean depths shall be possessed by the State, if these works have been performed by the funds from the State budget or self-government. If such information has been obtained by the order of legal persons or natural persons and by their funds, it shall be owned by the relevant legal person or natural person.
- (2) The self-government, any legal person or natural person regardless of the type of financing of works shall hand over the geological information obtained as a result of the use of subterranean depths to the State on behalf of the State limited liability company "Latvian Environment, Geology and Meteorology Centre" free of charge by entering into a contract regarding the use thereof. The State limited liability company "Latvian Environment, Geology and Meteorology Centre" shall submit to the Ministry of Economics the information obtained as a result of the geological exploration of hydrocarbons, as well as prospection, exploration and production of hydrocarbons. The State limited liability company "Latvian Environment, Geology and Meteorology Centre" shall compile, process and store information, as well as ensure access thereto.
- (3) The owner of geological information may not prohibit to use the information, if as a result of the non-use thereof potentially ecologically dangerous situations, ecologically dangerous situations or situations of ecological disasters may arise.
- (3¹) The Geological Information System shall be the property of the State. The system shall include the State geology fund, the archives, the library of geologically technical literature, the depository of borehole cores and the collections created therein, the electronic information systems developed using the resources from the State budget and other data.
- (4) The content and conditions for the use of the Geological Information System shall be regulated by the Cabinet.

[11 February 1999; 16 December 2004; 12 June 2009; 17 June 2010]

Chapter VI Final Provision

Section 24. Procedures for the Examination of Disputes

Disputes arising during the course of the use of subterranean depths shall be examined in accordance with the regulatory enactments in force.

Transitional Provisions

- 1. With the coming into force of this Law, the Law On Approval of Code of Subterranean Depths of Latvia, Code of Subterranean Depths (*Latvijas PSR Augstākās Padomes un Valdības Ziņotājs*, 1976, No. 23; 1980, No. 9; 1982, No. 52; 1985, No. 1; . 1988, No. 1).
- 2. The Cabinet shall approve the list of deposits of mineral resources of national significance within 6 months after coming into force of this Law.
- 3. Up to the approval of the list of deposits of mineral resources of national significance the deposits of mineral resources of industrial significance referred to in the Decision of the Council of Ministers, of 13 November 1991, No. 316, Regarding Approval of the List of Mineral Deposits and Peat Deposits of Industrial Significance, shall be considered as deposits of mineral resources of national significance.
- 4. The Cabinet shall develop regulations regarding the procedures for the use of mineral resources and deposits of national significance, as well as sections of subterranean depths of national significance; regulations regarding the procedures for licensing of prospection, exploration and production of hydrocarbons, as well as regulations for prospections, exploration and production of hydrocarbons within six months after entering into force of this Law.

[16 December 2004]

- 5. Until the day of coming into force of the new Cabinet regulations, but not longer than until 1 July 2005, the following Cabinet Regulations shall be in force insofar as they are not in contradiction with this Law:
- 1) Cabinet Regulation No.239, of 8 July 1997, Regulations for Use of Subterranean Depths;
- 2) Cabinet Regulation No. 307, of 5 September 2000, Procedures for Use of Mineral Resources and Deposits of National Significance, as well as for Use of Sections of Subterranean Depths of National Significance;
- 3) Cabinet Regulation No. 412, of 28 November 2000, Regulations Regarding the Protection of the Environment during Exploration and Production of Hydrocarbons in the Sea;
- 4) Cabinet Regulation No. 51, of 8 February 2000, Regulations for Prospection, Exploration and Production of Hydrocarbons; and
- 5) Cabinet Regulation No. 52, of 8 February 2000, Procedures for Licensing Competition of Prospection, Exploration and Production of Hydrocarbons. [16 December 2004]
- 6. By 1 September 2005 the Cabinet shall issue the following:
 - 1) the Regulations referred to in Section 12.¹, Paragraph two of this Law; and
- 2) the Regulations referred to in Section 14, Clause 2 of this Law. [16 December 2004]
- 7. If the use of useful properties of subterranean depths has been commenced prior to the day of coming into force of the amendments to this Law accepted on 16 December 2004, the user of subterranean depths shall not have to receive the authorisation for extraction of mineral resources or a licence for the use of subterranean depths up to the end of the term of validity of the contract entered into regarding the use of subterranean depths. These users of subterranean depths shall observe the requirements of regulatory enactments regulating the use of subterranean depths up to the receipt of the authorisation (licence), as well as he or she shall submit all geological information related to the use of subterranean depths to the relevant environmental protection institution

[16 December 2004]

- 8. Up to the day of coming into force of new Cabinet Regulations, but no longer than up to 30 April 2007 the Cabinet Regulation No. 449 of 21 June 2005, *General Procedures for Issuance of Licences for Use of Subterranean Depths and Authorisations for Extraction of Widespread Mineral Resources, as well as Use of Geological Information*, and the Cabinet Regulation No. 691 of 13 September 2005, *Regulations Regarding Prospection, Exploration and Production of Hydrocarbons*, shall be in force.

 [5 October 2006]
- 9. The Cabinet shall issue the regulations referred to in Section 10, Paragraph four of this Law by 1 October 2006. Up to the day of coming into force thereof the licences for the use of subterranean depths and authorisations for the extraction of widespread mineral resources shall be issued for charge in accordance with the Cabinet Regulation No. 449 of 21 June 2005, General Procedures for Issuance of Licences for Use of Subterranean Depths and Authorisations for Extraction of Widespread Mineral Resources, as well as Use of Geological Information.

[5 October 2006]

10. By 1 May 2008 the Cabinet shall issue the regulations referred to in Section 14, Clause 11 of this Law.

[5 October 2006]

- 11. Section 14, Clause 11 of this Law shall come into force on 1 May 2008. *[5 October 2006]*
- 12. By 7 August 2009 the Cabinet shall issue the regulations referred to in Section 10, Paragraph twelve of this Law. [12 June 2009]
- 13. [17 June 2010]
- 14. Amendments to Section 4, Paragraph three and five, Section 5, Paragraph one, Section 10, Paragraphs one and eleven, Section 11, Paragraph two, Section 14, Clauses 4 and 10, Section 16, Paragraph four, Section 17, Paragraph two and Section 23, Paragraph two of this Law regarding the change of the competent authority shall come into force on 1 August 2009. [12 June 2009]
- 15. By 1 September 2011 the Cabinet shall issue the regulations referred to in Section 5, Paragraph four of this Law. [17 June 2010]
- 16. By 1 September 2011 the Cabinet shall issue the regulations referred to in Section 8, Paragraph two of this Law. [17 June 2010; 21 October 2010]
- 17. By 1 September 2011 the Cabinet shall issue the regulations referred to in Section 10, Paragraphs two and eleven, as well as Section 23, Paragraph four of this Law. Until the date of the coming into force of these Cabinet regulations, but no longer than up to 1 September 2011 Cabinet Regulation No. 448 of 21 June 2005, Regulations Regarding Deposits of Mineral Resources of National Significance and the Procedures for the Use thereof, the Procedures for the Use of Mineral Resources of National Significance, as well as the Procedures for Competition or Tendering of Issuance of Authorisations or Licences for the

Use of Subterranean Depths, and Cabinet Regulation No. 280 of 24 April 2007, General Procedures for the Issue of Licences for the Use of Subterranean Depths and Authorisations for the Extraction of Widespread Mineral Resources, and for the Use of Geological Information, shall be in force insofar as they are not in contradiction with this Law. [17 June 2010]

- 18. By 1 September 2011 the Cabinet shall issue the regulations referred to in Section 10, Paragraph thirteen of this Law. Until the date of the coming into force of these Cabinet regulations, but no longer than up to 1 September 2011 Cabinet Regulation No. 597 of 4 September 2007, Regulations Regarding Prospecting, Exploration and Production of Hydrocarbons and Procedures for Payment and Amount of State Fee, shall be in force insofar as they are not in contradiction with this Law. [17 June 2010]
- 19. By 31 December 2010 the Cabinet shall issue the regulations referred to in Section 10, Paragraphs 2.¹ and fourteen of this Law. [17 June 2010]
- 20. Section 10, Paragraph fourteen of this Law shall come into force on 1 January 2011. [17 June 2010]
- 21. Amendments to Section 10, Paragraph 2.² of this Law shall come into force concurrently with the Maritime Environment Protection and Management Law. [21 October 2010]

Informative Reference to European Union Directive

[16 December 2004; 5 October 2006]

This Law includes legal norms arising from Directive 94/22/EC of the European Parliament and of the Council of 30 May 1994 on the conditions for granting and using authorizations for the prospection, exploration and production of hydrocarbons and Directive 2006/21/EC of the European Parliament and of the Council of 15 March 2006. This Law has been adopted by the *Saeima* on 2 May 1996.

President

G. Ulmanis

Rīga, 21 May 1996

Annex

List of Widespread Mineral Resources

- 1. Clay.
- 2. Sand, sand-gravel.
- 3. Loose freshwater rocks.
- 4. Peat deposits up to the area of 5 hectares within the borders of the property owned by one owner.
- 5. Loam, sandy loam, aleirite.



Law published: Official Gazette *Valstybės žinios*, 1995, No. 63-1582. Unofficial text of the Law.

LAW ON SUBSOIL OF THE REPUBLIC OF LITHUANIA

5 July 1995, No. I-1034 Vilnius

New version of the Law:

No. IX-243, 10/04/2001, Official Gazette Valstybės žinios, 2001, No. 35-1164 (25/04/2001)

CHAPTER ONE GENERAL PROVISIONS

Article 1. Purpose of the Law

- 1. This Law establishes the basic rights and obligations of the executive authorities, state and municipal institutions of the Republic of Lithuania, as well as of legal and natural persons and their groups acting under joint venture agreements, in relation to the exploitation and protection of the subsoil of the land territory of the Republic of Lithuania, its inland waters, continental shelf and economic zone in the Baltic Sea.
- 2. This Law implements the legal act of the European Union specified in the Annex hereto.

Amendments:

No. IX-2516, 02/11/2004, Official Gazette Valstybės žinios, 2004, No. 167-6097 (17/11/2004)

Article 2. Ownership of the Subsoil

The subsoil of land and inland waters is the exclusive property of the State, and the State holds exclusive rights to the subsoil on the continental shelf and in the economic zone in the Baltic Sea. Subsoil shall be exploited on the basis of the right of exploitation, which may be granted by the Government of the Republic of Lithuania or its authorised body in accordance with the procedure laid down by the present Law and other laws to legal and natural persons and groups of such persons acting under joint venture agreements.

Amendments:

No. IX-2516, 02/11/2004, Official Gazette Valstybės žinios, 2004, No. 167-6097 (17/11/2004)

Article 3. Main Definitions

- 1. **Data about subsoil (geological data)** means all primary data about drill cores, samples, fossils, collections of rocks and minerals, the investigation of their physical, mechanical, chemical and other properties obtained in the course of the exploitation of subsoil and the results of the summary of such data.
- 2. **Mining plot** means a part of the subsoil surveyed in the course of the exploration and containing the amount of mineral resources approved in accordance with the established procedure and the area of the deposit (or of a part thereof) provided to a person exploiting.

- 3. **Natural resources** mean natural mineral substances located in the subsoil which can be used in production or for other purposes:
 - 1) hydrocarbons;
 - 2) metal ores;
 - 3) non-metallic natural resources;
 - 4) valuable minerals.
- 4. **Groundwater** means the below-listed types of water naturally accumulated or artificially infiltrated in the subsoil:
 - 1) fresh drinking water which corresponds to the standard of drinking water of the Republic of Lithuania or which is suitable for the preparation of this type of water;
 - 2) mineral water containing a wider variety of mineral substances than ordinary drinking water and/or producing a certain physiological effect;
 - 3) industrial brines and mineralised water from which it is possible and economically beneficial to extract chemical elements or chemical compounds;
 - 4) production water not elsewhere classified and suitable for the use in industry, agriculture, livestock farming, fishery or for other purposes.
- 5. **Subsoil** means the part of the earth's crust (lithosphere) starting with the surface of subsoil rocks on land and on the surface of the bottom sediments of inland waters, in the continental shelf and the economic zone in the Baltic Sea.
- 6. **Protection of the subsoil** means activities and measures aimed at protecting the valuable properties of the subsoil from physical, chemical, biological or other negative effects arising as a result of natural processes or human activities, and full or partial restoration of these properties, as well as rational exploitation of subsoil resources.
- 7. **Underground caves** mean natural caves in rocks and in their layers as well as artificial caves, developed in the course of the extraction of natural resources or constructed specifically for this purpose.
- 8. **Geological survey of the subsoil** ("**survey of the subsoil**") means geological mapping, search, exploration and other activities aimed at obtaining knowledge about the structure, properties, physical fields, condition of the subsoil, processes taking place therein, its resources and the impact of economic activities on the subsoil. Activities carried out to prepare subsoil resources and caves for exploitation (drilling production boreholes, geophysical, engineering/geological, geotechnical surveys etc.) and providing data about the subsoil are regarded as surveys of the subsoil. The types of surveys of the subsoil:
 - 1) direct survey in the course of which the exploitation of the subsoil takes place (excavation, drilling, blasting, generation of vibrations and physical fields, sampling, etc.);
 - 2) remote survey in the course of which the physical properties or the composition of particular objects of the subsoil are determined without exploiting any subsoil (instrumental measurements of geophysical fields and radiation, airphoto geological surveys, etc.);
 - 3) indirect summary of primary data about the subsoil and other surveys in the course of which no exploitation of subsoil takes place.

