



ЦЕНТР МЕЖДУНАРОДНЫХ
И СРАВНИТЕЛЬНО-
ПРАВОВЫХ
ИССЛЕДОВАНИЙ

Приложение к сравнительно-правовому исследованию правового регулирования отношений в сфере нормирования негативного воздействия на окружающую среду, экономического стимулирования ответственного природопользования, возмещения вреда окружающей среде, обращения с отходами в Российской Федерации и зарубежных странах

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Введение

В настоящем Приложении к исследованию представлены ответы иностранных экспертов, которые принимали участие в ответах на вопросы опросника, подготовленного на основании п.2.2 Технического задания на выполнение сравнительно-правового исследования правового регулирования отношений в сфере нормирования негативного воздействия на окружающую среду, экономического стимулирования ответственного природопользования, возмещения вреда окружающей среде, обращения с отходами в Российской Федерации и зарубежных странах (далее – «Опросник»).

В разделе I представлен Опросник, направлявшийся экспертам. В разделе II представлены опыт Европейского союза. В разделе III – регулирование в Соединенных Штатах Америки. В разделе IV – экологическое законодательство Норвегии. В разделах V и VI – ответы экспертов относительно регулирования в Китае. В разделе VII – соответствующее законодательство Индии.

Представленные в настоящем Приложении ответы на вопросы Опросника воспроизведены в той форме, в которой они были получены от иностранных экспертов (на английском и русском языках).

I. Questionnaire – Environmental Laws and Regulations in Your Jurisdiction

Dear colleagues,

We are tasked with performing a comparative study on several environmental law issues, with particular attention to oil & gas, as well as to petrochemical industry, which for the purposes of this study includes oil & gas extraction and processing, preparatory activities of building oil, gas and petrochemical facilities and auxiliary activities of storing and transporting oil, gas and petrochemical products.

We are seeking your assistance on the following questionnaire.

Preliminary Questions – Legal Certainty and Environmental Litigation

What is the system of *environmental law sources* in your jurisdiction, e.g. statutes, regulations, case law etc.? Is environmental law *codified* or fragmented (e.g. split into sets of rules with separate regard to air, water and soil, to various territories or to various procedures, such as environmental impact assessment and audits)? Are environmental rules mainly principle-based, rule-based, or are solutions implemented on the individual, case by case basis? What is the procedure of discussing the draft environmental law changes with the businesses involved in the use of natural resources? Are any transitional rules implemented when changes are substantial?

Are environmental law *disputes* common in your jurisdiction? What are the most common types of disputes? Are there any out-of-court mediation / settlement options?

On the following questions, we expect the answer to consist of (i) the merits, (ii) the lists of legal sources (statutes, regulations, case law, doctrine), preferably with links in English. and (iii) the expert assessments. The latter should include your expert opinion whether the solutions in your jurisdiction (i) may be treated as best practicable solutions for other jurisdictions, or (ii) such solutions need improvement on certain points, or (iii) you have a neutral view of such solutions.

(I) Pollution limits (quotas) and risk management

1.1. If an industrial facility, e.g, an oil well, storage, pipeline or a petrochemical plant, is built or reconstructed, is there any *environmental impact assessment* procedure in your jurisdiction? Please describe the main parameters of such procedure(s), such as:

1.1.1. to which kinds of objects in oil and gas industry is this procedure applicable on the obligatory basis? Under which criteria are the objects classified?

1.1.2. when is the assessment made (on pre-project stage, on project stage, or both / other)?

1.1.3. who makes the assessment (the public authority itself, the experts nominated by the public authority and / or by the business entity etc.) and on what basis is the final admissibility decision made?

1.1.4. how is such procedure connected with other project admissibility procedures, such as building regulatory compliance?

1.1.5. how are the costs determined, who is bearing such costs?

1.1.6. what are the term limits for assessment?

1.1.7. if there is a need to change the project parameters, how is the re-assessment made? Is re-assessment partial or complete?

1.2. How are *pollution limits (quotas)* determined in your jurisdiction? Please consider any limits applicable to any component of the environment, such as water, air and soil. Who proposes the limits (the public authority itself, the experts nominated by the public authority and / or by the business entity etc.)? On what basis is the final decision made? Can the pollution limits be altered, and how?

1.3. Is the *best available technology / best practicable means / best practicable environmental option* methodology of pollution control applicable in your jurisdiction? If yes, to which objects or activities is it applicable? Were transitional procedures applicable when such methodology was applied on a first-time basis? What is the term limit and the procedure for review of best available technologies lists? What are the consequences of such review for existing enterprises?

1.4. Are rules prescribing certain actions for environmental damage prevention purposes, i.e. *pollution risk management* rules, established in your jurisdiction? Please describe the procedure, e.g. to which facilities or activities in oil & gas industry do these rules apply? Who establishes the rules? What is the character of the rules? How are the rules connected with other regulations that protect human life, health and property? Is there an exemption from environmental damage recovery if such rules, as well as other applicable conditions (e.g. damage insurance coverage), are complied with?

1.5. Does your jurisdiction have the *pollution charges* that are obligatory for business entities, including the recycling duties? Who are the payers (manufactures, sellers, customers, waste management operators etc.) and how are the payable amounts determined (including the criteria, the rates, the timing, etc.)?

1.6. What is the procedure of making an *environmental audit*? Who may / has to make such audit (the public authority itself, the experts nominated by the public authority and / or by the business entity, etc.)? Are these audits constant or are these made on a periodical / casual basis? Are any technical means of live monitoring used rather than human monitoring? What is being audited, the documents, the actual levels of pollution, or both? How are the costs determined, who bears the costs? What are the term limits for environmental audits? Are the pollution audits risk-based (e.g. are audits concentrated primarily on main contaminating substances)? How are environmental audits connected with other regulatory audits, such as industry regulations compliance?

1.7. Are there any rules on *target spending* with regard to funds collected from pollution charges, e.g. requirements for these funds to be spent exclusively for environmental needs? Are charges collected to budget or to other special funds? How is compliance by public authorities checked?

(II) Economical incentives for rational use of natural resources

2.1. What are the *sanctions* for non-compliance with pollution limits, e.g. multiple pollution charges or fines? How are the rates determined (flat amounts, turnover-based, etc.)? How are the multiple pollution charges or fines collected?

2.2. Are the polluter's expenses borne or other efforts made for purposes of curbing / diminishing pollution taken into consideration while calculating pollution charges, and if yes, what is the procedure, are the expenses recognized as accrued or in adjusted amounts?

2.3. Are the polluter's expenses borne or other efforts made for purposes of curbing / diminishing pollution taken into consideration while calculating taxes that are payable for use of natural resources (other than pollution charges)?

2.4. Are the polluter's expenses borne or other efforts made for purposes of curbing / diminishing pollution taken into consideration while calculating general business taxes, such as corporate profits tax (e.g. in form of accelerated depreciation) or property tax (e.g. in form of deduction from taxable value of business property)?

2.5. Are budget subsidies granted for purposes of environment protection? How may these subsidies be obtained? How is the purposeful spending controlled?

2.6. Are there any public-private partnerships, concession contracts, or other similar arrangements set up for purposes of environment protection? How are these arrangements implemented in practice?

2.7. Are there any other economic incentives for rational use of natural resources? What are such incentives, how are these being implemented?

(III) Environmental damage recovery

3.1. How is the environmental damage *calculated* in your jurisdiction? What is considered the principal basis to calculate damage, the amounts and formulas pre-set by authorities or the actual expenses bearable for purposes of restoring the state of environment? Is there a limitation as to what methods may be used for purposes of calculating damage, or any reasonable basis may be used, with all relevant circumstances of the case being considered?

3.2. What is the *principal remedy* to damage recovery – imposition of an obligation to restore the state of the environment on the polluter or imposition of a monetary obligation to repay the restoration charges to the public authority?

3.3. Are *the circumstances of the case*, such as the measure of the polluter's fault, his post factum behavior etc., taken into consideration while the sanctions for the damage are being determined?

3.4. What is the procedure *to restore* the environment in case of environmental damage? Who initiates the reparatory works - the public authority, the polluter, or both, including the immediate aftermath of inflicting the damage?

3.5. Are there any rules on *target spending* with regard to funds collected from multiple pollution charges or fines, e.g. requirements for these funds to be spent exclusively for environmental needs? Are fines collected to budget or to other special funds? How is compliance by public authorities checked?

II. Экологическое законодательство Европейского союза

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Preliminary Questions – Legal Certainty and Environmental Litigation

The European Union's environmental law sources consist of *primary EU law*, i.e. environmental provisions in the treaties (the Treaty on European Union, TEU, the Treaty on the Functioning of the European Union, TFEU and the Charter of Fundamental Rights of the European Union), and secondary EU law (directives, regulations and decisions). The primary and secondary law is interpreted by the Court of Justice of the European Union (CJEU) in its case law.

EU environmental law started off in an *ad hoc* and hence fragmented manner, introducing sets of rules for separate media / topics (for instance for air, water and waste) and various procedures (like EIA and audits). To a large extent, it still is fragmented, but nowadays some pieces of legislation follow a more integrated approach. Notably, the Industrial Emissions Directive (IED) 2010/75/EU integrates numerous pre-existing pieces of legislation and follows an integrated approach for the main industrial activities in the EU. EID permits must take into account the whole environmental performance of the installations, covering e.g. emissions to air, water and land, generation of waste, use of raw materials, energy efficiency, noise, prevention of accidents, and restoration of the site upon closure.

The EU law system is a rule-based system in which EU environmental legislation forms the basis for decisions. While EU law thus does not follow a common law precedence system, and case law strictly speaking does not for a source of law, the environmental case law in practice does form an important part of EU environmental law (the environmental 'acquis') and is often referred to in newer cases by the CJEU.

Draft environmental law changes are prepared by the European Commission. In line with art. 11 TEU,¹ the Protocol on the application of the principles of subsidiarity and proportionality,² and the EU's Better regulation initiative, there is a chance for businesses involved in the use of natural resources (and other stakeholders) to react to so-called green papers, white papers, impact assessments and/or roadmaps from the European Commission.

Green Papers stimulate discussion on given topics at European level on the basis of the proposals they put forward. They may give rise to legislative developments that are then outlined

¹ Stating notably that "the European Commission shall carry out broad consultations with parties concerned in order to ensure that the Union's actions are coherent and transparent."

² Stipulating that "before proposing legislative acts, the Commission shall consult widely".

in White Papers. White papers contain (options for) proposals for future EU action in a specific area that are aimed at launching a debate in order to arrive at political consensus. Roadmaps describe the scope, purpose and timing of new laws and policies and aim to inform about the Commission's work in order to allow them to provide feedback. Stakeholders are invited to provide views on the Commission's understanding of the problem and possible solutions and to make available any relevant information that they may have.

Transitional rules are frequently applied when changes are substantial.

Environmental law disputes are common in the European Union. At the level of the EU they are decided upon by the Court of Justice of the European Union (CJEU) – previously called European Court of Justice (ECJ) - and at the national level of the EU member states by national courts. The most common types of disputes at the EU level are actions for failure to fulfil obligations (Art. 258-260 TFEU; Commission v member states that failed to observe EU environmental law) or from references for preliminary rulings (Article 267 TFEU; judges from EU member states asking for clarifications regarding the interpretation of EU environmental law). At the EU level no out-of-court mediation / settlement options exist.

(I) Pollution limits (quotas) and risk management

1.1. EIA

If an industrial facility, e.g, an oil well, storage, pipeline or a petrochemical plant, is built or reconstructed, there exists a mandatory environmental impact assessment procedure in the European Union under the rules of the Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment.³ Projects listed in Annex I to the Directive are all subjected to an EIA because their environmental effects are presumed to be significant. Projects listed in Annex II require a determination to be made about their likely significant environmental effects and the need to perform an EIA procedure, based on a case-to-case examination or on thresholds or criteria set by EU member states.

The EIA procedure is applicable in accordance with Art. 4(1) EIA Directive to projects involving a number of listed objects in oil and gas industry if they meet the criteria set out in Annex I, namely:

³ OJ L 26, 28.1.2012, p. 1–21, <http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32011L0092>. Amended by Directive 2014/52/EU, OJ L 124, 25.4.2014, p. 1–18, <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32014L0052>. See for consolidated version <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:02011L0092-20140515>.

(1) Crude-oil refineries (excluding undertakings manufacturing only lubricants from crude oil) and installations for the gasification and liquefaction of 500 tonnes or more of coal or bituminous shale per day;

(14) Extraction of petroleum and natural gas for commercial purposes where the amount extracted exceeds 500 tonnes/day in the case of petroleum and 500 000 cubic metres/day in the case of gas;⁴

(16) Pipelines with a diameter of more than 800 mm and a length of more than 40 km (a) for the transport of gas, oil, chemicals;

(21) Installations for storage of petroleum, petrochemical, or chemical products with a capacity of 200 000 tonnes or more; and

(24) any change to or extension of projects listed in this Annex where such a change or extension in itself meets the thresholds, if any, set out in Annex I.

Following art. 4(2) EIA Directive, an EIA is also obligatory after a case-by-case examination or under conditions (thresholds or criteria worked out at the level of the EU member states) for the installations listed in Annex II, including the following energy sector installations:

(a) Industrial installations for the production of electricity, steam and hot water (projects not included in Annex I);

(b) Industrial installations for carrying gas, steam and hot water; transmission of electrical energy by overhead cables (projects not included in Annex I);

(c) Surface storage of natural gas;

(d) Underground storage of combustible gases;

(e) Surface storage of fossil fuels;

(f) Industrial briquetting of coal and lignite.

Furthermore, Annex II covers the following extractive industry projects:

(d) Deep drillings (...) ⁵

(e) Surface industrial installations for the extraction of coal, petroleum, natural gas and ores, as well as bituminous shale.

⁴ Also see footnote 5.

⁵ The CJEU clarified in case C-531/13 *Marktgemeinde Straßwalchen a.o.*, ECLI:EU:C:2015:79 that exploratory drilling, while not meeting the conditions of Annex I nr. 14, falls under the entry of “deep drilling” of Annex II.

The process of determining whether a Project listed in Annex II of the EIA Directive is likely to have significant environmental effects is called screening.

There has been a vast amount of litigation regarding the question whether a planned project was to be preceded by an EIA, notably where Annex II projects were concerned. The CJEU has consistently explained that the norms of the EIA directive are to be explained in such a manner that all installations with potentially negative effects for the environment need an EIA. For instance, neither salami tactics to stay below thresholds are allowed for, nor are thresholds set at such a level that in practice, no projects meet these thresholds.⁶ This jurisprudence has stood at the basis of some of the improvements that were introduced over time in the EU's EIA legislation, and notably the introduction of Annex III in which selection criteria are laid down for Annex II projects. Furthermore, the European Commission introduced guidance documents on several aspects of the EIA directive, for instance on screening, scoping and on the interpretation of project categories of Annex I and II.⁷

Expert assessment

The current EIA Directive's system (especially after the latest amendments) regarding Annex I projects forms a best practice that could be followed in other jurisdictions, and has helped ensuring that developers and authorities took environmental aspects into account.⁸ Where Annex II projects are concerned, in the past a wide variety in the number of EIAs conducted in different EU member states existed due to the broad discretion they had in determining whether Annex II projects should be subject to an EIA.⁹ It remains to be seen whether the newly introduced amendments to Annex III will improve the situation. One critics feared that the absence of a definition of 'likelihood of significant effects' and the fact that the Annex III criteria are worded in an open-ended manner (leaving authorities with a considerable discretion where screening of Annex II projects is concerned) mean that the amendments are unlikely to achieve the objectives of clarity and uniformity.¹⁰ At the same time, she submitted that authorities need some flexibility and hence in

⁶ See for example case C-72/95, ECLI:EU:C:1996:404, *Kraaijeveld* and case 227/01, ECLI:EU:C:2004:528, *Commission v Spain* and case C-142/07, PM, *Ecologistas en Acción-CODA*. On these and other cases, see also G. Van Calster and L. Reins, *EU Environmental Law*, Cheltenham, 2017, p. 134 ff.

⁷ The complete overview of guidance documents is available at <http://ec.europa.eu/environment/eia/eia-support.htm>.

⁸ See K. Arabadjieva, 'Better regulation' in *Environmental Impact Assessment: the amended EIA Directive*, *Journal of Environmental Law*, 2016, 28, 159–168.

⁹ European Commission, *Report on the effectiveness and application of the EIA directive*, COM(2009)378, p. 5: "from fewer than 10 to 4000 per year even when comparing Member States of a similar size".

¹⁰ K. Arabadjieva (footnote 8), p. 163.

the end concluded that Annex III might still form an adequate way to regulate the screening process.¹¹ .

1.1.2. Timing

An EIA is made in the pre-project stage (art. 2(1) EIA Directive). Based on the assessment and information obtained from consultations, the competent authorities are to reach a reasoned conclusion (Art. 1(2)(g)(iv) EIA Directive) that is to be incorporated in the decision on development consent (Art. 8a EIA Directive), i.e. the decision of the competent authority which entitles the developer to proceed with the project. These rules build on several CJEU decisions.¹²

Expert assessment

The EIA rules ensure that in principle, before a decision regarding development consent is issued, the authorities are provided with the information necessary to determine whether consent can be given or not, and if so, with or without further conditions. This qualifies as best practice.

1.1.3. Assessment

The assessment is made by the developer (i.e. the applicant for authorisation for a private project or the public authority which initiates a project, Art. 1(2)(b) and art. 2(1) EIA Directive). The developer is to ensure that the environmental impact assessment report is prepared by competent experts (art. 5(3)(a) EIA Directive). The assessment shall identify, describe and assess the direct and indirect effects of the project on (a) population and human health; (b) biodiversity (...); (c) land, soil, water, air and climate;¹³ (d) material assets,¹⁴ cultural heritage and the landscape; and the cultural heritage and the interaction between these factors (art. 3 EIA Directive). The final admissibility decision is made on the basis of criteria set out in art. 5(1) EIA Directive. The report is to include at least

(a) a description of the project comprising information on the site, design, size and other relevant features of the project;

(b) a description of the likely significant effects of the project on the environment;

¹¹ Ibid, p. 164.

¹² Notably case C-75/08 R *Mellor* PM and ECJ C-87/02 *Commission v Italy* PM.

¹³ Explained further in European Commission, *Guidance on integrating climate change and biodiversity into Environmental Impact Assessment*, 2013. PM

¹⁴ In case C-420/11 *Jutta Leth* the CJEU determined that only those effects of material assets which, by their very nature, are also likely to have an impact on the environment need to be taken into account. This includes the effects of noise on human beings in the event of use of a property affected by a project, but not the assessment of the effects which the project has on the value of material assets. The case concerned the house of ms Leth located near an airport that was extended without an EIA, in violation of the EIA Directive, and the claim for loss of property value.

(c) a description of the features of the project and/or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment;

(d) a description of the reasonable alternatives studied by the developer, which are relevant to the project and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the project on the environment;

(e) a non-technical summary of the information referred to in points (a) to (d); and

(f) any additional information specified in Annex IV relevant to the specific characteristics of a particular project or type of project and to the environmental features likely to be affected. Expert assessment

The extensive list of issues to be covered in the report can ensure that it covers the necessary issues for the authorities to make an informed decision and qualifies as best practice in this respect.

1.1.4. Coordination

If the procedure coincides with obligatory assessments of the effects on the environment under the Habitats directive¹⁵ and/or the Wild birds directive,¹⁶ the EU Member States shall, *where appropriate*, ensure that coordinated and/or joint procedures fulfilling the requirements of that Union legislation are provided for. The Commission is to issue guidance in this respect (art. 2(3) EIA directive). In the case of projects for which the obligation to carry out assessments of the effects on the environment arises simultaneously from the EIA Directive and Union legislation other than the Habitats and Wild birds directives, Member States *may* provide for coordinated and/or joint procedures (art. 2(3) EIA Directive).

Where other project admissibility procedures are concerned, such as building regulatory compliance, it is merely stipulated that EU member states *may* integrate EIA into the existing procedures for development consent to projects, or, alternatively, into other procedures or into procedures to be established to comply with the aims of the directive (art. 2(2) EIA Directive).

Expert assessment

The directive fails to set out what coordinated and/or joint procedures for EIA and the Habitats and/or Wild birds directive should look like. Non-binding guidance can only partially solve the challenges at the member state level in this respect.

¹⁵ Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora, OJ L 206, 22.7.1992, p. 7.

¹⁶ Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (OJ L 20, 26.1.2010, p. 7).

Before the last amendments to the EIA directive art. 2(3) provided that member states may introduce a single procedure for the EIA and the IPPC/IED directives. In practice, member states were reluctant to align these procedures.¹⁷ Even after the latest amendments, which do not add more specific norms in this respect, the EIA directive falls short of meaningful integration of EU legislation in this respect¹⁸ and hence does not qualify as best practice.

1.1.5. Costs

The costs of preparing an EIA or born by the developer, and as a share of project costs typically range from 0.1% for large projects to 1.0% for small projects.¹⁹ The costs depend on the expert(s) hired by the developer, so it is up to the market in other words. There are no references in the EU legislation regarding the issue of the costs of an EIA. It is only pointed out that EU member states may provide for coordinated and/or joint procedures in case of projects for which the obligation to carry out assessments of the effects on the environment arises simultaneously from this of projects for which the obligation to carry out assessments of the effects on the environment arises simultaneously from the EIA Directive and other Union legislation (art. 2(3) EIA Directive). Every six years from 16 May 2017, the EU member states are obliged to inform the Commission, where such data are available, of general estimates on the average direct costs of environmental impact assessments, including the impact from the application of this Directive to SMEs (art. 12(2)(e) EIA Directive).

Expert assessment

The fact that member states are not obliged to collect data about the costs of the assessments can not be regarded as a best practice, as it stands in the way of obtaining reliable data and improving the evaluation of the costs and benefits of EIA practice in the EU.

1.1.6. Term limits

Some term limits for aspects of the assessment process are laid down in the EIA Directive since the latest amendments. Art. 4(6) requires the competent authorities to determine whether an Annex II project is to be made subject to an EIA within 90 days after having received all the information from the developer. In exceptional cases, the authorities are allowed to take more time. Art. 6(6), art. 7(2)-(6) and 8(5) set out that ‘reasonable time-frames’ are to be used for the different phases of the process, and Art. 6(7) prescribes that the time-frames for consulting the public concerned

¹⁷ European Commission Working Paper, *Impact assessment accompanying the document proposal for a directive of the EP and of the Council amending directive 2011/92/EU*, SWD (2012)355, p. 16.

¹⁸ K. Arabadjieva (footnote 8 above), p. 162.

¹⁹ European Commission, *Report on the application and effectiveness of the EIA Directive*, COM(2009)378) and IVM, *Costs and benefits of the EIA Directive*, May 2007.

on the environmental impact assessment report shall not be shorter than 30 days. Art. 9(1) adds that when a decision to grant or refuse development consent has been taken, the competent authority shall promptly inform the public and the other authorities involved of the content of that decision and any conditions attached thereto, and the main reasons and considerations on which the decision is based, including information about the public participation process.

Expert assessment

The EIA directive only sets out some time limits, and these only improve EU practice in the member states to a limited degree. The 90 days timeframe is well above the average duration of the screening process in the member states (1.2 months)²⁰ so it affects only a limited number of states. The 30 days minimum timeframe affects at least six member states, though, so it does contribute to a more effective public consultation of the EIA procedure.²¹ While these concrete time limits (with a possible exemption) bring about some harmonization among the EU member states, the open-ended ‘reasonable’ standard leaves room for interpretation and thus disparities in the duration of the EIA procedures are likely to persist among the EU member states.²² This does not qualify as best practice.

1.1.7. Changed project parameters

Art. 5(3) EIA Directive underlines that an EIA report needs to be complete and have sufficient quality; sub c, the provision adds that where necessary, the competent authority shall seek from the developer supplementary information (in accordance with Annex IV) which is directly relevant to reaching the reasoned conclusion on the significant effects of the project on the environment. These general provisions could mean that when project parameters change, extra information or changes to the EIA report may be requested. Furthermore, art. 8(6) EIA Directive sets out that the competent authority shall be satisfied that the reasoned conclusion or the decisions referred to in art. 8(3) EIA Directive are still up to date when taking a decision to grant development consent. To that effect, Member States may set time-frames for the validity of the reasoned conclusion or any of the decisions referred to in art. 8(3) EIA Directive. No further specific rules exist regarding changes of project parameters, or whether re-assessments are to be partial or complete.

Expert assessment

While no provisions exist that explicitly discuss changes of project parameters or re-assessments, several provisions do warrant that reports will encompass such changes or that further

²⁰ European Commission Working Paper, *Impact assessment accompanying the document proposal for a directive of the EP and of the Council amending directive 2011/92/EU*, SWD (2012)355, p. 5.

²¹ Ibid, p. 141.

²² K. Arabadjieva (footnote 8 above), p. 161.

information is to be submitted to the authorities. The EIA Directive could include more specific rules regarding changes of parameters and the need for partial or complete re-assessments. At the moment, the rules do not qualify as best practice.

1.2. Emission limits

The IED regulates emissions to air, water and soil of about 50 000 (agro)industrial installations across the EU. It defines ‘emission limit value’ (ELV) as “the mass, expressed in terms of certain specific parameters, concentration and/or level of an emission, which may not be exceeded during one or more periods of time” (art. 3(5) IED). Member states are to ensure that the IED permit includes all measures necessary for compliance with the requirements of Articles 11 and 18 IED; those measures shall include at least emission limit values for polluting substances listed in Annex II (art. 14(1)(a) IED). The IED provides flexibility by allowing that the emission limit values of art. 14(1)(a) IED may be supplemented or replaced by equivalent parameters or technical measures ensuring an equivalent level of environmental protection (art. 14(2) IED).

Further details regarding ELVs are set out in art. 15 IED. First of all, ELVs for polluting substances shall apply at the point where the emissions leave the installation, and any dilution prior to that point shall be disregarded when determining those values. With regard to indirect releases of polluting substances into water, the effect of a water treatment plant may be taken into account when determining the ELVs of the installation concerned, provided that an equivalent level of protection of the environment as a whole is guaranteed and provided this does not lead to higher levels of pollution in the environment (art. 15(1) IED). In art. 15(2) IED it is added that the ELVs and the equivalent parameters and technical measures referred to in art. 14(1) and (2) IED shall be based on the best available techniques, without prescribing the use of any technique or specific technology. Art. 15(3) IED prescribes that the competent authority shall set ELVs that ensure that, under normal operating conditions, emissions do not exceed the emission levels associated with the best available techniques as laid down in the decisions on BAT conclusions by setting ELVs that do not exceed the emission levels associated with the best available techniques, or by setting different ELVs in terms of values, periods of time and reference conditions. In the latter case the authorities need to assess, at least annually, the results of emission monitoring in order to ensure that emissions under normal operating conditions have not exceeded the emission levels associated with the best available techniques. Art. 15(4) allows for an exemption. By way of derogation from art. 15(3) IED, the competent authority may, in specific cases, set less strict ELVs, in cases where an assessment shows that the achievement of emission levels associated with the best available techniques as described in BAT conclusions would lead to disproportionately higher costs compared to the environmental benefits due to:

- (a) the geographical location or the local environmental conditions of the installation concerned; or
- (b) the technical characteristics of the installation concerned.

Such less strict ELVs are not exceed the ELVs set out in the Annexes to the IED, where applicable, they are not to cause significant pollution and should still warrant that a high level of protection of the environment as a whole is achieved. Finally, art. 15(5) allows for temporary derogations for the testing and use of emerging techniques for a total period of time not exceeding 9 months.

For some types of installations, special rules apply. For instance, for combustion plants, special rules on ELVs are set out in art. 30 ff IED, and for waste incinerators in art. 49 IED. Further details on ELVs for such specific cases are set out in the annexes to the IED.

Expert assessment

Some researchers have pointed out that the IED aimed at accelerating the reduction trend of the industrial emissions in the EU, but evidence of significant results from the BAT / Brefs approach seems to be lacking. The 2008–2009 crisis seems to be the main factor for reduced emissions. BAT / Brefs show some weakness, they claim. Notably, the “concentration approach” for measuring emissions does not comply with the environment and health problems, because it sets no limit to the production. Improving the IED is needed, they conclude, in order to reduce the emission of pollutants to acceptable levels.²³ Another autyhor is critical about the governance model used, and notably the manner in which unequal numbers of people in the technical working groups respectively defending industrial and environmental interests and the inequality between them in terms of their capacity to develop solid technical arguments. “While it may seem natural that BAT determination processes require technically educated participants, this brings about forms of external and internal exclusion through constructing barriers to enter the IED political process and privileging a highly technical mode of communication, respectively”, he finds.²⁴

²³ M. Conti, R. Ciasullo, M. Tudino and E. Matta, *The industrial emissions trend and the problem of the implementation of the Industrial Emissions Directive (IED)*, Air Quality, Atmosphere & Health, 2015, Vol.8(2), pp.151-161.

²⁴ J. Kimmel, *Assessing the democratic quality of new modes of eu governance: the industrial emissions directive as a test case*, European Policy Science 2016, p. 1-18, at p. 15.

Examining the IED shortly after its adoption, another author finds that much will depend on the willingness of the EU member states to deliver on its promise of emission reductions.²⁵

A more optimistic author pointed out that the EU system has been applied outside the Union by countries that find enough advantages in the approach, and stressed that “the ELD provides a legally binding, but at the same time highly flexible legal and institutional framework that can keep up with industrial developments and is now properly enforceable at Member State level. At the same time, the flexibility instruments for the large combustion plants sector provide a sufficient timeframe for operators to consider investments into existing capacities or replacing them with new, preferably renewable ones.”²⁶

While it is still relatively early to tell whether the IED is the best way forward where prevention of pollution by large industrial installations is concerned, it does seem safe to conclude that the BAT / Brefs / ELV approach set out in this piece of legislation offers clear rules regarding ELVs. They are determined in the directive itself, hence by the Union legislator and the European Commission, but competent authorities at the member state level are left with some discretion to apply less strict ELVs under specific conditions. The advantages of this system mean that this aspect of the IED can qualify as best practice. The same holds true for the BAT / Brefs system.

1.3. BAT

The *best available technology* methodology of pollution control is applicable in the European Union through the Industrial Emissions Directive (EID).²⁷ It applies to which industrial activities giving rise to pollution referred to in Chapters II to VI EID (including energy industries like refining of mineral oil and gas and the production of coke – the complete list can be found in Annex I IED), but not to research activities, development activities or the testing of new products and processes (art. 2 IED). Transitional procedures were applicable when such methodology was applied on a first-time basis. These are notably laid down in art. 82 IED (‘Transitional provisions’). Special transitional rules exist for certain combustion plants with permits from before 27 November 2002 (art. 32 IED). Under certain conditions, during the period from 1 January 2016 to

²⁵ B. Lange, *The EU Directive on Industrial Emissions: Squaring the Circle of Integrated, Harmonised and Ambitious Technology Standards?*, *Environmental Law Review*, 2011, Vol.13(3), pp.199-204.

²⁶ P. Vajda, *The role of the Industrial Emissions Directive in the European Union and beyond*, *ERA Forum*, 2016, Vol.17(4), pp.487-499, at p. 497. Also - cautiously - optimistic is A. Zeri, *Deconstructing the Industrial Emissions Directive’s (2010/75/EU) Regulatory Standards: A Tale of Cautious Optimism*, *UCL Journal of Law and Jurisprudence*, 2 (1) pp. 173-200 (2013).

²⁷ Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control), OJ L 334, 17.12.2010, p. 17–119, corrigendum OJ L 158, 19.6.2012, p. 25 and consolidated version.

