
Marine Pollution from the Offshore Oil and Gas Industry: Review of Major Conventions and Russian Law (Part I)

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ABSTRACT

This article discusses provisions of major international and regional conventions that regulate marine pollution arising from offshore petroleum exploration and production, and examines the Russian environmental regime for offshore oil and gas operations. The article analyses existing federal environmental legislation in Russia, its application to the offshore petroleum industry, and the Russian administrative structure overseeing the ecological regime. The article also briefly discusses sources of marine pollution from offshore activities, and provides an overview of the Russian offshore industry and offshore hydrocarbon resources on the Russian continental shelf. The purpose of this article is to introduce readers to the legal framework for environmental and offshore petroleum regulation in Russia, determine whether Russian law adequately deals with pollution from offshore operations, and provide an update on the present position of international law on this issue. The international regime is discussed in Part I of the article and the Russian regulatory system will be examined in Part II.

Introduction

The increasing global demand for energy resources and major advances in technology have resulted in a transformation of the oil and gas industry. In recent years, there has been a significant shift of petroleum operations from land to offshore locations. Areas that once were beyond human reach are now becoming the

centres of large-scale energy projects.¹ The industry has developed a diversity of offshore platforms and drilling rigs, which are now a common feature of many continental shelves around the world.²

The constant growth of the offshore petroleum industry has raised many important questions, including its impact on marine ecosystems and biological resources. Different views exist on this issue. Some believe with confidence in the industry's environmental safety, while others totally disagree and offer the darkest forecasts.³ Considering the potential adverse impacts on the marine environment, a greater level of environmental protection may be required. This can be achieved through effective international or regional regulation, supported by appropriate national laws.

The general trend towards offshore oil and gas production can be seen in Russia as well, because the potential recoverable hydrocarbon resources of the Russian continental shelf are enormous.⁴ As a petroleum-producing country with intensively progressing offshore developments, Russia faces a real threat of increasing pollution of its marine environment resulting from offshore activities. Therefore it is critical for Russia to have an effective domestic regulatory regime for the offshore industry that would provide satisfactory environmental protection to its coastal ecosystems. In addition, Russia needs to address this important issue by actively participating in the development of international and regional legal instruments on conservation of the marine environment.

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Marine Pollution From Offshore Operations

The offshore oil and gas industry currently accounts for only one to two per cent of total marine pollution, which is quite low compared to other sources of marine pollution.⁵ However, there is a risk that pollution levels will increase due to the rapid expansion of offshore operations. Although the industry has maintained a relatively good pollution record to date, it still remains a high-risk industry with potential to cause serious damage to the marine environment.⁶ In fact, marine pollution can be linked to all activities at any stage of an offshore oil and gas development.⁷

Geological Surveying

The impact on the marine environment starts during the first stage of offshore operations – geological surveying of the seabed. Many marine animals possess hearing organs designed to detect low-frequency sounds.⁸ Intense seismic wave impulses may destroy or harm sound detection organs of marine animals, or alter their important behaviours involving sound production.⁹ Electro-surveys may also cause harm to the marine environment, but they are not as common as seismic exploration.¹⁰

Exploration and Production

The most adverse environmental impacts usually occur during the exploration and production stages. Offshore activities such as platform emplacement (Figure 1), dredging, pipe-laying, and construction of support facilities cause physical disturbances and produce various emissions and discharges of pollutants into the sea.¹¹ Pollution hazards also come from disposal of sewage and garbage from offshore platforms, flaring of natural gas,

and discharges of produced formation waters into the sea.¹² However, the greatest pollution hazard comes from offshore drilling. Drilling operations are always associated with discharges of drilling fluids, muds and drill cuttings.¹³ Discharges of various substances into the sea pose a significant ecological threat because they may have chronic and deteriorating effects on the marine environment.¹⁴