- 9. **Subsoil resources** mean the part of natural resources comprising the elements of the structure and the composition of the subsoil solid bodies, liquids, gases or energy fields which can be used by people and the quantity or quality whereof changes as a result of such use.
- 10. **Exploitation of subsoil resources and caves** means activities aimed at the extraction from the subsoil of natural resources, groundwater, underground thermal energy, as well as at the construction and utilisation of underground caves.
- 11. **Deposit of subsoil resources** means natural resources, groundwater or underground thermal energy, existing within established boundaries, the quantity and quality of which has been surveyed and the extraction of which when complying with environmental requirements is or may be economically beneficial in the future.
- 12. **Exploitation of subsoil** means activities in the course of which data about the subsoil is obtained or subsoil resources are extracted and the properties of the subsoil are utilised. The types of the exploitation of subsoil:
 - 1) survey of the subsoil;
 - 2) exploitation of subsoil resources;
 - 3) utilisation of underground caves.
- 13. **Monitoring of the subsoil** means a systematic review of the condition and the change of the subsoil, the assessment and the forecast of anthropogenic impact on it.
- 14. **Underground thermal energy** means thermal energy naturally or artificially accumulated in the subsoil, rocks, water or gas.
- 15. Valuable properties of the subsoil mean the features of the structure, composition of the subsoil and of the processes occurring therein, which are the elements of a natural or anthropogenic ecosystem and which influence the conditions of human life and economic activities.
- 16. **Land plot** means a part of a territory having established boundaries and the main purpose of the use of land

CHAPTER TWO STATE REGULATION OF THE EXPLOITATION AND PROTECTION OF SUBSOIL

Article 4. Competence of State Authorities and Institutions

- 1. The Ministry of the Environment implements the policy of the State in the area of the protection of the subsoil and of the exploitation of subsoil resources, draws up and approves long-term and target programmes of the State for the protection and exploitation of subsoil, organises and controls their implementation, lays down the procedure for the exploitation, protection and control of subsoil resources and implements it, establishes limits on and the conditions for the exploitation of subsoil resources, regulates and controls the accounting of subsoil resources.
- 2. The Geological Survey of Lithuania under the Ministry of the Environment ("Geological Survey of Lithuania") organises and conducts the state survey of the subsoil, establishes conditions for the exploitation and protection of subsoil, controls direct and remote surveys of

the subsoil, develops, keeps and administers the national geological information system, performs other functions provided for by laws and other legislation.

Article 5. Competence of Other Public Administration Institutions

- 1. The National Land Service under the Ministry of Agriculture coordinates the exploitation of subsoil.
- 2. Municipal authorities coordinate documents covering the exploitation and protection of subsoil, according to their competence established by laws and other legislation.

Amendments:

No. IX-972, 30/06/2010, Official Gazette Valstybės žinios, 2010, No. 86-4526 (20/07/2010)

CHAPTER THREE SURVEY OF THE SUBSOIL

Article 6. Permits for a Survey of the Subsoil

- 1. Direct and remote surveys of the subsoil, except for the survey of hydrocarbons, may be conducted by legal persons and groups of legal persons acting under joint venture agreements holding a permit for a respective type of survey.
- 2. Direct and remote surveys of hydrocarbons may be conducted by legal and natural persons and by their groups acting under joint venture agreements holding a permit for the conduct of such surveys.
- 3. Permits for direct and remote surveys of the subsoil are issued to legal and natural persons and to their groups acting under joint venture agreements by the Geological Survey of Lithuania in accordance with the procedure laid down by the Government.
- 4. Information on the issuance or revocation of a permit for a survey of the subsoil is published in the supplement "*Informaciniai pranešimai*" to the Official Gazette *Valstybės žinios*.

Amendments:

No. IX-2516, 02/11/2004, Official Gazette Valstybės žinios, 2004, No. 167-6097 (17/11/2004)

Article 7. Registration of Surveys of the Subsoil

- 1. Any type of subsoil surveys shall be registered with the Geological Survey of Lithuania in accordance with the procedure laid down by it, except for the non-state funded indirect surveys.
- 2. The place or the area of the surveys of the subsoil to be registered shall be coordinated with the owners and users of land in accordance with the procedure laid down by laws and other legal acts. Prior to the commencement of a direct survey of the subsoil the permit holder shall notify it to an executive authority of the municipality in the territory of which the survey is to be conducted.

Article 8. Conditions for a Survey of the Subsoil

- 1. Legal and natural persons as well as their groups acting under joint venture agreements holding a permit for a survey of the subsoil shall conduct the survey in accordance with a work plan (or terms of reference) and in compliance with work quality, environmental, occupational safety and other requirements. During the survey of the subsoil resources shall be exploited only in such cases, amounts and in the manner as specified in the work plan.
- 2. A body authorised by the Government may instruct legal and natural persons as well as their groups acting under joint venture agreements holding a permit for a survey of the subsoil to carry out additional works related to the survey, and the costs of such additional works shall be covered from the funds designated for the implementation of the programme of the state survey of the subsoil.
- 3. Upon the completion of a survey of the subsoil, boreholes drilled from public funds may be transferred to legal and natural persons as well as to their groups acting under joint venture agreements in accordance with the procedure laid down by the Government or by its authorised body.
- 4. Mineral and fresh drinking groundwater resources (except for individual drilled boreholes) as well as mineral water resources shall be classified according to the classification of resources approved by a body authorised by the Government, irrespective of the origin of the funding of their survey. Explored resources shall be approved by the Geological Survey of Lithuania in accordance with its established procedure.

Amendments:

No. IX-2516, 02/11/2004, Official Gazette Valstybės žinios, 2004, No. 167-6097 (17/11/2004)

Article 9. Suspension and Revocation of a Permit for a Survey of the Subsoil

A permit for a survey of the subsoil may be suspended or revoked by a body authorised by the Government at its own discretion or on a written request of a body exercising control over the survey of the subsoil, provided that the respective works have been carried out:

- 1) not in compliance with the work plan or the terms of reference;
- 2) in violation of environmental requirements;
- 3) in violation of other requirements established by this Law or by other legislation.

Article 10. State Surveys of the Subsoil

The Geological Survey of Lithuania in accordance with the programmes approved by the Government or its authorised body from the public funds shall carry out geological mapping, state monitoring of the subsoil, forecast of subsoil resources and other surveys of the subsoil providing data about subsoil necessary for the environmental protection, economic activities and for other public needs or required as a result of the international obligations of the Republic of Lithuania.

CHAPTER FOUR EXPLOITATION OF SUBSOIL RESOURCES AND UTILISATION OF UNDERGROUND CAVES

Article 11. Procedure for the Exploitation of Subsoil Resources and the Utilisation of Underground Caves

- 1. Subsoil resources and underground caves may be exploited/utilised only in accordance with the procedure laid down by laws and other legal acts.
- 2. The use of natural underground caves for burying or storing radioactive and toxic substances shall be prohibited.

Article 12. The Right to Exploit Subsoil Resources and to Utilise Underground Caves

- 1. The subsoil resources and the underground caves of the Republic of Lithuania, except for hydrocarbons, fresh drinking and production groundwater and thermal energy, may be exploited by legal persons and by groups of legal persons acting under joint venture agreements having obtained a permit issued by the Government or by its authorised body and having concluded an agreement on the exploitation of resources or the utilisation of caves with the body authorised by the Government.
- 2. Hydrocarbons may be used by legal and natural persons and by groups of such persons acting under joint venture agreements having obtained a permit issued by the Government or by is authorised body and having concluded an agreement on the exploitation of resources or the utilisation of caves with the body authorised by the Government.
- 3. A permit to use fresh drinking and production groundwater and thermal energy shall be issued to legal and natural persons and their groups acting under joint venture agreements in accordance with the procedure laid down in Article 13(2) of the present Law.
- 4. A permit to exploit subsoil resources and to use underground caves grants a right for a specified period of time and set out conditions to exploit the specified types of subsoil resources or utilise underground caves within the area described in the agreement on the exploitation of resources and utilisation of caves or on a mining plot provided.
- 5. A permit for the exploitation of subsoil resources and for the utilisation of underground caves may also provide for the surveys of subsoil resources or underground caves (search/exploration), specify the area and the time of such surveys and their conditions established in the agreement on the exploitation/utilisation. In such a case the permit shall grant a right to also exploit new or additionally surveyed resources under the conditions established in this chapter. Only persons holding a permit for a survey of the subsoil shall be entitled to conduct the survey (search/exploration) under the permit for the exploitation of subsoil resources or the utilisation of underground caves.
- 6. Permits for the exploitation of subsoil resources and for the utilisation of underground caves listed in Article 13(1) of the present Law shall be issued by way of a public tender, except for the cases specified in the present paragraph. A permit to construct and utilise artificial underground caves for storing radioactive and toxic substances may be issued without a public tender only to an undertaking having obtained, in accordance with the procedure laid down by the laws of the Republic of Lithuania, a permit for the operation of radioactive waste repositories and disposal sites. Any further permits for the exploitation of subsoil resources on the same mining plot shall be issued without a public tender. A permit for the exploitation of hydrocarbon resources may be granted without a public tender in accordance with the procedure laid down by the Government to the holder of the permit for an adjacent area, provided that the application filed by such person is based on geological reasons or on reasons related to the extraction of hydrocarbon resources. In the latter case the holders of the permits for all adjacent areas may

also file applications for such a permit in accordance with the procedure and time limits established.

- 7. Other types of subsoil resources and underground caves may also be surveyed and exploited/utilised on the same area and at the same time under a different permit, provided that this does not disturb the activities of persons having obtained their permit earlier.
- 8. The owner or the user of the land shall be entitled to exploit subsoil resources for his domestic purposes (not for sale) without the permit referred to in Article 12(1) hereof in accordance with the procedure laid down by other laws and other legal acts on the land plot owned by him or granted for use or leased to him.

Amendments:

No. IX-2516, 02/11/2004, Official Gazette Valstybės žinios, 2004, No. 167-6097 (17/11/2004)

Article 13. Issuance of Permits for the Exploitation of Subsoil Resources and for the Utilisation of Underground Caves

- 1. The Government or its authorised body shall issue permits for:
 - 1) exploitation of the resources of hydrocarbons, metals, valuable minerals, monomineral quartz sand;
 - 2) utilisation of natural underground caves for burying industrial waste (except for radioactive and toxic substances);
 - 3) construction and utilisation of artificial underground caves for storing radioactive and toxic substances;
 - 4) utilisation of natural underground caves for storing oil, gas or other substances.
- 2. Permits for the exploitation of fresh drinking and production groundwater and of underground thermal energy shall be issued to legal and natural persons and to groups of such persons acting under joint venture agreements by the Ministry of the Environment in accordance with its established procedure.
- 3. The Geological Survey of Lithuania shall issue permits for the exploitation of subsoil resources not specified in Articles 13(1) and 13(2) hereof in accordance with the procedure laid down by the Government or by its authorised body.
- 4. If the exploitation of subsoil resources or the utilisation of underground caves can influence the condition of the subsoil of another state, the decision concerning the permit for the exploitation of subsoil resources and for the utilisation of underground caves shall be issued by the Government of the Republic of Lithuania.
- 5. Permits for the exploitation of subsoil resources and for the utilisation of underground caves shall be registered with the body issuing them in accordance with the procedure established.
- 6. The body issuing permits for the exploitation of subsoil resources and for the utilisation of underground caves shall publish information about the issuance or the revocation of such permits in the supplement *Informaciniai pranešimai* to the Official Gazette *Valstybės žinios*.

Amendments:

No. IX-2516, 02/11/2004, Official Gazette Valstybės žinios, 2004, No. 167-6097 (17/11/2004)

Article 14. Project for the Exploitation of Subsoil Resources or for the Utilisation of Underground Caves

- 1. The exploitation of subsoil resources and the utilisation of underground caves, except for the caves used for storing or burying radioactive and toxic substances, fresh drinking and production groundwater, thermal energy and except for the cases provided for by Article 12(8) hereof shall be permitted only in accordance with a project for the exploitation of subsoil resources or for the utilisation of underground caves ("exploitation project"). Such project shall be coordinated with the executive authority of a relevant municipality, the National Land Service under the Ministry of Agriculture, the State Labour Inspectorate and approved by the Ministry of the Environment or by its authorised body.
- 2. The procedure for the installation and for the liquidation of boreholes for the supply of fresh drinking and production groundwater and for the consumption of thermal energy from water shall be established by the Ministry of the Environment.
- 3. The following shall be set forth in an exploitation project:
 - 1) manner of and means for the exploitation of resources;
 - 2) measures for the re-cultivation of land, as well as necessary measures for the restoration of other elements of the environment;
 - 3) measures for the re-cultivation of land damaged in the course of the exploitation of resources and for the protection of subsoil resources, left in the deposit, from the exhaustion and the reduction in quality, when the exploitation of the subsoil resources is temporarily or completely terminated.