31 December 2023, some combustion plants may be exempted from compliance with emission limit values and rates of desulphurisation (art. 33 IED). An exemption for other combustion plants that formed a part of a small isolated system is laid down in art. 34 IED, and for district heating plants in art. 35 IED.

BAT Reference documents (Brefs) are to be updated not later than 8 years after their adoption (preamble point 13). The procedure for review of Brefs is determined by the European Commission. In order to draw up, review and, where necessary, update Brefs, the Commission organises an exchange of information between the EU member states, the industries concerned, non-governmental organisations promoting environmental protection and the Commission.

Moreover, the Commission has established and regularly convenes a forum composed of representatives of Member States, the industries concerned and non-governmental organisations promoting environmental protection and obtains and makes publicly available the opinion of the forum on the proposed content of the BAT reference documents. The Commission shall take into account this opinion for the adoption of the BAT conclusions.

This forum has been created as a formal expert group through a Commission decision.²⁸ According to this Decision, new members of the forum who are not Member States shall be appointed by the Director General of DG Environment.

The consequences of such review for existing enterprises are as follows. Permit conditions should be updated where new or updated BAT conclusions are adopted (Preamble point 21). In specific cases where the introduction of new BATs require a longer period than 4 years after the publication of a decision on BAT conclusions, competent authorities may set a longer time period in permit conditions where this is justified on the basis of the criteria laid down in the IED (preamble point 22).

Expert assessment

See above under nr. 1.2.

1.4. Pollution risk management rules in the EU

Following the industrial accident in Seveso (Italy) in 1976 that caused heavy environmental contamination with dioxins, European legislation was introduced aimed at the prevention of such

²⁸ 2011/C 146/03 of 16 May 2011.

incidents.²⁹ Currently, these general rules are laid down in the Seveso III directive³⁰ and are discussed below sub A). For some specific types of activities, notably for offshore oil and gas operations, specific rules are laid down in separate pieces of legislations. These are discussed below sub B).

A. Seveso III

Scope

It applies to establishments as defined in art. 3(1) Seveso III, i.e. places with certain amounts of explosive substances or flammable gases. They are divided in lower- and higher-tier, i.e. smaller and bigger establishments. Where the oil and gas industry is concerned, notably the installations are covered where the following substances are used:

“Annex I, part 2

Column 1	Co lo mn 2	Co lo mn 3
Dangerous substances	Qualifyi ng quantity (tonnes) for the applicati on of	
	Lo we r- tie	Hi gh er- tie

²⁹ Directive 82/501/EC on the major-accident hazards of certain industrial activities, OJ L 230, 5.8.1982, p. 1–18. The Seveso I directive was replaced by the Seveso II directive in 1998 (Directive 96/82/EC on the control of major-accident hazards involving dangerous substances, OJ L 10, 14.1.1997, p. 13–33), notably in order to implement the Convention of the United Nations Economic Commission for Europe on the Transboundary Effects of Industrial Accidents (approved on behalf of the Union by Council Decision 98/685/EC of 23 March 1998 concerning the conclusion of the Convention on the Transboundary Effects of Industrial Accidents).

³⁰ Directive 2012/18 on the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive 96/82/EC, OJ 2010, L 334, p. 17.

	r re qui re me nts	r re qui re me nts
18. Liquefied flammable gases, Category 1 or 2 (including LPG) and natural gas (see note 19)	50	20 0
34. Petroleum products and alternative fuels	2	25
(a) gasolines and naphthas,	50 0	00 0
(b) kerosenes (including jet fuels),		
(c) gas oils (including diesel fuels, home heating oils and gas oil blending streams)		
(d) heavy fuel oils		
(e) alternative fuels serving the same purposes and with similar properties as regards flammability and environmental hazards as the products referred to in points (a) to (d)		

Note 19: Upgraded biogas

For the purpose of the implementation of this Directive, upgraded biogas may be classified under entry 18 of Part 2 of Annex I where it has been processed in accordance with applicable standards for purified and upgraded biogas ensuring a quality equivalent to that of natural gas, including the content of Methane, and which has a maximum of 1 % Oxygen.”

From the provisions cited above it becomes clear that in principle oil and gas installations that meet the threshold criteria are covered by the Seveso III directive. However, some exceptions apply. Art. 2(2) Seveso III excludes from the scope of the directive:

“(d) the transport of dangerous substances in pipelines, including pumping stations, outside establishments covered by this Directive;

(e) the exploitation, namely the exploration, extraction and processing, of minerals in mines and quarries, including by means of boreholes;

- (f) the offshore exploration and exploitation of minerals, including hydrocarbons;
- (g) the storage of gas at underground offshore sites including both dedicated storage sites and sites where exploration and exploitation of minerals, including hydrocarbons are also carried out;
- (...)

Notwithstanding points (e) and (h) of the first subparagraph, onshore underground gas storage in natural strata, aquifers, salt cavities and disused mines and chemical and thermal processing operations and storage related to those operations which involve dangerous substances, as well as operational tailings disposal facilities, including tailing ponds or dams, containing dangerous substances shall be included within the scope of this Directive.”

Obligations for operators

Under the Seveso III directive, operators are obliged to take all necessary measures to prevent major accidents and to limit their consequences for human health and the environment. They are to be required to prove to the competent authorities, at any time, in particular for the purposes of inspections and controls, that they have taken all necessary measures as specified in this Directive (art. 5 Seveso III). The requirements include:

- Notification of all concerned establishments (Article 7);
- Deploying a major accident prevention policy (Article 8);
- Producing a safety report for upper-tier establishments (Article 10);
- Producing internal emergency plans for upper tier establishments (Article 12);
- Providing information in case of accidents (Article 16).

Ad art. 8: Operators are to draw up a document in writing setting out the major-accident prevention policy (MAPP) and to ensure that it is properly implemented (art. 8(1) Seveso III). They shall periodically review and where necessary update the MAPP, at least every five years (art. 8(4) Seveso III). The MAPP shall be implemented by appropriate means, structures and by a safety management system, in accordance with Annex III, proportionate to the major-accident hazards, and the complexity of the organisation or the activities of the establishment. For lower-tier

establishments, the obligation to implement the MAPP may be fulfilled by other appropriate means, structures and management systems, proportionate to major-accident hazards, taking into account the principles set out in Annex III (art. 8(5) Seveso III).

Ad art. 10) Operators are to produce safety reports demonstrating *inter alia* that a MAPP and a safety management system for implementing it have been put into effect in accordance with the information set out in Annex III, and that major-accident hazards and possible major-accident scenarios have been identified and that the necessary measures have been taken to prevent such accidents and to limit their consequences for human health and the environment (art. 10 Seveso III). The operator shall periodically review and where necessary update the safety report at least every five years (art. 10(5) Seveso III).

Ad art. 12) For all upper-tier establishments, operators need to draw up an internal emergency plan for the measures to be taken inside the establishment (art. 12(1) Seveso III). Emergency plans are to be reviewed, tested, and where necessary updated by the operators at suitable intervals of no longer than three years. The review shall take into account changes occurring in the establishments concerned or within the emergency services concerned, new technical knowledge, and knowledge concerning the response to major accidents (art. 12(6) Seveso III).

The Seveso directive obliges the Member States to prohibit the use or bringing into use of any establishment, installation or storage facility, or any part thereof where the measures taken by the operator for the prevention and mitigation of major accidents are seriously deficient. To this end, Member States shall, *inter alia*, take into account serious failures to take the necessary actions identified in the inspection report. They may also prohibit the use or bringing into use of any establishment, installation or storage facility, or any part thereof if the operator has not submitted the notification, reports or other information required by this Directive within the specified period (art. 19 Seveso III).

Link with other regulations

The Seveso III directive contains some provisions connected with other regulations that protect human life, health and property. In the preamble (nr. 7), it is set out that the provisions of the Seveso III directive apply without prejudice to the provisions of Union law relating to health and safety at work and the working environment, and, in particular, without prejudice to Council Directive 89/391/EEC of 12 June 1989 on the introduction of measures to encourage

improvements in the safety and health of workers at work.³¹ Annex I of Seveso III was amended to align it to Regulation on classification, labelling and packaging of substances and mixtures.³² It can be added that the exemptions (art. 2(2) Seveso III) that were already mentioned above should concern activities that are subject to other legislation at Union or national level providing for an equivalent level of safety (preamble nr 8).

Exemption from environmental damage recovery if rules are complied with?

The Seveso III provisions do not provide for an exemption from environmental damage recovery if the rules, or other applicable conditions (e.g. damage insurance coverage), are complied with.

B. Other legislation

As explained above, rules on prevention of accidents is also laid down for some specific types of activities, and notably in the **Directive on safety of offshore oil and gas operations (SOOGO)**.³³ It applies to all activities associated with an installation or connected infrastructure relating to exploration and production of oil or gas, but excluding conveyance of oil and gas from one coast to another (art. 2 sub 3 SOOGO). Operators are to ensure that all suitable measures are taken to prevent major accidents (art. 3(1) SOOGO). They are to operate on the basis of systematic risk management so that the residual risks of major accidents to persons, the environment and offshore installations are acceptable (art. 3(4) SOOGO).

Expert assessment

The Seveso directive has managed to ensure that the amount of large accidents affecting the environment has stayed limited in the European Union. Since its inception, it has been improved three times. The latest version, Seveso III, to a certain extent forms best practice in accident prevention.

1.5. Pollution charges

EU environmental law does not include obligatory pollution charges for business entities. The introduction of pollution charges is left to the EU member states. Recycling duties do exist, notably

³¹ Council Directive 89/391/EEC of 12 June 1989 on the introduction of measures to encourage improvements in the safety and health of workers at work, OJ 1989, L 183, p. 1–8.

³² Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, OJ 2008, L 353, p. 1–1355.

³³ Directive 2013/30/EU of the European Parliament and of the Council of 12 June 2013 on safety of offshore oil and gas operations and amending Directive 2004/35/EC, OJ L 178, 28.6.2013, p. 66–106.

where packaging waste is concerned.³⁴ Furthermore, under art. 11 sub e IED member states are to take the necessary measures to provide that installations are operated in accordance with certain principles. Notably, where waste is generated, it is to be, in order of priority and in accordance with the Waste framework directive 2008/98/EC, prepared for re-use, recycled, recovered or, where that is technically and economically impossible, it is disposed of while avoiding or reducing any impact on the environment. The IED also demands that an application for a permit includes a description of, *inter alia*, measures for the prevention, preparation for re-use, recycling and recovery of waste generated by the installation (art. 12 sub h IED). Where waste incinerators are concerned, residues are to be recycled “where appropriate” (art. 44 sub c and 53(1) IED). Finally, best available techniques are to be determined notably by “the furthering of recovery and recycling of substances generated and used in the process and of waste, where appropriate” (Annex III IED).

Where waste prevention is concerned, several examples exist in which member states are explicitly allowed to use economic instruments.³⁵

Expert assessment

The Union does not provide best practices as long as it does not make more use of pollution charges. The recycling provisions of the IED leave too much discretion to the member states to qualify as best practice. The recycling provisions of the Packaging and packaging waste directive are concrete and have made a difference in practice.

1.6. Environmental audit

Introduction

The EU Eco-Management and Audit Scheme (EMAS)³⁶ is a management instrument developed by the European Commission for companies and other organisations to evaluate, report, and

³⁴ The recycling rates for different materials are laid down in art. 6 of the European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste, OJ L 365, 31.12.1994, p. 10–23; consolidated version 2015.

³⁵ For instance in order to reduce the consumption of lightweight plastic carrier bags (Directive 2015/720/EU of the European Parliament and of the Council of 29 April 2015 amending Directive 94/62/EC as regards reducing the consumption of lightweight plastic carrier bags, OJ L 115, 6.5.2015, p. 11–15).

³⁶ Regulation (EC) No 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organisation in a Community eco-management and audit scheme (EMAS), repealing Regulation (EC) 761/2001 and Commission Decisions 2001/681/EC and 2006/193/EC, OJ 2009, L 342; see consolidated version 2017.

improve their environmental performance. EMAS is open to every type of organisation (public and private, corporations, firms, enterprises, authorities or institutions, art. 2(21) EMAS) eager to improve its environmental performance. It spans all economic and service sectors and is applicable worldwide.³⁷ The latest EMAS revision came into effect on 11 January 2010. It is a voluntary instrument. Member states may charge reasonable fees that organisations that want to be audited need to pay (art. 39 EMAS).

Procedure

In accordance with art. 4 and 5 EMAS, an organisation can qualify by carrying out a review of all environmental aspects of its activities, following the criteria set out in Annexes I and II. This involves, for instance, identifying applicable legal requirements relating to the environment and providing evidence of compliance with these norms, and a register of aspects with potentially significant impacts on the environment. Based on the review, an Environmental Management System (EMS) is to be developed and implemented, taking into account the best environmental management practice for the sector concerned, following the core criteria of section 4 of the ISO 14001:2004 standard, complemented with additional EMAS requirements. Objectives and targets must be measurable and consistent with environmental policy. Internal audits are to be carried out, assessing the management system in place and determining conformity with the policy and programme of the organisation. This includes compliance with relevant environmental legislation (Annex III of EMAS), every three to four years. An environmental statement is to be prepared in line with Annex IV EMAS, which includes a clear description of the organization, its environmental policy, targets and objectives and a description of the EMS. The initial environmental review, the EMS, the audit procedure and its implementation, and the environmental statement are to be verified by an accredited or licensed verifier (art. 4(5) EMAS). The application needs to be submitted to the competent body in the member state concerned. This body registers the organization, controls the entry and maintenance of the organisation's details on the register, including where applicable its suspension and deletion.

Term limits

The EMAS register is renewed at least every three years (art. 6(1) EMAS). Internal audits of environmental and legal compliance need to take place on a yearly basis. For smaller organisations these frequencies can be lower, if no significant environmental risks occur.

Monitoring

³⁷ See http://ec.europa.eu/environment/emas/index_en.htm.

Part of the monitoring consists of live meetings (see for instance art. 25(4) EMAS).

Expert assessment

EMAS is not very successful. Only in a couple of member states, notably Germany, do organisations opt for EMAS. Most organisations use ISO standards instead.³⁸ It thus does not qualify as best practice.

1.7. Target spending

Are there any rules on *target spending* with regard to funds collected from pollution charges, e.g. requirements for these funds to be spent exclusively for environmental needs? Are charges collected to budget or to other special funds? How is compliance by public authorities checked?

EU law does not have general rules regarding target spending with regard to funds collected from pollution charges. Some examples exist where for in specific cases, requirements for funds to be spent for specific environmental needs are incorporated in EU law. For transport and noise, under EU fiscal rules in the form of the Eurovignette Directive,³⁹ common rules were introduced on distance-related tolls and time-based user charges (vignettes) for the use of certain infrastructure by heavy goods vehicles. According to the 2011 amendments to this directive, Member States may maintain or introduce external-cost charges related to the 'cost of traffic-based air pollution' — the cost of the damage caused by the release of particulate matter and ozone precursors, such as nitrogen oxide and volatile organic compounds, in the course of operation. The revenues generated from external cost charges should be used to make transport more sustainable.

In the area of waste, several examples exist where member states that raise fees. For instance for port ship facilities, they are to use these fees to cover for the costs of such facilities.⁴⁰

(II) Economical incentives for rational use of natural resources

2.1. Sanctions

EU member states are obliged to implement and enforce EU law, so also pollution limits imposed by EU environmental law. If secondary EU legislation (directives or regulations) do not contain provisions regarding sanctions for violations, still the member states are obliged to

³⁸ M.S. Wenk, *The European Union's Eco-Management and Audit Scheme (EMAS)*, 2005 and Van Calster and Reins (footnote 6), p. 111.

³⁹ Directive 1999/62/EC of the European Parliament and of the Council of 17 June 1999 on the charging of heavy goods vehicles for the use of certain infrastructures, OJ 1999, L 187, p. 42–50 - see [Consolidated 2016 version](#).

⁴⁰ See for further details the EEA Report No. 17/2016 (footnote 53).

introduce “effective, proportionate and dissuasive” sanctions, the ECJ determined on the basis of the principle of loyal cooperation (art. 4(3) TEU).⁴¹

Following this jurisprudence, nowadays the various pieces of EU environmental legislation usually demand that EU member states introduce effective, proportionate and dissuasive sanctions for non-compliance with pollution limits. Art. 79 IED and art. 7 ECD are examples of such general provisions. Sometimes, the provisions are a bit more precise. For instance, the former Waste incineration directive⁴² (nowadays repealed by the IED) used to contain an art. 4(9) that read: “If an incineration or co-incineration plant does not comply with the conditions of the permit, in particular with the emission limit values for air and water, the competent authority shall take action to enforce compliance.” According to some, this implied that plants exceeding emission limit values would need to be shut down.⁴³

The sanctions may consist of fines, pollution charges under penal law and/or administrative law. The choice is left up to the EU member states, except for certain environmental crimes identified in the Environmental Crimes Directive (ECD) where the member states need to make use of penal law.⁴⁴ The ECD introduces several offences (art. 3(a-i) ECD), including discharging materials into air, soil or water which causes or is likely to cause substantial damage to the environment and the operation of a plant in which dangerous substances are stored or used and which, outside the plant, causes or is likely to cause substantial damage to the environment. If non-compliance with pollution limits qualifies as one of the ECD offences, criminal penalties need to be introduced that are effective, proportionate and dissuasive (art. 5 IED). The exact amount for the individual offences is left open for the EU member states to decide. The manner in which rates are determined is left up to the member states as well (under the condition that the rates are effective, proportionate and dissuasive). The manner in which multiple pollution charges or fines are collected is also left up to the member states.

Expert assessment

The EU did legislation does not prescribe specific minimum sanctions that need to be imposed when pollution limits are not met.⁴⁵ As a result, a coherent enforcement policy is lacking in the EU.⁴⁶ The system can not be described as a best practice.

⁴¹ *Commission v Greece*, Case 68/88, [ECLI:EU:C:1989:339](#), para 24.

⁴² [Directive 2000/76 on the incineration of waste](#), OJ 2000, L 332, p. 91.

⁴³ J.H. Jans and H.H.B. Vedder, *European environmental law after Lisbon* (4th edition), Groningen, 2012, p.164.

⁴⁴ [Directive 2008/99/EC of 19 November 2008 on the protection of the environment through criminal law](#), OJ L 328, 6.12.2008, p. 28–37.

⁴⁵ See Jans and Vedder (footnote 43), p. 163 ff.

⁴⁶ *Ibid*, p. 166.

2.2. Pollution charges

No polluter charges exist that are prescribed by the EU.

2.3. Taxes for use of natural resources

No such taxes are raised under EU law.

2.4. Curbing pollution and other taxes

While it is recognized that tax systems should become greener in the EU, the organization did not introduce rules to this effect.

2.5. Subsidies

The European Commission provides funding to projects and initiatives that promote its policy priorities throughout the European Union and further afield. The Directorate General for the Environment makes funding available through two different programmes, the LIFE fund and the Eco-Innovation and Competitiveness and Innovation Framework Programme, and operating grants to environmental non-governmental organisations (NGOs).

LIFE is the European Union's financial instrument supporting environmental and nature conservation projects throughout the Union and in some candidate and neighbouring countries.

The Competitiveness and Innovation Framework Programme – Entrepreneurship and Innovation Programme (CIP-EIP) supports projects in eco-innovation through three initiatives: **financial instruments**, **network of actors** and **pilot and market replication projects**. The programmes offer funding opportunities through grants. The Commission also organises procurement tenders. Grants and tenders are announced on the websites of the European Commission.⁴⁷ Tenders are offered to those that submit offers that score highest through a system explained in the tender specifications (weighing in the price, experience of the experts etc.). The purposeful spending is controlled by the European Commission in the first place, and at times also by the European Court of Auditors.

2.6. Public-private partnerships

The EU is supporting the following public-private partnerships where research is concerned: Factories of the Future, Energy-efficient Buildings, Sustainable Process Industry and European Green Vehicles Initiative. On 17 December 2013, the European Commission launched eight contractual Public Private Partnerships (PPPs) of strategic importance for European industry. They will leverage more than €6 billion of public investments plus additional investments to develop

⁴⁷ Notably at http://ec.europa.eu/environment/funding/grants_en.htm and at <https://etendering.ted.europa.eu>.

new technologies, products and services and are to boost European industry. The PPPs are based on roadmaps for research and innovation activities which are the result of an open consultation process and a positive evaluation by the European Commission with the help of independent experts.

They are implemented in practice through open calls under Horizon 2020, the EU Programme for Research and Innovation for 2014-2020. The first Horizon 2020 Work Programme for 2014-15 foresaw around €1.45 billion for these eight PPPs. The Factories of the Future PPP, for example, concentrates on increasing the technological basis of EU manufacturing through the development and integration of enabling technologies, such as innovative technologies for adaptable machines, ICT for manufacturing, and novel industrial handling of advanced materials. One of the aims is to facilitate optimum production with less resource use and waste.⁴⁸

The EU introduced specific rules on the award of concession contracts for the EU member states through Directive 2014/23/EU.⁴⁹ EU countries had to transpose this directive into their national legislation by 18 April 2016. Before that date, public works concessions were subject to the basic rules of Directive 2004/18/EC.⁵⁰ Contrary to what has been established for public contracts, the present rules do not set out any specific procedure. It is left to the member states to define the applicable procedures for the award of concessions in observance of general rules concerning selection and award criteria and procedural guarantees. However, public authorities are obliged to communicate, without any discrimination, to all interested bidders, how they intend to structure the award process.⁵¹

2.7. Economic incentives

Economic incentives for rational use of natural resources are foreseen in a variety of EU pieces of legislation. The concretisation and implementation of these incentives is mostly left to the EU member states.

⁴⁸ European Commission, *Factories of the Future PPP: towards competitive EU manufacturing*, 2013.

⁴⁹ Directive 2014/23/EU of the European Parliament and of the Council of 26 February 2014 on the award of concession contracts, OJ L 94, 28.3.2014, p. 1–64.

⁵⁰ Directive 2004/18/EC of the European Parliament and of the Council of 31 March 2004 on the coordination of procedures for the award of public works contracts, public supply contracts and public service contracts, OJ 2004, L 134, p. 114.

⁵¹ See for more details European Commission, Memo, 15 January 2014.

In order to reach their targets under the Renewable Energy Directive (RED),⁵² member states may, *inter alia*, use support schemes, which are defined as any instrument, scheme or mechanism applied by a Member State or a group of Member States, that promotes the use^[1] of renewable energy by reducing its cost, increasing^[1] its sale price, or increasing, for example, through^[1] a renewable energy obligation, the volume of renewable energy purchased. This includes, but is not restricted to, investment aid; tax exemptions or reductions; tax refunds; renewable energy obligation support schemes, including those using green certificates; and direct price support schemes, including feed-in tariffs and premium payments.⁵³

Furthermore, energy or carbon taxes that have the effect of reducing end-use energy consumption may be used, under specific conditions, by EU member states as an alternative to setting up an energy-efficiency obligation scheme to achieve energy savings by final customers under the Energy efficiency directive.⁵⁴ Another relevant provision is contained in fiscal legislation in Directive 2003/96/EC on^[1] the taxation of energy products and electricity.⁵⁵ According to this, Member States may apply, under fiscal control, total or partial exemptions or reductions in the level of taxation to, among others, electricity generated by specified renewable sources and electricity produced from combined heat and power generation, provided that the combined generators are environmentally friendly.

(III) Environmental damage recovery

3.1. Calculation

How is the environmental damage calculated in your jurisdiction? What is considered the principal basis to calculate damage, the amounts and formulas pre-set by authorities or the actual expenses bearable for purposes of restoring the state of environment? Is there a limitation as to what methods may be used for purposes of calculating damage, or any reasonable basis may be used, with all relevant circumstances of the case being considered?

General case law

⁵² Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, OJ 2009, L 140, p. 16–62.

⁵³ EEA Report No. 17/2016, *Environmental taxation and EU environmental policies*, Luxembourg, 2016.

⁵⁴ Directive 2012/27/EU of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC, OJ 2012, L 315, p. 1.

⁵⁵ Council Directive 2003/96/EC of 27 October 2003 restructuring the Community framework for the taxation of energy products and electricity, OJ L 283, 31.10.2003, p. 51–70 and 2014 consolidated version.

EU environmental policy is based *inter alia* on the polluter pays principle (art. 191 TFEU). EU law does not prescribe in detail how environmental damage is to be calculated, but instead leaves this to its member states to a large degree. From the jurisprudence of the ECJ / CJEU some aspects or conditions have become clear, however. This polluter pays principle featured in the case C-188/07, *Commune de Mesquer v. Total*.⁵⁶ The ECJ gave a preliminary ruling in the case between the French municipality of Mesquer and two Total oil companies concerning compensation for the damage caused by the oil spread on the territory of that municipality following the sinking of the oil tanker Erika. The Court ruled that oil washed up on the shore following the accident classifies as waste and found that in principle, in accordance with the ‘polluter pays’ principle, Total as the producer of the oil, based on its conduct to fail to prevent the oil spill, could also be held responsible and be ordered to finance the clearing up. It thus seems that conduct to prevent environmental damage from arising could limit liability, but no further case law exists that substantiates this possibility.

Another important case regarding liability is the *Van der Walle a.o.* case regarding soil contaminated by fuels accidentally leaking from underground tanks at a Texaco filling station in Brussels.⁵⁷ This should be regarded as waste, the ECJ found, despite the fact that the soil was not excavated or disturbed. The company should be seen as the holder of the waste and thus responsible for its treatment because it produced the fuels.

ELD

The Environmental Liability Directive (ELD)⁵⁸ introduced an administrative law regime aimed at ensuring that the polluter pays for damage to the environment. It follows a strict liability system for environmental damage resulting from certain dangerous and potentially dangerous activities, and a complementary fault based liability for other activities. The directive does not apply to environmental damage or to any imminent threat of such damage arising from incidents in respect of which liability or compensation falls within the scope of any of the International Conventions listed in Annex IV, including any future amendments thereof, which is in force in the Member State concerned (art. 4(2) ELD).⁵⁹

⁵⁶ Case C-188/07,

⁵⁷ *Paul van der Walle a.o.*, Case C-1/03, ECLI:EU:C:2004:490.

⁵⁸ Directive 2004/35 on environmental liability with regard to the prevention and remedying of environmental damage, OJ 2004, L 143, p. 56.

⁵⁹ Annex IV includes, *inter alia*, (a) the International Convention of 27 November 1992 on Civil Liability for Oil Pollution Damage; (b) the International Convention of 27 November 1992 on the Establishment of an International Fund for Compensation for Oil Pollution Damage; and (c) the International Convention of 23 March 2001 on Civil Liability for Bunker Oil Pollution Damage.

The ELD defines "environmental damage" as significant a) damage to protected species and natural habitats, b) water damage and c) land damage (art. 2 sub 1). The ELD does not cover damage to property and persons or economical damage (see art. 3(3) ELD and preamble no 11 and 14).

In line with art. 12(1) ELD, natural or legal persons (a) affected or likely to be affected by environmental damage or (b) having a sufficient interest in environmental decision making relating to the damage or, alternatively, (c) alleging the impairment of a right, where administrative procedural law of a Member State requires this as a precondition, are entitled to submit to the competent authority any observations relating to instances of environmental damage or an imminent threat of such damage of which they are aware and shall be entitled to request the competent authority to take action under this Directive. In case environmental damage exists, the competent authority shall consider requests for action.

Strict liability (see Art. 3 I a) encompasses environmental damage and imminent threats when caused by specified occupations held to be dangerous to the environment ("dangerous activities"), listed in Annex III. These include *inter alia* the operation of IPPC / IED installations, discharges into inland surface water which require prior authorisation and offshore oil and gas operations.

There is no need to prove the subjective element (fault, culpa) if liability is strict. Strict liability is justified on the basis that the operator has been granted to carry out a dangerous activity. He must therefore also bear the disadvantages if he benefits from the advantages of such an activity. The general tax payer should not pay in such cases.

Fault based liability (see Art. 3 I b) encompasses damage to protected species and natural habitats and imminent threat when caused by non-specified occupational activities, others than those mentioned in Annex III. The subjective element needs to be proved. This may be a time consuming and costly process with often uncertain outcome.

The CJEU has clarified several provisions of the ELD over time. Causal link is required – but a presumption of causality is allowed for, the CJEU said in case C-378/08 that dealt with oil pollution dating back to the 1960s.⁶⁰ The ELD does not preclude national legislation which allows the competent authority acting within the framework of the directive to operate on the presumption, also in cases involving diffuse pollution, that there is a causal link between operators and the pollution found on account of the fact that the operators' installations are located close to the polluted area. However, in accordance with the 'polluter pays' principle, in order for such a causal link thus to be presumed, that authority must have plausible evidence capable of justifying its

⁶⁰ Case C-534/13, *Ministero dell'Ambiente e della Tutela del Territorio e del Mare a.o.*, ECLI:EU:C:2015:140.

presumption, such as the fact that the operator's installation is located close to the pollution found and that there is a correlation between the pollutants identified and the substances used by the operator in connection with his activities.

In the Fipa [case 534/13](#) the CJEU found that the ELD does not preclude national legislation which, in cases where it is impossible to identify the polluter of a plot of land or to have that person adopt remedial measures, does not permit the competent authority to require the owner of the land (who is not responsible for the pollution) to adopt preventive and remedial measures, that person being required merely to reimburse the costs relating to the measures undertaken by the competent authority within the limit of the market value of the site, determined after those measures have been carried out.

The question whether environmental damage from activities are covered by a permit can be excluded from liability under the ELD was discussed in the Gert Folk [case C-529/15](#). Folk is the owner of fishing rights in Austria who was confronted with damage to the fishes he was entitled to catch because of the operation of a hydroelectric power station. When he complained, he was told this type of damage was covered by a permit and hence no complaints were possible under Austrian law. The CJEU explained in that a provision of national law which excludes, generally and automatically, that damage which has a significant adverse effect on the ecological, chemical or quantitative status or ecological potential of the water in question be categorised as 'environmental damage', due to the mere fact that it is covered by an authorisation granted under that law, is incompatible with the ELD. It also found that a provision which does not entitle persons holding fishing rights to initiate a review procedure in relation to environmental damage within the meaning of Article 2(1)(b) of that directive is incompatible with the ELD.

A recent case was decided by the CJEU upon preliminary questions from a Hungarian judge in the Túrkevei Tejtermelő [case C-129/16](#). The request has been made in a dispute between Túrkevei Tejtermelő Kft. ('TTK') and the Országos Környezetvédelmi és Természetvédelmi Főfelügyelőség (National inspectorate general for the protection of the environment and nature, Hungary; 'the inspectorate') concerning a fine imposed on TTK as a result of illegal waste incineration occurring on land belonging to it and which resulted in air pollution. Hungarian law provides for joint and several liability of landowners besides those using the land. The owner is relieved of joint and several liability if he identifies the actual user of the land and unequivocally proves that he cannot be held responsible.

SOOGO

Under the SOOGO,⁶¹ no licences for offshore oil and gas operations are to be granted unless competent authorities are satisfied with evidence from the applicant that he has made or will make adequate provision, “on the basis of arrangements to be decided by Member States”, to cover liabilities potentially deriving from the applicant’s offshore oil and gas operations. Such provision shall be “valid and effective from the start of offshore oil and gas operations.” It is added that member states shall require applicants to provide, in an appropriate manner, evidence of technical and financial capacity and any other relevant information relating to the area covered by the licence and the particular stage of offshore oil and gas operations. Member states are to assess the adequacy of these provisions in order to establish whether the applicant has sufficient financial resources for the immediate launch and uninterrupted continuation of all measures necessary for effective emergency response and subsequent remediation, and “facilitate the deployment of sustainable financial instruments and other arrangements to assist applicants for licences in demonstrating their financial capacity pursuant to the first subparagraph.” Furthermore, they shall, as a minimum, establish procedures “for ensuring prompt and adequate handling of compensation claims including in respect of compensation payments for trans-boundary incidents” (art. 4(3) SOOGO). Hence, the EU legislator itself does not set out how damages are to be calculated but does formulate several conditions that a liability regime for offshore oil and gas operations needs to meet.

Expert assessment

An evaluation showed clear knowledge gaps and implementation deficiencies that need to be tackled in order for the ELD to become more effective. It showed that implementation still varies significantly from one member state to another in terms of the number of ELD cases and the way the ELD is implemented. The observed ‘patchwork’ of environmental remediation, together with the lack of some key data on implementation and on the cost (both administrative and financial security), form a major challenge.⁶² A Multi-Annual Work Programme (MAWP) 2017 – 2020 'Making the Environmental Liability Directive more fit for purpose' has been developed in response to the evaluation. It was finalised in a consultative process with ELD government experts from the EU Member States. Following consultation of a draft in September/October 2016, the present version of the MAWP was endorsed by the government on 28 February 2017. The

⁶¹ Directive 2013/30/EU of the European Parliament and of the Council of 12 June 2013 on safety of offshore oil and gas operations and amending Directive 2004/35/EC, OJ L 178, 28.6.2013, p. 66–106.

⁶² Report from the Commission to the Council and the European Parliament under Article 18(2) of Directive 2004/35/EC on environmental liability with regard to the prevention and remedying of environmental damage, COM(2016)204 final.

MAWP will be updated to changing developments, growing knowledge and new needs.⁶³ Literature is also critical about the ELD.⁶⁴ It is thus safe to say that the ELD does not yet form best practice.

The SOOGO does seem more fit for purpose, but it leaves many of the details regarding calculation of damages etc. to the EU member states and hence in and by itself, it does not qualify as best practice.

3.2. Principal remedy

Art. 6(1) ELD explains that the operator shall take all practicable steps to immediately control, contain, remove or otherwise manage the relevant contaminants and/or any other damage factors in order to limit or to prevent further environmental damage and adverse effects on human health or further impairment of services and take the necessary remedial measures, in accordance with Article 7 ELD. The latter provision refers to Annex II ELD, which under point 1.1.1. *inter alia* sets out that “the purpose of primary remediation is to restore the damaged natural resources and/or services to, or towards, baseline condition.”

If the operator fails to comply with his obligations, cannot be identified or is not required to bear the costs under the ELD, the competent authority may take these measures itself, as a means of last resort (art. 6(3) ELD). The principle remedy thus consists of an obligation to restore the state of the environment.

Expert assessment

The ELD system extensively sets out how the operator that caused the damage is to present options regarding possible remedial measures to the competent authorities (art. 7 ELD), following the detailed rules of Annex II ELD. In this respect, the ELD qualifies as best practice.⁶⁵

3.3. Circumstances of the case

EU legislation does not cover the taking into consideration of *the circumstances of the case*, such as the measure of the polluter’s fault, his post factum behavior etc., while the sanctions for the damage are being determined.

3.4. Restoration

⁶³ Source: <http://ec.europa.eu/environment/legal/liability/index.htm> .

⁶⁴ See Van Calster and Reins (footnote 6), p. 154 ff. Jans and Vedder (footnote 43), p. 383 ff note the implementation challenges regarding the ELD.

⁶⁵ See also Jans and Vedder (footnote 43), p. 387.

The competent authority itself can take remedial measures (art. 6(2)(e) and (3) ELD), but normally speaking the operator is to submit options for remedial measures to the competent authority for approval, in line with the detailed rules set out in Annex II ELD (art. 7(1) ELD). The competent authority then decides which of the remedial measures shall be implemented, also in accordance with Annex II (art. 7(2) ELD).

In the immediate aftermath of the damage, the operator shall, without delay, inform the competent authority of all relevant aspects of the situation and take “(a) all practicable steps to immediately control, contain, remove or otherwise manage the relevant contaminants and/or any other damage factors in order to limit or to prevent further environmental damage and adverse effects on human health or further impairment of services and (b) the necessary remedial measures, in accordance with Article 7” (art. 6(1) ELD).

Expert assessment

The manner in which restoration activities are arranged under the ELD could qualify as best practice.

3.5. Target spending

There exist no EU rules on target spending with regard to funds collected from multiple pollution charges or fines, e.g. requirements for these funds to be spent exclusively for environmental needs.

III. Экологическое законодательство США

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This memorandum provides a summary of environmental legal provisions about the oil and gas extraction sectors, including the related petrochemical industry, in the United States of America. These sectors are regulated by federal environmental laws, and also by environmental laws in each of the States. State regulation varies significantly from state to state. Some State laws are very strict, e.g. Hawaii, and some less strict, e.g. Louisiana. To illustrate State law regimes, reference will be made to the environmental laws of the State of New York, which as a mature and well developed system of environmental laws, and some other states (See NYS Environmental Conservation Law, <http://public.leginfo.state.ny.us/lawssrch.cgi?NVLWO:> ; these statutes are administered by the NYS Department of Environmental Conservation , <https://www.dec.ny.gov/65.html>, and <https://www.dec.ny.gov/permits/70293.html> . See the SEQRA Handbook at <http://www.dec.ny.gov/permits/57228.html> .

It should also be noted that as of 2018, both the rules and the administration of the federal environmental rules under the Administration of President Donald Trump are currently being relaxed, including the application of environmental regulations about the oil and gas sector, and many other sectors. This means that the summary provided here should be regularly updated in light of the notices that federal agencies are amending federal regulations. These changes are monitored by Universities, such as Harvard Law School, see <http://environment.law.harvard.edu/policy-initiative/regulatory-rollback-tracker/> . Often it is unclear why the rules are being weakened. For example, on February 28, the Interior Department's Royalty Policy Committee recommended lowering the royalty rate that companies pay to the public when they drill for oil and gas in U.S. coastal waters. On specialist, Hayni Hein, submitted critical comments (reported in E&E News): "There is no credible evidence that lowering the offshore royalty rate would benefit the American public, and doing so will deprive taxpayers of fair market value for publicly owned resources. This change represents an egregious giveaway to industry." Hein states that such a change would go against the Interior Department's statutory mandate to earn fair market value for the development of publicly owned natural resources. Despite such objections from the public or experts, federal agencies are making changes to regulations that the President requests. Many of these administrative changes result in federal lawsuits to challenge the changes. 174 were filed as of the end of 2017. Therefore, even when changes are proposed and even adopted, it may take some period of time for the courts to rule whether or not that are to be allowed under the relevant federal statutes. The federal environmental

regulatory framework, which was quite stable under past presidencies, such as George W. Bush or Barack Obama, is now often uncertain.

For the purposes of this study-questionnaire, it is understood that the inquires include oil & gas extraction and processing, preparatory activities of building oil, gas and petrochemical facilities and auxiliary activities of storing and transporting oil, gas and petrochemical products.

I. Preliminary Background Introduction:

The governance of energy markets in the USA affects all aspects of oil and gas production. Prof. Richard L. Ottinger, Co-Director of the Center for Environmental Legal Studies at Pace University School of Law (New York, USA) offers the following analysis of this (Adapted from his forthcoming paper in the *ENCYCLOPEDIA: ENERGY LAW AND ENVIRONMENT, PART III "REGULATING ENERGY MARKETS"*). See also Kurt Deketelaere, editor, *International Encyclopaedia of Energy Law* (<http://www.kluwerlawonline.com/toc.php?pubcode=ENER>).

The U.S. Energy Governance Framework

In the United States, energy is provided primarily by fossil fuels, nuclear power plants and renewable energy for electricity; fossil fuels for transportation, industrial production and the heating and cooling of buildings.

Energy production and delivery in the United States is overwhelmingly provided by private companies, subject to a very complex system of regulations described below. Oil, natural gas and nuclear energy are all privatized. Electricity is 75% provided by private companies subject to regulation; of the remaining 25% some is provided by the federal government at the Tennessee Valley Authority (a regional federal government agency operating dams and producing electricity), four Department of Energy power marketing administrations and several federal dams all regulated by the relevant federal authorities; and the remaining 25% by a few state and regional power authorities and cooperatives responsible to their state legislatures; and a number of consumer-owned municipal power companies answerable to their municipal councils.

Historically private electricity companies were vertically integrated monopolies comprising production, transmission and distribution of power. With the development of new energy efficiency and renewable energy technologies the U.S. Congress in 1978 passed the Public Utilities Regulatory Policy Act (PURPA, Pub.L. 95-1-617, <http://legislink.org/us/stat-92-3117>) requiring utilities to purchase all cogeneration and renewable energy offered to them at a competitive price and to conduct a public least cost planning process before making new production investments to include cogeneration and other efficiency measures. The act also created a market for power from non-utility power producers, leading to a major restructuring of the industry. Today most states,

but not all, have required that the utilities become solely power transmitters and distributors and that they purchase their power from “Independent Power Producers.”

Regulation of all these entities is very extensive and complex. Environmental regulations are independent and other federal agencies are required to honor the environmental rules. For example, all federal agencies must comply with the National Environmental Policy Act (342 U.S. Code 4321).

Federal Agencies Principally Responsible for Oil & Gas and Energy

Each of the federal agencies identified below has a website, which provides links to its regulations and decisions with respect oil and gas and other related energy issues.

Council on Environmental Quality (CEQ): Established the generic regulations for all federal environmental impact assessments (see Section 1.1 *infra*).

Department of Energy (DOE): The federal DOE has broad oversight over federal energy policy and specific authority over “long-term, high-risk research and development of energy technology, federal power marketing, energy conservation, the nuclear weapons program, energy regulatory programs, and a central energy data collection and analysis program.” Its research work is carried out by sixteen National Laboratories operating in partnership with private research institutions.

Federal Energy (FERC): According to its website “*FERC* regulates, monitors and investigates electricity, natural gas, hydropower, oil matters, natural gas pipelines, LNG terminals, hydroelectric dams, electric transmission, energy markets and pricing.” However, FERC regulates only interstate electricity markets and pricing; states regulate all intra state electricity markets and pricing.

Environmental Protection Agency (EPA): EPA is authorized by Congress to regulate power plant emissions and their effects on the environment, including greenhouse gas emissions.

Department of the Interior (Interior): Interior governs the public lands under direct federal ownership (1/3 of the USA, in the western and Alaskan areas), and leases oil and gas exploration and production on these lands, as well as off-shore in the marine environment subject to USA authority. It does so through several specialized bureaus within Interior.

US Army Corps of Engineers (Army Corps): The Army Corps approves permit for oil and gas pipelines that cross wetlands and waterways and has other regulatory authority on floodplains.

Department of Transportation (DOT): DOT regulates vehicle pollution and efficiency requirements and federal highway contributions to environmental degradation, and thus determines patterns of vehicular oil and gas consumption.

Occupational Safety & Health Administration (OSHA): An agency within the Department of Labor, OSHA sets and enforces standards to assure safe and healthful working conditions for working men and women. This is particularly relevant in the energy field relative to assuring the safety of workers in the hazardous occupations of off-shore oil drilling and deep below surface coal mining.

Securities Exchange Commission (SEC): The SEC has acted to require all publicly traded companies to disclose their climate related risks.

Nuclear Regulatory Commission (NRC): The NRC regulates the construction and safety provisions for nuclear power. Prices, however, are regulated by the state regulatory commissions.

State & Treasury Departments & Federal Trade Commission (FTC): The State & Treasury Departments and FTC deal with US treaties, other international agreements and tariff energy issues.

U.S. Energy and its environmental impacts also have been impacted throughout the ages by the energy and trade policies of the U.S. and other countries and by the decisions of international institutions. Thus, for most of modern history, supplies and prices of oil and gasoline were greatly influenced by a cartel of the major oil producing states, the Organization of Petroleum Exporting Countries (OPEC). And today the U.S. is coping with the environmental impacts of energy (despite the Administration's declared rejection) as affected by the adoption of the Paris Climate Agreement.

State Regulation

States are the principal regulators of electric and natural gas utility energy policy and pricing. Each state has legislated its own regulatory regime. In general each state has its own environmental protection agencies and laws regulating the siting of oil and gas extraction activity and infrastructure. Each state also has a state utility regulatory commission that supervises and sets the rate utilities can charge each of its classes of customers. An authority, known as an Independent Systems Operator, allocate the electricity offered to the utility, usually on an hourly least cost basis regardless of origin. Some states have supporting energy research and development offices and energy commissions

There are several regional power agreements between states and between states and Canada. Thus New York imports power from Canada and California has a regional greenhouse gas cap and trade agreement with Canada. There are several interstate regional cap and trade programs.

The rapid growth of renewable electricity has caused very large and often contentious regulatory issues. There are problems in handling the intermittency of solar and wind energy and of providing clean and efficient backup power. As solar rooftop generation becomes more prevalent, increasingly with battery backup, many utilities are seeking regulatory authority to increase charges and reject net metering that allows customers to sell electricity in excess of usage back to the utility at the rates it charges. More enlightened utilities see that renewables are the future and they are working with their commissions to work out equitable compromises. Some of the utilities are seeking to enter the renewable market business themselves.

One of the duties state legislators and state regulatory commissions is to prevent utilities from raising rates in a manner that disadvantages low income households that cannot afford renewable energy. Some legislatures and commissions are requiring that the utilities, which they regulate at the state level, must make provision to enable low income customers to take part in the renewable energy revolution.

Distributed energy, serving groups of customers or whole communities with shared renewable facilities that do not rely on a grid of power lines, is a relatively new and fast growing phenomenon. Combined with energy storage and, where there is a grid, with methods for disconnection from the grid, thereby enabling electricity service during grid outages, creates a very attractive customer option. This is so particularly for facilities that require assured service, like hospitals and various technology companies. This application also creates adaptation challenges for the utilities. These are all regulated primarily under state law. Such systems are reducing demand for oil and gas.

The growing state reforms for adoption of both energy efficiency and renewable energy across states such as California and New York is because of the policy consensus that recognizes the urgency of mitigating the environmental and health damages as a result of climate change, thereby enabling the USA to meet or exceed the American national contributions for greenhouse gas emissions, as agreed by President Barak Obama (despite President Trump's plan to withdraw from Paris climate change agreement). Such State regulation also enable customers of electricity to meet their electricity needs more economically, with substantial cost and reliability advantages. The demand for oil and gas is being reduced, and dependence on the fossil fuel sectors, especially in the case of coal and oil, is gradually declining. The development of economic electric cars helps the utilities by creating a large new market to offset customer losses from self-generation.

Federal Subsidies, and alterations on market conditions

Oil and gas companies have secured large subsidies from the federal government in the past, in many ways, include tax relief. This was because it was deemed important policy to encourage an abundance of traditional energy supplies. This policy is changing. However, substantial subsidies to promote the production and use of oil and gas, as well as coal, remain an important obstacle to achieving climate change mitigation and the Paris climate change goals. A 2016 study estimated these subsidies at \$5.3 trillion in 2016 representing 6.5% of global GDP. Not surprisingly, the largest subsidizers were also the largest greenhouse gas emitters (with China at \$1.8 trillion and the U.S. at \$0.6 trillion). The study estimates that subsidy elimination would reduce global carbon emissions by 21%, air pollution deaths by 55%, increasing global revenues by 4%. The International Energy Agency (IEA) in Paris has stated that subsidy elimination would be one of the most effective ways of reducing greenhouse gases. The IEA's chief economist has declared that without removal of fossil fuel subsidies countries cannot reach their climate targets. In May 2016 the G7 nations set a deadline for ending most subsidies by 2025.

These enormous market-distorting subsidies are most often justified by unsubstantiated assertions of the need to make electricity affordable to low income people. The fact is that the 1.2 billion people, who are without access to electricity, receive none of this largess. The beneficiaries are those consuming the most electricity, primarily corporations. Thus, phasing out the subsidies creates a political problem for the legislators, since these subsidy beneficiaries tend to have the most political clout. The enormity of these subsidies undermines the allocation of funds that could go a long way towards solving recognized social problems or investing in creating jobs in new economic sectors. Moreover, funding will be needed for responding to the increased frequency of hurricanes, tsunamis, sea level rise, floods, droughts, fires, food supply disruptions, and occurrences of diseases, attributable to the federal government's failure to eliminate the climate change threats. Subsidies exacerbate these risks.

Energy is critical for economic development. However, energy production has great impacts on human health and the environment. Since these impacts can be alleviated economically by ending dependence on oil, gas and coal, in the U.S. many state governments are beginning to require use of energy efficiency measures and to require a transition from dependence on oil and gas fuels to renewable energy.

For secular and systematic policy reasons, the oil and gas sector in the USA is beginning to be in decline, and regulation of the sector. As subsidies are cut back, and environmental regulations strengthened, the oil and gas sector will recede. These longer term trends do not support the short-term enthusiasm for the oil and gas sector in 2018 in the administration of President Trump.

II. Preliminary Questions – Legal Certainty and Environmental Litigation

What is the system of *environmental law sources* in your jurisdiction, e.g. statutes, regulations, case law etc.? Response: Environmental law is extensively set forth in federal statutes, and extensive regulations promulgated by agencies. These are interpreted and enforced by the judiciary, and court decisions clarify how to apply these statutes and regulations. See generally the legal materials available from the expert research center, the Environmental Law Institute (Washington, DC), at <https://www.eli.org/> .

Is environmental law *codified* or fragmented (e.g. split into sets of rules with separate regard to air, water and soil, to various territories or to various procedures, such as environmental impact assessment and audits)? Response: The laws are fragmented, and adopted by subject matter. They are published annually as Session Laws and then placed into subject matter sections of the U.S. Code. See generally <https://system.uslegal.com/congress/legislative-process/> .

Are environmental rules mainly principle-based, rule-based, or are solutions implemented on the individual, case by case basis? Response: The rules are based on a legislative decision about what the public interest requires, and these rules are then elaborated by administrative agencies in their regulations and guidance documents.

What is the procedure of discussing the draft environmental law changes with the businesses involved in the use of natural resources? Are any transitional rules implemented when changes are substantial? Response: The draft statutes are published by the UA Congress, or by the legislature of each state, and then business and non-governmental civic organizations, and the public are invited to comment. There are no transitional rules, although effective dates often may be delayed form some time to allow those who are regulated time to adjust their practices to the new requirements.

Are environmental law *disputes* common in your jurisdiction? Response: The disputes are usually associated with (a) decisions about where to locate and approve a new facility (siting); (b) whether the environmental impact assessment for an agency action was correctly done; (c) whether an agency regulations was properly adopted and (d) enforcement of an environmental rule when violated. See generally, <https://www.epa.gov/environmental-topics> .

What are the most common types of disputes? Are there any out-of-court mediation / settlement options? Response: Most disputes involve enforcement of environmental laws, or claims of injury for environmental damages. All court rules provide for mediation and settlement o disputes. The likelihood of using such means depends on the prolonged nature of disputes and whether the costs and benefits of settling appear to be attractive or not. See, e.g., “Mediation of Environmental Disputes: A Source Book” at <https://www.beyondintractability.org/bksum/mernitz-mediation> .

For the following questions, Responses address, in generic terms: (i) the merits, (ii) the lists of legal sources (statutes, regulations, case law, doctrine), and (iii) the expert assessments. The latter includes an expert assessment about whether the solutions in the USA at federal or state levels, (i) may be treated as best practicable solutions for other jurisdictions, or (ii) such solutions need improvement on certain points, or (iii) you have a neutral view of such solutions.

III. Substantive Questions

(I) Pollution limits (quotas) and risk management

1.1. If an industrial facility, e.g., an oil well, storage, pipeline or a petrochemical plant, is built or reconstructed, is there any *environmental impact assessment* procedure in your jurisdiction? Response: Federal law requires preparation of an environmental impact statement under the Section 102(2) (c) or the National Environmental Policy Act, vol. 42 of the US Code Section 4321, see https://ceq.doe.gov/laws-regulations/agency_implementing_procedures.html ; and the regulations provided by the Council on Environmental Quality in vol. 33 of the US Code of Federal Regulations, Part 1500. See https://www.energy.gov/sites/prod/files/NEPA-40CFR1500_1508.pdf . There is a very useful definition of all federal environmental impact assessment terms and procedures in the federal regulations. See http://www.thecre.com/fedlaw/legal14/toc_ceq.htm .

Here are descriptions of the main parameters of such procedures:

1.1.1. to which kinds of objects in oil and gas industry is this procedure applicable on the obligatory basis? Under which criteria are the objects classified? Response: All major federal actions significantly affecting the quality of the human environment require an impact statement. See Section 102(2)(C) of the National Environmental Policy Act (NEPA), <https://ceq.doe.gov/> .

1.1.2. when is the assessment made? Response: The assessment must begin at the pre-project stage. A supplemental impact assessment can be required at the project stage, if impacts require doing so.

1.1.3. who makes the assessment? Response: The public authority itself is required to do the assessment, and usually requires the oil or gas applicant to hire consultants to compile the data and submit it for the authority as the basis for a draft impact assessment statement. The final environmental impact statement is adopted by the authority, after public comment on a draft statement.

1.1.4. how is such procedure connected with other project admissibility procedures, such as building regulatory compliance? Response: The oil or gas project must disclose all other permits that its proposed project requires, such as land use approvals by state or local authorities, and also

evaluate how these other proceedings would affect the environmental impact. All other interested authorities are given notice and copies of the draft impact statement and are invited to give comments about the draft statement, and their comments must be responded to in the final impact statement.

1.1.5. how are the costs determined? Response: The governmental authority that prepare the impact statement is legally responsible for all the costs, but in practice passes the major cost on to the applicant, who is requested to assemble the data and prepare a draft impact statement at its own expense.

1.1.6. what are the term limits for assessment? Response: The environmental impact assessment law, i.e. NEPA, and CEQ regulations (above 1.1), define how the term limits are to be determined. The process is uniform but the application is specific to the project and its context. After the governmental agency with principal authority over the project (known as the “lead agency”) determines that an impact statement is to be prepared, a meeting is held to scope out the terms of the statement (“scoping meeting”) and the terms are then specified in the context of the type of action being studied and all relevant environmental considerations.

1.1.7. if there is a need to change the project parameters, how is the re-assessment made? Is re-assessment partial or complete? Response: The procedures provide for making such reassessments through a supplement environmental impact, which is based on the underlying data and evaluations in the first assessment.

1.2. How are *pollution limits (quotas)* determined in your jurisdiction? Response: The environmental quality limits applicable to any component of the environment, are provided by the US Environmental Protection Agency for water, air and hazardous substance exposures, and by state law for soils, and by the US Fish and Wildlife Service in the Interior Department, or the State agencies, for wildlife habitat. The authority doing an environmental impact assessment cannot change these standards, and the oil and gas company as project applicant must comply with them. Any emission permits are set separately by the US EPA, in specific permit application proceedings. The US EPA has its own expert civil servants and agency officials, who set the general limits in regulations under federal statutes for the nation, and who then also expert civil servants in each region who will prescribe the specific limits as applied to the applicant for the project. Limits cannot be altered without separate applications to do so. The federal regulations specific the basis for the final decision. Environmental quality limits are thus distinct form the impact assessment, and the impact assessment can make establish stricter standards if the circumstances require doing to avoid and mitigate adverse environmental impacts. State agencies can also require stricter standards. For example, each state must ensure that air emissions from any oil and gas or

petrochemical project do not degrade air quality standards in the part of the state where the project is located, under the “State Implementation Plan” (SIP) for the Clean Air Act. The SIPs are all published and available on line. <https://www.epa.gov/air-quality-implementation-plans> .

1.3. Is the *best available technology (BAT) / best practicable means / best practicable environmental option* methodology of pollution control applicable in your jurisdiction? If yes, to which to which objects or activities is it applicable? Response: BAT Technology standards are required for the federal environmental protection agency in setting the allowable limits for both air emissions <https://www.epa.gov/clean-air-act-overview/setting-emissions-standards-based-technology-performance> , and water emissions. See <https://www.epa.gov/eg/learn-about-effluent-guidelines> . EPA provides an on-line “clearing house,” or databases, providing information on BAT and other available technology standards. <https://www3.epa.gov/ttnecat1/rblc/htm/welcome.html> . Once the BAT or the appropriate technology standard is used by EPA or a state in setting an environmental quality limit, there are no transitional procedures applicable when such methodology was applied on a first-time basis? EPA upgrades technology practices generically from time to time, and either EPA or each State upgrade the limits in specific permits for the oil and gas or petrochemical, or other licensed activity, every 5 years or less. The permits each are issued for a set of years, and when they must be renewed the governmental agency that issues the further permit must inform the public and may upgrade the permit conditions to reflect use of more advanced technology. Each of the federal environmental laws provides by regulations both the term limits and the procedure for review of best available technologies lists. If an existing enterprise does not have its permit renewed, it must cease operations. If it operates in violation of its permit, or without a permit, it is subject to criminal penalties, civil penalties, or administrative fines, as specifically provided for each federal or state environmental statute. See generally, <https://www.justice.gov/enrd/environmental-crimes-section> .

1.4. Are rules prescribing certain actions for environmental damage prevention purposes, i.e. *pollution risk management* rules, established in your jurisdiction? Response: The Pollution Prevention Act of 1990 provides a set of actions to avert actions that harm the environment. See <https://www.epa.gov/laws-regulations/summary-pollution-prevention-act> . It has been effective. See http://pprc.org/wp-content/uploads/2015/09/P2-Retrospective_25-Year_Final-Draft_20151.pdf . The procedure by which facilities or activities in oil & gas industry apply these rules is through designing and adhering to their environmental management system (EMS). See <https://www.epa.gov/ems> . Each company must design and establish its internal corporate rules that ensure compliance with all federal and state environmental laws and regulations; guidance is provided for how to do so. See <https://www.epa.gov/ems/guide-developing-environmental->

management-system-plan .The company can seek to have its EMS certified under the voluntary procedures of ISO 14,000. See <http://asq.org/learn-about-quality/iso-14000/> . The EMS rules in each company or corporate internal regulations, and they designed to ensure that all operations in a company are in compliance with environmental permits and all other applicable environmental quality requirements that protect human life, health and property? Many governmental permits require companies to show that the company has obtained commercial insurance policies with coverage adequate to pay for a range of possible accidents and environmental damages. See generally Stephanie K. Jones, “Environmental Pollution Insurance: A Fluid and Ever-changing Market,” at <https://www.insurancejournal.com/magazines/mag-features/2001/07/23/18589.htm> Such commercial insurance is easily obtained. See for example: (a) <https://b-h-a.com/about-us/what-is-environmental-insurance/>, or (b) <https://www.aig.com/business/insurance/environmental> . All oil and gas and petrochemical operations have commercial insurance in the USA. Moreover, it would expose companies to extensive tort liability or share-holder actions, if a company failed to carry adequate insurance. There are no exemptions from environmental damage recovery if such EMS rules, as well as other applicable conditions (e.g. damage insurance coverage), are complied with, but compliance with an EMS can show that a company has exercised “due diligence” and is not negligent, so for this reason oil and gas and petrochemical companies use EMS routinely. This will not exempt a company from criminal responsibility and civil liability. See the BP Deepwater Horizon oil rig disaster in the Gulf of Mexico in 2010, the worst oil and gas disaster in US history. <https://www.britannica.com/event/Deepwater-Horizon-oil-spill-of-2010> . The federal EPA and Department of Justice, and several state agencies, and many private companies and individuals, held BP accountable for a vast range of environmental damages. See EPA at <https://www.epa.gov/enforcement/deepwater-horizon-bp-gulf-mexico-oil-spill> .

In addition to the Pollution Prevent Act, all industry is also subject to Act, **Emergency Planning and Community Right to Know (EPCRA)**. Under EPCRA, EPA enforces requirements that ensure that facilities are prepared for chemical emergencies and report any releases of hazardous and toxic chemicals. EPCRA requires that citizens be informed of toxic chemical releases in their area. Industrial facilities must annually report releases and transfers of certain toxic chemicals. See <https://www.epa.gov/laws-regulations/summary-emergency-planning-community-right-know-act> .

1.5. Does your jurisdiction have the *pollution charges* that are obligatory for business entities, including the recycling duties? Response: Pollution charges exist in the USA at local, state and some federal sectors. Recycling costs generally are born by the person or company that is legally required to recycle. Many local and state authorities set fees for recycling services. There is no

standard or common nation-wide pattern for such applications of the OECD “polluter pays principle.” Generally, the environmental laws in the USA have used strict regulations of the oil and gas and petrochemical industry, to protect health and environment, rather than effluent fees and economic incentives. See, e.g., for air emissions, the discussion at <https://scholarship.law.duke.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=2292&context=dlj> . While not widespread, “pollution fees,” “user fees,” and “product charges” are used in some states and for a range of activities. See Table 4.1 in the report at [https://yosemite.epa.gov/ee/epa/erm.nsf/vwAN/EE-0216B-05.pdf/\\$file/EE-0216B-05.pdf](https://yosemite.epa.gov/ee/epa/erm.nsf/vwAN/EE-0216B-05.pdf/$file/EE-0216B-05.pdf) . When such pollution charges are established, the State or local laws specify the payers (manufacturers, sellers, customers, waste management operators etc., and how are the payable amounts determined, including the criteria, the rates, the timing. The systems for doing so are not standardized.

1.6. What is the procedure of making an *environmental audit*? Response: In the USA, as elsewhere, an environmental audit is a general term for a variety of evaluations that are designed to identify a company’s compliance with all applicable environmental laws. The audit is customarily a part of the environmental management system (EMS). See Response 1.4 above. An environmental audit often identifies weak aspects of an EMS and specifies corrective actions. Since environmental audits are designed to reduce the risks of financial loss due to environmental damages, they are often required by company boards of directors, and often a coordinated and reviewed along with a company’s financial audits. Companies often publish an annual environmental report, to demonstrate their due diligence and compliance with environmental laws. See <https://www.epa.gov/compliance/environmental-auditing-policy-statement> .

Environmental audits are customarily required by the company’s board of directors, usually on an annual or other periodic basis. In some cases will be required as a condition of a permit by a federal or state agency, or under a court order, if the company has a record of not adhering to environmental laws. Environmental auditors are trained and professional societies of auditors seek to ensure the high standards and independent competence of environmental auditors. See <https://www.nrep.org/certifications/certified-environmental-auditor-cea> . In some cases, state inspector general or comptroller will conduct audits of an entire industry sector (e.g. for solid or hazardous waste handling), but government authorities rarely audit the environmental compliance of a company overall. Audits often use the automatic compliance monitoring, e.g. discharge monitoring systems, required by governmental permits, such as the for the National Pollutant Discharge Elimination Permit System (NPDES), requiring nation-wide monitoring of all waste water discharges. See <https://echo.epa.gov/tools/data-downloads/icis-npdes-dmr-and-limit-dataset> . For air emissions and water effluents, there are many technical means of live monitoring used,

far more than reliance on human monitoring? Companies must show that they comply with all applicable environmental quality metrics, keep records of their compliance (or violations) and make these records available to the EPA, state environmental agencies and the public. Costs are borne by the company, and a part of their costs of doing business. The terms of all permits are conterminal with such monitoring requirements, but environmental audits can and often do look at a wider set of environmental compliance goals as specified in a company's EMS. Pollution audits are usually risk-based as well as for ensuring compliance with environmental laws generally. Where environmental agencies inspect companies for their permit compliance, the audits are used to prepare for such inspections.