Amendments:

No. IX-2516, 02/11/2004, Official Gazette Valstybės žinios, 2004, No. 167-6097 (17/11/2004) No. IX-972, 30/06/2010, Official Gazette Valstybės žinios, 2010, No. 86-4526 (20/07/2010)

Article 15. Conditions for the Exploitation of Subsoil Resources and for the Utilisation of Underground Caves

- 1. Subsoil resources and underground caves may be exploited/utilised only after they have been surveyed, approved and after the environmental impact of their extraction has been assessed in accordance with the established procedure.
- 2. The exploitation of subsoil resources shall be rational and integrated; it shall include the protection of non-exploited subsoil resources located in the same deposit or in the zone of its influence.
- 3. The volumes of the extraction of subsoil resources, which may be set by the Government or by its authorised body, shall be specified in an agreement on the exploitation of resources or the utilisation of caves.
- 4. The exploitation of subsoil resources shall necessarily involve the monitoring of their condition, the forecasting of the change in their quantity and quality, the accounting of resources extracted and remaining in the deposit, the conduct by economic entities of the monitoring of the subsoil, provided that this is stipulated in the agreement on the exploitation of resources or the utilisation of caves, as well as the provision of relevant data to the Register of Subsoil in accordance with the established procedure.

5. Having discovered geological, archaeological and other objects with a scientific or cultural value, the person exploiting subsoil resources shall notify this to the body having issued the permit and to other state and municipal institutions in accordance with the established procedure, as well as to suspend the works carried out in a particular plot, if the continuation of the works could be harmful to the said objects.

Amendments:

No. IX-2516, 02/11/2004, Official Gazette Valstybės žinios, 2004, No. 167-6097 (17/11/2004)

Article 16. Acquisition of a Land Plot

A land plot required for the exploitation of subsoil resources or for the utilisation of underground caves shall be purchased, expropriated for public purposes or leased in accordance with the procedure laid down by the Law on Land, the Law on the Lease of Land and by other legislation.

Article 17. Expiry of a Permit for the Exploitation of Subsoil Resources or the Utilisation of Underground Caves

A permit for the exploitation of subsoil resources or for the utilisation of underground caves shall cease to be valid in the following cases:

- 1) the established period of the validity of the permit expires;
- 2) the resources for the use of which the permit was obtained have been exhausted;
- 3) the enterprise has been dissolved or reorganised;
- 4) the permit has been revoked in cases specified in Article 18 hereof.

Article 18. Suspension or Revocation of the Permit for the Exploitation of Subsoil Resources or for the Utilisation of Underground Caves

- 1. A permit for the exploitation of subsoil resources or for the utilisation of underground caves shall be revoked if the parties entering into an agreement on the exploitation of resources or the utilisation of caves fail to agree on the terms of the agreement.
- 2. A permit for the exploitation of subsoil resources or for the utilisation of underground caves may be suspended or revoked if the permit holder:
 - 1) has acted in breach of the conditions of the agreement on the exploitation of resources or the utilisation of caves or of the requirements of the exploitation project, or has failed to meet the time limits set for the completion of relevant works and has failed to rectify the breach within the time limits set by the controlling body;
 - 2) has violated environmental and occupational safety requirements;
 - 3) has violated other requirements of the present Law;
 - 4) has filed an application for the revocation of the permit;
 - 5) has been deprived of the right to use the land;
 - 6) is a group of persons and the joint venture agreement has expired.

- 3. A permit for the exploitation of subsoil resources or for the utilisation of underground caves may be revoked by way of the expropriation of the land for public purposes in accordance with the procedure laid down by laws.
- 4. A permit shall be suspended or revoked in accordance with the procedure laid down by the Government, by the body having issued the permit.

Amendments:

No. IX-2516, 02/11/2004, Official Gazette Valstybės žinios, 2004, No. 167-6097 (17/11/2004)

CHAPTER FIVE PROTECTION OF THE SUBSOIL

Article 19. Measures of the Protection of the Subsoil

In order to ensure the rational exploitation of the subsoil and of its resources, the measures of the protection of the subsoil shall be implemented in accordance with the procedure laid down by the Law on the Environment, by the present Law and by other laws by conducting the following activities:

- 1) zoning;
- 2) assessment of the environmental impact of economic activities and of the consequences of extreme events for the condition of the subsoil;
- 3) systematic survey and monitoring of the condition of the subsoil;
- 4) establishment of protected areas.

Article 20. Zoning

- 1. Zoning shall be conducted after the assessment of the structure of the subsoil of a relevant territory and of its resources and it shall involve the assessment of the impact of economic activities on the condition of the subsoil, its resources and valuable properties.
- 2. The zoning solutions of all levels and types and the consequences of their environmental impact related to the exploitation and protection of the subsoil and its resources shall be developed, assessed and implemented in accordance with the procedure laid down by the Law on Zoning, the Law on the Assessment of the Environmental Impact of Proposed Economic Activities and by other legislation.
- 3. Non-exploited subsoil resources shall be protected from any acts affecting their quality and extraction conditions, as well as from the building up of the area or from other acts which would obstruct the use of the subsoil resources in the future.

Article 21. Monitoring of the Subsoil

1. The condition of the subsoil shall be systematically monitored throughout the territory of the Republic of Lithuania, in the zones of intensive geological processes and of the hazards posed by them, in the areas of a heavier anthropogenic load and in individual objects of economic activities

- 2. The monitoring of the subsoil as a part of the general system of the state environmental monitoring shall be coordinated and conducted throughout the territory of the Republe of Lithuania and the data received shall be accumulated in accordance with the procedure laid down by laws and other legislation by a body authorised by the Government.
- 3. The destruction and damaging of boreholes, geodetic signs and other installations intended for the survey of the subsoil, the interference with their use for surveys, as well as the damaging of benchmarks and mining signs marking deposits and their protection zones shall be prohibited.

Article 22. Protection and Exploitation of Subsoil in Protected Areas

In protected areas, the protection of the subsoil and its valuable properties shall also be ensured, and the restrictions on the exploitation of subsoil shall be established in the relevant regulations for protected areas as well as in other legislation.

CHAPTER SIX DATA ABOUT SUBSOIL

Article 23. Mandatory Provision of Data about Subsoil

Legal and natural persons, as well as groups of such persons acting under joint venture agreements shall provide to the Geological Survey of Lithuania, in accordance with its established procedure and free of charge, data about subsoil obtained in the course of the surveys of the subsoil and the exploitation of its resources carried out by such persons, except for the data of state-funded indirect surveys.

Amendments:

No. IX-2516, 02/11/2004, Official Gazette Valstybės žinios, 2004, No. 167-6097 (17/11/2004)

Article 24. National Geological Information System

- 1. The national geological information system shall be developed, kept and managed by the Geological Survey of Lithuania. Data about subsoil accumulated in this system shall be the property of the State and shall form the common national geological information system the individual parts of which may form integral parts of other national information systems.
- 2. Data about subsoil resources, underground caves, boreholes and surveys shall be recorded with the Register of Subsoil. This register shall be established by a regulation of the Government and shall form an integral part of the national geological information system.

Article 25. Use of Data about Subsoil

1. The data about subsoil contained in the national geological information system ("the data") shall be made available to legal and natural persons of the Republic of Lithuania, as well as to groups of such persons acting under joint venture agreements, except for the restrictions set forth in Articles 25(4) and 25(5) hereof. The procedure for the use of the national geological information system shall be laid down by a body authorised by the Government.

- 2. Legal and natural persons and groups of such persons acting under joint venture agreements shall not be entitled to sell data obtained from the national geological information system.
- 3. Legal and natural persons and groups of such persons acting under joint venture agreements shall use at their discretion the data obtained at their own expense, except for the restrictions provided for by other laws and in the present chapter.
- 4. The use of the data provided to the national geological information system and obtained at the expense of legal and natural persons and groups of such persons acting under joint venture agreements may be restricted if such restriction is requested in writing by persons having provided the relevant data. In such case the body administering the national geological information system may use the relevant data for its internal purposes only (for the performance of the regulatory functions of the State) and shall not be entitled to publish it or to transfer it to other persons except for the public authorities and institutions entitled to request it. The period of the restriction of the use of such data shall not exceed five years from the receipt of the relevant data. After the expiry of the above-mentioned period the data shall be used in accordance with Article 25(1) hereof.
- 5. The Government may restrict the publication, distribution of data about subsoil resources, as well as the transfer of such data to third parties or the export of it from the Republic of Lithuania irrespective of whose funds were used to obtain it and of the time of its receipt, provided that the restriction is required for the interests of the State.
- 6. If a permit for the survey of the subsoil or for the exploitation of subsoil resources and for the utilisation of underground caves is revoked in cases specified in Articles 9 and 18 hereof, the relevant data shall be transferred to the Geological Survey of Lithuania in accordance with its established procedure.
- 7. Geological collections, geological exhibits of museums, drill cores or their samples may be exported from the Republic of Lithuania only having obtained a permit issued by the Geological Survey of Lithuania in accordance with the procedure laid down by the Government or by its authorised body.

Amendments:

No. IX-2516, 02/11/2004, Official Gazette Valstybės žinios, 2004, No. 167-6097 (17/11/2004)

CHAPTER SEVEN LIABILITY FOR THE VIOLATION OF THE LAW ON SUBSOIL AND SETTLEMENT OF DISPUTES

Article 26. Liability for the Violation of the Law on Subsoil

Legal and natural persons as well as groups of such persons acting under joint venture agreements shall bear liability for the violation of the Law on Subsoil in accordance with the procedure laid down by laws.

Amendments:

No. IX-2516, 02/11/2004, Official Gazette Valstybės žinios, 2004, No. 167-6097 (17/11/2004)

Article 27. Indemnification

- 1. The State shall be indemnified for the damage sustained as a result of the exploitation of subsoil by legal and natural persons as well as by groups of such persons acting under joint venture agreements, where such exploitation results in the reduction of subsoil resources or in the deterioration of the conditions of their exploitation, in the change in valuable properties or other elements of the environment.
- 2. In legal proceedings related to the indemnification of the damage sustained the State shall be represented by a body authorised by the Government of the Republic of Lithuania according to its competence:
 - 1) where damage has been inflicted on the environment or on natural resources;
 - where damage or loss has been inflicted as a result of the breach of the procedure for the survey of the subsoil and for the provision or use of data about subsoil, and in other cases.

Amendments:

No. IX-2516, 02/11/2004, Official Gazette Valstybės žinios, 2004, No. 167-6097 (17/11/2004)

Article 28. Settlement of Disputes

Disputes concerning the exploitation and protection of subsoil shall be settled by courts.

CHAPTER EIGHT INTERNATIONAL RELATIONS

Article 29. Impact on the Environment of Other States

- 1. The exploitation of subsoil in the Republic of Lithuania shall be arranged in such manner so that not to cause any negative impact on or damage to the environment of other states, the condition of their subsoil and their people.
- 2. The Government of the Republic of Lithuania or its authorised body shall represent the Republic of Lithuania if damage has been inflicted on other states in the course of the exploitation of subsoil in the Republic of Lithuania.

Article 30. International Cooperation

The Government of the Republic of Lithuania shall seek to ensure that the use of the subsoil and other economic activities in neighbour states have no negative impact on the environment of the Republic of Lithuania, the valuable properties and resources of its subsoil and that they do not cause any damage to people. This aim shall be pursued by entering into international treaties on the regulation of economic activities and the exploitation of subsoil in frontier areas, by exchanging data about the condition of the subsoil, by encouraging cooperation in the field of surveys of the subsoil and by other means based on the international law.

Article 31. International Treaties

If international treaties of the Republic of Lithuania provide for other requirements than laid down in the present Law, the requirements of the international treaties shall apply.

I promulgate this Law passed by the Seimas of the Republic of Lithuania.

THE PRESIDENT OF THE REPUBLIC

ALGIRDAS BRAZAUSKAS

Annex to the Law on Subsoil of the Republic of Lithuania

Legal Act of the European Union Implemented by this Law

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.

Law supplemented with the Annex:

No. IX-2516, 02/11/2004, Official Gazette Valstybės žinios, 2004, No. 167-6097 (17/11/2004)

Amendments:

1.