1.7. Are there any rules on *target spending* with regard to funds collected from pollution charges, e.g. requirements for these funds to be spent exclusively for environmental needs? Response: Pollution charges are not generally used. Some states require fees to be paid in order to cover the governmental costs of a state's environmental compliance and enforcement regime. For example, the State Supreme Court in Pennsylvania in 2016 ruled that fees collected to regulate oil and gas extraction from hydraulic fracturing must be used to protect and restore the environment, as part of the State's Constitutional right to the environment. See <https://stateimpact.npr.org/pennsylvania/2016/09/28/pa-supreme-court-rules-with-environmentalists-over-remaining-issues-in-act-13/>

(II) Economical incentives for rational use of natural resources

2.1. What are the *sanctions* for non-compliance with pollution limits, e.g. multiple pollution charges or fines? Response: If a court finds a violation of the Clean Water Act, due to criminal negligence (e.g., carelessness, inattentiveness), it will impose a fine—a minimum of \$2,500 with a maximum of \$25,000 fine per day for the first offence and a maximum fine of \$50,000 per day for the second offence. These amounts are provided for in the statute. For the Clean Air Act, see <https://www.epa.gov/enforcement/air-enforcement>.

The amount of the fine is set by the enforcement agency, and accrues on a daily basis as long as the violation continues (e.g. pollution is flowing). All civil penalties and fines are paid by the polluting company to the government directly. Failure to pay the fine is itself another violation. Companies forfeit property if they fail to pay fines. Fines are paid in due course, without problems usually. Remediation expenses may be considered in relation to reductions in taxes owed by a company. <https://www.epa.gov/laws-regulations/summary-emergency-planning-community-right-know-act>

2.2. Are the polluter's expenses borne or other efforts made for purposes of curbing / diminishing pollution taken into consideration while calculating pollution charges? Response:

Generally, no as pollution chargers are not much used. Fines must be paid as calculated. When orders are made to restore environmental damage, in the discretion of the government the costs of restoration may be given priority and the payments made in lieu of fines. Often this is done through a settlement of either an administrative or judicial an enforcement action. In the case of remediating hazardous waste sites, the selection of the appropriate technology will carry different costs estimates. See generally, <https://www.epa.gov/superfund/cost-remedy-selection-process> .

2.3. Are the polluter's expenses borne or other efforts made for purposes of curbing / diminishing pollution taken into consideration while calculating taxes that are payable for use of natural resources (other than pollution charges)? Response: Yes, the federal Internal Revenue Code provides for expensing remediation costs. See <https://www.law.cornell.edu/uscode/text/26/198> . See Charles J. Reichert, "Deducting Environmental Cleanup Costs," *Journal of Accountancy*, (2002) at <https://www.journalofaccountancy.com/issues/2002/feb/deductingenvironmentalcleanupcosts.html> .

2.4. Are the polluter's expenses borne or other efforts made for purposes of curbing / diminishing pollution taken into consideration while calculating general business taxes, such as corporate profits tax (e.g. in form of accelerated depreciation) or property tax (e.g. in form of deduction from taxable value of business property)? Response: Generally, no. See Response to 2.3.

2.5. Are budget subsidies granted for purposes of environment protection? How may these subsidies be obtained? Response: Grants are made to facilitate remediation of past damage but not to prevent future pollution. Any grants are subject to audits and oversight to ensure purposeful spending. See generally, <https://www.epa.gov/grants> .

2.6. Are there any public-private partnerships, concession contracts, or other similar arrangements set up for purposes of environment protection? How are these arrangements implemented in practice? Response: EPA offers guidance on establishment of public private partnerships for environmental protection. These are voluntary and can be effective, usually with local authorities. See <https://nepis.epa.gov/Exe/ZyNET.exe/40000CEP.TXT?ZyActionD=ZyDocument&Client=EPA&Index=1991+Thru+1994&Docs=&Query=&Time=&> .

2.7. Are there any other economic incentives for rational use of natural resources? What are such incentives, how are these being implemented? Response: Payments for ecosystem services (PES) are used by the US Department of Agriculture (National Forest Service) and the some states (e.g. NYC Watershed for drinking water supplies), but not generally for oil and gas sectors. See

<https://nicholasinstitute.duke.edu/ecosystem/land/taking-stock-payments-for-forest-ecosystem-services-in-the-united-states-1> .

(III) Environmental damage recovery

3.1. How is the environmental damage *calculated* in your jurisdiction? Response: The actual costs required for the remediation of a damaged area is the basis for calculating monetary damages. These are empirically determined, and are not pre-set by authorities. Agencies will make assessments of the injury and determine the actual expenses bearable for purposes of restoring the state of environment? See, for example, the process to assess costs for the BP Deepwater Horizon oil spill in the Gulf of Mexico, at <https://darrp.noaa.gov/oil-spills/deepwater-horizon> . There limitations as to what methods may be used for purposes of calculating damage, because this is a scientific and technical assessment. Therefore, sound science requires all relevant circumstances of the case be considered. See, e.g. <https://response.restoration.noaa.gov/about/media/assessing-impacts-deepwater-horizon.html> .

3.2. What is the *principal remedy* to damage recovery? Response: Beyond assessing penalties, the federal or state agencies with competence will issued orders that define restoration in kind or by substitute (if site specific restoration is impossible) of the state of the environment. The party that caused the damage, such as the polluter, bears this cost. Where emergency action is taken by the government to stem damage, the costs of this may be recovered from the pollution by imposition of a monetary obligation to repay the restoration charges to the public authority.

3.3. Are *the circumstances of the case*, such as the measure of the polluter's fault, his *post factum* behavior etc., taken into consideration while the sanctions for the damage are being determined? Response: These factors may be considered by a court in its discretion, in imposing penalties. Administrative agencies may use prosecutorial discretion to apply such factors. See David L. Uhlmann, "Prosecutorial Discretion and Environmental Crime," Harvard Environmental Law Review (2014) at <https://repository.law.umich.edu/articles/1457/> .

3.4. What is the procedure *to restore* the environment in case of environmental damage? Response: Once damage is discovered, the company must report it at once to the government, and stabilize the injurious conduct. See, e.g. for oil spills, <https://www.epa.gov/emergency-response/when-are-you-required-report-oil-spill-and-hazardous-substance-release> . The competent governmental agency will then assess the damage and order the responsible party to undertake the cleanup and restoration. See <https://www.epa.gov/cleanups/basic-information-about-cleanups> .

3.5. Are there any rules on *target spending* with regard to funds collected from multiple pollution charges or fines? Response: In some instances, dedicated funds exist and payments are set aside to pay for environmental remediation. Such funds are audited by the agency inspector general or by independent government auditors from financial authorities. This is often found at the State level, e.g. (a) New Jersey at <http://www.nj.gov/dep/nrr/>, or (b) New York Environmental Protection Fund at <https://www.dec.ny.gov/about/92815.html>

IV. Экологическое законодательство Норвегии

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Общая характеристика природоохранного законодательства

What is the system of *environmental law sources* in your jurisdiction, e.g. statutes, regulations, case law etc.? Is environmental law *codified* or fragmented (e.g. split into sets of rules with separate regard to air, water and soil, to various territories or to various procedures, such as environmental impact assessment and audits)? Are environmental rules mainly principle-based, rule-based, or are solutions implemented on the individual, case by case basis? What is the procedure of discussing the draft environmental law changes with the businesses involved in the use of natural resources? Are any transitional rules implemented when changes are substantial? Are environmental law *disputes* common in your jurisdiction? What are the most common types of disputes? Are there any out-of-court mediation / settlement options?

В Норвегии действует сводное природоохранное законодательство. Это динамично развивающаяся область права, которая менее консервативна и статична по сравнению с многими другими областями права.

Нормы международного права в сфере охраны окружающей среды играют все более возрастающую роль, хотя формально не входят в норвежскую правовую систему. Норвегия является участником большинства наиболее значимых международных конвенций в области защиты окружающей среды как на региональном, так и на глобальном уровнях.

Экологические директивы Европейского Союза также являются важным компонентом при усовершенствовании национального законодательства. Хотя Норвегия и не является членом Европейского Союза, но как страна член Европейской ассоциации свободной торговли имплементировала в норвежское законодательство ряд директив в рамках выполнения соглашения об Европейском Экономическом Пространстве.

Необходимо отметить, что принцип дуализма традиционно регулирует отношения между норвежским правом и международными правом. Для придания международным обязательствам юридической силы норвежский законодательный орган, Стортинг должен одобрить инкорпорацию международных норм во внутреннее право. Однако, из-за так называемого принципа презумпции, норвежские законы, насколько это возможно, интерпретируются в соответствии с действующим международным правом.

Конституция и конституционный обычай, как источники норвежского права, имеют наибольшую юридическую силу.⁶⁶ В статье 112 Конституции провозглашается, что каждый человек имеет право на здоровую окружающую среду. Природные ресурсы должны использоваться в долгосрочной и всесторонней перспективе, обеспечивая это право и для будущих поколений. Граждане имеют право на получение сведений о состоянии природной среды и о влиянии на природу планируемых и осуществляемых мероприятий.

Основными и самыми часто применяемыми источниками норвежского экологического права являются формальные законы. Лишь немногие вопросы, к примеру земельные сервитуты, регулируются в рамках правового обычая.

Центральными законами по охране окружающей среды среди прочих являются:

Закон от 9 Мая 2003 г. № 31 «О праве на экологическую информацию и участие общественности в процессе принятия решений, касающихся окружающей среды».⁶⁷

Закон от 13 марта 1981 г. № 6 «О защите от загрязнения и об отходах».⁶⁸

Многие вопросы охраны окружающей среды в нефтегазовой промышленности регулируются отраслевым законодательством. Основным правовым источником при регулировании нефтяной деятельности на норвежском континентальном шельфе является норвежский закон от 29 ноября 1996 г. № 43 «О нефтяной деятельности».⁶⁹ Закон в значительной степени основывается на опыте, приобретенном властями и другими участниками нефтегазовой деятельности в процессе следования предыдущему законодательству.⁷⁰ Налогообложение в нефтяной сфере регулируется посредством закона от 13 июня 1975 г. № 35 «О налогообложении подводных нефтяных месторождений и пр.».⁷¹ В Норвегии не смотря на предположение об отсутствии нефтегазовых залежей на суше был принят закон, который охватывает добычу нефти и газа на сухопутной территории Норвегии: Закон от 4 мая 1973 № 21 «О поиске и добыче нефти под

⁶⁶Конституция Королевства Норвегия от 17 мая 1814 г. Доступна на английском языке: The Constitution of the Kingdom of Norway of 17 Mai 1814. <https://lovdata.no/dokument/NLE/lov/1814-05-17>

⁶⁷Доступен только на норвежском языке: Lov av 9 mai 2003 № 31 om rett til miljøinformasjon og deltakelse i offentlige beslutningsprosesser av betydning for miljøet (miljøinformasjonsloven) <https://lovdata.no/dokument/NL/lov/2003-05-09-31?q=miljø>

⁶⁸Доступен на английском языке: Act of 13 March 1981 No.6 Concerning Protection Against Pollution and Concerning Waste [Pollution Control Act] <https://www.regjeringen.no/en/dokumenter/pollution-control-act/id171893/> Примечание: Перевод основан на версии закона от 20 июня 2003 года.

⁶⁹Доступен на английском языке: Act of 29 November 1996 No. 72 relating to petroleum activities. <http://www.npd.no/en/Regulations/Acts/Petroleum-activities-act/>

⁷⁰Закон «О континентальном шельфе» от 21 июня 1963 года и закон «О нефтегазовой деятельности» от 22 марта 1985 года.

⁷¹Доступен только на норвежском языке: Lov av 13 Juni 1975 № 35 om skattlegging av undersjøiske petroleumforekomster mv. (petroleumsskatteloven). <https://lovdata.no/dokument/NL/lov/1975-06-13-35>

материковой частью Норвегии». Согласно статье 3 данного закона более подробный регламент, касающийся поиска и добычи нефти на суше, может быть дан в Положении Правительства. До настоящего момента подобного положения издано не было.

Кодекс как законодательный метод не слишком распространен в норвежской юриспруденции. Тем не менее, подобный принцип был предусмотрен Конституцией Норвегии в первом предложении статьи 94 Конституции. Примером кодификационного метода, реализованного в норвежском законодательстве, может быть общая часть Уголовного закона. Соответствующей кодификации в области гражданского, экологического или нефтегазового права не существует.

В Норвегии ход законодательного процесса определяется параграфами 76-81 Конституции. При принятии или пересмотре любого закона проводится тщательная предварительная работа согласно строго определенной процедуре. Правительством назначается экспертная комиссия по законопроекту, в которую входят государственные служащие, юристы и представители заинтересованных сторон. Комиссия представляет разработанный текст законопроекта вместе с обосновывающими материалами в виде «Норвежского официального отчета» (NOU) в профильное министерство, которое проводит слушания по законопроекту. Все заинтересованные органы власти, организации, объединения и коммерческие лица имеют возможность направить комментарии в указанные сроки, на основании которых профильное министерство разрабатывает предложение законопроекта, которое после доработки экспертами Министерства Юстиции вносится в норвежский парламент Стортинг. После принятия законопроект направляется на подписание Королю, что, по сути, в настоящее время является лишь формальностью.

В соответствии с норвежской правовой доктриной, материалы обсуждения и подготовки законопроектов служат также источником права, позволяя выявить истинные намерения и цели законодателя, хотя их указания не следует рассматривать как безусловно решающие.⁷² Существует ряд законопроектов, имеющих отношение к нефтяному законодательству, из которых для целей данного исследования необходимо упомянуть Предложение Правительства Стортингу № 43 (1995-1996) и № 48 (2000-2001). Кроме этого, до настоящего времени актуальным является Предложение Правительства Стортингу № 72 (1982-83).

Нормативные акты и правовые толкования со стороны государственных органов, в частности министерств, также являются правовым источником, но с меньшей юридической

⁷²Eckhoff, Torstein. og Helgesen Jan E. *Rettskildelære*. 6.utg. Oslo, 2017.

силой чем законы. В Норвегии был издан ряд дополнительных постановлений, основывающихся на Законе о нефтяной деятельности. Особенное значение в сфере нефтегазовой деятельности имеет Положение от 27 июня 1997 г. № 653 к закону о нефтяной деятельности.⁷³

То же самое можно сказать и о решениях норвежского Омбудсмана Стортинга по административным вопросам (Sivilombudsmann), где большинство дел по вопросам окружающей среды касается законодательства планирования и строительства.⁷⁴

В качестве одного из источников норвежского экологического права выступают и судебные прецеденты. В Норвегии до настоящего времени было относительно мало судебных дел в области защиты окружающей среды, включая привлечения к ответственности за ущерб от загрязнения или очистки загрязненной почвы. Большинство вынесенных решений касается экономической компенсации владельцам земли за понесенный экономический ущерб в вопросах урегулирования споров между соседями. Судебная практика является одним из центральных источников норвежского административно-деликтного права

Самым резонансным делом в сфере экологического права в настоящее время является иск общественных организаций «Природа и Молодёжь» и «Гринпис Нордик» против правительства Норвегии о том, что расширение добычи нефти на арктическом шельфе⁷⁵ нарушают Парижское климатическое соглашение⁷⁶ и вышеупомянутую статью 112 Конституции Норвегии. Окружной суд Осло, как суд в первой инстанции отказал в удовлетворении заявленных требований, основывая свое решение, среди прочего, на том, что право на благоприятную окружающую среду, закреплённое в статье 112 Конституции Норвегии, не охватывает выбросы парниковых газов при сжигании нефти, экспортированной из Норвегии в другие страны. Решение суда было обжаловано, и апелляция подана сразу в Верховный суд Норвегии. В настоящий момент путем краудфандинга — коллективного финансирования, основанного на добровольных взносах

⁷³Доступен на английском языке: Regulations of 27 Juni 1997 nr. 653 to Act relating to petroleum activities. <http://www.npd.no/en/Regulations/Regulations/Petroleum-activities/>

⁷⁴Официальный сайт Омбудсмана Стортинга по административным вопросам доступен по ссылке <https://www.sivilombudsmannen.no>

⁷⁵В мае 2017 года Министерство нефти и энергетики Норвегии выдало 13 компаниям лицензии на разработку месторождений на шельфе в норвежском секторе Баренцева моря.

⁷⁶Русский текст доступен по ссылке <http://unfccc.int/resource/docs/2015/cop21/rus/l09r.pdf>

— уже собрано 648 000 норвежских крон на покрытие издержек истца в дальнейшем судебном процессе.⁷⁷

Количество судебных решений, связанных с нефтяной деятельностью в целом, довольно незначительно, за исключением некоторых налогово-правовых споров и решений о выдаче и изменении выданных лицензий. Одной из причин является широкое применение санкций и наложение штрафов в случае нарушения нефтегазового законодательства и в большинстве случаев их безоговорочного принятия со стороны компаний, во избежание негативной огласки вследствие судебного процесса.⁷⁸ По той же причине в Норвегии широкое применение находят альтернативные способы разрешения природоохранных споров вне судебной системы.

Правовые исследования и доктрина, трактующие положения закона либо судебные решения дополняют список источников экологического права, которым придается все более важное значение.⁷⁹

В Норвегии сформирован эффективно действующий правовой механизм охраны окружающей среды при осуществлении нефтегазовой деятельности на континентальном шельфе, к которому относится законодательно закрепленный принцип рационального использованию углеводородов, ступенчатая система лицензирования, обязательное проведение оценки воздействия на окружающую среду, государственный и внутренний контроль, ответственность за ущерб, причиненный загрязнением окружающей среды.

(I) Pollution limits (quotas) and risk management

1.1. If an industrial facility, e.g, an oil well, storage, pipeline or a petrochemical plant, is built or reconstructed, is there any *environmental impact assessment* procedure in your jurisdiction? Please describe the main parameters of such procedure(s), such as: to which kinds of objects in oil and gas industry is this procedure applicable on the obligatory basis? Under which criteria are the objects classified? when is the assessment made (on pre-project stage, on project stage, or both / other)? who makes the assessment (the public authority itself, the experts nominated by the public

⁷⁷ Информация предоставлена на сайте: <https://bidra.klimasøksmål.no>

⁷⁸ Kommentarutgave ved Ulf Hammer, Trond Stang, Sverre B. Bjelland, Yngve Bustnesli og Amund Bjøranger Tørum. Lov av 29. november 1996 nr. 72 om petroleumsvirksomhet (petroleumsloven) Digital utgave - Universitetsforlaget

⁷⁹ К центральным научно-теоретическим работам по экологическому праву Норвегии можно отнести Backer, I. L. (2012). *Innføring i naturressurs- og miljørett*. Gyldendal akademisk; Bugge, H. C. (2015). *Lærebok i miljøforvaltningsrett*. Universitetsforlaget; Bugge, H. (2011). *Environmental law in Norway*. Alphen aan den Rijn: Kluwer Law International; Fleischer, C. A. (1996). *Miljø -og ressursforvaltning: grunnleggende forutsetninger*. Universitetsforlaget; Røhnebæk, Ø. (1995). *Miljø og jus: oversikt over norsk miljørett med innføring i jus og forvaltningsrett*. Universitetsforlaget.

authority and / or by the business entity etc.) and on what basis is the final admissibility decision made? how is such procedure connected with other project admissibility procedures, such as building regulatory compliance? how are the costs determined, who is bearing such costs? what are the term limits for assessment? if there is a need to change the project parameters, how is the re-assessment made? Is re-assessment partial or complete?

Общее требование о проведении оценки воздействия (*konsekvensutredninger*) было введено в Норвегии в 1990 году и регламентируется в Законе от 27 июня 2008 г. № 71 «О планировании и строительстве».⁸⁰ Общие правила проведения регламентированы на уровне постановлений Правительства.

В 2017 году в целях эффективизации и модернизации законодательства было принято Постановление от 21 июня 2017 № 854 «О оценке воздействия» и введены новые правила по ее проведению.⁸¹ Во-первых, новое положение заменило два предыдущих положения, в частности Положение об оценке воздействия для планов в соответствии с Законом о планировании и строительстве и Положение об оценке воздействия в соответствии с отраслевым законодательством. Во-вторых, новое регулирование была приведено в соответствие с директивами ЕС, в том числе с Директивой ЕС об оценке воздействия на окружающую среду (Директива 2014/52 / ЕС)⁸², а также Директивой ЕЭС об оценке воздействия определенных планов и программ на окружающую среду (Директива 2001/42 / ЕЭС)⁸³. Цель постановления заключается в обеспечении должного внимания к вопросам окружающей среды и общества при подготовке планов и мер и при рассмотрении вопроса о том, могут ли быть реализованы планы или меры.

Правила оценки воздействия на окружающую среду (в дальнейшем ОВОС, в норвежской терминологии *miljøkonsekvensutredninger*), закрепленные в Законе о планировании и строительстве не применяются для нефтегазовой деятельности на норвежском континентальном шельфе.⁸⁴ Требование и процедура проведения ОВОС в нефтегазовой сфере основаны на тех же базовых принципах, указанных в вышеупомянутом законе, но

⁸⁰Доступен на английском языке: Act of 27 June 2008 nr.71 relating to planning and the processing of building applications (the planning part) [Planning- and Building Act (the planning part)] Translation date: January 2010 <https://www.regjeringen.no/en/dokumenter/planning-building-act/id570450/>

Примечание: Перевод основан на версии закона от 1 января 2010 года.

⁸¹Доступен на норвежском языке: Forskrift av 21 juni 2017 nr.854 om konsekvensutredninger <https://lovdata.no/dokument/SF/forskrift/2017-06-21-854>

⁸²Доступен на английском языке: <http://eur-lex.europa.eu/eli/dir/2014/52/oj>

⁸³Доступен на английском языке: <http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32001L0042>

⁸⁴Bugge, H. (2011). Environmental law in Norway. Alphen aan den Rijn: Kluwer Law International, page 50.

регламентированы отдельно отраслевым законодательством, которое включает в себя следующие нормативно-правовые акты:

Закон от 29 ноября 1996 г. № 43 «О нефтяной деятельности».

Положение от 27 июня 1997 г. № 653 к закону о нефтяной деятельности.

При ведении нефтегазовой деятельности на норвежском континентальном шельфе предусматриваются следующие три процедуры ОВОС:

ОВОС на этапе открытия нового района нефтегазовой деятельности

ОВОС на этапе добычи и завершения нефтегазовой деятельности

Региональный ОВОС

ОВОС на этапе открытия нового района нефтегазовой деятельности

Первая процедура ОВОС проводится на этапе открытия нового района нефтегазовой деятельности на континентальном шельфе, задолго до этапа выдачи лицензий. В соответствии с статьей 3-1 Закона о нефтегазовой деятельности необходимо определить, благоразумно ли ведение нефтегазовой деятельности в этом районе.

Положение к закону о нефтяной деятельности в части 2а регламентирует процесс проведения ОВОС. Ответственным органом по координации и проведению ОВОС является Министерство нефти и энергетики.⁸⁵

Министерство разрабатывает предложение о программе проведения ОВОС, которое предоставляется заинтересованными организациями, государственным органам и делается доступным для общественности в Интернете. Крайний срок для подачи комментариев не должен быть короче шести недель.

На основании утверждённой программы проводится ОВОС. Важной частью этого процесса является рассмотрение последствий нефтегазовой деятельности, включая оценку возможных экономического и экологического воздействия добычи нефти в этом районе, определение последствий возможных загрязнений окружающей среды, а также социальных и экономических результатов нефтегазовой деятельности и определение последствий для других отраслей таких как, например, рыболовство.

Результаты ОВОС также выносятся на общественные слушания. Крайний срок для подачи комментариев составляет 3 месяца и не менее 6 недель.

⁸⁵Ministry of Petroleum and Energy, официальный сайт <https://www.regjeringen.no/no/dep/oed>

Основываясь в том числе на результатах ОВОС, решение по открытию нового района для нефтегазовой деятельности в силу важности его значения для страны принимается Стортинг.

Все расходы на проведение ОВОС на этапе открытия нового района нефтегазовой деятельности покрываются государством.

Региональный ОВОС

Нефтегазовые компании, получившие лицензии в одном районе на норвежском континентальном шельфе, проводят совместно более широкое обследование в рамках регионального ОВОС для получения оптимальной картины экологических последствий от нефтегазовой деятельности в этом районе.

ОВОС на этапе добычи и завершения нефтегазовой деятельности

ОВОС является важным инструментом учета экологические аспектов в течении всего периода разработки шельфовых месторождениях Норвегии.

Закон «О нефтегазовой деятельности» в статье 4-2 требует от владельцев лицензий проведения ОВОС как интегрированной части плана по разработке и освоения месторождения (в норвежской терминологии plan for utvikling og drift, PUD) после получения лицензии на добычу и как часть плана о ликвидации месторождения, подлежащие утверждению Министерством нефти и энергетики.

Процесс проведения ОВОС подробно регламентирован в Положении к закону о нефтяной деятельности. Оценка должна показать возможные экологические последствия для окружающей среды, а также влияния на другие отрасли, включая рыболовство и провести систематический анализ возможных смягчающих мер.

Нефтегазовая компания отправляет проект программы ОВОС в государственные органы и заинтересованным организациям. Крайний срок для подробных комментариев не должен быть короче шести недель. Министерство утверждает программу ОВОС на основе поступивших предложений. Отчет после проделанной ОВОС выносятся на слушания, крайний срок которых не должен быть короче шести недель.

Вся процедура ОВОС проводится за счет компании и его стоимость обычно не составляет больше 0.1 – 0.5% от общей стоимости проекта. Пока не было зафиксировано, чтобы нефтегазовый проект задержали из-за сложностей с процессом проведения ОВОС.

При условии, что никаких значительных экологических последствий не предполагается, Министерство нефти и газа Норвегии может освободить проект от проведения ОВОС, если

его ежедневное производство будет составлять менее 4000 баррелей нефти или 500 000 м³ природного газа. Это касается даже более крупные проектов, если они не будут иметь трансграничного воздействия на окружающую среду.⁸⁶ В случае если предполагаются значительные трансграничные последствия, применяются принципы и правила взаимной информации и консультации по Конвенция от 1991 г. об оценке воздействия на окружающую среду в трансграничном контексте.⁸⁷

1.2. How are *pollution limits (quotas)* determined in your jurisdiction? Please consider any limits applicable to any component of the environment, such as water, air and soil. Who proposes the limits (the public authority itself, the experts nominated by the public authority and / or by the business entity etc.)? On what basis is the final decision made? Can the pollution limits be altered, and how?

Загрязняющие выбросы в атмосферу и сбросы в море в результате ведения нефтегазовой деятельности на норвежском шельфе, включая выбросы с установок на шельфе и наземных объектов, регулируются рядом законов:

Закон от 29 ноября 1996 г. № 43 «О нефтяной деятельности».

Закон от 21 декабря 1990 г. № 72 «О налоге на загрязнение CO₂ в связи с нефтяной деятельностью на континентальном шельфе».⁸⁸

Закон от 19 мая 1933 г. № 11 «О специальных сборах»⁸⁹

Закон от 17 декабря 2004 г. № 99 «Об эмиссионных квотах»⁹⁰

Закон от 13 марта 1981 г. № 6 «О защите от загрязнения и об отходах».⁹¹

с прилегающими к ним постановлениями, включая комментарии к постановлениям, центральными среди которых являются:

⁸⁶Bugge, H. (2011). Environmental law in Norway. Alphen aan den Rijn: Kluwer Law International, page 51.

⁸⁷Текст Конвенции доступен на русском языке: https://www.unece.org/fileadmin/DAM/env/eia/documents/legaltexts/Espoo_Convention_authentic_RUS.pdf

⁸⁸Доступен на английском языке: Act of 21 December 1990 no 72 relating to tax on discharge of CO₂ in the petroleum activities on the continental shelf. <http://www.npd.no/en/Regulations/Acts/CO2-discharge-tax/> Русский перевод доступен <http://www.yabloko.ru/Publ/Norway/z72.html>

⁸⁹Act of 19 Mai 1933 concerning sales tax. <http://app.uio.no/ub/ujur/oversatte-lover/data/lov-19330519-011-eng.pdf>

⁹⁰Доступен на норвежском языке: Lov 17. desember 2004 nr. 99 om kvoteplikt og handel med kvoter for utslipp av klimagasser (klimakvoteloven) <https://lovdata.no/dokument/NL/lov/2004-12-17-99>

⁹¹Доступен на английском языке: Act of 13 March 1981 No.6 Concerning Protection Against Pollution and Concerning Waste [Pollution Control Act] <https://www.regjeringen.no/en/dokumenter/pollution-control-act/id171893/> Примечание: Перевод основан на версии закона от 20 июня 2003 года.

Постановление от 12 февраля 2010 г. № 158 «О здоровье, охране окружающей среды и промышленной безопасности в нефтегазовой деятельности (Рамочное постановление)».⁹²

Постановление от 29 апреля 2010 г. № 613 «Об организации нефтегазовой деятельности».⁹³

Постановление от 29 апреля 2010 г. № 611 «О системах управления и раскрытию информации в нефтяной деятельности и на определенных наземных объектах».⁹⁴

Постановление от 1 июня 2004 г. № 931 «О ограничении загрязнения».⁹⁵

Статья 7 Закона о защите от загрязнения и об отходах запрещает любое действие, которое несет за собой риск загрязнения окружающей среды если на это не выдано специальное разрешение.

Для нефтегазовой деятельности такие разрешения выдаются Директоратом окружающей среды⁹⁶ на основании статьи 11 Закона о защите от загрязнения и об отходах.

Нормативы по выбросу в атмосферу и сброса в воду установлены в части 11 Постановления об организации нефтегазовой деятельности.

Сбросы в воду

Целевой показатель нулевого сброса в воду был установлен норвежским правительством в 1997 году.⁹⁷ Переработанную воду необходимо очистить до сброса в море. Содержание нефти в воде должно быть как можно ниже и не превышать 30 мг нефти на литр воды в качестве взвешенного среднего значения за календарный месяц.⁹⁸

Выбросы в атмосферу

Основными источниками выбросов от нефтегазовой деятельности на норвежском шельфе являются выработка электроэнергии и сжигания попутного нефтяного газа на

⁹²Forskrift av 12. februar 2010 nr. 158 om helse, miljø og sikkerhet i petroleumsvirksomheten og på enkelte landanlegg (rammeforskriften) <https://lovdata.no/dokument/SF/forskrift/2010-02-12-158?q=rammeforskriften>

⁹³Forskrift av 29. april 2010 nr. 613 om utføring av aktiviteter i petroleumsvirksomheten (aktivitetsforskriften) <https://lovdata.no/dokument/SF/forskrift/2010-04-29-613?q=aktivitetsforskriften>

⁹⁴Forskrift av 29. april 2010 nr. 611 om styring og opplysningsplikt i petroleumsvirksomheten og på enkelte landanlegg (styringsforskriften) <https://lovdata.no/dokument/SF/forskrift/2010-04-29-611>

⁹⁵Forskrift av 1. juni 2004 nr. 931 om begrensnings av forurensning (forurensningsforskriften) <https://lovdata.no/dokument/SF/forskrift/2004-06-01-931>

⁹⁶Miljødirektoratet, Директорат окружающей среды, находится в подчинении Министерства климата и окружающей среды, которое несет общую ответственность за экологическую политику государства, официальный сайт <http://www.miljodirektoratet.no/no/>

⁹⁷St.meld. nr. 58 (1996-97) Miljøvernpolitikk for en bærekraftig utvikling - Dugnad for framtida. https://www.regjeringen.no/no/dokumenter/st-meld-nr-58_1996-97/id191317/

⁹⁸Статья 60, Постановления от 3 сентября 2001 г. № 1157 об организации нефтегазовой деятельности

факельных установках. Выбросы в атмосферу в основном состоят из двуокиси углерода (CO₂), оксидов азота (NO_x), летучих органических соединений (nmVOC) и метана (CH₄). Выбросы CO₂ из норвежской части Северного моря составляют около 75% от общего объема выбросов на норвежском континентальном шельфе.

Статья 4-4 Закона о нефтегазовой деятельности гласит, что сжигание газа сверх объемов, необходимых для нормального ведения операций, не допускается, за исключением случаев, специально разрешенных Министерством.

Постановление об организации нефтегазовой деятельности в статье 61 устанавливает обязательное требование о получении разрешения на выбросы в атмосферу NO_x и CO₂. на основании Закона о защите от загрязнения и об отходах. Более подробная информация установлена в руководстве к Постановлению об организации нефтегазовой деятельности.⁹⁹

Выбросы загрязняющих веществ в атмосферу на норвежском континентальном шельфе подпадают под действие Закона о защите от загрязнения и об отходах. Для морских платформ (существующих и новых установок с общей номинальной тепловой мощностью более 50 МВт) также применяется Директива Совета Европейского Союза 96/61/ЕС от 24 сентября 1996 г. о комплексном предотвращении и контроле загрязнений (Директива КПОЗ).¹⁰⁰ В соответствии с Законом о загрязнении и Директивой IPPC нефтегазовым компаниям необходимо использовать наилучшие имеющиеся методы (BAT). Это учитывается Министерством при определении требований к выбросам в выдаваемых разрешениях на выбросы в атмосферу NO_x и CO₂.

Все данные о выбросах в атмосферу и сбросах в море поступают от нефтегазовых компаний, оперирующих на норвежском шельфе в национальную базу данных EPUB Environment Hub (ЕЕН), созданной Ассоциацией нефти и газа Норвегии.¹⁰¹

1.3. Is the *best available technology / best practicable means / best practicable environmental option* methodology of pollution control applicable in your jurisdiction? If yes, to which objects or activities is it applicable? Were transitional procedures applicable when such methodology was applied on a first-time basis? What is the term limit and the procedure for review

⁹⁹Доступен только на норвежском языке: Veiledning til aktivitetsforskriften (Sist oppdatert 18. desember 2017) <http://www.ptil.no/aktivitetsforskriften/category383.html#p61>

¹⁰⁰Доступен на английском языке. Council Directive 96/61/EC of 24 September 1996 concerning Integrated Pollution Prevention and Control (IPPC). Official Journal L 257: <https://www.eea.europa.eu/policy-documents/council-directive-96-61-ec-ippc>

¹⁰¹Официальный сайт: <https://epim.no/eeh/>

of best available technologies lists? What are the consequences of such review for existing enterprises?

Норвегия как член Европейского Экономического Пространства наряду со всеми членами Европейского Союза, руководствуется вышеупомянутой Директивой КПОЗ и ее последующими обновлениями. Одним из основных принципов природоохранных директив ЕС, является то, что лицо, ответственное за предприятие, обязано использовать наилучшие имеющиеся методы (НИМ), наилучшие доступные технологии (НДТ) и наилучшую экологическую практику (НЭП) и предельные уровни выбросов, установленные в разрешении, должны быть основаны на этом.

При разработке новых месторождений нефти и газа на норвежском континентальном шельфе, нефтегазовые компании, обладающие лицензией на добычу при подготовке обязательного для утверждения плана разработки и освоения месторождения (в норвежской терминологии *plan for utbygging og drift*, PUD) подчиняются требованиям об использовании наилучших имеющихся методов, наилучших доступных технологий и наилучших экологических практик.

Власти тщательно следят за этим и могут в процессе утверждения плана разработки и освоения месторождения (PUD) установить в качестве одного из условий утверждения, выбор лучшего технологического решения.

При этом необходимо учитывать, что Норвегия давно перешла от подробных правил и инструкций, детально прописывающих использование того или иного приема, к правилам в виде «функциональных требований» (в норвежской терминологии *funksjonskrav*), которые указывают каких результатов необходимо добиться, предоставляя тем самым нефтегазовым компаниям право выбирать способ, который, приведет к достижению требуемого результата. Это тесно связано с обязательной системой внутреннего контроля. Закон о нефтегазовой деятельности содержит пример функционального требования, нефтегазовая деятельность должна осуществляться таким образом, чтобы обеспечить высокий уровень безопасности, поддерживать его и способствовать его дальнейшему совершенствованию в соответствии с технологическим прогрессом.

Сложившаяся система, по мнению автора данного исследования, приводит к тому что требования не являются статичными, что позволяет отрасли применять наилучшие имеющиеся методы, наилучшие доступные технологии и наилучшую экологическую практику для выполнения требований, касающихся здоровья, технологической безопасности и окружающей среды.

1.4. Are rules prescribing certain actions for environmental damage prevention purposes, i.e. *pollution risk management* rules, established in your jurisdiction? Please describe the procedure, e.g. to which facilities or activities in oil & gas industry do these rules apply? Who establishes the rules? What is the character of the rules? How are the rules connected with other regulations that protect human life, health and property? Is there an exemption from environmental damage recovery if such rules, as well as other applicable conditions (e.g. damage insurance coverage), are complied with?

Норвежское законодательство требует, чтобы нефтегазовая деятельность на норвежском шельфе велась обоснованно по отношению к рискам, как на основе единичной, так и целостной оценки всех факторов, которые имеют отношение к планированию и ведению деятельности с точки зрения вопросов охраны здоровья, безопасности и окружающей среды.¹⁰²

Для всех нефтегазовых компаний, оперирующих на норвежском шельфе, законодательно закреплено требование о необходимости создания, поддержания и развития высокого уровня охраны здоровья, безопасности и окружающей среды.¹⁰³

Риски должны оцениваться и снижаться на всех этапах деятельности.¹⁰⁴ Экологические риски приравнены к риску загрязнения и определяется как сочетание вероятности и последствий сброса или выброса вредных для окружающей среды жидкости, газа или твердых веществ в атмосферу, воду и землю.¹⁰⁵

Операторы морских месторождений должны определить критерии приемлемости риска крупных аварий и экологических рисков, связанных с высоким загрязнением.¹⁰⁶ Критерии приемлемости используются при оценке результатов анализа рисков. Анализ рисков должен обеспечить сбалансированную и наиболее полную картину рисков, связанных с нефтегазовой деятельностью.¹⁰⁷

¹⁰²Рамочное постановление, статья 10.

¹⁰³Рамочное постановление, статья 10

¹⁰⁴Рамочное постановление, статья 11

¹⁰⁵Belkina, N., & Sarkova, O. (2015). Regulatory approaches to oil spill response in Norway and Russia. *Polar Geography*, 38(1), 1-21.

¹⁰⁶Статья 9, Постановление от 29 апреля 2010 г. № 611 о системах управления и раскрытию информации в нефтяной деятельности и на определенных наземных объектах

¹⁰⁷Статья 17, Постановление от 29 апреля 2010 г. № 611 о системах управления и раскрытию информации в нефтяной деятельности и на определенных наземных объектах

Процедура оценки экологических рисков (в английской терминологии Environmental Risk Assessment) в нефтегазовой отрасли Норвегии многоступенчатая и состоит из следующих этапов:¹⁰⁸

Идентификация риска. Идентифицируются все риски и неопределенности, связанные с конкретной деятельностью.

Дается подробная характеристика деятельности.

Проводится идентификация определенных опасностей и инцидентов (DSHA) через различные сценарии:

идентификацию потенциального выброса вредного вещества – разлив нефти;

определение разбавления, диспергирования, будущего статуса и интенсивности разлива;

Выбор сценария выброса – фонтанирование скважины, утечка в трубопроводе/емкости/разделительной колонне;

Определение показателей разрушения/отказа оборудования и конструкций

Определение ценных компонентов экосистем (ЦКЭ) и их распределения

Определение частоты и величины воздействия.

Определение частоты реализации выбранного сценария – частоты выбросов – как правило, фонтанирования

На основе базы данных фонтанирования, в которую входят статистика и данные, основанные на моделях устойчивости в конкретной ситуации составляются матрицы вероятности интенсивности и длительности фонтанирования

Определение потенциального поведения нефти – моделирование разлива нефти

Метеорология. Океанография. Физико-химические свойства нефти, к примеру естественное разложение.

Вероятность достижения суши

Объем нефти на поверхности воды и на берегу

Концентрации в водяном столбе

Длительность, траектория дрейфа и т.п.

¹⁰⁸Основано на презентации DNV «Управление рисками применительно к разливам нефти: “Норвежский опыт”», <https://www.dnvgl.ru/>

Степень поражения. Определяются возможные экологические последствия разлива.

Расчет поражения (полученной дозы) ЦКЭ

В целях расчета степени поражения распределение ЦКЭ привязывается к траекториям дрейфа нефти

Оценка эффекта загрязнения ЦКЭ

Резкое уменьшение популяций (гибель) рассчитывается как функция массы нефти и уязвимости (фактор ущерба)

Расчет степени ущерба для ЦКЭ

Результаты объединяются, чтобы получить общее сокращение ЦКЭ

Степень сокращения ЦКЭ выражается в категориях ущерба

Характеристика рисков. Определение допустимости риска

Экологический риск – это вероятность сокращения ЦКЭ (гибели) умноженная на повторяемость выбросов

Допустимый/ недопустимый экологический риск – это экологический риск ↔ код оценки риска оператора

Управление рисками. Профилактика недопустимых рисков и планирование реакции на реализацию риска

К примеру, норвежская система оценки рисков и готовности к разливам нефти и их ликвидации построена на взаимодействии и распределении ролей и обязанностей между государственными органами, муниципальными органами и коммерческими предприятиями.

Береговая администрация Норвегии отвечает за анализ рисков, аварийное планирование и готовность в отношении всего, что не охвачено обязанностями коммерческого сектора и муниципальных органов, включая судоходство в прибрежной зоне, транспортировку по суше и прочие инциденты, связанные с большим потенциалом загрязнения окружающей среды.

Муниципальные органы Норвегии отвечают за анализ рисков и аварийное планирование на своей территории. Береговая администрация Норвегии предоставляет при этом операционное сопровождение, обучение и поддержку.

Коммерческие предприятия отвечают за анализ рисков, аварийное планирование и готовность в сфере своей собственной деятельности.

Норвежская ассоциация промышленников NOFO выступает в качестве координационной организации в случае разлива нефти и отвечает за тактическое и оперативное управление используемыми ресурсами.¹⁰⁹

1.5. Does your jurisdiction have the *pollution charges* that are obligatory for business entities, including the recycling duties? Who are the payers (manufactures, sellers, customers, waste management operators etc.) and how are the payable amounts determined (including the criteria, the rates, the timing, etc.)?

Центральными сборами за загрязнение (*miljøavgifter*; экологические сборы) на нефтяную деятельность в Норвегии являются государственные сборы на выбросы CO₂ и выбросы NO_x.

Наряду с этим, с 2008 года введено дополнительное обязательство в том числе и для нефтегазовых компаний по оплате дополнительных квот, когда компания обладатели лицензии обязана покупать климатические квоты на каждую тонну CO₂, которую они выпускают на норвежском континентальном шельфе, за пределами выделенной квоты. Режим квот был продлен в 2012 году. Так же, как и для сбора на выбросы CO₂, по мнению автора данного исследования, режим квот является косвенным инструментом сокращения выбросов NO_x, поскольку большинство мер предпринимаемых компаниями будет нацелено на сокращение потребления топлива.

Сбор на выбросы NO_x был введен в 2007. Плата рассчитывается на килограмм фактических выбросов (NO_x) и в 2018 году составляет 21,94 норвежских крон за килограмм.¹¹⁰ Специализированный Фонд NO_x, который более подробно будет описан в пункте 1.7 данного исследования, был создан в 2008 году.

Норвегия в качестве одной из первых стран мира ввела сбор на выбросы CO₂ в 1991 году. Сбор регулируется отдельным Законом о налогообложении выбросов CO₂. Закон предусматривает, что компании должны платить сбор на выбросы CO₂ при сжигании попутного газа, нефти и дизельного топлива в нефтяной деятельности на континентальном шельфе, а также при иных выбросах CO₂ или природного газа.

¹⁰⁹ <http://www.nof.no/en/>

¹¹⁰ Информация предоставлена на сайте: <https://www.skatteetaten.no/en/business-and-organisation/vat-and-duties/excise-duties/about-the-excise-duties/nox/>

Оператор месторождения несет прямую ответственность за расчет и выплату сбора на выбросы CO₂ Нефтяному Директорату Норвегии от имени всех лицензиатов.¹¹¹ Плата за период с 1 января по 30 июня выплачивается до 1 октября и за период с 1 июля по 31 декабря до 1 апреля следующего года.

В 2017 году ставка сбора была установлена в размере 1,04 норвежских крон за стандартный кубический метр газа или литра нефти, или конденсата. Для сжигаемого природного газа это составит около 445 крон на тонну CO₂. Для природного газа, выделяемого в атмосферу, этот показатель составил 7,16 норвежских крон за стандартный кубический метр.

В 2018 году ставки увеличились до 1,06 норвежских крон (553 норвежских крон за тонну) и 7,30 норвежских крон соответственно.¹¹²

В 2018 году общий объем доходов от налогов на выбросы CO₂ оценивается примерно в 5,6 млрд. норвежских крон.¹¹³

1.6. What is the procedure of making an *environmental audit*? Who may / has to make such audit (the public authority itself, the experts nominated by the public authority and / or by the business entity, etc.)? Are these audits constant or are these made on a periodical / casual basis? Are any technical means of live monitoring used rather than human monitoring? What is being audited, the documents, the actual levels of pollution, or both? How are the costs determined, who bears the costs? What are the term limits for environmental audits? Are the pollution audits risk-based (e.g. are audits concentrated primarily on main contaminating substances)? How are environmental audits connected with other regulatory audits, such as industry regulations compliance?

Несмотря на строгое законодательство об охране окружающей среды в целом и в частности в нефтегазовом секторе, в норвежском природоохранном законодательстве не содержится четкого требования относительно использования определенной системы экологического менеджмента и аудита.

¹¹¹Oljedirektoratet, официальный сайт <http://www.npd.no/>. Нефтяной Директорат Норвегии находится в административном подчинении у Министерства нефти и энергетики, и его основной функцией является ведение административного и финансового контроля за соответствием нефтегазовой деятельности руководящим принципам, установленным Министерством нефти и энергетики.

¹¹²Информация предоставлена на сайте: <https://www.regjeringen.no/no/tema/okonomi-og-budsjett/skatter-og-avgifter/avgiftssatser-2018/id2575160/>

¹¹³Информация предоставлена на сайте: <https://www.norskpetroleum.no/okonomi/statens-inntekter/#avgifter>

Однако законодательство, к которому относится нефтегазовый сектор, включает законы и правила социальной ответственности, регулирования экологических отношений и воздействия на окружающую среду, а также отчетность о выбросах и т. п.

Закон о нефтегазовой деятельности с прилегающими положениями об охране труда, окружающей среды и безопасности (ОТОСБ) являются центральными для всех видов контроля и аудита нефтяной деятельности.

В Норвегии экологический аудит необходимо также рассматривать в контексте с так называемым принципом внутреннего контроля (в норвежской терминологии *internkontroll*), который был законодательно закреплен в 1992 году. Принцип внутреннего контроля заключается в том, что любое предприятие, занимающееся или участвующее в нефтегазовой деятельности, должно сформировать систему внутреннего контроля и проводить внутренний надзор по проверке соответствия деятельности лицензионным условиям, правовым нормам, включая постановления, принятые в соответствии с Законом о нефтегазовой деятельности и активно стремиться к тому, чтобы привести выявленные отклонения в соответствие с нормой. Таким образом, в нефтегазовой отрасли экологический аудит является неотъемлемой частью внутреннего контроля и проводится в дополнение к традиционным инспекционным проверкам со стороны государства.

Экологическая социальная ответственность являются важными элементом, и охрана окружающей среды рассматривается в контексте правил и принципов для ОТОСБ, ответственности за загрязнение и ликвидации производственной деятельности.

Компании, владеющие лицензией на норвежском шельфе, должны представить документацию в Министерство нефти и энергетики по целям и видению системы ОТОСБ, включая вопросы по охране внешней среды и энергоэффективности. В Плане развития и эксплуатации нефтяных скважин (РАД) требуется разработать систему менеджмента в соответствии с правилами ОТОСБ, установленных в Рамочном постановлении. Соответственно, в законодательстве прямо не указан процедура проведения экологического аудита и компании разрабатывают их сами.

В рамках Европейского Экономического Пространства, Норвегия следует, помимо прочего, положению ЕС о добровольном участии в схеме экологического менеджмента и экологических аудитов (в английской терминологии *Eco-Management and Audit Scheme (EMAS)*).¹¹⁴ Поскольку участие является добровольным, государства-члены должны поощрять организации к участию в EMAS и публиковать точные отчеты об их

¹¹⁴Официальный сайт: <http://ec.europa.eu/environment/emas/>.

эффективности управления окружающей средой. EMAS - это система управления окружающей средой с той же целью, что и система экологического менеджмента NS-EN ISO 14001: 2004 (ISO 14001). Зачастую одна из этих систем лежит в основе экологического аудита компаний.

1.7. Are there any rules on *target spending* with regard to funds collected from pollution charges, e.g. requirements for these funds to be spent exclusively for environmental needs? Are charges collected to budget or to other special funds? How is compliance by public authorities checked?

Как описано выше в пункте 1.2 данного исследования, экологические сборы, включая сборы на выбросы CO₂ и сборы на выбросы NO_x, занимают существенное место в системе «косвенного налогообложения» нефтегазовой деятельности на норвежском континентальной шельфе.

Согласно Закону от 21 декабря 2005 года № 123 «О Государственном пенсионном фонде»¹¹⁵ оба налога отчисляются напрямую в Государственный пенсионный фонд Норвегии (в норвежской терминологии Oljefondet).¹¹⁶ Средства из Государственного пенсионного фонда могут быть переведены в государственный бюджет только по решению норвежского парламента Стортинг. Ассигнования на экологические нужды, в конечном счете, оцениваются наряду с другими постами бюджета.

Наряду с этим в Норвегии с 2008 года успешно действует альтернатива налогу на выбросы NO_x. Предприятия подписав Соглашение об охране окружающей среды NO_x вместо налога выплачивают взносы в специализированный Фонд NO_x, 70% доходов которого приходится на поступления от нефтегазового сектора.¹¹⁷

При этом Фонд предоставляет гранты для покрытия до 80% инвестиций на реализацию проектов по сокращению выбросов NO_x. Поддержка мер по сокращению выбросов оказывается каждому проекту в индивидуальном порядке, исходя из ожидаемого ежегодного объема снижения вредных выбросов. Такой подход, по мнению автора данного исследования, в большей степени чем налоговая нагрузка стимулирует компании к модернизации технологий и принятию надлежащих мер по сокращению выбросов.

(II) Economical incentives for rational use of natural resources

¹¹⁵Доступен только на норвежском языке: Lov av 21.desember 2005 nr. 123 om Statens pensjonsfond <https://lovdata.no/dokument/NL/lov/2005-12-21-123>.

¹¹⁶Официальный сайт Государственного пенсионного фонда Норвегии: <https://www.nbim.no/no/>.

¹¹⁷Подробнее о Фонд NO_x на сайте: <https://www.nho.no/Prosjekter-og-programmer/NOx-fondet/>.

2.1. What are the *sanctions* for non-compliance with pollution limits, e.g. multiple pollution charges or fines? How are the rates determined (flat amounts, turnover-based, etc.)? How are the multiple pollution charges or fines collected?

Основной целью и подходом надзорных органов Норвегии, в том числе и в нефтегазовом секторе, является не наказать нарушителя, а способствовать принятию с его стороны необходимых мер для ведения деятельности в соответствии с требованиями законодательства и их последующего соблюдения.

На основании этого, центральным элементом надзорной деятельности и средством оказания влияния на принятие мер является непрерывный диалог между надзорными органами и компаниями, работающими на норвежском шельфе.

В случае если диалог не приводит к желаемым действиям со стороны компании, они сначала будут предупреждены о возможных санкциях, а только затем будут приняты сами санкции.

Общая система наказания представляет собой штраф или лишение свободы на срок до трех месяцев и предусмотрена в статье 78 Закона о защите от загрязнения и об отходах, статье 10-17 Закона о нефтегазовой деятельности, статье 7 Закона о налоге на выбросы CO₂.

Штрафы устанавливаются в каждом отдельном случае и с превентивной целью могут быть очень высокие.

К примеру, компания Equinor (ранее Statoil) получила в 2013 самый большой штраф за нарушение положений Закона о защите от загрязнения и об отходах в размере 10 миллионов норвежских крон после утечки нефти и химических веществ на месторождении Veslefrikk.¹¹⁸ В том же году нефтяная компания Centrica получила штраф в размере 500 000 норвежских крон за сброс около 80 тонн цемента с платформы в зоне защиты кораллов.¹¹⁹

Однако, в декабре 2017 года Норвежский Директорат по охране окружающей среды выступил с законодательной инициативой о внесении изменений в Закон о защите от загрязнения и об отходах с целью введения сбора за превышение нормативов предельно допустимых или временно согласованных выбросов загрязняющих веществ.¹²⁰ По данным

¹¹⁸Информация предоставлена на сайте: <http://www.miljodirektoratet.no/no/Nyheter/Nyheter/2013/Okttober-2013/Statoil-fikk-ti-millioner-i-bot-for-Veslefrikk-utslipp/>.

¹¹⁹Информация предоставлена на сайте: <http://www.miljodirektoratet.no/no/Nyheter/Nyheter/2013/November-2013/Oljeselskap-botelagt-etter-sementutslipp/>

¹²⁰Forslag om å innføre overtredelsesgebyr og heve strafferammene i forurensningsloven, produktkontrollloven og naturmangfoldloven. Miljødirektoratet 8.12.2017

<http://www.miljodirektoratet.no/Global/dokumenter/horinger/Regelverk/H%C3%B8ringsnotat%20->

Норвежского Директората по охране окружающей среды, норвежский аппарат уголовного правосудия (полиция, прокуратура и судебные органы) слишком перегружен и зачастую не в состоянии в сроки рассмотреть возросшее количество экологических нарушений.

2.2. Are the polluter's expenses borne or other efforts made for purposes of curbing / diminishing pollution taken into consideration while calculating pollution charges, and if yes, what is the procedure, are the expenses recognized as accrued or in adjusted amounts?

Косвенно, да. Более подробно объяснено в пункте 1.2 и 1.3 данного исследования. При определении требований к выбросам в выдаваемых разрешениях на выбросы в атмосферу NOx и CO₂ учитывается применение компаниями наилучших имеющихся методов и технологий.

2.3. Are the polluter's expenses borne or other efforts made for purposes of curbing / diminishing pollution taken into consideration while calculating taxes that are payable for use of natural resources (other than pollution charges)?

Налогообложение нефтегазового сектора Норвегии является объектом специального регулирования.

Дополнительно к ставке корпоративного налога 24% (23% с 2018 года) взимается дополнительный налог. Суммарная ставка налогов на доход нефтегазового сектора достигает 78%.

Закон о налогообложении нефтегазовой деятельности от 13 июня 1975г № 35 предусматривает гибкую систему вычетов расходов для компаний, вкладывающих средства из полученного дохода в освоение континентального шельфа. 121

Это является достаточно эффективным средством стимулирования инвестиций. Однако, предпринимаемые компаниями меры чисто экологического характера напрямую не затронуты в законе.

2.4. Are the polluter's expenses borne or other efforts made for purposes of curbing / diminishing pollution taken into consideration while calculating general business taxes, such as corporate profits tax (e.g. in form of accelerated depreciation) or property tax (e.g. in form of deduction from taxable value of business property)?

[%20forslag%20om%20%C3%A5%20innf%C3%B8re%20overtredelsesgebyr%20og%20heve%20strafferammene%20i%20forurensningsloven%20og%20produktkontrollloven.PDF?epslanguage=no](#)

¹²¹Lov av 13. juni 1975 om skatlegging av undersjøiske petroleumforekomster mv. (petroleumsskatteloven).<https://lovdata.no/dokument/NL/lov/1975-06-13-35>.

К основным источникам налогового права Норвегии относятся Закон о налоге на богатство и доход от 26 марта 1999 г. № 14¹²², а также Закон о НДС от 19 июня 1969 г. № 66.¹²³

Ставка корпоративного налога в Норвегии 24% (23% с 2018 года). Налогооблагаемая прибыль складывается из балансовой прибыли, уменьшенной на сумму затрат на производство и реализацию продукции.

Компаниям, к примеру, предоставляется налоговый вычет для проведения научных исследований в промышленности.

2.5. Are budget subsidies granted for purposes of environment protection? How may these subsidies be obtained? How is the purposeful spending controlled?

Министерство окружающей среды предоставляет в ежегодном циркуляре общую информацию о государственном субсидирования мероприятий и мер по охране окружающей среды как для муниципалитетов так и коммерческий предприятий. В циркуляре дается дополнительная информация о руководящих принципах, сроках подачи заявок, критериях и т. д.¹²⁴

Например, энергетическое предприятие Министерства нефти и энергетики Enova SF в рамках Норвежского парламентского соглашения по климату обеспечивает поддержку в разработке климатических технологий в Норвегии. Enova SF через свой фонд климатических технологий, помогает реализации ряда проектов, которые способствуют сокращению выбросов парниковых газов, развитию энергетической и климатической технологии и укреплению безопасности поставок.¹²⁵

2.6. Are there any public-private partnerships, concession contracts, or other similar arrangements set up for purposes of environment protection? How are these arrangements implemented in practice?

¹²²Lov av 26. mars 1999 nr. 14 om skatt av formue og inntekt (skatteloven) <https://lovdata.no/dokument/NL/lov/1999-03-26-14>.

¹²³Lov av 19.06.1969 nr. 66 om merverdiavgift (Merverdiavgiftsloven) <https://lovdata.no/dokument/NL/lov/2009-06-19-58?q=merverdiavgift>.

¹²⁴Циркуляр на 2018 год доступен по ссылке <https://www.regjeringen.no/no/dokumenter/tilskotsordningar-for-2018/id2577758/?q=Tilskotsordningar%20for%202018>.

¹²⁵Официальный сайт: <https://www.enova.no/>.

На основании статьи 29 Директива ЕС 2008/98 /ЕС об отходах (Рамочная директива по отходам) было заключено ряд соглашений между Министерством окружающей среды и различными группами компаний с целью сокращения выбросов и проблем с отходами.¹²⁶

Другим примером является Соглашение между норвежским государством в лице Министерства нефти и энергетики и Enova SF по управлению средствами Энергетического фонда в течение периода 1 января 2017 года по 31 декабря 2020 года. В ходе данного соглашения было реализовано ряд природоохранных мероприятий.

2.7. Are there any other economic incentives for rational use of natural resources? What are such incentives, how are these being implemented?

Рациональное использование природных ресурсов является важнейшей задачей нефтегазовой политики Норвегии. Статья 1-2 Закона о нефтегазовой деятельности гласит, что управление нефтегазовыми ресурсами должно осуществляться с долгосрочной перспективой на благо всего норвежского народа. В этом смысле, управление ресурсами должно обеспечивать доход для государства и способствовать благосостоянию общества, занятости и улучшению состояния окружающей среды, а также для укрепления торгового и промышленного развития Норвегии, одновременно уделяя должное внимание вопросам региональной и местной политики и другим видам деятельности.

Охрана окружающей среды и рациональное использование природных ресурсов на протяжении многих лет стимулировали экономический рост страны и создавали рабочие места.

(III) Environmental damage recovery

The list of legal sources (statutes, regulations, case law, doctrine), preferably with links in English.

Норвежские источники административно-деликтного права в нефтегазовой сфере по своей структурной части совпадают с перечисленными в пункте предварительных вопросов данного исследования. В дополнение к ним следует отнести ряд нормативно-правых актов и других источников и сделать небольшие пояснения.

Глава 7 Закона о нефтяной деятельности устанавливает ответственность за ущерб, причиненный загрязнением окружающей среды. При возникновении коллизии норм с

¹²⁶Информация предоставлена на сайте: [http://www.miljodirektoratet.no/Global/dokumenter/horinger/Regelverk/Forslag%20til%20program%20for%20avfallsforebygging\(1\).pdf?epslanguage=no](http://www.miljodirektoratet.no/Global/dokumenter/horinger/Regelverk/Forslag%20til%20program%20for%20avfallsforebygging(1).pdf?epslanguage=no)

главой 8 Закона о защите от загрязнения и об отходах подлежит применению норма Закона о нефтяной деятельности.

К списку источников необходимо добавить:

Норвежский официальный отчет NOU 1981:33 «Ответственность за ущерб от загрязнения, вызванный нефтяной деятельностью на норвежском континентальном шельфе». ¹²⁷

Норвежский официальный отчет NOU 1982:19 «Общие правила компенсации ущерба от загрязнения». ¹²⁸

Законопроект 43 (1995-1996) «О законе о нефтяной деятельности». ¹²⁹

Источником административно-деликтного права служит и обширная литература, посвящённая этому вопросу ¹³⁰

3.1. How is the environmental damage *calculated* in your jurisdiction? What is considered the principal basis to calculate damage, the amounts and formulas pre-set by authorities or the actual expenses bearable for purposes of restoring the state of environment? Is there a limitation as to what methods may be used for purposes of calculating damage, or any reasonable basis may be used, with all relevant circumstances of the case being considered?

Статья 7-1 Закона «О нефтяной деятельности» определяет ущерб от загрязнения как ущерб или убытки, вызванные загрязнением при аварийном разливе или выбросе на платформе или ином сооружении в норвежском секторе, и расходы на приемлемые меры по предотвращению или ограничению подобного ущерба и подобных убытков, а также ущерб и убытки, к которым приводят такие меры.

В норвежском законодательстве предусмотрена объективная (безвиновная) экологическая ответственность. Норвегия придерживается метода восстановления и определения стоимости замещения (restoration and replacement costs method).

¹²⁷Доступен только на норвежском языке: NOU 1981:33 Erstatningsansvar for forurensningsskade som følge av petroleumsvirksomhet på norsk kontinentalsokkel <https://lovdata.no/pro/#document/NOU/forarbeid/nou-1981-33?searchResultContext=1131>

¹²⁸Доступен только на норвежском языке: NOU 1982:19 Generelle lovregler om erstatning for forurensningsskade <https://lovdata.no/pro/#document/NOU/forarbeid/nou-1982-19>

¹²⁹Доступен только на норвежском языке: Ot.prp.nr. 43 (1995-1996) Om lov om petroleumsvirksomhet. <https://www.stortinget.no/no/Saker-og-publikasjoner/Stortingsforhandlinger/Lesevisning/?p=1995-96&paid=4&wid=c&psid=DIVL224>

¹³⁰“Erstatningsrett” i Knophs oversikt over Norges rett 14. utg (2014) s. 422-443; Viggo Hagstrøm og Are Stenvik: Erstatningsrett, 2015; Morten Kjelland: Erstatningsrett - en lærebok. Universitetsforlaget 2016.

Норвежский подход базируется на судебной дискреционной оценке и тем самым сильно отличается от применяемого в России математико-методологического подхода. Экономическая оценка ущерба окружающей среде проводится путем установления судом причинно-следственной связи между аварией и нанесенным ущербом и сопоставлением состояния *ex ante* окружающей среды с *ex post.*, и построена на оценке и усмотрении суда, которые служат основанием для расчета компенсации.

В отличие от ситуаций при утечке нефти с танкера, где возмещение ущерба возможно до определенной суммы для нефтяной деятельности ответственность не ограничена. В то же время компенсируются расходы только на приемлемые меры по восстановлению, замене или очистке природных ресурсов.