Seimas of the Republic of Lithuania, Law No. VIII- 321, 26/06/1997, Official Gazette *Valstybės žinios*, 1997, No. 66-1600 (11/07/1997) LAW AMENDING ARTICLES 4, 6, 8, 14 AND 15 OF THE LAW ON SUBSOIL OF THE REPUBLIC OF LITHUANIA

- 2. Seimas of the Republic of Lithuania, Law No. VIII- 573, 09/12/1997, Official Gazette *Valstybės žinios*, 1997, No. 117-3012 (24/12/1997) LAW AMENDING AND SUPPLEMENTING ARTICLES 4, 5, 14, 15, 18 AND 21 OF THE LAW ON SUBSOIL OF THE REPUBLIC OF LITHUANIA
- 3.
 Seimas of the Republic of Lithuania, Law
 No. IX- 243, 10/04/2001, Official Gazette *Valstybės žinios*, 2001, No. 35-1164 (25/04/2001)
 LAW AMENDING THE LAW ON SUBSOIL **New version of the Law**
- 4. Seimas of the Republic of Lithuania, Law No. IX- 2516, 02/11/2004, Official Gazette *Valstybės žinios*, 2004, No. 167-6097 (17/11/2004)

LAW AMENDING AND SUPPLEMENTING ARTICLES 1, 2, 6, 8, 12, 13, 14, 15, 18, 23, 25, 26 AND 27 OF THE LAW ON SUBSOIL OF THE REPUBLIC OF LITHUANIA AND SUPPLEMENTING THE LAW WITH AN ANNEX

5. Seimas of the Republic of Lithuania, Law No. IX- 972, 30/06/2010, Official Gazette *Valstybės žinios*, 2010, No. 86-4526 (20/07/2010) LAW AMENDING ARTICLES 5 AND 14 OF THE LAW ON SUBSOIL

*** The end ***

Edited by Aušrinė Trapinskienė (23/07/2010) autrap@lrs.lt

Resolution published: Official Gazette *Valstybės žinios*, 2005, No. 130-4670 Unofficial text of the Resolution

GOVERNMENT OF THE REPUBLIC OF LITHUANIA

RESOLUTION

ON THE APPROVAL OF THE DESCRIPTION OF THE PROCEDURE FOR THE ISSUANCE OF PERMITS FOR THE EXPLOITATION OF HYDROCARBON RESOURCES

28 October 2005, No. 1151 Vilnius

Following Articles 12(2), 12(6) and 18(4) of the Law on Subsoil of the Republic of Lithuania (Official Gazette *Valstybės žinios*, 1995, No. 63-1582; 2001, No. 35-1164; 2004, No. 167-6097), the Government of the Republic of Lithuania decides:

- 1. To approve the Description of the Procedure for the Issuance of Permits for the Exploitation of Hydrocarbon Resources (attached).
- 2. To authorise the Ministry of the Environment to approve the form of a permit for the exploitation of hydrocarbon resources and the standard agreement on the exploitation of hydrocarbon resources.
- 3. To declare invalid:
 - 3.1. Paragraphs 1, 3, 4, 5, 6, 7 and 8 of the Resolution No. 169 of the Government of the Republic of Lithuania dated 16 March 1992 on the Acceleration of the Extraction and Refining of Oil (Official Gazette *Valstybės žinios*, 1992, No. 16-434);
 - 3.2. The Resolution No. 604 of the Government of the Republic of Lithuania dated 4 August 1993 Amending Resolution No. 169 of the Government of the Republic of Lithuania dated 16 March 1992 (Official Gazette *Valstybės žinios*, 1993, No. 35-805).

Prime Minister Algirdas Brazauskas

Minister of the Environment Arūnas Kundrotas

APPROVED
By the Resolution No. 1151 of the
Government of the Republic of Lithuania
dated 28 October 2005

DESCRIPTION OF THE PROCEDURE FOR THE ISSUANCE OF PERMITS FOR THE EXPLOITATION OF HYDROCARBON RESOURCES

I. GENERAL PROVISIONS

- 1. The Description of the Procedure for the Issuance of Permits for the Exploitation of Hydrocarbon Resources ("the Description") governs the issuance/reissuance, suspension, revocation of the suspension, expiry and revocation of permits for the exploitation of hydrocarbon resources.
- 2. A permit for the exploitation of hydrocarbon resources ("permit") shall grant an exclusive right to the permit holder to exploit hydrocarbon resources in the area (deposit of hydrocarbons) specified in the agreement on the exploitation of hydrocarbon resources ("exploitation agreement") and according to the conditions set forth therein. The permit may also provide for a survey of hydrocarbons (search and/or exploration), specify the area of the survey, the time limits for its completion and its conditions set forth in the exploitation agreement (methods, scope, sequence, etc.).
- 3. The boundaries of areas shall be specified in the permit and/or in the exploitation agreement according to the Lithuanian Coordinate System LKS-94 ("LKS-94"). The boundaries of the relevant areas shall be determined taking into account the applicable zoning documents and the boundaries of the areas specified in other valid permits and/or exploitation agreements, after the evaluation of all geological and economic conditions.
- 4. The meaning of the definitions used in the present Description has been explained in the Law on Subsoil of the Republic of Lithuania (Official Gazette *Valstybės žinios*, 1995, No. 63-1582; 2001, No. 35-1164).

II. ISSUANCE/REISSUANCE OF PERMITS

5. Permits shall be issued:

- 5.1. by way of a public tender to the successful bidder of the tender for the exploitation of hydrocarbon resources in accordance with the Regulations of the Tender for the Exploitation of Hydrocarbon Resources approved by the Regulation No. 299 of the Government of the Republic of Lithuania dated 10 March 2003 (Official Gazette *Valstybės žinios*, 2003, No. 26-1036);
- 5.2. without a public tender to permit holders in cases described in paragraphs 6, 9 and 11 hereof.
- 6. A permit holder may, at any time, file a reasoned application with the Geological Survey of Lithuania under the Ministry of the Environment ("the Geological Survey of Lithuania") for the issuance of a permit without a public tender for the exploitation of hydrocarbon resources in an additional area bordering the area specified in the permit and/or the exploitation agreement of the

permit holder ("additional area") without a public tender, where a part of the deposit of hydrocarbons located in the area of the permit holder extends to the bordering area in respect of which no permit has been issued to any economic operator. Such an application shall be based on geological reasons or on reasons related to the extraction of hydrocarbon resources.

Amendments:

No. 988, 07/07/2010, Official Gazette Valstybės žinios, 2010, No. 83-4377 (14/07/2010)

- 7. The application of the permit holder referred to in paragraph 6 hereof shall be accompanied by the following documentation:
- 7.1. plan or map of the land plot at the scale of 1:25000 or 1:10000 ("plan") indicating the additional area requested;
- 7.2. documents and data substantiating the geological or other reasons related to the extraction of hydrocarbon resources due to which there is a need for the additional area.
- 8. The Geological Survey of Lithuania, having received the application referred to in paragraph 6 hereof and the documentation referred to in paragraph 7 hereof shall, not later than within 10 business days from the receipt of the application:
- 8.1. notify it, by registered mail, to all permit holders the permits and/or the exploitation agreements whereof specify areas bordering on the additional area;
 - 8.2. send copies of the application and of the plan by registered mail for coordination to:
- 8.2.1. the National Land Service under the Ministry of Agriculture ("the National Land Service"), the environmental protection department of the relevant region of the Ministry of the Environment and to a relevant territorial unit of the Cultural Heritage Department under the Ministry of Culture;
- 8.2.2. in addition to the Ministry of Foreign Affairs and to the State Border Guard Service under the Ministry of the Interior, if the additional area is located in the state border guard zone;
- 8.2.3. in addition to the Environmental Protection Agency, if the additional area or a part thereof is under a surface water body.

Amendments:

No. 988, 07/07/2010, Official Gazette Valstybės žinios, 2010, No. 83-4377 (14/07/2010)

9. Permit holders having received the notice from the Geological Survey of Lithuania referred to in subparagraph 8.1 hereof shall be entitled to file applications with the Ministry of the Environment for the issuance of a permit for the exploitation of hydrocarbon resources in the new area specified in the notice of the Geological Survey of Lithuania without a public tender setting out geological reasons or reasons related to the extraction of hydrocarbon resources and accompanied by the relevant substantiating documentation, not later than within 30 calendar days from the receipt of the notice.

Amendments:

No. 988, 07/07/2010, Official Gazette Valstybės žinios, 2010, No. 83-4377 (14/07/2010)

- 10. The state authorities and institutions shall present their conclusions concerning the application and the plan referred to in subparagraph 8.2 hereof submitted to them for coordination no later than within 30 calendar days from the receipt of such documents. If the state authorities and institutions fail to present their conclusions within the time limit set in the present paragraph, it shall be deemed that a positive decision has been taken with regard to the coordination.
- 11. Permits shall be reissued to permit holders for the same area without a public tender if:

- 11.1.the permit holder has filed an application with the Ministry of the Environment for the reissuance of the permit in the following cases:
- 11.1.1. the permit holder requests to reduce the area specified in the permit and/or the exploitation agreement. Such a request of the permit holder must be coordinated with the environmental protection department of the relevant region of the Ministry of the Environment and with the National Land Service not earlier than six months before the application (the conditions and the procedure for the re-cultivation of the area to be refused of and for the protection of the remaining resources must be coordinated);
- 11.1.2. previously issued permit was revoked due to the reasons specified in subparagraph 19.2 hereof, but the former permit holder has, respectively, gained a right to use the land or has renewed the joint venture agreement. In such a case the permit may be reissued not later than within a year from the date of the revocation and only provided that no decision has been taken to organise a public tender for the exploitation of hydrocarbon resources in the area specified in the previously issued permit;
- 11.2. a legal or natural person or a group of such persons acting under joint venture agreements has filed an application with the Ministry of the Environment for the reissuance of the permit due to the acquisition of an enterprise holding the permit.

Amendments:

No. 988, 07/07/2010, Official Gazette Valstybės žinios, 2010, No. 83-4377 (14/07/2010)

- 12. The Ministry of the Environment shall be entitled, not later than within 30 calendar days from the receipt of the applications specified in paragraphs 6, 9 and 11 hereof, to request the applicants to present additional data and documents substantiating the geological reasons or the reasons related to the extraction of hydrocarbon resources specified in the relevant application, as well as other information required in order to take a decision on the issuance/reissuance of the permit.
- 13. Having considered all relevant circumstances, the Ministry of the Environment shall present to the Government of the Republic of Lithuania a draft resolution on the issuance/reissuance of the permit or shall issue a reasoned response to the relevant applicant stating the reasons for the rejection of his application, not later than within 30 calendar days from the receipt of the documentation specified in paragraphs 9, 10, 11 and 12 hereof or from the expiry of the time limit for the receipt of this documentation.
- 14. The Geological Survey of Lithuania shall, not later than within 30 calendar days from the entry into force of the resolution on the issuance/reissuance of the permit adopted by the Government of the Republic of Lithuania, conclude the exploitation agreement with the permit holder, issue/reissue the permit in the prescribed form and record the permit.

Amendments:

No. 988, 07/07/2010, Official Gazette Valstybės žinios, 2010, No. 83-4377 (14/07/2010)

15. The place and the time of the signing of the exploitation agreement shall be notified in writing by the Geological Survey of Lithuania to the holder of the permit/reissued permit in advance.

Amendments:

No. 988, 07/07/2010, Official Gazette Valstybės žinios, 2010, No. 83-4377 (14/07/2010)

III. EXPIRY, SUSPENSION AND REVOCATION OF THE PERMIT

- 16. The Government of the Republic of Lithuania may adopt a resolution on the suspension of the permit for the period of up to one year, if the permit holder:
- 16.1. has acted in breach of the conditions of the exploitation agreement, the requirements established in the plans for survey works or for the exploitation of hydrocarbon resources, or has failed to meet the time limits set for the completion of the works and has failed to rectify the breach within the time limits set by the body authorised by the Ministry of the Environment;
- 16.2. has violated environmental and occupational safety requirements or other requirements set forth in the Law on Subsoil of the Republic of Lithuania;
 - 16.3. has been deprived of the right to use the land;
 - 16.4. is a group of persons and the joint venture agreement concluded has expired.

Amendments:

No. 988, 07/07/2010, Official Gazette Valstybės žinios, 2010, No. 83-4377 (14/07/2010)

- 17. The Government of the Republic of Lithuania shall adopt a resolution on the revocation of the suspension of the permit, if the permit holder has removed the reasons for the suspension of the permit.
- 18. The permit for the exploitation of subsoil resources or for the utilisation of underground caves shall cease to be valid when:
- 18.1. resources for the exploitation of which the permit was obtained have been exhausted (in such a case the permit shall cease to be valid upon the implementation by the permit holder of all solutions set forth in the plan for the exploitation of hydrocarbon resources);
 - 18.2. the permit holder has been dissolved or reorganised;
 - 18.3. the permit has been revoked in cases specified in paragraph 19 hereof.
- 19. The Government of the Republic of Lithuania shall adopt a resolution on the revocation of the permit if:
 - 19.1. the permit holder:
- 19.1.1. has failed to agree with the Geological Survey of Lithuania on the conditions of the exploitation agreement (if the permit is issued under the Regulations of the Tender for the Exploitation of Hydrocarbon Resources, the obligations of the permit holder shall be established in the exploitation agreement taking into account his tender);
- 19.1.2. has filed a written application for the revocation of the permit/reissued permit. Such an application shall have been coordinated with the environmental protection department of the relevant region of the Ministry of the Environment and with the National Land Service not earlier than six months before the application (the issues of the re-cultivation of the land plot of the object and of the protection of the remaining resources shall have been coordinated);
- 19.1.3. has failed to rectify the breaches due to which the permit was suspended within the time limits set in the resolution referred to in paragraph 16 hereof;
 - 19.1.4. has been reissued the permit;
- 19.2. the circumstances described in subparagraphs 16.3 and 16.4 hereof have not changed during the period set in the resolution referred to in paragraph 16 hereof.

Amendments:

No. 988, 07/07/2010, Official Gazette Valstybės žinios, 2010, No. 83-4377 (14/07/2010)

- 20. The permit for the exploitation of subsoil resources or for the utilisation of underground caves may be revoked if the land has been expropriated for public purposes in accordance with the procedure laid down by laws.
- 21. The Ministry of the Environment shall draw up and present to the Government of the Republic of Lithuania the drafts of the relevant resolutions in cases described in paragraphs 16, 17, 19 and 20 hereof.
- 22. The expiry, suspension or revocation of the permit shall not release the permit holder from the obligation to carry out the relevant actions related to the re-cultivation of the land damaged in the course of the exploitation of resources and to the protection of hydrocarbon resources left in the deposit of hydrocarbons from exhaustion and from the reduction in quality.

IV. FINAL PROVISIONS

- 23. The permit shall be issued/reissued to the successful bidder of the tender for the exploitation of hydrocarbon resources or to the permit holder having submitted a document confirming the payment of the stamp duty.
- 24. The Geological Survey of Lithuania shall notify in writing the permit holder and the environmental protection department of the relevant region of the Ministry of the Environment about the issuance/reissuance, suspension or revocation of the suspension and revocation of the permit, and shall notify the relevant data to the Register of Legal Entities in accordance with the established procedure, not later than within 3 business days from the entry into force of the relevant resolution of the Government of the Republic of Lithuania.

Amendments:

No. 988, 07/07/2010, Official Gazette Valstybės žinios, 2010, No. 83-4377 (14/07/2010)

25. Any disputes arising in relation to the issuance/reissuance, suspension or revocation of permits shall be settled in accordance with the procedure laid down by laws of the Republic of Lithuania.

Amendments:

1.

Government of the Republic of Lithuania, Resolution

No. 988, 07/07/2010, Official Gazette Valstybės žinios, 2010, No. 83-4377 (14/07/2010)

AMENDING RESOLUTION NO. 1151 OF THE GOVERNMENT OF THE REPUBLIC OF LITHUANIA DATED 28 OCTOBER 2005 ON THE APPROVAL OF THE DESCRIPTION OF THE PROCEDURE FOR THE ISSUANCE OF PERMITS FOR THE EXPLOITATION OF HYDROCARBON RESOURCES

*** The end ***

Edited by Vilija Tamaliūnienė (15/07/2010) vitama@lrs.lt



LAW OF UKRAINE

On Production-Sharing Agreements

Including the amendments and addenda pursuant to the Laws of Ukraine N 429-IV dated 16 January 2003, N 3370-IV dated 19 January 2006, N 799-VI dated 25 December 2008, N 2562-VI dated 23 September 2010 N 2756-VI dated 2 December 2010, N 3553-VI dated 17 June 2011 N 3959-VI dated 21 October 2011 N 4053-VI dated 17 November 2011

Part one of Article 5 of this Law has been found to be in line with the Constitution of Ukraine (constitutional) (pursuant to Ukrainian Constitutional Court Decision N 17-rp/2001 dated 6 December 2001)

A separate provision in part three of Article 6 of this Law has been found to be contrary to the Constitution of Ukraine (unconstitutional) (pursuant to Ukrainian Constitutional Court Decision N 17-rp/2001 dated 6 December 2001)

The purpose of this Law is to create favorable conditions for investment in prospecting, exploration and extraction of mineral resources within the territory of Ukraine, its continental shelf and the exclusive (maritime) economic zone on the terms and conditions set forth in production-sharing agreements.

Section I. General Provisions

Article 1. Definition of Terms

The terms used in this Law have the following meanings:

"investor" - a citizen of Ukraine, a foreigner, a stateless person, a legal entity of Ukraine or another state, an association of legal entities created in or outside Ukraine, that has the appropriate financial, economic and technical potential or relevant qualification to be able to use subsoil and identified as a tender winner; the person identified in paragraph fifteen in part one of Article 7 of this Law, if an agreement is entered into with the participation of this person; a person that assumed the rights and responsibilities stipulated by a production-sharing agreement as a result of the assignment of rights and responsibilities pursuant to Article 26 of this Law;

(in Article 1 a new paragraph two was added pursuant to Law of Ukraine N 4053-VI dated 17 November 2011, for this reason paragraphs two - eight shall be paragraphs three - nine respectively)

"production" means mineral resources of national or local significance (mineral raw materials) extracted (produced) during development of mineral deposits;

"produced production" means the total amount of production extracted under the production-sharing agreement and delivered to the point of measurement;

"cost-recovery production" means the portion of the produced production which is transferred to the investor for ownership as reimbursement of its costs;

"profit production" means the portion of the produced production which is shared between the investor and the State, and is defined as the difference between produced production and cost-recovery production;

"point of measurement" means the point where the produced production is measured and divided into cost-recovery and profit production pursuant to the production-sharing agreement;

"low mineral reserves" means the mineral reserves identified in accordance with the criteria stipulated by the Cabinet of Ministers of Ukraine;

"significant mineral reserves" means the mineral reserves exceeding low mineral reserves.

Article 2. Relations Governed by This Law

- 1. This Law shall regulate the relations arising in the process of concluding, implementing and terminating production-sharing agreements and stipulate the basic legal requirements for such agreements, as well as the specifics of the legal relations pertaining to the use of subsoil on production-sharing terms.
- 2. The relations arising during prospecting, exploration and extraction of mineral resources, sharing of produced production, as well as transportation, treatment, storage, processing, use, sale or other disposal thereof, shall be governed by a production-sharing agreement, which shall be concluded pursuant to this Law.
- 3. The rights and obligations of the Parties to a production-sharing agreement shall be stipulated pursuant to the civil law of Ukraine, subject to the peculiarities set forth in this Law.
 - 4. The legislation of Ukraine on production-sharing agreements, pursuant to the

Constitution of Ukraine, shall be applied subject to the peculiarities stipulated by this Law. The relations not regulated by this Law, including those arising during the use of land, subsoil and other natural resources, shall be regulated by the Constitution of Ukraine and the relevant legislative acts of Ukraine. If the legislative acts of Ukraine prescribe rules other than those stipulated by this Law, the rules of this Law shall apply.

Article 3. Relations Between the Bodies of Executive Power and Local Self-Government During Implementation of This Law

- 1. While implementing this Law, the bodies of executive power and local self-government shall operate on the basis of interaction and cooperation, within the scope of their powers, to protect the interests of the Ukrainian people, the State, regions and territories, and to ensure environmental protection and rational use of the subsoil and other natural resources of Ukraine.
- 2. The Cabinet of Ministers of Ukraine, within the scope of its powers, shall coordinate the activity of the bodies of executive power and local self-government during conclusion, implementation and termination of production-sharing agreements.

Article 4. Definition of a Production-Sharing Agreement

- 1. According to a production-sharing agreement, one party, Ukraine (hereinafter-- "the State"), assigns the other party, the investor, to prospect for, explore and extract mineral resources in the designated subsoil area(s) and to perform the works related to the agreement for a specified period of time, whereas the investor undertakes to perform the assigned works at its own cost and risk, with further compensation of the costs and receipt of payment (remuneration) in the form of a portion of the profit production.
- 2. A production-sharing agreement may be bilateral or multilateral, i.e. several investors may be parties thereto, provided that they incur joint and several liability for the obligations stipulated by such agreement.
- 3. The State shall ensure the issuance to the investors, in compliance with established procedure, of approvals, quotas, special permits to use subsoil and licenses to carry out the activity associated with the prospecting (exploration) and operation of mineral deposits, acts for the provision of mining allotments, the documents certifying the right to use land, as well as other permits, authorizations, licenses related to the use of subsoil, performance of the works, construction of the structures stipulated by a production sharing agreement.

Said documents shall be issued pursuant to the requirements of Ukrainian legislation for the term of the agreement, unless otherwise stipulated by the laws of Ukraine, and shall lose effect or be amended under the terms and conditions set forth in the agreement.

Article 5. Parties to a Production-Sharing Agreement

1. The Parties to a production sharing agreement shall be the investor(s) and the State represented by the Cabinet of Ministers of Ukraine.

The permanent inter-departmental commission (hereinafter -- "the Inter-Departmental Commission") shall be established by the Cabinet of Ministers of Ukraine and shall consist of representatives of the state bodies, the bodies of local self-government and People's Deputies of Ukraine, and shall be authorized to resolve the matters related to the organization of conclusion and implementation of production-sharing agreements.

If necessary, the appropriate production and scientific organizations, as well as experts and advisors, will be involved in the work of the Inter-Departmental Commission.

The working body of the Inter-Departmental Commission shall be the central body of executive power in the domain of exploration and use of subsoil.

The Regulations for the Inter-Departmental Commission shall be approved by the Cabinet of Ministers of Ukraine.

2. Part two of Article 5 has been deleted

(pursuant to Law of Ukraine N 4053-VI dated 17 November 2011)

3. In case an investor under the agreement is an association of legal entities which is not a legal entity, the participants of such association incur joint and several liability for the obligations stipulated by the production-sharing agreement.

Article 6. Conditions for Concluding Production-Sharing Agreements

1. Under this Law, production-sharing agreements may be concluded with respect to specific subsoil area(s) limited in space and coordinates, within which mineral deposits or parts thereof of national and local significance are located, including the subsoil areas within the continental shelf and the exclusive (maritime) economic zone of Ukraine.

(paragraph one of part one in Article 6 amended pursuant to Law of Ukraine N 3959-VI dated 21 October 2011)

Subsoil (mineral deposit) areas shall be granted for use together with a land plot of State-owned or municipal lands. If the land plots required for the use of subsoil under production sharing agreements are owned by individuals or legal entities, or if they are municipal property, the State shall assume the title to these land plots in accordance with the law.

2. Paragraph one in part two of Article 6 deleted

(paragraph one of part two in Article 6 amended pursuant to Law of Ukraine N 2562-VI dated 23 September 2010, deleted pursuant to Law of Ukraine N 3959-VI dated 21 October 2011)

An investor may file with the Cabinet of Ministers of Ukraine or the Inter-Departmental Commission a proposal concerning the holding of a tender for the conclusion of a production-sharing agreement with respect to a subsoil area. The investor shall be notified of the outcomes of the consideration of a filed proposal within three months.

(paragraph two of part two in Article 6 amended pursuant to Law of Ukraine N 3959-VI dated 21 October 2011)

The tender for the conclusion of the production-sharing agreement with respect to a subsoil area shall be held if any of the following criteria is met:

(the wording of paragraph three of part two in Article 6 pursuant to Law of Ukraine N 3959-VI dated 21 October 2011)

- losses will be incurred by the subsoil users and the State for objective reasons in case of further development of mineral deposits, if the development of such mineral deposits can yield a substantial amount of extracted mineral resources and conservation or liquidation of the developed facility may result in negative social repercussions and financial (material) losses;
- non-availability of State financial and technical means required for the development of new big mineral deposits when such development provides for the nation-wide level of extraction of mineral resources in Ukraine necessary for social development and economic security of Ukraine;
- the need to use special costly development technologies with respect to hard-toextract and significant mineral reserves located in complicated mining and geological conditions or residual in the deposits under development, as well as the need to prevent loss of fuel, energy or mineral raw materials in the subsoil;
- the need to provide regions with their own fuel and energy raw materials, or to create new employment in low-employment districts;
- the need to introduce advanced technologies and progressive equipment to ensure effective prospecting, exploration and development of perspective under-explored mineral deposits;
- the need to develop mineral deposits in especially complicated conditions (subsoil areas and deposits in sea regions, hard-to-extract and exhausted deposits, or regions where oil or gas deposits have not been assessed);

- the need to perform additional or advanced exploration of a subsoil area.

The Verkhovna Rada of Ukraine shall approve a List of the subsoil areas of scientific, cultural or natural-reserve significance which cannot be granted for use on the terms and conditions in production-sharing agreements not later than three months from the date of entry into force of this Law.

3. It shall be prohibited to change geographic coordinates of the subsoil areas (mineral deposits) with respect to which an agreement was concluded or a tender for the conclusion of a production-sharing agreement was announced, or negotiations are being held by the Inter-Departmental Commission concerning the conclusion of the agreement.

(the provision of part three in Article 6 limiting the legislative powers of the Verkhovna Rada of Ukraine has been found to be contrary to the Constitution of Ukraine (unconstitutional) pursuant to Decision No. 17-rp/2001 of the Constitutional Court of Ukraine dated 6 December 2001)

(the wording of part three of Article 6 pursuant to Law of Ukraine N 3959-VI dated 21 October 2011)

4. A production-sharing agreement shall be concluded with the winner of a tender, subject to the tender conditions and the winner's bid, and in the events stipulated in paragraph fifteen in part one of Article 7 of this Law - with the winner of the tender and the person identified in paragraph fifteen in part one of Article 7 of this Law.

(paragraph one of part four in Article 6 amended pursuant to Law of Ukraine N 3553-VI dated 17 June 2011, the wording pursuant to Law of Ukraine N 4053-VI dated 17 November 2011)

A tender shall be considered as accomplished in the case when at least one participant files its application for participation, if the participant has complied with all conditions of the tender.

(paragraph two of part four in Article 6 amended pursuant to Law of Ukraine N 2562-VI dated 23 September 2010, N 4053-VI dated 17 November 2011)

5. Upon the resolution of the Cabinet of Ministers of Ukraine and the body of local self-government, a production-sharing agreement can be concluded without holding a tender in relation to subsoil areas with low mineral deposits as certified by conclusions of the relevant government bodies.

If a subsoil user that holds a special subsoil use permit and has commenced the activities in accordance with the terms and conditions stipulated therein wants to enter into a

production sharing agreement, the agreement (bilateral or multilateral) can also be concluded without holding a tender on the basis of a decision of the Cabinet of Ministers of Ukraine.