3.2. What is the *principal remedy* to damage recovery – imposition of an obligation to restore the state of the environment on the polluter or imposition of a monetary obligation to repay the restoration charges to the public authority?

Ответственный за ущерб, причиненный загрязнением обязан оплатить все меры и действия необходимые для восстановления или замены природных ресурсов. В тексте законопроекта о законе о нефтяной деятельности довольно подробно описано какие расходы покрываются термином ущерб от загрязнения.

В первую очередь, речь идет о расходах на меры по предотвращению ущерба, как правило, это сбор нефти. Это также меры по восстановлению прежнего состояния природы, к примеру очистка пляжей и морских птиц.

3.3. Are *the circumstances of the case*, such as the measure of the polluter's fault, his post factum behavior etc., taken into consideration while the sanctions for the damage are being determined?

Ответственность за ущерб, причиненный загрязнением не ограничена и наступает без необходимости учета или обоснования наличия вины. Не важно совершено деяние с противоправными намерениями, по неосторожности или небрежности.

Ответственность может быть уменьшена в разумных пределах, только в случае доказанных обстоятельств вне контроля ответственного лица (форс-мажор) в значительной степени способствовавших ущербу или его степени, включая непреодолимые стихийные бедствия, военные действия, действия государственных властей или иные подобные обстоятельства непреодолимой силы. При этом особое внимание уделяется масштабу деятельности, положению сторон, потерпевших ущерб и страховым возможностям обеих сторон.

3.4. What is the procedure *to restore* the environment in case of environmental damage? Who initiates the reparatory works - the public authority, the polluter, or both, including the immediate aftermath of inflicting the damage?

Обязательства владельцев лицензии и тех, кто совершил ошибку, канализируются к оператору месторождения. Оператор месторождения обязан без промедления путем публичного оповещения сообщить, как и куда может быть предъявлен иск о компенсации и в какие сроки.

Оповещение должно быть опубликовано как минимум дважды, с не менее чем недельным перерывом в “Norsk Lysningsblad” и в газетах и других изданиях, которые обычно читают в тех местах, в которых нанесен или может быть нанесен ущерб. Все судебные иски по делу должны рассматриваться в одном суде.

3.5. Are there any rules on *target spending* with regard to funds collected from multiple pollution charges or fines, e.g. requirements for these funds to be spent exclusively for environmental needs? Are fines collected to budget or to other special funds? How is compliance by public authorities checked?

В Норвегии нет специального фонда для покрытия ответственности по возмещению ущерба в результате нефтяного загрязнения. Его создание обсуждалось в 1981 году, но было отклонено по ряду причин.¹³¹

По мнению автора данного исследования, это обосновано следующим:

Во-первых, фондовый взнос путем единовременной выплаты при получении лицензии, или в виде дополнительной пошлины с добычи или взысканный иным способом будет дополнительным экономическим бременем для нефтегазовых компаний наряду с уже установленными высокими налогами и другими государственными сборами.

Во-вторых, могут возникнуть споры относительно распределения ресурсов фонда.

В-третьих, сложно предугадать минимальных размер фондовых взносов, чтобы полностью освободить компании от ответственности

* * *

Таким образом, по мнению автора данного исследования, нефтегазовые компании ведущие добычу нефти и газа на норвежском континентальном шельфе подчиняясь с одной стороны строгим экологическим требованиям и контролю со стороны государства,

¹³¹ NOU: Erstatningsansvar for forurensningsskade som følge av petroleumsvirksomhet på norsk kontinentalsokkel. 1981:33. p.34.

стимулируются к самостоятельному и активному принятию надлежащих мер по эффективизации охраны окружающей среды. Постоянное усовершенствование национальных требований по применению лучших технологических решений и методик, проведение оценки воздействия на окружающую среду на нескольких этапах нефтегазовой деятельности, выдача разрешений на выбросы и экономические инструменты, такие как сборы на выбросы NO_x и CO₂, объективная (безвиновная) и безграничная ответственность за ущерб, причиненный загрязнением способствуют минимально возможному загрязнению от нефтегазовой деятельности и способствует развитию эффективного механизма охраны окружающей среды. Поэтому загрязнение от норвежской нефтяной деятельности является одним из самых низких в мире по отношению к объему производства.

V. Экологическое законодательство Китая – взгляд из России

Мочула Богдан Олегович, Русско-Китайское юридическое общество

Preliminary Questions – Legal Certainty and Environmental Litigation

What is the system of environmental law sources in your jurisdiction, e.g. statutes, regulations, case law etc.? Is environmental law codified or fragmented (e.g. split into sets of rules with separate regard to air, water and soil, to various territories or to various procedures, such as environmental impact assessment and audits)? Are environmental rules mainly principle-based, rule-based, or are solutions implemented on the individual, case by case basis? What is the procedure of discussing the draft environmental law changes with the businesses involved in the use of natural resources? Are any transitional rules implemented in according to substantial changes?

Источниками экологического права в КНР являются законы, постановления, издаваемые государством и региональные и муниципальные акты, издаваемые на уровне провинций и муниципалитетов. Экологическое законодательство делится на группы правил, отдельно рассматривающих загрязнение воды, отходы и т. п. К основным экологическим законам относятся:

- Закон об охране окружающей среды.
- Закон об оценке воздействия на окружающую среду.
- Закон об экологическом налоге.

Законы, относящиеся к конкретным областям охраны окружающей среды, включают:

- Закон о предупреждении и контроле загрязнения атмосферы.
- Закон о защите морской среды.
- Закон о предупреждении и контроле загрязнения воды.
- Закон о пастбищах.
- Закон о лесном хозяйстве.
- Закон о предупреждении и контроле шумового загрязнения окружающей среды.
- Закон о предупреждении и контроле загрязнений окружающей среды твердыми отходами и т. д.

Процедура обсуждения проекта поправок в экологическое право не включает консультаций с представителями бизнеса. В экологическом праве нет переходных норм.

Are environmental law disputes common in your jurisdiction? What are the most common types of disputes? Are there any out-of-court mediation / settlement options?

Споры, связанные с экологическим законодательством достаточно распространены в КНР.¹³² Наряду с уголовными делами существуют административные дела и гражданские споры по экологическим правонарушениям. Как сказал Председатель КНР Си Цзиньпин на 19-м съезде Коммунистической партии Китая (2017), «Мы будем применять целостный подход для сохранения наших гор, рек, лесов, сельскохозяйственных угодий, озёр и пастбищ, реализовывать самые строгие системы защиты окружающей среды и развивать экологически безопасные модели экономического роста и образа жизни», сейчас Китай осуществляет более передовые и активные механизмы контроля за загрязнениями. В китайской судебной системе не уделено должного внимания спорам по экологическому праву, а они будут более важны в будущем, к примеру, в провинции Гуандун около 61'000 дел по экологическому праву (только гражданских) были рассмотрены судом в первой инстанции в течение последних 5 лет и даже в Гуандунском Высшем народном суде была основана специальная палата по рассмотрению апелляций по экологическим делам. Согласно Положениям об основаниях для гражданских исков (2011), опубликованных Верховным народным судом, споры по экологическому праву могут включать: (1) споры о загрязнении атмосферы; (2) споры о загрязнении воды; (3) споры об ответственности за шумовое загрязнение; (4) споры о радиоактивном заражении; (5) споры об ответственности за загрязнение почвы; (6) споры об ответственности за электронные отходы; (7) споры об ответственности за загрязнение твердыми отходами.

Медиация и возможности регулирования не только существуют, но и играют важную роль в экологических спорах в Китае. Отметим, что стороны могут прийти к соглашению, и народный суд может осуществить медиацию, но соглашение должно быть обнародовано до рассмотрения судом и принятия решения и продолжении судопроизводства (Статья 289 толкования Верховного народного суда о Применении гражданского процессуального права в Китайской Народной Республике).

On the following questions, we expect the answer to consist of (i) the merits, (ii) the lists of legal sources (statutes, regulations, case law, doctrine), preferably with links in English, and (iii) the expert assessments. The latter should include your expert opinion whether the

¹³² <https://www.chinadialogue.net/blog/9715-Six-important-environmental-cases-/en>

solutions in your jurisdiction (i) may be treated as the best practicable solutions for other jurisdictions, or (ii) such solutions need improvement on certain points, or (iii) you have a neutral view of such solutions.

(I) Pollution limits (quotas) and risk management

1.1. If an industrial facility, e.g. an oil well, storage, pipeline or a petrochemical plant, is built or reconstructed, is there any environmental impact assessment procedure in your jurisdiction?

Please describe the main parameters of such procedure(s), such as:

1.1.1. to which kinds of objects in oil and gas industry is this procedure applicable on the obligatory basis? Under which criteria are the objects classified?

Процесс оценки воздействия на окружающую среду регулируется Законом КНР «Об оценке воздействия на окружающую среду» (ОВОС)¹³³ и правилами, утверждающими список классификации воздействия на окружающую среду для строительных объектов. Оценка воздействия на окружающую среду применяется на обязательной основе.

Классификация объектов основана на характеристике строительных объектов и экологической уязвимости места, на котором они расположены.

Для нефтепереработки и коксовой промышленности, включающих сырую нефть, керосин, биотопливо и другие нефтяные продукты, полученные из сырой нефти, природного газа, горючего сланца и других угольных химических производств, предприятие должно разработать Отчет об Экологических Последствиях, который включает всестороннюю оценку экологических последствий. Он включает: а.) представление проекта строительства; б.) окружающую среду проекта строительства; в.) анализ и оценку экологических последствий, которые могут быть вызваны проектом; г.) меры по защите окружающей среды, а также техническая и экономическая демонстрация; д.) анализ экономических прибылей и убытков от экологических последствий, которые могут быть вызваны проектом; е.) предложения по проведению экологического мониторинга над проектом; ж.) заключение оценки экологических последствий. (Статья 16 Закона КНР «Об оценке воздействия на окружающую среду» 2016).

Также существует техническое руководство для оценки воздействия на окружающую среду для Строительных проектов в сфере нефти и природного газа.¹³⁴ Этот стандарт

¹³³ http://www.mep.gov.cn/gkml/hbb/bl/201707/t20170711_417602.htm

¹³⁴ http://kjs.mep.gov.cn/hjbhzbz/bzwb/other/pjjsdz/200704/t20070419_102903.htm

конкретизирует общие принципы и методы оценки воздействия на окружающую среду для строительных проектов, касающихся, нефти и природного газа. Он применим к изучению и развитию нефтяных и газовых месторождений в Китае, строительству инфраструктуры и смежных процессов сбора, транспортировки, хранения, переработки нефти и газа, включая нефтяные и газовые скважины и трубопроводы.

1.1.2. when is the assessment made (on pre-project stage, on project stage, or both / other)?

Оценка должна быть дана на этапе разработки проекта. Проект не должен реализовываться, пока не будет проведена оценка. Закон КНР “Об оценке воздействия на окружающую среду” требует завершения оценки воздействия на окружающую среду до начала реализации строительного проекта. В соответствии со статьей 25 Закона ОВОС “Департамент, утверждающий проект не должен утверждать проект, и строительство не должно начинаться до того, как уполномоченный Департамент рассмотрит и одобрит документы ОВОС”.

1.1.3. who makes the assessment (the public authority itself, the experts nominated by the public authority and / or by the business entity etc.) and on what basis is the final admissibility decision made?

Соответствующий департамент Госсовета, местные органы власти на уровне или выше муниципалитета совместно с районным и соответствующими департаментами проводят организационные мероприятия для осуществления оценки. (Статьи 7-11 Закона ОВОС). В случае если строительный проект может вызвать негативные экологические последствия, охватывающие несколько административных районов, и что, если существуют споры среди уполномоченных органов по охране окружающей среды, документы ОВОС должны быть рассмотрены и одобрены уполномоченным органом по охране окружающей среды более высокого уровня. Одобрение действительно в течение 5 лет и должно быть получено снова, если строительство началось по его истечении.

Государственный орган делает заключение, основываясь на документах, подготовленных сертифицированными учреждениями, которые могут обеспечивать техническое обслуживание ОВОС для проекта строительства. Речь идет о следующих документах: заявление об экологических последствиях (ЗЭП), форма об экологическом

воздействию (ФЭВ) или заполненная регистрационная таблица по экологическому воздействию (ОВОС).

1.1.4. how is current procedure connected with other project admissibility procedures, such as building regulatory compliance?

Различные разрешения могут запрашиваться параллельно.

1.1.5. how are the costs determined, who is bearing such costs?

В соответствии с законом ОВОС, не требуется плата за предварительное рассмотрение, изучение или одобрение документов ОВОС для строительного проекта.

Организация, осуществляющая проект должна подготовить заявление об экологических последствиях, форму об экологическом воздействии или заполнить регистрационную таблицу по экологическому воздействию за свой счет.

1.1.6. what are the term limits for assessment?

В соответствии с законом ОВОС, документы ОВОС строительного проекта должны быть предоставлены компетентным органам по охране окружающей среды. Морской ОВОС для морских инженерно-строительных работ должен быть одобрен в соответствии с Законом КНР “О защите морской среды”. Департамент должен одобрить решения и уведомить заявителя в письменной форме в течение 60 дней после получения экологических отчетов, в течение 30 дней после получения форм об экологическом воздействии, и в течение 15 дней после получения регистрационной таблицы по экологическому воздействию соответственно.

1.1.7. if there is a need to change the project parameters, how is the re-assessment made? Is re-assessment partial or complete?

Статья 24 закона об ОВОС гласит следующее: “после одобрения документов ОВОС строительного проекта, если в них окажутся значительные различия в характере строительных проектов, их масштабе, месте, принятом производственном процессе или мерах для предотвращения и контроля загрязнений и предотвращения экологических нарушений, заявители должны вновь предоставить документы ОВОС проекта для повторного одобрения”. Таким образом, процедура ОВОС начинается заново. В случае любого нарушения последовательности с документами ОВОС в течение строительства и эксплуатации проекта, организация-заявитель должна организовать оценку экологических последствий пост-фактум, принять меры, направленные, на совершенствование и сообщить

органу, изначально одобрявшему документы ОВОС. Данный орган может также запросить проведение оценки экологических последствий пост-фактум и принять дополнительные меры.

1.2. How are pollution limits (quotas) determined in your jurisdiction? Please consider any limits applicable to any component of the environment, such as water, air and soil. Who proposes the limits (the public authority itself, the experts nominated by the public authority and / or by the business entity etc.)? On what basis is the final decision made? Can the pollution limits be altered, and how?

Национальные стандарты качества окружающей среды изданы Административным департаментом охраны окружающей среды Государственного совета КНР; по вопросам, не включенным в национальные стандарты качества окружающей среды, правительства провинций могут разработать локальные стандарты качества окружающей среды.¹³⁵ Государственный орган самостоятельно предлагает и обнародывает проект, запрашивает комментарии. Как правило, срок обнародования и запроса комментариев составляет не менее 30 дней. На основе рассмотрения замечаний, государственный орган выносит финальное решение.

Примеры норм выбросов и стандартов качества воздуха в Китае (1980-ые – настоящее время), кратко описанные на основе стандартов, доступных на сайте Министерства Экологии.¹³⁶

Стандарты выбросов SO ₂ , TSP and NO _x для угольных электростанций (mg/m ³)				
Year	No. of Standard	SO ₂	TSP	NO _x
1992	GB13223-91	- ²	200– 3300	-
1996	GB13223-1996	1200– 2100	200– 3300	650– 1000
2004	GB13223-2003	400– 2100	50– 600	450– 1100 ⁴

¹³⁵ Local environmental quality standards shall be submitted to the environmental protection administrative department of the State Council for recordation.

¹³⁶ Jin Y, Andersson H, Zhang S. Air Pollution Control Policies in China: A Retrospective and Prospects. Levy JK, ed. *International Journal of Environmental Research and Public Health*. 2016;13(12):1219. doi:10.3390/ijerph13121219.

2012	GB13223-2011		50–200	20–30	100– 200				
Стандарты выбросов SO ₂ , TSP and NO _x for угольных котлов (mg/m ³)									
Year	No. of Standard		SO ₂	TSP	NO _x				
1984	GB3841-83		-	200– 600	-				
1992	GB13271-91		1200– 1800	100– 400	-				
2001	GB13271-2001		900– 1200	80– 350	-				
2014	GB13271-2014		200– 400	30–80	200– 400				
Пределы и методы измерения выбросов от легковых автомобилей (g/km)									
Year	No. of Standard	of Engine ⁶	CO	HC	NO _x	HC + NO _x	PM		
2000	GB18352.1- 2001	S	2.72	-	-	0.97	-		
		C	2.72	-	-	0.97– 1.36	0.14– 0.2		
2004	GB18352.2- 2001	S	2.2	-	-	0.5	-		
		C	1	-	-	0.7– 0.9	0.08– 0.1		
2007	GB18352.3- 2005	S	2.3	0.2	0.15	-	-		
		C	0.64	-	0.5	0.56	0.05		
2010	GB18352.3- 2005	S	1	0.1	0.08	-	-		
		C	0.5	-	0.25	0.3	0.025		
2017	GB18352.5- 2013	S	1	0.1	0.06	-	0.0045		
		C	0.5	-	0.18	0.23	0.0045		
Национальный стандарт качества атмосферного воздуха (µg/m ³ , 24 h Среднее, за исключением CO and O ₃)									
Year	No. of Standard	of Grade	SO ₂	TSP	NO ₂	CO	O ₃	PM ₁₀	PM _{2.5}
1982	GB3095-82	I	50	150	50	100	120	50	-
		II	150	300	100	100	160	150	-
		III	250	500	150	200	200	250	-
1996	GB3095-1996	I	20	80	40	100	120	40	-
		II	60	200	40	100	160	100	-

		III	100	300	80	200	200	150	-
2000	Amended GB3095-1996	I	20	80	40	100	160	40	-
		II	60	200	80	100	200	100	-
		III	100	300	80	200	200	150	-
2016	GB3095-2012	I	20	80	40	100	160	40	15
		II	60	200	40	100	200	70	35
Техническое регулирование индекса качества окружающего воздуха ($\mu\text{g}/\text{m}^3$, 24 h Среднее, за исключением CO и O ₃)									
Year	No. Standard	of	AQI ⁹	SO ₂	NO ₂	CO	O ₃	PM ₁₀	PM _{2.5}
			0	0	0	0	0	0	0
			50	50	40	50	160	50	35
			100	150	80	100	200	150	75
2016	HJ633-2012		150	475	180	350	300	250	115
			200	800	280	600	400	350	150
			300	1600	565	900	800	420	250
			400	2100	750	1200	1000	500	350
			500	2620	940	1500	1200	600	550

1.3. Is the best available technology / the best practicable means / the best practicable environmental option methodology of pollution control applicable in your jurisdiction? If yes, to which to which objects or activities is it applicable? Were transitional procedures applicable when such methodology was applied on a first-time basis? What is the term limit and the procedure for review of the best available technologies lists? What are the consequences of such review for existing enterprises?

Существует разница между наиболее целесообразными с экологической точки зрения методами контроля загрязнений в Китае. Каждая индустриальная сфера имеет свои лучшие практики. Что на счет добычи нефти и газа, существует ряд рекомендаций, например, “Лучшие осуществимые технологии для комплексного предотвращения загрязнений и контроля в нефтепереработке и обработке природного газа”, “Стандарты выбросов загрязняющих веществ в нефтеперерабатывающей промышленности”.¹³⁷ Они применимы к производству бензина, дизельного топлива и нефтяного топлива из сырой нефти, тяжелой

¹³⁷ <http://www.mep.gov.cn/gkml/hbb/bgth/201011/W020101130376213630736.pdf>

нефти и искусственной сырой нефти, нефтяного асфальта, и нефтехимического сырья. Сброс сточных вод нефтеперерабатывающих предприятий осуществляется в соответствии с комплексным стандартом сброса сточных вод (GB8978-1996). Некоторые провинции и города требуют внедрения стандартов по загрязнению, осуществляемым городскими очистными сооружениями (GB18918-2002).

“Стандарты загрязнений в нефтеперерабатывающей промышленности” разделены на 2 временных периода, временной интервал определяется моментом утверждения отчета о воздействии на экологию строительным проектом, и стандартным временем для введения и реализации. Утверждение новых источников загрязнения корпораций должно осуществляться строго в соответствии с требованиями этих стандартов.

Стандарты не регламентируют временные лимиты и процедуру пересмотра перечня лучших применимых практик.

1.4. Are rules prescribing certain actions for environmental damage prevention purposes, i.e. pollution risk management rules, established in your jurisdiction? Please describe the procedure, e.g. to which facilities or activities in oil & gas industry do these rules apply? Who establishes the rules? What is the character of the rules? How are the rules connected with other regulations that protect human life, health and property? Is there an exemption from environmental damage recovery if such rules, as well as other applicable conditions (e.g. damage insurance coverage), are complied with?

Как было отмечено ранее, предварительная оценка окружающей среды является основной мерой, принятой в Китае в области нефтегазовой промышленности. Компании обязаны разработать Отчет об экологических последствиях, который включает всестороннюю оценку воздействия на окружающую среду. Кроме того, системы по контролю и предотвращению загрязнения, включенные в проект строительства, должны быть спроектированы, установлены и введены в эксплуатацию одновременно с предметом проекта строительства. Такие системы должны удовлетворять требованиям утвержденного документа об оценке воздействия на окружающую среду и не могут быть демонтированы или выведены из эксплуатации без разрешения. (Статья 41 Закона об охране окружающей среды Китайской Народной Республики).

Борьба с последствиями загрязнения экологии осуществляется в КНР, в том числе, при помощи экологического страхования.

Рынок экологического страхования активно развивается в последние годы. В настоящее время широко доступны страховые услуги, включая как общие страховые полисы так специальные, касающиеся ответственности по загрязнению окружающей среды. Также были приняты Руководящие принципы по проведению экспериментальной работы по обязательному страхованию гражданской ответственности за загрязнение окружающей среды (关于开展环境污染强制责任保险试点工作的指导意见)¹³⁸ и Руководящие принципы по проведению добровольного страхования ответственности за загрязнение окружающей среды (关于开展环境污染责任保险指导意见)¹³⁹. Основная цель этих документов – побудить предприятий добровольно приобретать дополнительное страхование ответственности за загрязнения окружающей среды.

1.5. Does your jurisdiction have the pollution charges that are obligatory for business entities, including the recycling duties? Who are the payers (manufactures, sellers, customers, waste management operators, etc.) and how are the payable amounts determined (including the criteria, the rates, the timing, etc.)?

Да, имеются. Они обязательны для всех хозяйствующих субъектов. Суммы и плательщики определяются Законом «О налоге на защиту окружающей среды»¹⁴⁰ (Далее – Закон о НЗОС) и подзаконными актами, принятыми в исполнение данного закона.¹⁴¹ В соответствии с вышеупомянутым законом налогоплательщиками являются предприятия, и другие хозяйствующие субъекты, осуществляющие на территории Китая прямой сброс облагаемых налогом загрязняющих веществ. Закон о НЗОС предназначен только для субъектов, ведущих предпринимательскую деятельность, и не применяется в отношении физических лиц или организаций, не связанных с бизнесом, таких как государственные учреждения и НОАК. Термин «прямой сброс» определяет точное географическое местоположение, в котором могут быть сброшены загрязняющие вещества. Если компания сбрасывает загрязняющие вещества в открытую среду, где нет никаких систем очистки, то это считается нарушением Закона о НЗОС. В Законе о НЗОС указывается, что сброс загрязняющих веществ в городские очистные станции по переработке сточных вод и

¹³⁸ <http://www.circ.gov.cn/web/site0/tab5225/info236857.htm>

¹³⁹ http://www.tjhb.gov.cn/root16/mechanism/office/201706/t20170615_27844.html

¹⁴⁰ <https://www.v4.cc/News-3556566.html>

¹⁴¹ http://www.gov.cn/zhengce/content/2017-12/30/content_5251797.htm

твёрдых отходов не облагаются налогом, тогда как заводы, сбрасывающие загрязняющие вещества в промышленные очистные сооружения, обязаны уплачивать налог. Закон о НЗОС указаны четыре категории налогооблагаемых загрязняющих веществ: загрязнители воздуха и воды, твердые отходы и шум. В Перечне облагаемых налогом загрязняющих веществ и их допустимых значений, опубликованном в приложении к Закону о НЗОС, содержится полный перечень налогооблагаемых веществ, который может быть использован предприятиями для определения налоговой базы и расчёта подлежащего уплате налога до вступления закона в силу. Следует отметить, что некоторые виды загрязняющих веществ не облагаются налогом, например, загрязняющие вещества, выбрасываемые сельскохозяйственным производством, автотранспортными средствами, судами, самолетами и городскими станциями по очистке сточных вод. Включение в список загрязняющих веществ углекислого газа (CO₂) активно обсуждалось в процессе разработки, однако в итоге этого сделано не было. Благодаря усовершенствованным технологиям и знаниям в области мониторинга окружающей среды правительство может корректировать текущее облагаемое налогом значение, когда оно достигло достаточной пропускной способности. Налоговые расчеты: механизм расчета налога на окружающую среду в основном согласуется с системой PDF (PDF system). Налог основан на объеме сброшенных загрязняющих веществ, умноженном на налоговую ставку соответствующего налога. Статья 6 этого закона гласит: «Налоговые статьи и суммы налога на охрану окружающей среды регулируются Графиком налога на охрану окружающей среды, приложенным к настоящему Закону». Другой важный аспект заключается в том, что местные органы власти могут принимать решение о собственных налоговых ставках в пределах диапазона, определенного центральным правительством.

1.6. What is the procedure of making an environmental audit? Who may / has to make such audit (the public authority itself, the experts nominated by the public authority and / or by the business entity, etc.)? Are these audits constant or are these made on a periodical / casual basis? Are any technical means of live monitoring used rather than human monitoring? What is being audited, the documents, the actual levels of pollution, or both? How are the costs determined, who bears the costs? What are the term limits for environmental audits? Are the pollution audits risk-based (e.g. are audits concentrated primarily on main contaminating substances)? How are

environmental audits connected with other regulatory audits, such as industry regulations compliance?

В Китае существует два вида экологического контроля.

Государственный экологический мониторинг. Он проводится в соответствии с Мерами по контролю над использованием источников загрязнения.¹⁴² Они могут применяться к мониторингу выбросов загрязняющих веществ субъектов, которые создают и выбрасывают загрязняющие вещества, за исключением мониторинга радиоактивных загрязняющих веществ и источников движимого загрязнения. Мониторинг источников загрязнения относится к мониторингу сброса загрязнений на выходах загрязняющих веществ, мониторингу участков производства, хранения, удаления, утилизации и сброса твердых отходов, мониторингу работы систем контроля и предотвращения загрязнения, мониторингу на проверку и принятие проектов «трех одновременностей» (three simultaneities), мониторинг при проверке и принятии проектов по ликвидации загрязнения и контроля существующих источников загрязнения (включая проекты по ликвидации и контролю загрязнения до истечения крайнего срока), мониторинг соблюдения лицензий на сброс загрязнений, и последующий мониторинг во время случаев с загрязнением.

Только организации, утвержденные Государственным управлением по охране окружающей среды или бюро по охране окружающей среды провинциального уровня, могут заниматься мониторингом источников загрязнения. Они проводятся на основе ежегодного плана мониторинга. Станции мониторинга окружающей среды при природоохранных бюро на практике осуществляют надзорный мониторинг источников загрязнения и выполняют следующие обязанности:

- (1) Осуществлять на практике надзорный мониторинг местных источников загрязнения и создавать архивы мониторинга;
- (2) Организовать сети мониторинга источников загрязнения, действовать как и отвечать за ежедневное управление сетями мониторинга;
- (3) Изучать результаты мониторинга, представленные субъектами, выбрасывающими загрязняющие вещества, проводить выборочные обследования оспариваемых данных и

¹⁴²

http://english.sepa.gov.cn/Resources/laws/regulations/Environmental_Standards_Monitoring/200711/t20071122_113261.shtml

проводить контроль качества устройств непрерывного автоматического мониторинга, установленных субъектами загрязнения;

(4) Проведение экстерриториального мониторинга во время несчастных случаев с загрязнением, участие в арбитражных спорах по вопросам загрязнения и расследованиях локальных аварий со случаями серьезных загрязнений;

(5) Сообщать о результатах надзорного контроля в компетентные природоохранные бюро, представлять данные мониторинга, предоставленные субъектами загрязнения в качестве основы правоприменения и администрирования; а также

(6) Выполнение задачи мониторинга, назначенных компетентным бюро охраны окружающей среды или бюро по охране окружающей среды более высокого уровня, и оказывать техническую поддержку в области управления окружающей средой.

Мониторинг в реальном времени широко применяется для оценки состояния окружающей среды,¹⁴³ хотя большинство статистических данных в режиме реального времени недоступны для общественности. Защита окружающей среды по-прежнему является новой сферой в Китае, в Ланьчжоу-2015 существует экспериментальная программа аудита окружающей среды, но в рамках этой программы аудит был добровольным, а основное внимание было уделено бюджетированию.

Второй тип - это аудит, осуществляемый хозяйствующими субъектами. Основой для разработки стандартов экологического аудита являются китайские законы и правила аудита, конвенционные стандарты аудита, а также законы и подзаконные акты об охране окружающей среды (Закон «Об аудите», независимые стандарты аудита и внутренний аудит правовых норм, а также Закон «Об охране окружающей среды», Закон «О предотвращении загрязнения воздуха», «стандарт мер по охране окружающей среды», «Меры по разрешению выбросов загрязняющих веществ в воде » и другие законы и подзаконные акты об охране окружающей среды, а также соответствующие местные нормативные акты о защите окружающей среды и т. д.).

Система стандартов экологического аудита должна включать два уровня:

(1) первый уровень - это основные стандарты экологического аудита, в том числе требования к профессиональной компетентности. Формулирование основных принципов

¹⁴³ <http://www.cnemc.cn/> example of live monitoring made by China Environmental Monitoring Center, you could find real-time PM 2.5 for all major cities in China.

экологического аудита может принимать во внимание требования к профессиональной компетентности и подготовке экологических аудиторов в ISO14012.

(2) второй уровень - это конкретные руководящие принципы аудита, в том числе национальные стандарты экологического аудита, стандарты экологического аудита сертифицированных объединений аудиторов и стандарты внутреннего экологического аудита. В Китае существуют три основные отрасли действующей системы стандартов аудита: независимые стандарты аудита, национальные стандарты аудита и стандарты внутреннего аудита.

1.7. Are there any rules on target spending with regard to funds collected from pollution charges, e.g. requirements for these funds to be spent exclusively for environmental needs? Are charges collected to budget or to other special funds? How is compliance by public authorities checked?

Штрафы за загрязнение не учитываются в бюджете. В 2018 году Китай начал применять Закон «Об экологическом налоге», отменил систему взимания платы за сточные воды и передал налог на охрану окружающей среды под единое управление в бюджете. Не существует прямой взаимосвязи между фондом охраны окружающей среды и штрафом за загрязнение окружающей среды.

(II) Economical incentives for rational use of natural resources

2.1. What are the sanctions for non-compliance with pollution limits, e.g. multiple pollution charges or fines? How are the rates determined (flat amounts, turnover-based, etc.)? How are the multiple pollution charges or fines collected?

В качестве санкций за несоблюдение пределов загрязнения используются штрафы, которые могут быть наложены местными органами власти. Все штрафы администрируются Государственным казначейством. Штрафы – плоские, но их размер зависит от типа нарушения.

2.2. Are the polluter's expenses borne or other efforts made for purposes of curbing / diminishing pollution taken into consideration while calculating pollution charges, and if yes, what is the procedure, are the expenses recognized as accrued or in adjusted amounts?

Закон о НЗОС¹⁴⁴ содержит два вида налоговых льгот, чтобы побудить компании сократить выбросы загрязняющих веществ. Если выбросы загрязняющих веществ на 30

¹⁴⁴ <https://www.v4.cc/News-3556566.html>

процентов меньше допустимого предела содержания загрязняющих веществ, загрязнители могут получить 25-процентное сокращение подлежащей оплате суммы. Если выбросы загрязняющих веществ на 50 процентов меньше установленного стандарта – 50% сокращение.

2.3. Are the polluter's expenses borne or other efforts made for purposes of curbing / diminishing pollution taken into consideration while calculating taxes that are payable for use of natural resources (other than pollution charges)?

Нет.

2.4. Are the polluter's expenses borne or other efforts made for purposes of curbing / diminishing pollution taken into consideration while calculating general business taxes, such as corporate profits tax (e.g. in form of accelerated depreciation) or property tax (e.g. in form of deduction from taxable value of business property)?

Нет.

2.5. Are budget subsidies granted for purposes of environment protection? How may these subsidies be obtained? How is the purposeful spending controlled?

Нет.

2.6. Are there any public-private partnerships, concession contracts, or other similar arrangements set up for purposes of environment protection? How are these arrangements implemented in practice?

Правительство Китая широко продвигает ГЧП в сферах общественных услуг. Оно принимает различные виды ГЧП для предоставления государственных услуг в различных секторах, включая охрану окружающей среды.¹⁴⁵ К сожалению, нет информации о том, как это реализуется на практике. Агентство новостей Синьхуа сообщило, что ГЧП не пользуется популярностью, и на самом деле все проекты в этой области связаны с государственными предприятиями.

2.7. Are there any other economic incentives for rational use of natural resources? What are such incentives, how are these being implemented?

¹⁴⁵ http://jjs.mof.gov.cn/zhengwuxinxi/zhengcefagui/201504/t20150427_1223522.html
http://www.mof.gov.cn/zhuantihuigu/2015lh_8106/2014rd/201610/t20161018_2437953.html

Да, есть и другие стимулы для рационального использования природных ресурсов.¹⁴⁶ Новейшими являются: План экологического сотрудничества в области окружающей среды Один пояс Один путь (2017); Руководство по пропаганде зеленого Пояса и Пути (2017); Предложения Государственного совета по усилению основных видов деятельности по охране окружающей среды (2011). Их основная цель - содействие реагированию на международную тенденцию к поиску зеленого, низкоуглеродного и перерабатываемого сырья, активизация усилий по решению важнейших экологических проблем, влияющих на научное развитие и угрожающих общественному здоровью.

Перечень нормативных правовых актов об экологической политике и в Китае.

Дата	Политика	Примечания
1988	Правила радиационной защиты (SEPA 1988a)	Требуют оценку экологического риска в рамках оценки воздействия на окружающую среду.
Августа 1988	Руководящие принципы регулирования охраны окружающей среды, стандартный формат и содержание отчетов об экологических последствиях для ядерных установок (SEPA 1988b)	Регулирует процедуры и методы, используемые для оценки экологических рисков при авариях на АЭС.
1990	Уведомление об оценке экологического риска для основных потенциальных аварий, связанных с загрязнением окружающей среды (SEPA 1990)	Требует оценки экологического риска для потенциального риска экологических аварий.
1993	Технические руководящие принципы для оценки воздействия на окружающую среду Общие принципы (SEPA 1993a)	Требуют провести оценку риска для потенциальных аварий.
1 апреля 1994	Руководящие принципы регулирования охраны окружающей	Требу.м анализ аварий и радиационный анализ для всех

¹⁴⁶ <http://english.sepa.gov.cn/Resources/Policies/policies/>

	среды для ядерных установок, стандартный формат и содержание отчетов об экологических последствиях для исследовательских реакторов (SEPA 1993b)	аварий, связанных с ядерными объектами.
1 апреля 1994	Руководящие принципы регулирования охраны окружающей среды для ядерных установок. Стандартный формат и содержание отчетов об экологических последствиях для мелкого захоронения твердых радиоактивных отходов (SEPA 1993c)	Требуется анализ аварий и радиационный анализ для всех аварий, связанных с хранением и захоронением радиоактивных твердых отходов на малой глубине.
Апрель 1996	Временные положения об охране окружающей среды в случаях импорта отходов (SEPA 1996)	Указывает технические требования и процедуры проверки для оценки экологического риска для импортируемых отходов.
1997	Уведомление об усилении надзора и управления сточными водами предприятий пестицидов (SEPA и др., 1997)	Требует, чтобы новые, расширенные или реконструированные производственные предприятия по производству пестицидов оценивали экологические риски, создаваемые возможной эмиссией загрязнителей воды, и особенно характерные загрязняющие вещества, образующиеся в ходе производственных процессов.
2001	Руководящие указания по системе управления безопасностью и гигиеной труда (SETC 2001a)	Содержит процесс оценки рисков, необходимый для работодателей.
2001	Спецификации системы управления охраной труда и техники безопасности (SETC 2001b)	Закрепляет, что выводы оценки риска должны быть задокументированы и использованы в качестве основы для создания и поддержания системы управления охраной труда.
Декабрь 2004	Технические руководящие принципы оценки экологических рисков для проектов (SEPA 2004)	Описывает и детально определяет процедуры и технические методы оценки экологических рисков и является

		первым техническим документом, в котором основное внимание уделяется оценке экологических рисков.
Декабрь 2005	Экстренное уведомление о проведении крупных исследований рисков экологической безопасности (SEPA 2005a)	Требует улучшения оценки экологического риска предприятием или проектом и определения риска безопасности.
2005	Уведомление об усилении оценки воздействия на окружающую среду для предотвращения экологического риска (SEPA 2005b)	Требует добавления оценок экологического риска в региональные отчеты об оценке воздействия на окружающую среду.
Март 2006	Регулирование предотвращения и контроля за загрязнением окружающей среды твердыми отходами провинции Чжэцзян (ZJG 2006)	Требует оценки экологического риска и восстановления загрязненных почв в провинции Чжэцзян.
Январь 2007	Техническое руководство по оценке мест (проект) (ВМЕРВ 2007)	Регулирует процедуры и технические методы, используемые для исследования и оценки экологической среды в Пекине.
Май 2007	Постановление Правительства г.Чунцина об охране окружающей среды (СQMPG 2007)	Требует, чтобы все производственные предприятия уничтожали оставшиеся ядовитые и опасные материалы и исправляли загрязненную почву в Чунцине.
Май 2007	Меры по экологическому управлению и восстановлению на загрязненных участках в городе Шэньян (пробная реализация) (SYEPB 2007)	Устанавливает стандарт для оценки и идентификации загрязненных участков в Шэньяне.
Июнь 2008	Уведомление об укреплении управления и рекультивации загрязненных участков, ранее используемых промышленностью и предприятиями в городе Чунцин (СQMPG 2008)	Требует, чтобы оценка риска загрязненных бывших промышленных и коммерческих объектов проводилась до их использования в других целях.
Сентябрь 2009	Руководство по оценке рисков загрязненных участков (проект) (МЕР 2009d)	Регулирует процедуры и технические методы для расследования и оценки

		земельных участков для всего Китая.
Октябрь 2009	Руководство по экологической оценке места (BBQTS 2009)	Регулирует процедуры и технические методы, используемые для исследования и оценки полевой среды в Пекине. Заменяет Техническое руководство по экологической оценке места (ВМЕРВ 2007)
Ноябрь 2009	Технические руководящие принципы оценки экологических рисков для проектов (проект) (МЕР 2009с)	Изменяют техническое руководство по оценке экологических рисков для проектов. (МЕР 2009с)
Ноябрь 2009	Технические руководящие принципы планирования оценки воздействия на окружающую среду. Общие принципы (проект) (МЕР 2009а).	Требуют оценку рисков для здоровья человека и окружающей среды в рамках оценки воздействия на окружающую среду.
Ноябрь 2009	Технические руководящие принципы оценки воздействия на окружающую среду. Градостроительный план города (проект) (МЕР 2009b)	Требуют оценку рисков для здоровья человека и окружающей среды в рамках оценки воздействия на окружающую среду для городского планирования.
Ноябрь 2009	Технические руководящие принципы оценки воздействия на окружающую среду для планов землепользования (проект) (МЕР 2009е)	Требуют оценку рисков для здоровья человека и окружающей среды в рамках оценки воздействия на окружающую среду для планирования землепользования.
Январь 2010	Технические руководящие принципы оценки экологических рисков: метод классификации экологических рисков хлорщелочных предприятий (МЕР 2010)	Первые рекомендации по экологическому риску для промышленности в Китае.

(III) Environmental damage recovery

3.1. How is the environmental damage calculated in your jurisdiction? What is considered the principal basis to calculate damage, the amounts and formulas pre-set by authorities or the actual expenses bearable for purposes of restoring the state of environment? Is there a limitation

as to what methods may be used for purposes of calculating damage, or any reasonable basis may be used, with all relevant circumstances of the case being considered?

В случае, если потерпевшая сторона просит восстановить первоначальное положение, народный суд может вынести решение о том, что загрязнитель обязан взять на себя ответственность за восстановление окружающей среды или возместить расходы за восстановление окружающей среды, в случае если обвиняемый не выполняет обязательства по восстановлению. Пострадавшая сторона также может подать иск, чтобы попросить загрязнителя произвести компенсацию за потерю имущества и личный ущерб, причиненный загрязнением, и разумные затраты, связанные с принятием необходимых мер для предотвращения расширения загрязнения и устранения загрязнения. Кроме того, если загрязнитель заявляет, что он соблюдал национальные или местные нормы сброса загрязняющих веществ, но ущерб был вызван загрязнением окружающей среды, он не может быть поддержан судом для снижения размера выплаты. (Толкование Верховного народного суда по нескольким вопросам применения закона в делах об ответственности за экологические правонарушения).

Претензии в отношении чисто экологического ущерба допускаются только в том случае, если конкретное законодательство имеет четкие положения, причем положения обычно ограничиваются превентивными мерами или мерами по восстановлению первоначального положения. Даже когда речь идет о восстановительных мерах, в стандартах оценки отсутствуют параметры для определения восстановления ущерба. Это особенно актуально для загрязнения почвы; до сих пор технические стандарты не определены или слишком устарели для решения существующих проблем. Это означает, что стандарты, устанавливающие качество восстанавливаемой почвы, не существуют или не являются удовлетворительными. Отсутствие четких указаний на стандарты по восстановлению существенно усложняют работу судей. Чтобы справиться с подобными трудностями, правительство намерено обнародовать стандарты оценки. Первый шаг в этом направлении был сделан в Рекомендациях по методам оценки ущерба окружающей среде, опубликованных Министерством экологии в 2011 году.¹⁴⁷ В этом документе приводятся некоторые общие рекомендации о том, как оценивать чистый экологический ущерб в некоторых конкретных областях, но они не обязательны к применению в суде.

¹⁴⁷ <http://www.mep.gov.cn/gkml/hbb/bwj/201105/W020110530352486511962.pdf>

3.2. What is the principal remedy to damage recovery – imposition of an obligation to restore the state of the environment on the polluter or imposition of a monetary obligation to repay the restoration charges to the public authority?

The principal remedy to damage recovery is imposition of an obligation to restore the state of the environment on the polluter.

Если какая-либо организация незаконно начинает строительство без получения одобрения своих документов об оценке воздействия на окружающую среду: административный отдел по охране окружающей среды издаст предписание прекратить строительство, может оштрафовать или потребовать восстановить исходное состояние. Ответственное лицо и другой персонал организации, напрямую ответственный за эти вопросы, понесут административную ответственность.

3.3. Are the circumstances of the case, such as the measure of the polluter's fault, his post factum behavior etc., taken into consideration while the sanctions for the damage are being determined?

Согласно Закону «Об охране окружающей среды», предприятие, которое вызвало опасность загрязнения окружающей среды, обязано устранить её и возместить всем юридическим и физическим лицам понесенные прямые убытки. Кроме того, согласно Закону об административной ответственности,¹⁴⁸ загрязнители несут бремя доказывания отсутствия ответственности или смягчающих обстоятельств. Они также несут бремя доказывания отсутствия причинно-следственной связи между их действиями и ущербом.

Признание ответственности за ущерб от загрязнения окружающей среды является принципом безвиновной ответственности. Принцип ответственности без вины относится к любому предприятию или физическому лицу, которые загрязняют или разрушают окружающую среду. До тех пор, пока они объективно наносят ущерб, даже непреднамеренно и без вины, они также несут ответственность за ущерб. Другими словами, на ответственность и установление компенсации не повлияют ни виновность жертвы, ни какие-либо нарушения закона, ни чрезмерная утечка отходов. Пока поведение жертвы имеет причинно-следственную связь с результатом повреждения, ущерб может быть компенсирован. Статья 106 и статья 124 «Общих принципов гражданского права» также подтвердили этот принцип.

¹⁴⁸ <http://www.wipo.int/edocs/lexdocs/laws/en/cn/cn136en.pdf>

В случае если затраты на восстановление экологической среды не могут быть определены или затраты на идентификацию конкретной стоимости слишком высоки, народный суд может разумно определить вышеуказанные расходы, учитывая степень загрязнения и разрушения окружающей среды, трудность восстановления, эксплуатационные расходы на оборудование для предотвращения и контроля загрязнения, выгоды, полученные ответчиком в результате нарушения, степень вины и другие факторы. Например:

(1) если поведение загрязнителя является злонамеренным, в некоторых случаях народный суд может налагать штрафные санкции;

(2) если ответчик отклоняет или откладывает исполнение судебного решения, народный суд может нанять независимую третью сторону для восстановления окружающей среды, причем расходы будут наложены на обвиняемого;

(3) если ответчик не принял разумных мер для предотвращения увеличения убытков, истец может потребовать разумную компенсацию возмещения убытков, и народный суд обычно поддерживает просьбу истца. Поэтому при определении затрат будет учитываться вина, последующее поведение.

3.4. What is the procedure to restore the environment in case of environmental damage? Who initiates the reparatory works - the public authority, the polluter, or both, including the immediate aftermath of inflicting the damage?

Восстановление первоначального положения является приоритетом, полностью воплощающим принцип «кто разрушает, тот и отвечает» - принцип экологического восстановления. Это означает, что все предприятия и отдельные лица, которые вызвали опасность загрязнения окружающей среды, несут ответственность за контроль загрязнения и должны компенсировать ущерб.

Применение реституции. Что касается экологических ресурсов, то применение реституции обычно проходит следующие этапы:

1. Техничко-экономическое обоснование применения реституции.
2. Подготовить планы реализации и подробные планы реституции.
3. В случае, если начинается процесс по делу, касающемуся экологии, судебный орган должен в первую очередь рассмотреть вопрос о том, как восстановить поврежденные экологические ресурсы, и осуществлять надзор за процессом восстановления. Независимо

от того, должны ли стороны нести уголовную, административную или гражданскую ответственность, конечной целью является достижение цели восстановления окружающей среды и поврежденной экологии, настолько насколько это возможно.

В случае если загрязнение очень тяжелое и представляет собой аварийное происшествие¹⁴⁹, в результате которого правительство начнет процесс восстановления, то он может быть разделен на административный и гражданский процесс, (после этого расходы будут оплачиваться загрязнителем). Если масштабы загрязнения весьма ограничены, например, несколько заводов вызвали так называемое незначительное изменение качества воды, тогда начнется гражданский процесс. В большинстве случаев суд может вынести решение о том, что ответчик должен вернуть экологическую среду в первоначальное состояние, что является началом процесса официального восстановления. Если пострадавшие уже начали процесс восстановления по собственной инициативе, они имеют право требовать возмещения стоимости этого процесса.

3.5. Are there any rules on target spending with regard to funds collected from multiple pollution charges or fines, e.g. requirements for these funds to be spent exclusively for environmental needs? Are fines collected to budget or to other special funds? How is compliance by public authorities checked?

Все штрафы передаются в Государственное казначейство. Штрафы за загрязнение не включаются в бюджет в качестве специального фонда. Начиная с 2018 года, Китай начал применять закон об экологическом налоге, отменил систему платы за сточные воды и передал налог на охрану окружающей среды под единое управление. Не существует прямой взаимосвязи между вопросом об охране окружающей среды и бюджетированием штрафов за загрязнение окружающей среды.

¹⁴⁹ Аварийными происшествиями являются стихийные бедствия, катастрофы, инциденты в области общественного здравоохранения или социальной безопасности, произошедшие в результате аварии и которые вызвали или могут вызвать серьезный социальный ущерб и нуждаются в принятии мер реагирования на чрезвычайные ситуации. В соответствии с таким фактором, как степень социального ущерба и объемы последствий, бедствия и катастрофы подразделяются на четыре вида: особо тяжкие, тяжкие, крупные и обычные, за исключением случаев, предусмотренных законами или подзаконными актами Государственного совета

VI. Экологическое законодательство Китая – взгляд китайского эксперта

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Preliminary Questions – Legal Certainty and Environmental Litigation

What is the system of *environmental law sources* in your jurisdiction, e.g. statutes, regulations, case law etc.? Is environmental law *codified* or fragmented (e.g. split into sets of rules with separate regard to air, water and soil, to various territories or to various procedures, such as environmental impact assessment and audits)? Are environmental rules mainly principle-based, rule-based, or are solutions implemented on the individual, case by case basis? What is the procedure of discussing the draft environmental law changes with the businesses involved in the use of natural resources? Are any transitional rules implemented when changes are substantial?

[Answer] The system of environmental law sources are statutes. The laws are fragmented. The environmental rules are rule-based.

References:

Environmental protection and resource conservation are written in the Constitution. Relevant articles in the Constitution of the People's Republic of China (1982) [Revised] includes:

[Article 9] All mineral resources, waters, forests, mountains, grasslands, unreclaimed land, beaches and other natural resources are owned by the state, that is, by the whole people, with the exception of the forests, mountains, grasslands, unreclaimed land and beaches that are owned by collectives in accordance with the law. The state ensures the rational use of natural resources and protects rare animals and plants. Appropriation or damaging of natural resources by any organization or individual by whatever means is prohibited.

[Article 10] Land in the cities is owned by the state. Land in the rural and suburban areas is owned by collectives except for those portions which belong to the state in accordance with the law; house sites and privately farmed plots of cropland and hilly land are also owned by collectives. The state may, in the public interest, requisition land for its use in accordance with the law. No organization or individual may appropriate, buy, sell or otherwise engage in the transfer of land by unlawful means. The rights to the use of land may be transferred according to law. All organizations and individuals using land must ensure its rational use.

[Article 22] The state promotes the development of art and literature, the press, radio and television broadcasting, publishing and distribution services, libraries, museums, cultural centres and other cultural undertakings that serve the people and socialism, and it sponsors mass cultural

activities. The state protects sites of scenic and historical interest, valuable cultural monuments and relics and other significant items of China's historical and cultural heritage.

[Article 26] The state protects and improves the environment in which people live and the ecological environment. It prevents and controls pollution and other public hazards. The state organizes and encourages afforestation and the protection of forests.

Are environmental law *disputes* common in your jurisdiction? What are the most common types of disputes? Are there any out-of-court mediation / settlement options?

[Answer] Yes, environmental law disputes are normally shown in several forms, including civil cases on damage caused by environmental pollution and ecological destruction, and environmental civil public interest lawsuits. Two relevant judicial interpretations have been issued:

- Interpretation of the Supreme People's Court on Several Issues concerning the Application of Law in the Conduct of Environmental Civil Public Interest Litigations

- Interpretation of the Supreme People's Court of Several Issues on the Application of Law in the Trial of Disputes over Liability for Environmental Torts

On the following questions, we expect the answer to consist of (i) the merits, (ii) the lists of legal sources (statutes, regulations, case law, doctrine), preferably with links in English. and (iii) the expert assessments. The latter should include your expert opinion whether the solutions in your jurisdiction (i) may be treated as best practicable solutions for other jurisdictions, or (ii) such solutions need improvement on certain points, or (iii) you have a neutral view of such solutions.

(I) Pollution limits (quotas) and risk management

1.1. If an industrial facility, e.g, an oil well, storage, pipeline or a petrochemical plant, is built or reconstructed, is there any *environmental impact assessment* procedure in your jurisdiction? Please describe the main parameters of such procedure(s), such as:

1.1.1. to which kinds of objects in oil and gas industry is this procedure applicable on the obligatory basis? Under which criteria are the objects classified?

[Answer] The levels of environmental impact assessment for different construction projects are different. The criteria are specified in Article 16 of the People's Republic of China on Environmental Impact Assessment (2016 Amendment).

Reference:

[Article 16] The state practices classified management over the appraisals of the environmental impacts of construction projects according to the seriousness of the impacts.

The construction entities shall work out the report of environmental impacts, the report form of environmental impacts or the registration form of environmental impacts (hereafter “environmental impact appraisal documents”) according to the following principles:

a. If the environmental impacts may be significant, it shall work out a report of environmental impacts so as to include an all-round appraisal of the environmental impacts;

b. If the environment impacts may be gentle, it shall work out a report form of environmental impacts so as to include an analysis or special appraisal of the environmental impacts;

c. If environment impacts may be very small so that it is not necessary to conduct an appraisal of the environmental impacts, it shall fill in a registration form of the environmental impacts.

The types of the construction projects subject to classified management of appraisal of environmental impacts shall be determined and published by the administrative department of the State Council in charge of environmental protection.

1.1.2. when is the assessment made (on pre-project stage, on project stage, or both / other)?

[Answer] The assessment is made at the pre-project stage.

1.1.3. who makes the assessment (the public authority itself, the experts nominated by the public authority and / or by the business entity etc.) and on what basis is the final admissibility decision made?

[Answer] The construction entities shall work out the report of environmental impacts. The construction entities often contract with environmental impact assessment firms to work out the report.

1.1.4. how is such procedure connected with other project admissibility procedures, such as building regulatory compliance?

1.1.5. how are the costs determined, who is bearing such costs?

[Answer] The construction entities bear the costs. The costs are determined by negotiation between the construction entities and the environmental impact assessment firms.

1.1.6. what are the term limits for assessment?

[Answer] Article 17 of the Law of the People's Republic of China on Environmental Impact Assessment specifies this.

Reference:

Article 17 The report of the environmental impacts of a construction project shall include the following elements:

- a. An introduction of the construction project;
- b. The surrounding environment of the construction project;
- c. An analysis, prediction and appraisal of the environmental impacts that may be caused by the construction project;
- d. The measures for protecting the environment of the construction project as well as a technical and economical demonstration;
- e. An analysis of the economic gains and losses of the environmental impacts that may be caused by the construction project;
- f. Suggestions for carrying out environmental monitoring over the construction project;
- g. Conclusion of appraisal of the environmental impacts.

For a construction project which involves water conservancy, there shall be a plan of water conservancy which has been examined and approved by the administrative department of water.

1.1.7. if there is a need to change the project parameters, how is the re-assessment made? Is re-assessment partial or complete?

[Answer] Article 24 of the Law of the People's Republic of China on Environmental Impact Assessment specifies this.

Reference:

Article 24 If, after the environmental impact appraisal document of a construction project has been approved, either the nature or scale or venue or the production techniques employed or the measures for preventing pollution and preventing ecological damage has undergone substantial changes, the construction entity shall submit anew the environmental impact appraisal documents of the construction project for examination and approval.

In case five years has passed after the environmental impact document of a construction project is approved when it is decided to start the construction of the project, the environmental impact appraisal document thereof shall be submitted to the original examination and approval department for examination and approval anew. The original examination approval department shall, within 10 days after receiving the environmental impact appraisal document of the construction project, inform the construction entity of the opinions of examination in written form.

1.2. How are *pollution limits (quotas)* determined in your jurisdiction? Please consider any limits applicable to any component of the environment, such as water, air and soil. Who proposes the limits (the public authority itself, the experts nominated by the public authority and / or by the business entity etc.)? On what basis is the final decision made? Can the pollution limits be altered, and how?

[Answer] It is determined by environmental emission standards for the different industries.

1.3. Is the *best available technology / best practicable means / best practicable environmental option* methodology of pollution control applicable in your jurisdiction? If yes, to which objects or activities is it applicable? Were transitional procedures applicable when such methodology was applied on a first-time basis? What is the term limit and the procedure for review of best available technologies lists? What are the consequences of such review for existing enterprises?

[Answer] The Ministry of Environmental Protection has issued some guidelines on Best Available Technologies of Pollution Prevention and Control for different industries and different process. For different industries, the guidelines include thermal power plant and pulp and paper industry etc. For different processes, for example, four guidelines are made respectively regarding to coking, rolling, steel-making and mining and mineral process of the Iron and Steel Industry. Moreover, there are guidelines for Treatment and Disposal of Sludge from Municipal Wastewater Treatment Plant, and for Medical Waste Treatment and Disposal.

1.4. Are rules prescribing certain actions for environmental damage prevention purposes, i.e. *pollution risk management* rules, established in your jurisdiction? Please describe the procedure, e.g. to which facilities or activities in oil & gas industry do these rules apply? Who establishes the rules? What is the character of the rules? How are the rules connected with other regulations that protect human life, health and property? Is there an exemption from environmental damage recovery if such rules, as well as other applicable conditions (e.g. damage insurance coverage), are complied with?

1.5. Does your jurisdiction have the *pollution charges* that are obligatory for business entities, including the recycling duties? Who are the payers (manufactures, sellers, customers, waste management operators etc.) and how are the payable amounts determined (including the criteria, the rates, the timing, etc.)?

Article 43 of Environmental Protection Law of the People's Republic of China prescribes this.

Reference:

Article 43 Enterprises, public institutions, and other businesses that discharge pollutants shall pay pollutant discharge fees in accordance with the relevant provisions of the state. Pollutant discharge fees shall be all used for the prevention and control of environmental pollution. No entity or individual may withhold such funds or use such funds for similar or other purposes. No pollutant discharge fees shall be levied if environmental pollution tax has been levied according to the law.

1.6. What is the procedure of making an *environmental audit*? Who may / has to make such audit (the public authority itself, the experts nominated by the public authority and / or by the business entity, etc.)? Are these audits constant or are these made on a periodical / casual basis? Are any technical means of live monitoring used rather than human monitoring? What is being audited, the documents, the actual levels of pollution, or both? How are the costs determined, who bears the costs? What are the term limits for environmental audits? Are the pollution audits risk-based (e.g. are audits concentrated primarily on main contaminating substances)? How are environmental audits connected with other regulatory audits, such as industry regulations compliance?

1.7. Are there any rules on *target spending* with regard to funds collected from pollution charges, e.g. requirements for these funds to be spent exclusively for environmental needs? Are charges collected to budget or to other special funds? How is compliance by public authorities checked?

[Answer] Pollutant discharge fees shall be all used for the prevention and control of environmental pollution.

(II) Economical incentives for rational use of natural resources

Chapter VI of the Environmental Protection Law of the People's Republic of China (2014 Revision) is helpful for answering the following questions (2.1-2.7).

Chapter VI Legal Liability

Article 59 Where any enterprise, public institution, or other business is fined and ordered to make correction for illegally discharging pollutants but refuses to make correction, the administrative agency legally making the punishment decision may impose continuous fines on it in the amount of the original fine for each day from the next day after it is ordered to make correction.

The fine punishment as mentioned in the preceding paragraph shall be determined on the basis of factors such as the operation costs of pollution prevention and control installations, the direct losses caused by the illegal act and the illegal income as provided for by the relevant laws and regulations.

Based on the actual needs for environmental protection, the types of illegal acts subject to continuous daily fines as mentioned in the first paragraph hereof may be increased in local regulations.

Article 60 Where any enterprise, public institution, or other business discharges pollutants beyond the pollutant discharge standards or the total discharge volume control indicators of key pollutants, the environmental protection administrative department of the local people's government at or above the county level may order it to adopt measures such as restricting production or suspending business for rectification; and if the circumstances are serious, order it to terminate business or close down with the approval of the people's government with such approval power.

Article 61 Where any construction employer fails to submit the environmental impact assessment documents for its construction project according to the law or commences construction without permission before the environmental impact assessment documents are approved, the department with environmental protection supervision and administration functions shall order it to cease construction, and impose a fine on it, and may order restoration to the original state.

Article 62 Where, in violation of this Law, any pollutant discharging entity under intensified supervision fails to disclose or honestly disclose environmental information, the environmental protection administrative department of the local people's government at or above the county level shall order it to disclose the information, impose a fine on it, and issue a public announcement of the punishment.

Article 63 Where any enterprise, public institution, or other business commits any of the following acts, if no crime is constituted, in addition to imposing punishment in accordance with the provisions of relevant laws and regulations, the environmental protection administrative department or any other relevant department of the people's government at or above the county level shall transfer the case to the public security authority, which shall detain the directly liable person in charge and other directly liable persons for not less than 10 days but not more than 15 days; or, if the circumstances are relatively minor, for not less than 5 days but not more than 10 days:

(1) It refuses to comply with an order requiring it to cease construction of a construction project which has not undergone environmental impact assessment as legally required.

(2) It refuses to comply with an order requiring it to cease discharge of pollutants for its illegal discharge of pollutants without a pollutant discharge license.

(3) It illegally discharges pollutants by installing underground pipelines, using seepage wells or pits, conducting perfusion, or altering or forging monitoring data, through the abnormal operation of pollution prevention and control installations, or by other means to avoid supervision.

(4) It refuses to comply with an order requiring it to make correction for its production or use of pesticides which have been expressly prohibited by the state from production or use.

Article 64 Where any damage is caused by environmental pollution or ecological disruption, the tortfeasor shall assume tort liability in accordance with the relevant provisions of the Tort Law of the People's Republic of China.

Article 65 Where any environmental impact assessment institution, environmental monitoring institution, or institution engaging in the maintenance or operation of environmental monitoring equipment and pollution prevention and control installations makes falsification in the provision of relevant environmental services and is liable for the environmental pollution or ecological disruption caused, it shall assume joint and several liability with other parties liable for the environmental pollution or ecological disruption, in addition to punishment in accordance with the provisions of relevant laws and regulations.

Article 66 The time limitation for instituting an environmental action for damages shall be three years, starting from the time when a party knows or should have known the harm caused to the party.

Article 67 The people's governments at higher levels and the environmental protection administrative departments thereof shall strengthen supervision over the environmental protection work of the people's governments at lower levels and the relevant departments thereof, and, if they discover that any employees have committed any illegal acts for which disciplinary actions shall be taken according to the law, recommend disciplinary actions to the appointment and removal authorities or supervisory authorities for such employees.

Where the relevant environmental protection administrative department fails to impose administrative punishment as otherwise legally required, the environmental protection administrative department of the people's government at a higher level may directly make a decision to impose administrative punishment.

Article 68 Where a local people's government at any level or the environmental protection administrative department or any other department with environmental protection supervision and administration functions of a people's government at or above the county level commits any of the following acts, the directly liable person in charge and other directly liable persons shall be subject to a demerit, a major demerit, or demotion; and if the consequences are serious, they shall be

removed from office or expelled, and the primary person in charge thereof shall resign to assume the responsibility for the act:

(1) Granting any administrative license despite that the conditions for granting the administrative license are not satisfied.

(2) Harboring any environment-related illegal acts.

(3) Failing to make a decision to order cessation of business or closedown as otherwise legally required.

(4) Failing to investigate any discharge of pollutants beyond the prescribed standards, discharge of pollutants by means to avoid supervision, environmental accident, or ecological disruption caused by a failure to implement ecological protection measures and impose punishment in a timely manner, after discovering or receiving a report on it.

(5) Seizing or impounding any facility or equipment of any enterprise, public institution, or other business in violation of this Law.

(6) Altering or forging monitoring data or instigating others to do so.