(the wording of paragraph two of part five in Article 6 pursuant to Law of Ukraine N 2562-VI dated 23 September 2010, as amended pursuant to Law of Ukraine N 4053-VI dated 17 November 2011)

Article 7. Holding a Tender for Concluding a Production-Sharing Agreement

- 1. A decision on holding a tender for conclusion of a production-sharing agreement shall be made by the Cabinet of Ministers of Ukraine, and shall indicate the following:
 - term and procedure of the tender;
- subsoil areas (mineral deposits, parts of mineral deposits) for which the tender for the conclusion of a production-sharing agreement is announced (hereinafter -- "subject of the tender"), including geographic coordinates of an operation area, as well as subsoil use depth restrictions;
 - the conditions of the tender (subject to the specifics of the subsoil area), indicating:
 - the list and deadlines of the works to be performed at the subject of the tender;
 - minimal amount of investment;
 - basic production-sharing criteria;
- peculiarities of the terms and conditions set forth in the production-sharing agreement by the State;
- optimal economic, technological, environmental or other indices (measures) for rational use of the subsoil;
- all essential requirements of the State with respect to the conditions and performance of the works stipulated by the production-sharing agreement;
 - the deadline for filing the applications for participation in the tender;
 - amount of the tender participation fee:
- the list of the tender documents to be drafted by the Inter-Departmental Commission, and the procedure for providing bidders with the documents.

In certain cases, tender conditions may stipulate the requirements:

concerning the conclusion of a production-sharing agreement with the tender winner

and a business company identified in accordance with the tender conditions in which the State owns 100 per cent of the authorized capital, or a business company created with its participation, stating the company's interest in the production-sharing agreement;

concerning sale exclusively in the territory of Ukraine of the production produced and acquired by the investor into ownership.

(paragraph fourteen in part one of Article 7 has been replaced with three paragraphs pursuant to Law of Ukraine N 4053-VI dated 17 November 2011; therefore, paragraph fifteen shall be paragraph seventeen)

Paragraph seventeen in part one of Article 7 has been deleted

(pursuant to Law of Ukraine N 3553-VI dated 17 June 2011)

- 2. In addition to the requirements set forth in part one of this Article, the tender announcement shall indicate:
 - the decision of the Cabinet of Ministers of Ukraine on the basis of which the tender is held;
 - the address to be used for filing applications for participation in the tender;
 - an exhaustive list of the materials (documents) and information to be submitted by the participants;

(paragraph four in part two of Article 7 amended pursuant to Law of Ukraine N 4053-VI dated 17 November 2011)

- details of the bank account to be used for transferring the tender participation fee.
- 3. Within two months of the date of adoption of the decision to hold a tender, the Inter-Departmental Commission shall draw up and approve the tender documentation, publish tender announcements in the official publications of Ukraine and foreign mass media, and perform other functions relating to tender organization within the scope of its powers, as established by the Cabinet of Ministers of Ukraine.
- 4. The period between the publication of the announcement of a tender for the conclusion of a production-sharing agreement and the deadline for submission of the applications for participation in the tender shall not be less than one month.
- 5. The fee shall be paid for the participation in the tender for the conclusion of a production-sharing agreement, the amount of and the procedure for paying which shall be stipulated by the Cabinet of Ministers of Ukraine.

(part five of Article 7 amended

pursuant to Law of Ukraine N 4053-VI dated 17 November 2011)

- 6. The time for holding the tender shall not exceed three months from the date of expiration of the deadline for submission of tender applications.
 - 7. Tender application shall meet the tender conditions, and shall contain:

(paragraph one in part seven of Article 7 amended pursuant to Law of Ukraine N 4053-VI dated 17 November 2011)

 information about the participant or participants (full name, citizenship, place of residence, profession - for individuals; name of legal entity or association of legal entities, the addresses of their seats, the country under the laws of which the legal entity or the association of legal entities was registered, principal activity stipulated by the charter, and charter capital) certified by documents;

(paragraph two in part seven of Article 7 amended pursuant to Laws of Ukraine N 2562-VI dated 23 September 2010 N 4053-VI dated 17 November 2011)

- brief information on experience in using the subsoil, as well as information on the technical and financial capabilities for performance of the works and on the technologies which will be applied during the use of subsoil, certified by documents;
- program of the works to be performed on the subsoil area, including those related to observance of the basic conditions of the tender, indicating subsoil and environment protection measures and dates for initiation and termination of the works;
- amounts and types of investment;
- additional proposals concerning performance of the tender conditions;
- other materials and information stipulated by the tender conditions.
- 8. The Inter-Departmental Commission shall register all timely submitted applications on the day of receipt in compliance with the procedure stipulated by the Cabinet of Ministers of Ukraine.

(part eight of Article 7 amended pursuant to Law of Ukraine N 4053-VI dated 17 November 2011)

9. The Inter-Departmental Commission shall consider and assess the registered applications and the enclosed materials pursuant to the criteria set forth in this Article.

On the basis of consideration and assessment of the submitted materials, the Inter-Departmental Commission shall prepare and submit to the Cabinet of Ministers of Ukraine the conclusions and proposals concerning identification of the winner of the tender.

10. The winner of the tender shall be identified by the Cabinet of Ministers of Ukraine within the term stipulated by clause 6 of this Article, taking into consideration the proposals of the Inter-Departmental Commission.

In determining the winner of the tender, preference shall be given pursuant to the following principal criteria:

(paragraph two in part ten of Article 7 amended pursuant to Laws of Ukraine N 2562-VI dated 23 September 2010 N 4053-VI dated 17 November 2011)

- the program of works to be performed on the subsoil area ensures the most rational use of natural resources;
- the most effective technological solutions are employed in performance of the works;
- provision is made for optimal protection of the environment;
- the investment terms are the most attractive;
- the participant has sufficient financial support and international experience for performing the program of works and investments set forth in detail in the conditions of the tender or tender documents.

(paragraph seven in part ten of Article 7 amended pursuant to Law of Ukraine N 4053-VI dated 17 November 2011)

- 11. Tender results shall be published in the official publications of Ukraine, and each participant in the tender shall be informed of these results.
- 12. Not later than twelve months after the day of publication of the tender results, a production-sharing agreement shall be concluded in compliance with the procedure and on the conditions stipulated by this Law, subject to the tender conditions and the winner's bid. This term can be extended by six months at the investor's written request.

(part twelve of Article 7 amended pursuant to Laws of Ukraine N 3553-VI dated 17 June 2011 N 4053-VI dated 17 November 2011)

Section II. Conclusion of Production-Sharing Agreements

Article 8. Requirements for a Production-Sharing Agreement

1. A production-sharing agreement shall be concluded in writing, and shall meet the

requirements of the tender for conclusion of the agreement, as well as the requirements of this Law.

2. A production-sharing agreement shall stipulate: a list of types of the investor's activity and a program of mandatory works, indicating performance deadlines, scopes and types of financing, technological equipment and other indices which shall not be lower than those proposed by the investor in the tender application, as well as other essential terms and conditions.

The essential terms and conditions of a production-sharing agreement shall be:

- 1) the names of the Parties to the agreement and the relevant contact information;
- a description of the subsoil area (mineral deposit) with respect to which the agreement is concluded, including geographic coordinates of the operation area, and depth restrictions on industrial subsoil development;
- 3) the conditions for providing a land plot for the needs associated with subsoil use, and a subsoil area;
- 4) a plan for restoration of the lands damaged in the course of prospecting, exploring and extracting mineral resources;
- 5) type(s) of subsoil use;
- 6) a list, scopes and deadlines for performance of the works stipulated by the agreement;
- 7) the quality requirements for the works performed under the agreement;
- 8) the rights and obligations of the Parties, in particular the investor's rights to use the land, subsoil and other rights, as well as the investor's obligations stipulated by part five of this Article:
- 9) procedure for the parties to negotiate annual budgets and programs of the works the investor undertakes to perform;
- 10) the conditions for using mineral resources;
- 11) the procedure for determining the value of extracted mineral resources;
- 12) the procedure for making payments for the use of subsoil and the amount of the fee for the geological exploration works accomplished at the expense of the State budget;
- 13) the point of measurement;
- 14) the investor's obligation to deliver the produced production to the point of

measurement:

- 15) the conditions for calculating the amounts of cost-recovery production;
- 16) composition of the costs to be reimbursed with the cost-recovery production;
- 17) the procedure and conditions for sharing the profit production between the State and the investor:
- 18) the procedure and term for transferring to the State its portion of the profit production. The agreement may stipulate transfer to the State of a monetary equivalent of the portion of the profit production which belongs to the State;
- 19) the procedure for transferring the title to the produced production;
- 20) the procedure by which the investor obtains the portion of the profit production which belongs to the investor pursuant to the agreement;
- 21) the procedure for transferring the title to the property from the investor to the State;
- 22) the procedure for supervising performance of the works stipulated by the agreement, observance of other terms and conditions of the agreement; deadlines, forms and content of the reports, information and accounts to be submitted by the investor to the Inter-Departmental Commission;
- 23) the requirements regarding return of subsoil areas and land plots granted for the purposes related to the use of subsoil upon termination of the agreement in case of early termination thereof or completion of individual stages of works, as well as the deadlines and procedure for returning these areas;
- 24) conditions for amendment, early termination or extension of the agreement;
- 25) conditions for assignment by the investor of the rights and obligations stipulated by the agreement;
- 26) requirements regarding rational and comprehensive use and protection of the subsoil and the environment, safety and protection of the personnel involved in the works stipulated by the agreement;
- 27) the procedure for conserving or liquidating mining facilities;
- 28) the term of the agreement, date, place of signing, and the procedure for its entry into force:
- 29) liability of the Parties to the agreement and the means to secure it;

- 30) dispute settlement procedure;
- 31)procedure to be followed by the investor in order to transfer to the State the property that was created or acquired by the investor for the purposes of performing a production sharing agreement and the title to which was assumed by the State in accordance with the Law;
- 32) other essential provisions stipulated by this Law.

Other terms and conditions may be stipulated by a production-sharing agreement upon agreement between the Parties.

- 3. The essential terms and conditions stipulated by this Article, except those indicated in clauses 1, 2, 5, 14 of part two of this Article, shall be stipulated exclusively by the production-sharing agreement, subject to the requirements set forth in this Law.
- 4. A production-sharing agreement shall include as its integral parts the annexes which the Parties refer to in the agreement, in particular an exhaustive list of the rules, norms, standards for performing the works associated with the use of subsoil, protection of the environment, the use and processing of mineral raw materials, calculations, plans, lists, programs, tables, etc., and, if necessary, conclusions of the experts (Expert Evaluation Statements), scientists and specialists involved in drafting the agreement.
- 5. A production-sharing agreement shall set forth the following obligations of the investor:

to grant preference to the products, works, services and other material values of Ukrainian origin under equal conditions with respect to the price, performance deadline, quality and compliance with international standards;

to employ (hire) mainly Ukrainian citizens in the territory of Ukraine for the needs indicated in the agreement, and to train them within the scope stipulated by the agreement.

- 6. For the purpose of coordinating the activities of the Parties during performance of a production-sharing agreement, the agreement may stipulate the setting-up of a Coordination Committee.
- 7. A production-sharing agreement shall specify the documents certifying the parties' powers to sign the agreement.

Article 9. Special Terms and Conditions of Production-Sharing Agreements

1. Production-sharing agreements made with respect to prospecting, exploration and extraction of hydrocarbon raw materials, as well as the use of significant mineral deposits, in addition to the essential terms and conditions specified in Article 8 of this Law, shall also

stipulate the following essential conditions:

annual declaration of extraction characteristics;

the procedure for using geological, geophysical and other information;

the procedure for and peculiarities of recording the expenses of industrial and technological needs;

the procedure and term for evaluating the environmental pollution level in the subsoil exploitation area (the land plot granted for the needs related to the use of subsoil) as of the time of conclusion of the agreement;

the scopes and time-frames for the implementation of environmental protection measures;

the procedure for negotiating and approving annual work programs, in particular the programs for implementing petroleum operations;

the conditions for reliable storage of the State's portion of the extracted mineral resources prior to its transfer to the State;

the conditions for insuring property risks, including loss of produced mineral resources as a result of spillover, flood, fire;

the conditions for the exclusive risk in the course of development of deposits.

2. If a foreign investor is a party to a production sharing agreement, it shall have its representative office registered in Ukraine within three months after the conclusion of the production sharing agreement.

If two or more investors participate in a production sharing agreement, they shall designate from among themselves one investor - agreement operator to represent their interests in relations with the State. If a foreign investor is the agreement operator, it shall have its representative office registered in Ukraine within one month.

If a production-sharing agreement is entered into with the tender winner and the person identified in paragraph fifteen of part one in Article 7 of this Law, the tender winner (one of the winners) shall be predominantly appointed the agreement operator.

(a new paragraph three has been added in part two of Article 9 pursuant to Law of Ukraine N 4053-VI dated 17 November 2011; therefore, paragraphs three and four shall be paragraphs four and five respectively)

The agreement operator and/or foreign investor's representative office in Ukraine shall

have all powers prescribed for the investor by the production sharing agreement.

The relations between the State and a foreign investor concerning a production sharing agreement shall be implemented through its representative office in Ukraine.

Article 10. Drafting a Production-Sharing Agreement

1. The investor shall draft a production-sharing agreement in accordance with the requirements set forth in this Law.

In certain cases, pursuant to the decision of the Cabinet of Ministers of Ukraine, an agreement can be drafted by the Inter-Departmental Commission.

2. A draft production-sharing agreement shall be prepared in the Ukrainian language.

Article 11. Registration and Approval of a Draft Production-Sharing Agreement

- 1. A draft production-sharing agreement shall be prepared within three months from the day of the official publication of the results of the tender, and shall be registered by the Inter-Departmental Commission.
- 2. Drafts of production sharing agreements shall be subject to mandatory State expert evaluation in respect of financial, legal, environmental and other matters in accordance with the legislation.
- 3. Not later than three months from the day of registration of a draft production-sharing agreement, the Inter-Departmental Commission shall provide the investor with the conclusions, comments, results of the accomplished expert evaluations or a new version of the agreement, on the basis of which the investor shall revise the agreement or prepare its conclusions and comments on the new draft agreement.

The new version of the draft agreement shall be reviewed and approved again by the Parties.

Additional or repeated expert evaluations can be carried out upon the initiative and at the expense of one of the Parties, with respect to the matters which have not been agreed upon by the Parties, within six months from the day of registration of the first version of the draft agreement. The investor can contact well-known international non-governmental organizations or specialized scientific organizations with a request for an expert evaluation (scientific, technical, etc.) of the matters that require additional substantiation.

4. A draft production-sharing agreement shall be approved by the body of local self-government in the territory of which the subsoil area to be transferred for use under the agreement is located.

The Inter-Departmental Commission shall ensure and coordinate the works related to the drafting and approval of the draft agreement.

- 5. Upon final approval and review, a draft production-sharing agreement shall be initialized (approved) and registered again by the Inter-Departmental Commission and thereafter submitted (sent) to the Parties to the agreement for signing.
- 6. The procedure for registering the initial and final versions of the draft productionsharing agreement shall be established by the Cabinet of Ministers of Ukraine.

Article 12. Peculiarities of Drafting and Approving Multilateral Production-Sharing Agreements

- 1. The Cabinet of Ministers of Ukraine shall cooperate in the timely preparation of the documents stipulated by part three of Article 4 of this Law in the names of all investors-participants of the production-sharing agreement, and shall be directly responsible for observance by the State of the terms and conditions of the agreement.
- 2. A draft production-sharing agreement shall be approved by each investor. If one of the investors refuses to enter into the agreement, the agreement can be concluded upon consent of the Parties with other participants thereof after the appropriate amendments are made to the agreement.

Article 13. The Procedure for Signing a Production-Sharing Agreement

- 1. A production-sharing agreement shall be signed by the authorized representatives of the Parties.
- 2. The Inter-Departmental Commission shall verify the powers of the investors' representatives to sign the agreement.
- 3. If a foreign investor is a Party to the agreement, the production-sharing agreement shall be made in the Ukrainian and English languages. The translation of the final version of the draft agreement into the English language shall be made by the party that drafted the agreement. The Ukrainian and English versions of the agreement shall have equal legal force.
- 4. The authenticity of all copies of the production-sharing agreement to be signed by the Parties shall be ensured by the Cabinet of Ministers of Ukraine.

Article 14. The Term of a Production-Sharing Agreement

1. The term of the production-sharing agreement shall be specified by the Parties, but

shall not exceed fifty years from the date of signing.

The terms for prospecting, exploration and extraction of mineral resources, as well as the procedure and conditions for extending these terms, shall be specified within the framework of the term of the agreement. If the investor does not initiate performance of the agreement within the term stipulated by the agreement, the State shall have the right to refuse to perform the agreement (terminate the agreement) and require indemnification of damages in compliance with the procedure stipulated by Article 31 of this Law.

- 2. The term of the production-sharing agreement determined in accordance with part one of this Article, upon the investor's initiative and provided that the investor has performed its obligations, can be extended by concluding an additional agreement. The licenses and other permits issued for the purpose of performing the production-sharing agreement shall be extended, in compliance with the procedure stipulated by this Law, simultaneously with the signing of the extension agreement.
- 3. The production-sharing agreement may be terminated early only in accordance with the procedure and conditions stipulated by this Law and the production-sharing agreement.
- 4. The extension or early termination of the production-sharing agreement shall be subject to State registration in compliance with the procedure stipulated for the registration of the agreement.

Article 15. State Registration of a Production-Sharing Agreement

The State registration of a concluded production-sharing agreement shall be carried out by the Inter-Departmental Commission in compliance with the procedure stipulated by the Cabinet of Ministers of Ukraine. The fee for State registration of the agreement shall not be collected.

Section III. Implementation of Production-Sharing Agreements

Article 16. Performance of the Works Stipulated by Production-Sharing Agreements

- 1. The works stipulated by a production-sharing agreement shall be performed pursuant to the programs, plans and estimated costs approved in compliance with the procedure stipulated by the agreement.
- 2. Upon the completion of individual stages of prospecting and exploration works, the investor shall return the subsoil areas that were transferred to the it for use pursuant to the terms and conditions of the production-sharing agreement.
 - 3. The industrial development of the mineral deposits, in particular technogenic

deposits, or areas thereof, explored under a production-sharing agreement, shall be carried out pursuant to the conditions stipulated by this agreement.

Article 17. Peculiarities of Subsoil Use During Implementation of a Production-Sharing Agreement

- 1. Peculiarities of subsoil use during implementation of a production-sharing agreement, primarily those associated with the provision, transfer and termination (suspension or restriction) of the right to use the subsoil, as well as legal formalization of such relations, shall be stipulated by this Law and the production-sharing agreement.
- 2. The right to use the subsoil during the implementation of a production-sharing agreement can be restricted, temporarily prohibited (suspended) or terminated by the Cabinet of Ministers of Ukraine in case of a direct hazard to human life and health or the environment, in compliance with the procedure stipulated by such agreement.

The rights to use the subsoil shall be fully renewed as of the moment of elimination by the investor of the conditions that resulted in the restriction of such rights.

3. Mining facilities related to subsoil use under a production-sharing agreement shall be conserved or liquidated at the investor's cost in compliance with the procedure stipulated by such agreement.

Article 18. Equipment, Supplies, Machinery and Other Property Required for the Purposes of a Production-Sharing Agreement

- 1. Licensing and quotas shall not be applied to the investor and all of its contractors during import into Ukraine of the equipment, supplies, machinery and other property owned or leased by them and required for performance of the works stipulated by a production-sharing agreement.
- 2. The equipment, supplies, machinery and other property and material values imported for the implementation of the agreement, except the property and material values the value of which was reimbursed to the investor by the cost-recovery production and which was transferred into the ownership of the State, can be exported from Ukraine on the conditions stipulated by part one of this Article.

Article 19. Sharing of the Produced Production

1. The production produced pursuant to a production-sharing agreement shall be shared between the Parties to the agreement: the State and the investor(s), pursuant to the agreement conditions, which shall stipulate the conditions and procedure for:

- determining the total amount of the produced (extracted) production and the value thereof;
- determining the portion of the cost-recovery production subject to the requirements stipulated by this Article;
- sharing the profit production between the State and the investor;
- transferring to the State the portion of the produced production owned by the State pursuant to the conditions of the agreement, or a monetary equivalent thereof.
- 2. Produced production shall be shared quarterly (hereinafter -- "settlement period"), unless otherwise stipulated by the production-sharing agreement, and the appropriate quarter adjustments with consideration of the extraction output (more or less than the established rate) shall be carried out to the next settlement period.
- 3. The quarterly portion of the cost-recovery production shall not exceed 70 per cent of the total amount of the production produced during the settlement period until full reimbursement of the investor's costs.
- 4. Neither Party to the production-sharing agreement shall have the right to dispose of the produced production prior to the sharing thereof under the agreement without the written consent of the other Parties to the agreement.
- 5. The procedure for determining the composition of the costs to be reimbursed to the investor with the cost-recovery production shall be set forth in the production-sharing agreement and shall meet the following requirements:

only the investors' costs associated with performance of the works stipulated by the agreement, incurred after entry into force of the agreement, shall be subject to reimbursement;

the composition of the costs to be reimbursed by the cost-recovery production may differ from the composition of the costs stipulated by the legislation and included in the total costs of production and turnover;

costs shall be reimbursed not later than the first settlement period, unless otherwise stipulated by the agreement;

costs shall be reimbursed by transferring to the investor the title to the cost-recovery production at the point of measurement;

long-term (more than 10 years) agreements shall stipulate relevant indexation of the costs that must be reimbursed by cost-recovery production but have not been reimbursed.

The costs of acquiring non-circulating assets and the costs of exploring, equipping and

producing minerals shall be included in full at the time they are incurred in the costs to be reimbursed by cost-recovery production without depreciation.

Article 20. Title of the Parties to the Production-Sharing Agreement to the Produced Production

- 1. Until the time of production sharing at the point of measurement, the title to all production produced under the agreement shall be vested with the State.
- 2. As of the time of production sharing at the point of measurement, the investor shall acquire the title to the cost-recovery production and a portion of the profit production stipulated in the agreement; the rest of the produced production shall remain under the ownership of the State.

Article 21. The Use of the State-Owned Portion of Produced Production Pursuant to a Production-sharing agreement

The portion of the produced production remaining in the ownership of the State shall be used (realized) in compliance with the procedure stipulated by the Cabinet of Ministers of Ukraine. The needs of the territory, in which the subsoil area transferred for use under the agreement conditions is located, shall be taken into consideration. Calculation and substantiation of local needs for the produced production shall be carried out by the body of local self-government. Such calculation shall envisage the appropriate reimbursement of the losses resulting from violation of environmental requirements during the use of natural resources in the territory in question.

Article 22. Disposal of the Investor's Portion of Produced Production

1. The investor shall have the right to freely dispose of the portion of the produced production the title to which has been acquired by the investor pursuant to the terms and conditions of the agreement, including: to sell in Ukraine, export, exchange, transfer free of charge and perform any other operations with such production. Such production shall not be subject to licensing or quotas during export, or similar restrictions during its sale in the territory of Ukraine.

The investor shall sell the production owned by it pursuant to the conditions of a production-sharing agreement exclusively within the territory of Ukraine to the State or other business entities, if such requirement arises out of the conditions of a tender and a concluded agreement and if the selling price is not lower than the international market prices of such production. In this case, the production shall be sold provided that there are guarantees of payment for the production, unless otherwise stipulated by a purchase-sale contract.

2. Any restrictions of the investor's rights stipulated by part one of this Article shall be

allowed only if they are stipulated by the agreement and arise out of the conditions of a tender for conclusion of a production-sharing agreement.

Article 23. Title to the Property Created or Acquired by the Investor for the Implementation of a Production-Sharing Agreement

1. The property created or acquired by the investor for implementation of a productionsharing agreement shall be owned by the investors.

The title to such property shall be transferred from the investor to the State as of the date when the value of said property has been completely reimbursed by the cost-recovery production, or as of the day of termination of the production-sharing agreement pursuant to the conditions and in compliance with the procedure stipulated in the agreement.

2. Upon transfer to the State of the title to the property created or acquired by the investor for implementation of a production-sharing agreement, the investor shall have, within the term of the agreement, the preemptive right to use such property to perform the works stipulated in the agreement.

Article 24. Information Received as a Result of Implementation of a Production-Sharing Agreement

1. Geological, geophysical, geochemical, technical, economic and other information, as well as samples of rocks (including cores) and other data (hereinafter -- "information") received by the investor as a result of performing the works stipulated in the production-sharing agreement, shall be the property of the State. Provided that the confidentiality conditions stipulated by the agreement are observed, the investor shall have the right to freely use said information free of charge to perform the works stipulated by the agreement.

The investor shall provide the State with such information in compliance with the procedure established by the agreement.

The disposal of said information (in particular, its State expert evaluation, registration and recording) shall be carried out pursuant to the requirements of the legislation and the conditions of the production-sharing agreement.

2. The Parties to the agreement shall be liable for disclosure of confidential information received in the course of implementation of a production-sharing agreement pursuant to the requirements set forth in the agreement and the legislation of Ukraine.

Article 25. Taxes, Charges and Other Mandatory Fees Payable During the Implementation of a Production-Sharing Agreement

- 1. The specifics of collecting taxes from tax payers under a production sharing agreement shall be stipulated in the Tax Code of Ukraine, and those concerning the calculation of cost-recovery and profit production shall be stipulated in this Law.
- 2. During the implementation of a production-sharing agreement the investor shall pay the taxes and charges (mandatory fees) stipulated by the Tax Code of Ukraine, as well as the single contribution for the mandatory State social insurance of Ukrainian employees and the foreigners employed in Ukraine.
- 3. The single contribution for the mandatory State social insurance of Ukrainian employees and the foreigners employed in Ukraine shall be paid by the investor on regular terms, on the conditions and in the amounts prescribed by the legislation of Ukraine as of the date on which a production sharing agreement is signed.
- 4. If a State fee or duty stipulated by the legislation of Ukraine must be paid for the purposes of getting a service or having a required act done by public authorities or institutions, the fee and duty shall be paid by the investor.

Article 26. Assignment of Rights and Obligations Stipulated by a Production-Sharing Agreement

- 1. The investor shall have the right to assign all or part of its rights and obligations stipulated in the production-sharing agreement to any legal entity or natural person only upon consent of the State, and provided that such entity or person has sufficient financial and technical resources and experience in organizing operations necessary for performance of the works stipulated in the agreement. The State shall not deny such consent without substantial reason. If the Cabinet of Ministers of Ukraine upon the approval of the body of local self-government does not reply to the investor's request concerning assignment of its rights and obligations stipulated in the agreement within 90 days of receipt thereof, the consent of the State shall be deemed obtained.
- 2. The assignment of the rights and obligations under the agreement shall be formalized by a written contract with the entity or person assuming such rights and obligations under the production-sharing agreement. The contract shall become the integral part of the agreement and shall be subject to State registration in compliance with the procedure stipulated by this Law for the State registration of production-sharing agreements, and shall result in the relevant formulation of licenses, permits, etc., within 30 days from the date of signing of such contract.
- 3. If a Ukrainian investor assigns its rights and obligations to a foreigner or a foreign legal entity in compliance with the procedure stipulated by this Article, the terms and conditions set forth in the production-sharing agreement can be revised upon the foreign investor's request, taking into account the peculiarities for foreign investment stipulated by this Law.