(7) Failing to disclose environmental information as otherwise legally required.

(8) Withholding or using for similar or other purposes the pollutant discharge fees collected.

(9) Other illegal acts as specified by laws and regulations.

Article 69 Whoever is suspected of a crime for violating this Law shall be subject to criminal liability according to the law.

VII. Экологическое законодательство Индии

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Indian Environmental Law: Some observations

After achieving independence in 1947 from the two centuries long British colonial rule, India concentrated on achieving economic growth commensurate with the rising expectations of its large and ever-growing population. India while participating in the first ever 1972 Stockholm Conference on Environment, stressed the importance of economic growth while endorsing the call for protection of environment. It is largely due to the efforts of India and other developing countries, the concept of sustainable development emerged and continues to play its central role in the in all matters concerning development consistent with the protection of environment both at the domestic and international level. The issues currently surrounding climate change negotiations are an example of the same concern to balance protection of environment with the needs of development.

While focusing on its economic development, given the urgency of utilizing its rich natural resource base to sustain its status as an emerging economy¹⁵⁰, India has to contend with issues concerning protection of its environment raised with equal force, often involving delays and litigation at the state and national level. Acquisition of land for mining projects, displacement of people from lands as part of construction of hydro-electric dams, deforestation affecting the traditional lands, wildlife habitats and rights of indigenous people are contested with highly organized human right and environmental groups and litigation before courts. The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act 2006 and the Forest (conservation) Act 1980, as amended in 1988¹⁵¹, and Environment (Protection) Act of 1986 and the Environment (Protection) Rules, 1986 govern matters concerning environmental clearance

¹⁵⁰ According to one estimate, if current patterns of refined fuel consumption for its economic expansion and rising industrial activity yields, infrastructure improvements and increased energy access for commercial and retail consumers continue, India's fuel demand could rise to as much as 335 mn tonnes by 2030, and 472 mn tonnes by 2040, from about 194 mn tonnes last year (2017). India is the world's third largest oil consumer and importer. It plans to raise the capacity of its refineries by 77% of its present holding to about 8.8 mn barrels per day (bpd) to ensure nation's surplus production of diesel and gasoline last until 2035. See "India to raise refining capacity by 77% by 2030", Gulf Times Doha, Qatar, Business section, p.2, col.6, Saturday, February 10, 2018.

¹⁵¹ For the texts of these two Acts of 2006 and 1980 as amended in 1988, <http://www.moef.nic.in/division/forest-conservation>.

necessary for the acquisition of land including forest areas¹⁵². It is important to note in this connection that Article 5 of the Forest Rights Act vests the Gram Sabhas (Village Councils) and the forest dwellers with statutory rights to conserve, protect and manage forests, biodiversity, wildlife, water catchment areas and their cultural and natural heritage. The provisions of this Act could be modified only for conservation of critical wildlife habitats.

The Central Government also established in 1995, the National Environment Tribunal [through the National Environment Tribunal Act 1995] to provide for strict liability for damage arising out of accidents caused from the handling of hazardous substances¹⁵³. More importantly, the National Green Tribunal has been established on 18.10.2010 under the National Green Tribunal Act 2010 for effective and expeditious disposal of cases relating to environmental protection and conservation of forests and other natural resources including enforcement of any legal right relating to environment and giving relief and compensation for damages to persons and property and for matters connected therewith or incidental thereto¹⁵⁴. It is a specialized body equipped with the necessary expertise to handle environmental disputes involving multi-disciplinary issues. The Tribunal shall not be bound by the procedure laid down under the Code of Civil Procedure, 1908, but shall be guided by principles of natural justice.

The Tribunal's dedicated jurisdiction in environmental matters shall provide speedy environmental justice and help reduce the burden of litigation in the higher courts. The Tribunal is mandated to make and endeavour for disposal of applications or appeals finally within 6 months of filing of the same. Initially, the NGT is proposed to be set up at five places of sittings and will follow circuit procedure for making itself more accessible. New Delhi is the Principal Place of Sitting of the Tribunal and Bhopal, Pune, Kolkata and Chennai shall be the other 4 place of sitting of the Tribunal.

A number of important cases came up before the Supreme Court raising issues of environmental protection. One of the early cases in which the broad principles of good governance¹⁵⁵ and

¹⁵² For access to the various Acts governing environmental protection see, <http://www.moef.nic.in/division/environment-protection>.

¹⁵³ <http://www.moef.nic.in/rules-regulations/national-environment-tribunal>.

¹⁵⁴ <http://www.moef.nic.in/rules-regulations/national-green-tribunal-ngt>.

¹⁵⁵ The Supreme Court in this case also examined the deficiencies in the Judicial and technical inputs in the appellate system under some of our existing environmental laws. Different statutes in our country relating to environment provide appeals to appellate authorities. It emphasized the importance of good governance which includes the need for the State to take the necessary 'legislative, administrative and other actions' to implement the duty of prevention of environmental harm, as noted in Article 7 of the draft approved by the Working Group of the International Law Commission in 1996. (See Report of Dr.Sreenivasa Rao Pemmaraju, Special Rapporteur of the International Law Commission dated 3.4.1998 on 'Prevention of transboundary damage from hazardous activities') (paras 103, 104). "Of paramount importance, in the establishment of environmental Courts, Authorities and Tribunals, the judgment

environmental protection were emphasized was the *A.P. Pollution Control Board vs Prof.M.V.Nayudu (Retd.) & Others* on 27 January, 1999. In that case, the Supreme Court of India first reiterated the important findings of its decision by a three judge bench *In Vellore Citizens' Welfare Forum vs. Union of India and Others* [1996 (5) SCC 647], which stated, after referring to the relevant constitutional and statutory provisions of India, that “we have no hesitation in holding that the Precautionary Principle and the Polluter Pays Principle are part of the environmental law of the country.” Further, the Court observed that even otherwise the above- said principles are accepted as part of the customary international law and hence there should be no difficulty in accepting them as part of our domestic law. In fact, on the facts of the case before this Court, it was directed that the authority to be appointed under section 3(3) of the Environment (Protection) Act, 1986 “shall implement the ‘Precautionary Principle’ and the ‘Polluter Pays Principle’.

Noting that the learned Judges in the Vellore Citizens’ Welfare case also observed that the new concept which places the Burden of Proof on the Developer or Industrialist who is proposing to alter the status quo has also become part of our environmental law, the judgment in *M.V.Naidu* case went further. Citing the work of the International Law Commission (in particular the Report of Dr. Sreenivasa Rao Pemmaraju, Special Rapporteur, International Law Commission, dated 3.4.1998, page 61), and noting the principle of precaution, which suggested that where there is an identifiable risk of serious or irreversible harm, including, for example, extinction of species, widespread toxic pollution in major threats to essential ecological processes, the judgment declared that it may be appropriate to place the burden of proof on the person or entity proposing the activity that is potentially harmful to the environment.

In addition, economic development projects including mining leases are subject to India’s obligations under various international treaties on human rights to which it is a party. Mention may be made in this connection to the UN International Covenant on Civil and Political Rights, the UN Convention on the Elimination of All Forms of Racial Discrimination, the Convention on Biological Diversity and the UN Declaration on the Rights of Indigenous People.

noted, is the need for providing adequate Judicial and scientific inputs rather than leave complicated disputes regarding environmental pollution to officers drawn only from the Executive”. This case is a landmark case in that it not only reiterated the law laid down by the earlier Supreme Court cases, for example, *M.C.Mehta vs. Union of India and Shriram Foods & Fertilizers Case* [1986 (2) SCC 176, but laid firm foundations for the protection of environment under Indian case law that has since evolved. For the *M.V.Naidu* case, see <https://indiankanoon.org/doc/764031/>. For a more recent case in this regard see the judgment of the National Green Tribunal in the case of *Himmat Singh Shekhawat & Ors. Vs. State of Rajasthan & ors.* in Original Application No. 123 of 2014 decided on 13th January, 2015. Available at Ministry of Environment, Forests, & Climate Change website www.moef.nic.in and the NGT website.

To illustrate the matters noted above, it is useful to note the case of Vedanta Alumina Ltd (VAL) in respect of a bauxite mining project in the state of Orissa, India. The project suffered major setbacks as the Indian government withdrew the permission for bauxite mining in Niyamgiri hills and issued a show cause notice under Environment protection act in 2010 for undertaking construction activity without obtaining environmental clearance for its alumina expansion project at Lanjigarh in Kalahandi district in Orissa¹⁵⁶.

Policy governing the Indian Oil and Gas Sector

The broad vision behind this the Indian policy has been to create a regime to reduce dependence on imports and reliably meet energy demands with safe, clean and convenient energy at minimum cost. Towards this end India adopted an integrated energy policy in 2008, providing a collective policy regime covering all sources of energy. To supplement this, the government and several states have adopted policies promoting clean and renewable energy.

Originally, oil and gas sector was entirely controlled by the Government of India through its public sector undertakings. However, since 1999, this sector is now open to both public and private sector companies. As part of implementation of this policy, concessions for explorations of oil and gas have been awarded through international competitive bidding, where even the national oil companies must compete on an equal footing with domestic and foreign companies. Further, to facilitate foreign participation, the government has permitted 100% foreign direct investment in the oil and gas sector¹⁵⁷. National oil companies account for 70% of the total oil produced in India, with the remaining 30% coming from private/joint venture companies.

While export of oil and gas is not restricted by legislation, the production sharing contracts entered into between the Indian government and oil and gas companies require every company producing oil and gas in India to sell its entitlement to crude oil and condensate from its contract area to the domestic market to first satisfy domestic demand as determined by the Indian government. In this connection, it may be noted that despite being a net importer of crude oil, India is a net exporter of petroleum products due to significant investments in refineries designed for export, particularly in the state of Gujarat. India is more self-sufficient with regard to natural gas than oil because domestic production satisfies about 60% of its requirements. There have been promising recent discoveries of shale gas reserves that may play an important role in meeting India's energy requirements. On the whole, India is dependent on imports for about 80.2% of its

¹⁵⁶ See Leena Ajit KAUSHAL, "A Case Study on Vedanta Alumina Ltd (VAL) Orissa India: State and FDI versus Democracy?", *Valahian Journal of Economic Studies*, Volume 8(22), Issue 1, 2017. DOI 10.1515/vjes-2017-0012.

¹⁵⁷ The Indian government has adopted policies such as allowing 100 per cent foreign direct investment (FDI) in many segments of the oil and gas sector such as refineries, pipelines, petroleum products, natural gas and infrastructure related to the marketing of petroleum products.

oil requirements and 40% of its natural gas requirements. Remaining oil and gas requirements are met by domestic production.

To expedite self-sufficiency in energy sector, the government has introduced the new Hydrocarbon Exploration and Licensing Policy (HELP) 2016 with the objective of enhancing domestic oil and gas production, encouraging investment and generating employment. The new Hydrocarbon Exploration and Licensing Policy (HELP) 2016 includes:

Uniform licensing. A uniform system covering all hydrocarbons under a single licence (such as oil, gas, coal-bed methane, shale gas/oil, tight gas and gas hydrates).

Marketing and pricing freedom. Departing from earlier policies, the HELP proposes marketing and pricing freedom for the oil and gas produced.

Open acreage licensing policy. Hydrocarbon companies can select exploration blocks throughout the year without waiting for the formal bid round from the government.

Revenue sharing model. The present fiscal system of production sharing contracts will be replaced by revenue sharing contracts that will be simple, easy to administer and have operational freedom.

Apart from HELP, the government also adopted the Marginal Field Policy in 2015 to bring marginal fields belonging to national oil companies (which have not been monetised for reasons such as isolated locations, being too small, unfavourable fiscal terms and so on) to production as soon as possible. The first round of auctions for discovered small and marginal fields (67 fields, clubbed together into 46 contract areas) started in July 2016 and will conclude in October 2016.

Regulatory Framework governing the Indian Oil and Gas sector

The Indian Constitution accords legislative powers to both the Central/Federal Government as well as to the state governments. However, only the federal government is empowered to make laws relating to regulation and development of oil fields and mineral oil resources, petroleum and petroleum products¹⁵⁸. The Oilfields (Regulation and Development) Act 1948 and the Petroleum and Natural Gas Rules 1959, together, regulate the grant of petroleum mining leases and provide the provisions for regulating petroleum operations and granting licences and leases for exploration,

¹⁵⁸The power of Parliament to legislate in these matters to the exclusion of States in the Union of India has been consistently upheld by courts in India. *Satish Maganlal Vora v. Union of India & Ors.* L.P.A. No. 692 of 2000, *Babubhai Jashbhai Patel & Ors. v. Union of India & Ors.* Special Civil application No. 2912 of 1982. See also *Reliance Natural Resources Limited v. Reliance Industries Limited* (2010) 7 SCC 1 for a discussion on ‘natural resources’: http://www.nishithdesai.com/fileadmin/user_upload/pdfs/Research%20Papers/Oil_and_Gas_Industry_in_India.pdf, page 7, fn.47.

development and production of petroleum in India¹⁵⁹. It is interesting to note that while the federal government is the sole authority to manage national oil and gas resources, the Supreme Court of India has held that natural resources (including oil and gas) are vested in the government as a matter of trust in the name of the people of India and must always be used in the interest of the country, and not for private interests (*Reliance Natural Resources Ltd v Reliance Industries Ltd (2010) 7 SCC 1*).

The Ministry of Petroleum and Natural Gas manages and oversees upstream¹⁶⁰ oil and natural gas exploration and production. The Directorate General of Hydrocarbons is the agency vested with the responsibility of promoting sound management of Indian petroleum and natural gas resources with due regard to environmental, safety, technological and economic aspects of petroleum activities. While oil and gas exploration rights are granted to investors using either a production sharing or revenue sharing contract. Currently, the revenue sharing contract regime applies to concessions for coal-bed mining fields and the government is proposing to use it for small and marginal field blocks (for which bidding is currently underway). Under the new 2014 Hydrocarbon Exploration and Licensing Policy, revenue sharing will replace the production sharing.

Health, safety and the environment

India has a robust legislative framework for health and safety irrespective of the industry involved. The Factories Act 1948 (Factories Act) and its rules serve as the primary legislation for ensuring health and safety at work. The Factories Act imposes criminal liability on both companies and individuals who breach its provisions. The penalties include monetary fines and imprisonment.

In addition, there are specific laws and regulations on safety in the oil and gas sector, such as:

- Petroleum and Natural Gas (Safety in Offshore Operations) Rules 2008.

¹⁵⁹ For a brief discussion of different laws governing oil and gas exploration and production, see Oil and Gas Industry in India, Id., pp.7-9.

¹⁶⁰ The oil and gas sector consists of three segments—upstream, midstream and downstream. The upstream segment primarily comprises companies that are engaged in exploration and production activities, while the midstream segment comprises of players in storage and transportation, and the downstream segment comprises of players that are engaged in refining, processing and marketing of petroleum products. See Figure 3 which highlights the credentials of leading players in each segment (upstream, midstream and downstream) of the oil and gas industry. The Indian oil and gas sector is highly regulated and largely state controlled. Among other initiatives, the Petroleum and Natural Gas Regulatory Board was formulated to ensure the smooth supply of petroleum and petroleum products throughout the country at regulated prices. This body was also tasked with enabling pipeline development, and regulating the midstream and downstream segments of the oil and gas sector. The oil and gas sector is dominated by PSUs and a few large private sector companies.

<https://www.ibef.org/download/Oil-Gas-Sector-040213.pdf>.

- PNGRB (Technical Standards and Specifications including Safety Standards for City or Local Natural Gas Distribution Networks) Regulations 2008.

The Oil Industry Safety Directorate is a technical directorate under the Ministry of Petroleum and Natural Gas. It formulates and co-ordinates the implementation of a series of self-regulatory measures aimed at enhancing safety in the oil and gas industry. Under the Production Sharing Contract, Union Govt. and the contractor recognizing that petroleum operations cause some impact on the environment, have to conduct petroleum operations with due regard to concerns with respect to protection of the environment and conservation of natural resources ¹⁶¹

Further, all projects involving offshore and onshore oil and gas exploration, development and production need prior environmental clearance, as per the Environmental Impact Assessment Notification 2006. Before commencing E&P, it is mandatory to conduct an Environmental Impact Assessment (“EIA”) for the project site, in accordance with the Environmental Impact Assessment Notification, 1994¹⁶². Subsequently, a proposal has to be submitted to the Ministry of Environment and Forests (“MoEF”), Union Govt. outlining the details relating to the drilling activity, the co-ordinates of drilling, and EIA report along with public hearing report. The first of the aforementioned studies has to be carried out in two parts, namely, a preliminary part which has to

¹⁶¹ The Contractor is obliged in this regard to: i) employ modern oilfield and petroleum industry practices and standards including advanced techniques, practices and methods of operation for the prevention of environmental damage in conducting its petroleum operations; ii) take necessary and adequate steps to: a) prevent environmental damage and, where some adverse impact on the environment is unavoidable, to minimize such damage and the consequential effects thereof on property and people; b) ensure adequate compensation for injury to persons or damage to property caused by the effect of petroleum operations; and iii) comply with the requirements of applicable laws and the reasonable requirements of the Union Govt. from time to time; iv) In case of failure to comply with the above steps; the contractor has to remedy the failure.

¹⁶² The EIA involves the following stages:

- Screening. The project plan is screened to see whether it requires environmental clearance.
- Scoping. This is the process detailing the EIA's terms of reference.
- Public consultation. The concerns of local affected persons and others who have a plausible stake in the environmental impact of the project or activity are ascertained, taking into account all material concerns in the project or activity design.
- Appraisal. This involves detailed scrutiny of the application and other documents by the appraisal committee. The Environmental Clearance procedure was thoroughly restructured through issuance of said Environmental Clearance Notification by MoEF, New Delhi for making the environmental clearance procedure more transparent, less time consuming and decentralized as much as possible. Under this restructured Environmental Clearance notification, the industrial / developmental activities, which may cause serious spatial and temporal environmental impacts, have been scheduled to obtain prior Environmental Clearance. And also it has been decided that such activities shall be classified as category A or category B type projects. The existing Expert Appraisal Committees at central level at Ministry of Environment & Forests, New Delhi, shall screen - scope - appraise category A projects. Each state shall constitute State Environment Impact Assessment Authority (SEIAA) and the State Expert Appraisal Committee (SEAC) for carry out similar environmental procedure at State level. The SEIAA shall grant or refuse Environmental Clearance to any B type project after screening - scoping – appraisal of Environmental Clearance applications at state level. On the Indian EIA procedures, see section 3.5, *Unit 3: Environmental Impact Assessment (EIA)*.

be concluded before commencement of any field work relating to a seismographic or other survey, and a final part relating to drilling in the exploration period. The part of the study relating to drilling operations in the exploration period has to be approved by Union Govt. before the commencement of drilling operations, and such approval is not generally unreasonably withheld. The second of the aforementioned studies shall be completed before commencement of development operations and shall be submitted by the contractor as part of the development plan, with specific approval of Union Govt. being obtained before commencement of development operations, and such approval is not generally unreasonably withheld. The MoEF subsequently approves the project if they are satisfied that all requirements are met. Exploration surveys (not involving drilling) are exempt if the concession areas have had previous clearance for a physical survey.

In addition to environmental clearance, there are several other permits needed to extract or process oil and gas. They include:

Certificate of no objection and consent to operate and establish from the relevant State Pollution Control Board under the Air (Prevention and Control of Pollution) Act 1981 and the Water (Prevention and Control of Pollution) Act 1974.

Authorisation from the State Pollution Control Board under the Hazardous Wastes (Management, Handling and Trans-boundary Movement) Rules 2016 for generating, processing, treating, packaging, storing and transporting waste (generated from drilling for oil and gas).

A licence to possess and store explosives from the Petroleum and Explosive Safety Organisation under the Explosives Act 1884 and Explosives Rules 2008.

The permit or licence can set out specific conditions to be complied with.

In the recent years, the Supreme Court of India has taken a proactive role in enforcing environmental legislations. For instance, the Supreme Court developed the concept of "absolute liability" under which enterprises engaged in hazardous or inherently dangerous activities can be absolutely liable to compensate those affected by an accident (such as the accidental leakage of toxic gas). This liability will not be subject to any of the exceptions under the tortious principle of strict liability.

In addition, there are regulations on the disposal of waste products resulting from oil or gas extraction or processing include:

- Air (Prevention and Control of Pollution) Act 1981.
- Water (Prevention and Control of Pollution) Act 1974.
- Environment Protection Act 1986.

- Environment Protection Rules 1989.
- Hazardous Wastes (Management, Handling and Trans-boundary Movement) Rules 2016.
- Oil Mines Regulations 1981.
- Oil Field (Regulation and Development) Act 1948.
- Petroleum and Natural Gas Rules 1959.
- Coastal Regulation Zone Notification 2011.

The Indian government has also issued the following supplementary guidance:

- Guidelines for Discharge for Gaseous Emissions by Oil Drilling and Gas Extraction Industry 1996.
- Standards for Liquid Discharge by Oil Drilling and Gas Extraction Industry 1996.
- Guidelines for Disposal of Solid Waste by Oil Drilling and Gas Extraction 1996.

Flaring and venting in the oil and gas industry is regulated under the Environment Protection Rules 1986 and Oil Mines Regulations 1984. Under the Oil Mines Regulations, gas produced at any installation cannot be discharged into the atmosphere unless it complies with certain set standards. The Environment Protection Rules provide that all gaseous emissions must be flared (not cold). Elevated flares must be used except where it might affect crop production in adjoining areas.

Decommissioning

The Petroleum and Natural Gas Rules provide that on termination of the exploration licence or mining lease, the area and any wells contained in it must be delivered in good order and condition to either the Indian or state government, whichever is relevant. For six months after the licence or lease ends, the former licensee or lessee can remove or dispose of any petroleum recovered during the licence or lease period, along with stores, equipment, tools and machinery and any improvements on the land covered by the licence or lease that the state government permits. Consent must be obtained from the Indian government for any transaction in excess of US\$50,000.

If the petroleum, stores, equipment, tools, machinery and improvements are not removed or disposed of, they can be sold at auction. The proceeds of the sale will be held by the Indian or state government until the former licensee or lessee applies for them to be released.

Production sharing and revenue sharing contracts provide that if the contractor fails to fulfil its environmental obligations and duties, its liability will be limited to any damage to the environment

that occurred after the effective date of the contract. Damage must result from the contractor's act or omission.

Enforcement of regulation

The Ministry of Petroleum and Natural Gas manages and oversees upstream oil and natural gas exploration and production. The Directorate General of Hydrocarbons (DGH) is the technical arm of the ministry and acts as a regulatory body having oversight on all concessions relating to oil and gas including coal bed methane, shale gas etc¹⁶³. There is no independent regulator for upstream sector. With respect to the midstream and downstream sector, the Petroleum and Natural Gas Regulatory Board (PNGRB) is a separate regulator constituted under the Petroleum and Natural Gas Regulatory Board Act 2006¹⁶⁴. The powers of the PNGRB *inter alia* includes adjudicating upon the complaints and resolution of disputes in relation to activities pertaining to petroleum and petroleum products such as refining, processing, storage, transportation, marketing and distribution etc. The PNGRB has the power to investigate and can impose civil penalty.

Fines and penalties

Contravening the directions of the PNGRB is punishable with a fine up to INR250 million. A continuing contravention carries an additional fine up to INR1 million for every day the

¹⁶³ DGH was established under Regulation No.O20013/2/92-ONG, D-III, Union Govt. Ministry of P&NG, dated 8th April, 1993.95 The DGH, under the administrative control of the Ministry of PNG, is responsible for the environmental, safety, technological, and economic activities related to the oil and gas industry. The DGH facilitates E&P activities through regulation as well as research. In unexplored or poorly explored areas, the DGH conducts studies, surveys, information drilling, and other related activities.96 The DGH reviews the exploration programs and reservoir production of companies for adequacy and advises the Union Govt. on such activities.97 Further, the DGH oversees matters concerning production sharing contracts for discovered field and exploration blocks. To ensure compliance with Ministry of Defence guidelines, DGH scientists remain onboard all of the seismic vessels and deep water drilling rigs during operation.

¹⁶⁴ The Regulatory Board is empowered to regulate the refining, processing, storage, transportation, distribution, marketing and sale of petroleum and petroleum products and natural gas, and to foster fair trade and competition amongst oil and gas companies.100 The Regulatory Board registers entities to market petroleum and natural gas products, establish and operate liquefied natural gas terminals, and establish storage facilities for petroleum, petroleum products, or natural gas that exceed capacity specified by regulations. Further, the Board is responsible for authorizing pipeline development. Unless otherwise provided for arbitration in the relevant agreement, the Regulatory Board has the power to adjudicate a dispute arising out of (a) refining, processing, storage, transportation and distribution of petroleum, petroleum products and natural gas by the entities; (b) marketing and sale of petroleum, petroleum products and natural gas including the quality of service and security of supply to the consumers by the entities; and (c) registration or authorization issued by the Regulatory Board under Section 15 or Section 19 of PNG Act.10. The Appellate Tribunal established under Section 110 of the Electricity Act, 2003 is the Appellate Tribunal for the purposes of PNG Act and the Appellate Tribunal exercises jurisdiction, powers and authority conferred on it by under the PNG Act.102 Further, under Section 37 of the PNG Act, an appeal shall lie against any order, not being an interlocutory order, of the Appellate Tribunal to the Supreme Court on one or more of the grounds specified in Section 100 of Civil Procedure Code (“CPC”). However, no appeal shall lie against any decision or order made by the Appellate Tribunal with the consent of the parties. The limitation for filing an appeal before Supreme Court is 90 days.

contravention continues. In addition to the above, there are specific penalties prescribed for wilful breach and unauthorised activities, among others.

An appeal can be made against an order from the Petroleum and Natural Gas Regulatory Board (PNGRB) to the appellate tribunal constituted under the Electricity Act 2003. Appeal to the tribunal must be made within 30 days from the date on which a copy of the direction or order from the PNGRB is received. An appeal against an order from the appellate tribunal must be taken to the Supreme Court of India.

Under the Indian constitution, the Supreme Court and the High Court have the writ jurisdiction and they can judicially review all governmental actions. A party aggrieved by any action of the governmental authorities including the decisions of the regulators can approach the Supreme Court or High Court and seek appropriate writ remedy.

As per Section 26 of the Oil Development Act, 1984, no court inferior to that of a metropolitan magistrate or a magistrate of the first class has the jurisdiction to try any offence punishable under Oil Development Act. Also, no prosecution for any offence punishable under the Oil Development Act shall be instituted except with the previous sanction of the Union Government. Finally, no suit, prosecution or other legal proceeding shall lie against the Union Govt. or the Regulatory Board or any committee constituted by the Regulatory Board or any member of the Regulatory Board or of such committee or any officer or other employee of the Union Govt. or of the Regulatory Board or any agent of or any other person authorized by the Central Government or the Board, for anything which is in good faith done or intended to be done under Oil Development Act or the rules made thereunder.

Information on the subject under various websites

On the Indian environment law and cases material enclosed with the mail.

For statistics on India oil and gas sector and regulatory framework, see

[https://uk.practicallaw.thomsonreuters.com/4-635-5648?transitionType=Default&contextData=\(sc.Default\)&firstPage=true&bhcp=1](https://uk.practicallaw.thomsonreuters.com/4-635-5648?transitionType=Default&contextData=(sc.Default)&firstPage=true&bhcp=1).

For a detailed analysis of legal and regulatory aspects of the Indian oil and gas sector, see https://www.google.com/search?q=oil+and+gas+regulation+in+India&rlz=1C1OPRB_enQA587QA588&oq=oil+and+gas+regulation+in+India+&aqs=chrome..69i57j69i6113j0l2.22119j0j4&sourceid=chrome&ie=UTF-8.

http://www.nishithdesai.com/fileadmin/user_upload/pdfs/Research%20Papers/Oil_and_Gas_Industry_in_India.pdf.

For various enactments that regulate the Oil and Gas sector in the USA,

- i. Clean Water Act (CWA)
- ii. Resource Conservation and Recovery Act (RCRA)
- iii. Safe Drinking Water Act (SDWA)
- iv. Oil Pollution Act (OPA)
- v. Federal Clean Air Act (CAA).
- vi. Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

and their impact on Environmental Regulation of the Oil and Gas Industry, with reference to a CASE STUDY: PIONEER NATURAL RESOURCES – THE RESPONSE OF A LARGE INDEPENDENT, see

<http://www.kentlaw.edu/faculty/fbosselman/classes/energyF09/Coursedocs/WalkerErinEnvironmental%20Regulation%20of%20the%20Oil%20and%20Gas%20Industry.pdf>.

On the role of oil and gas industry in the economic growth of India, with an expected growth rate of 7% resulting in doubling India's per capita energy consumption over the next 20 years, and an analysis of policy options India is pursuing, see

<https://www.ibef.org/download/Oil-Gas-Sector-040213.pdf>.

For US laws and regulations applicable to oil and gas production, see

<https://teeic.indianaffairs.gov/er/oilgas/legal/index.htm>.

[Welcome to Petroleum and Natural Gas Regulatory Board, India](http://www.pngrb.gov.in/)

www.pngrb.gov.in/

Of Petroleum, Petroleum Products And Natural Gas. Processing. Transportation. Distribution. Marketing. Sale ...

[India's upstream needs independent regulator - Oil & Gas Journal](http://www.ogj.com/articles/print/.../india-s-upstream-needs-independent-regulator.html)

www.ogj.com/articles/print/.../india-s-upstream-needs-independent-regulator.html

Feb 6, 2017 - Offering technical advice to MoPNG on issues relevant to exploration and optimal exploitation of **oil and gas** reserves in **India** and abroad. ... Regulating data preservation and storage, including samples pertaining to petroleum exploration, drilling, and production.

Regulatory Regime for Oil and Gas Industry in India - The Lex-Warrier

Oct 6, 2013 - **India** has always had a rich and long history in **Oil & Gas** sector. Primarily, **oil** was struck at Makum in Assam in the year 1867. Then, first **oil** discovery put to commercial benefit was made in Digboi in 1889. In the times of pre-independent **India**, the Assam **Oil** Company and Attock **Oil** Company were the only ...

Home | Ministry of Petroleum and Natural Gas | Government of India

petroleum.nic.in/

MINISTRY OF PETROLEUM AND NATURAL GAS (PETROLEUM AUR PRAKRITIK GAS MANTRALAYA) - Exploration for and exploitation of petroleum resources ... supply, distribution, marketing and pricing of petroleum including natural **gas**, coal bed methane and petroleum products, **Oil** refineries, including Lube Plants, ...

[PDF]Oil and Gas Industry in India - Nishith Desai Associates

Oil & Gas Regulation 2017 | Laws and Regulations | India | ICLG

<https://iclg.com/practice-areas/oil-and-gas-regulation/oil-and-gas-regulation.../india>

Apr 1, 2017 - **Oil & Gas Regulation in India** covering issues of Overview of Natural **Gas** Sector, Overview of **Oil** Sector, Development of **Oil** and Natural **Gas**, Transportation.

Legal Aspect Of Oil And Gas Sector - Manupatra Articles

The **Indian oil and gas** sector is one of the six core industries in **India** and has very significant forward linkages with the entire economy. ... Oil Fields (**Regulation** and Development) Act, 1948 and the Petroleum and Natural Gas Rules, 1959 provided **regulatory** framework for domestic exploration and production of Oil & Gas.

Oil and Natural Gas | National Portal of India

Jun 19, 2017 - The Oil Industry Safety Directorate is a technical directorate under the Ministry of Petroleum and Natural Gas that formulates and coordinates the implementation of a series of self-**regulatory** measures aimed at enhancing the safety in the **oil and gas** industry in **India**.