Article 27. Guarantees Against Changes in Legislation

- 1. The State guarantees that the investor's rights and obligations stipulated in the production sharing agreement shall be governed during its term by the legislation effective at the time the agreement was entered into, except for the legislation that reduces or cancels taxes or charges, simplifies the regulation of the business activities of prospecting for, exploration and production of minerals, weakens the procedures of State supervision (control) of business activities, in particular the procedures of customs, currency, tax and other types of State control, or mitigates the investor's liability, which legislation must be applied from the date on which the legislation takes effect. The legislation stability guarantees shall not apply to the legislation amendments concerning defense, national security, public order maintenance and environmental protection matters.
- 2. The investor shall not be subject to the normative and legal acts of the bodies of executive power and local self-government, if such acts limit the investor's rights stipulated in the production-sharing agreement, except for orders of the bodies of State control and supervision issued pursuant to the Ukrainian legislation to create the conditions for safe performance of works, subsoil and environmental protection and preservation of human health. Said orders of the bodies of State control and supervision that result in limitation, temporary prohibition (suspension) or termination of the use of subsoil shall be binding upon the investor as of the date of adoption of the relevant resolution by the Cabinet of Ministers of Ukraine or the body of local self-government, which is a Party to the agreement, in compliance with the procedure stipulated by part two of Article 17 of this Law.

Article 28. Control Over Implementation of a Production-Sharing Agreement

1. State control and supervision of the performance of the works stipulated in a production-sharing agreement shall be carried out by the bodies of executive power within the scope of their authority and in compliance with the procedure stipulated by the legislation of Ukraine.

The Cabinet of Ministers of Ukraine shall control implementation of a productionsharing agreement by the State.

State control over the implementation of a production-sharing agreement shall be carried out by the Cabinet of Ministers of Ukraine or, upon its assignment, by the Inter-Departmental Commission or the appropriate body (bodies) of central executive power in compliance with the procedure and conditions stipulated by the production-sharing agreement and this Law.

At least once every five years the Cabinet of Ministers of Ukraine, with the participation of the Inter-Departmental Commission, shall organize and perform a complex audit of the observance of the conditions stipulated by a production-sharing agreement. If substantial violations by the investor of the agreement conditions are revealed, the Cabinet of Ministers of Ukraine shall have the right to cancel the agreement, and the losses shall be reimbursed in compliance with the procedure stipulated by Article 31 of this Law.

- 2. Authorized representatives of the bodies, exercising control over implementation of a production-sharing agreement, shall have the right of unrestricted access to the sites of the works stipulated in the agreement, as well as the documents related to performance of such works, exclusively for the purpose of exercising control over the implementation of the agreement.
- 3. Adoption of restrictive decisions by the bodies of State control and supervision shall be allowed only in the events and in compliance with the procedure stipulated by part two of Article 17 and part two of Article 27 of this Law.
- 4. If contracting, sub-contracting and other organizations (persons) are involved in performance of the works stipulated in a production-sharing agreement, the investor shall supervise the performance of the works to ensure compliance with the requirements of the agreement and the work performance documents approved in compliance with the established procedure.

Article 29. Liability of the Parties to a Production-sharing agreement

1. The Parties shall incur the liability stipulated by a production-sharing agreement for the failure to perform or improper performance of their obligations set forth in the agreement, subject to the provisions of this Article.

- 2. Environmental damage resulting from the investor's activity associated with implementation of a production-sharing agreement shall be indemnified (compensated) in full by the investor, irrespective of payments for environmental pollution or deterioration of natural resources. The investor shall be released from the indemnification of environmental damage only if the investor proves that the damage resulted from natural calamities or intentional actions of the affected persons or entities.
- 3. The damage resulting from the investor's legitimate actions that are in full compliance with the requirements of the production-sharing agreement, and were approved by the Inter-Departmental Commission, shall be indemnified by the Parties to the agreement in the proportions stipulated for production-sharing purposes.

Article 30. Ensuring Performance of the Investor's Obligations and Liability

- 1. Performance of the investor's obligations stipulated in the production-sharing agreement shall be ensured pursuant to the conditions determined by the Parties in compliance with Ukrainian law.
- 2. The investor's civil liability, including liability for damage to the environment and human health, shall be subject to insurance, unless otherwise stipulated by the agreement. Upon agreement between the Parties, an environmental risk insurance program shall be adopted within the framework of the agreement.

Article 31. Dispute Resolution

Disputes between the Parties to a production-sharing agreement, associated with performance, termination and invalidation of the agreement, shall be settled in the courts of Ukraine, unless otherwise stipulated by the conditions of the production-sharing agreement.

(The provision of Article 32 was nullified because of being unconstitutional to the extent that it established mandatory waiver by the State of judicial immunity, immunity in respect of the preliminary injunction, and enforcement of court awards in the production-sharing agreements made with the participation of foreign investors, on the basis of Decision No. 17-rp/2001 of the Constitutional Court dated 06.12.2001)

Article 32. Immunity of the State

The production-sharing agreements made with the participation of foreign investors shall stipulate waiver by the State of judicial immunity, immunity in respect of the preliminary injunction, and enforcement of court awards.

Section IV. Currency Regulation During Implementation of

Production-Sharing Agreements

Article 33. Bank Accounts

- 1. For the purpose of servicing the works stipulated in the production-sharing agreement, the investor (contractor, subcontractor, supplier, carrier and other contracting parties) shall have the right to open national and (or) foreign currency bank accounts in Ukrainian banks in compliance with the procedure established by the legislation of Ukraine; these accounts shall be used exclusively for servicing the activity (works, services) stipulated by the agreement.
- 2. Collection of funds from the bank accounts opened by the investor in the territory of Ukraine for the purpose of servicing the works stipulated by a production-sharing agreement may not be performed in a non-disputable manner.

Article 34. Currency Regulation

- 1. The money received by the foreign investor pursuant to a production-sharing agreement can be converted freely (without any restrictions) into the Ukrainian or foreign convertible currency, as well as transferred outside Ukraine in compliance with the conditions set forth in such agreement.
- 2. If foreign currency proceeds are subject to mandatory sale on the currency market of Ukraine in accordance with Ukrainian legislation, this requirement shall not be applied to the foreign currency proceeds received by the investors that are parties to a production-sharing agreement as a result of sale of the portions of the produced production that are in their ownership.

Section V. Peculiarities of Regulating Labor Relations During Implementation of a Production-Sharing Agreement

Article 35. Employment Agreement

1. Investors (including foreign investors) shall employ (hire) employees in the territory of Ukraine for the purposes of a production-sharing agreement by concluding employment agreements (contracts), the form and contents of which shall comply with the Ukrainian labor legislation.

(Part two of Article 35 was suspended until 1 January 2011 pursuant to Law of Ukraine N 799-VI dated 25.12.2008)

2. Employment in Ukraine of foreigners hired by the investor within the scope and for the positions (specialties) stipulated by a production-sharing agreement shall be carried out without obtaining employment permits.

Article 36. International Agreements of Ukraine

If rules other than those stipulated by this Law are established pursuant to an international treaty, a consent to ratification of which was given by the Verkhovna Rada of Ukraine, the rules of the international treaty shall prevail.

Section VI. Final Provisions

- 1. This Law shall take effect as of the date of its publication.
- 2. The Cabinet of Ministers of Ukraine within one month shall:

submit for consideration by the Verkhovna Rada of Ukraine the proposals on harmonizing the laws of Ukraine with the Law of Ukraine "On Production-Sharing Agreements";

ensure, within the scope of its powers, the adoption of the regulations stipulated by this Law;

harmonize its regulations with this Law;

ensure revision and cancellation by the ministries and other central bodies of executive power of Ukraine of their regulations that are contrary to this Law.

President of Ukraine

L. KUCHMA

Kiev 14 September 1999 N 1039-XIV





Conference Speakers biographies



Vanessa Edwards
Partner, K&L Gates London and Brussels office

Vanessa Edwards is a partner in our London and Brussels offices. Her experience means that she is uniquely placed to advise on the implications of European Union regulation for business and on strategies to influence the legislative process. Ms. Edwards focuses her practice on regulatory matters involving EU law, with particular emphasis on EU environmental legislation including REACH (Regulation on the registration, evaluation, authorization and restriction of chemicals) and CLP (classification, labeling and packaging) Regulation. She advises a number of clients in the mining and minerals sector. Ms. Edwards joined K&L Gates in 2008 after 15 years at the Court of Justice of the EU ("CJEU") in Luxembourg, the ultimate arbiter for ruling on the interpretation of EU law. At the CJEU, she was involved in several hundred cases in a wide variety of areas, including anti-dumping; capital movements; competition; consumer protection; cross-border trade; customs classification, duties and procedures; environmental regulation (including biocidal and plant protection products, environmental impact assessment, habitats and wild birds, waste (including mining waste) and water quality); export and import controls; parallel imports; public procurement and state aid. Before working at the CJEU, Ms. Edwards had spent 10 years in practice at an international law firm in London and Brussels. Until 2012 she was also Visiting Professor of EU Company Law at King's College London and European Case-law Editor for the Oxford Journal of Environmental Law.



Eugenijus Filonovas Senior Associate, Sorainen Lithuania

Eugenijus Filonovas is a senior associate who has been practising law for more than 10 years. Eugenijus is a member of SORAINEN Lithuania Competition & Regulatory team and his practice has focused on energy law. He advises clients in the main energy projects in Lithuania. Currently he is involved in the team of SORAINEN lawyers advising in the largest energy project in the Baltic States since they regained independence in the early 1990s – nuclear power plant (NPP) project in Lithuania, where SORAINEN provides advice to strategic investor – Hitachi. He is a part of the team assisting clients in many other energy projects, including Lithuanian-Swedish electricity systems interconnection project (NORDBALT), establishment and operation of the natural gas exchange in Lithuania, operation of the largest waste-to energy CHP project in Lithuania, and several other energy projects. Eugenijus recently also advised Chevron – one of the largest energy company in the world in acquisition of 50 per cent shares in LL investicijos, a Lithuanian company holding a permit for exploration and production of hydrocarbon resources (transaction was closed in the end of Oct 2012). Before joining SORAINEN, he practiced law as a Legal Counsel and Member of Management Team of Statoil Lithuania, a subsidiary of international oil company Statoil ASA. Eugenijus holds a Master's Degree in Law and Postgraduate Diploma in EU Law from the University of Tilburg, the Netherlands.





Dr. Irina PaliashviliRULG - Ukrainian Legal Group, P.A., Co-Chair
CIS Local Counsel Forum

Irina Paliashvili began her private practice in 1992 by founding one of the first private law firms in Kiev and expanded by co-founding a private law firm in Moscow. In 1995, she founded the Washington-based RULG-Ukrainian Legal Group, P.A. She has also served as a Professor of Law at the Kiev State University Law School. Irina graduated with high honors from the Kiev State University School of International Law and received a Ph.D. in Private International Law from the same school. She also holds an LL.M. in International and Comparative Law from George Washington University. She is licensed to practice Ukrainian law as a Special Legal Consultant in the District of Columbia and is a member of the Kiev Bar. She serves as Chair of the Legal Affairs Group of the U.S.-Ukraine Business Council. Vice-Chair of the Russia/Eurasia Committee of the ABA's International Law Section, member of the Advisory Board of Best Lawyers, and Co-Chair of the CIS Local Counsel Forum. She also serves on the Board of Trustees of the Kyiv School of Economics (KSE). Irina was included in the Hundred Best Lawyers of Ukraine (Clients' Choice) based on the survey conducted by Yurydychna Gazeta, a leading legal publication in Ukraine. She was individually designated as a recommended corporate and M&A practitioner in Ukraine by PLC Which Lawyer, and included in the Best Lawyers list of solicitors for Ukraine in the specialties of Antitrust, Arbitration and Mediation, Corporate, Energy and Natural Resources Law and Mergers and Acquisitions. In addition to general corporate and transactional expertise, Irina has special experience in the areas of oil and gas, focusing on upstream and specifically on production sharing agreements. She co-authored the Law of Ukraine "On Production Sharing Agreements" and has advised on various production sharing projects in Ukraine, Russia, Kazakhstan, and Georgia.



Konrad Szymański

PiS member of the European Parliament, deputy coordinator of the European Conservatives and Reformists Group in the ITRE Committee

Konrad Szymański is a graduate of the Law and Administration Faculty at the Adam Mickiewicz University in Poznań. In 1997-2001 he was Counsel for International Affairs to Marcin Libicki, the-then Chairman of the Polish Delegation to the Parliamentary Assembly of the Council of Europe (PACE). In 1999-2000 he served as Advisor to the Deputy Marshall of the Polish Sejm, and in 2000 as Advisor in the Prime Minister's Office. In 2000-2002 he was a Program Editor of TV Puls, and subsequently in 2002-2011 the Editor in Chief of the International Political Review. In 2003 he participated in the International Visitors Program of the USA Department of State, Washington, New York. Since 2005 Konrad Szymański has been a Member of the College of Eastern Europe in Wrocław. In 2007-2008 he was a member of the Board of the Foundation for Polish-German Reconciliation and since 2007 he has been a Member of the Board of the European College in Natolin, Warsaw.

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