Decommissioning

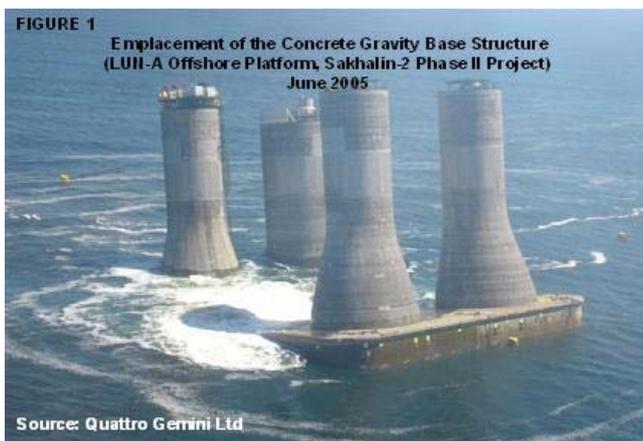
Abandoned offshore installations may also create environmental hazards and interference with navigation.¹⁵ There is always the risk that a decommissioned platform will shift from its original position at some future time.¹⁶ The removal of fixed offshore platforms weighing thousands of tons is very difficult and virtually impossible without using explosive materials. Undoubtedly, explosions created during the removal process have negative impacts on the marine environment.¹⁷

Accidents and Intentional Acts

The significance and potential magnitude of pollution resulting from accidents should not be underestimated. Pollution may be caused by events such as oil spills from offshore installations damaged by storm or by ships, leakages from ruptured pipelines, oil well blowouts, as well as accidental fires and explosions.¹⁸ Although the risks of an accident occurring during offshore operations have been reduced due to state of the art technology employed by the industry,¹⁹ when major accidents do occur they may result in the loss of human life, injury, destruction of expensive equipment, and serious pollution with catastrophic long-term impacts on marine ecosystems.²⁰ In addition to accidental pollution, environmental harm may be caused by intentional discharges of oil from offshore platforms,²¹ or by unlawful acts such as terrorist attacks, sabotage, or arson.²² These illegal activities also pose a significant pollution risk to the marine environment.

Summary of Environmental Impacts

Unless major improvements are made in energy efficiency, the offshore industry will continue to grow, together with levels of pollution associated with the industry.²³ To solve these



environmental problems, it is necessary to create conditions that would allow the maximum recovery of hydrocarbons with minimal disturbance of the marine environment.²⁴ As stated above, the solution may be achieved through effective regulation at international, regional, and national levels. The next section of this article examines international and regional conventions that regulate marine pollution from offshore petroleum exploration and production.

International and Regional Conventions

International law plays a significant role in the rational use of marine resources and protection of the marine environment from pollution. In customary international environmental law there is a fundamental obligation for states not to pollute the surrounding environment.²⁵ Today, apart from customary international legal principles, the issue of marine pollution is addressed through international and regional conventions, as well as other legal instruments.²⁶ However, only a limited number of legal provisions dealing with pollution from offshore installations can be found in international conventions.²⁷

UNCLOS 1982

*UNCLOS*²⁸ authorises coastal states to build offshore installations on the continental shelf and in the exclusive economic zone, and exercise jurisdiction over these installations.²⁹ The convention contains a number of general and specific provisions relating to protection of the marine environment from harmful effects of activities such as construction, operation, and maintenance of offshore platforms.³⁰ In particular, the convention requires states to take steps to minimise marine pollution from offshore installations,³¹ make efforts to implement national laws and standards regulating seabed activities,³² cooperate globally and regionally in formulating international rules and standards for protection of the marine environment,³³ enforce effective international standards,³⁴ and establish adequate compensation for damage caused by pollution to the marine environment.³⁵ It also refers to pollution prevention and control measures, practices of dealing with emergencies, as well as safety of the design, construc-

tion, and operation of offshore installations.³⁶ *UNCLOS* establishes a comprehensive general international framework with respect to prevention of marine pollution resulting from seabed activities such as exploration and exploitation of hydrocarbons. However, it does not set any definite or specific standards, but instead, encourages coastal states to develop national laws.³⁷ There are also uncertainties as to whether *UNCLOS* authorises the extension of general national environmental legislation to the exclusive economic zone and extended continental shelf.³⁸

London Convention 1972

The *1972 London Convention*³⁹ is a very important convention that addresses prevention of marine pollution. It prohibits dumping of wastes or other matter listed in [its] Annex I, and requires a prior permit for the dumping of all other wastes or matter.⁴⁰ The *Convention* covers dumping from offshore platforms and other man-made structures including any deliberate disposal of offshore platforms, but does not cover disposal during normal operations of platforms.⁴¹ Under this *Convention* dumping may be conducted where it is necessary to minimise the likelihood of damage to human or marine life.⁴² The *1996 Dumping Protocol*,⁴³ which recently entered into force and superseded the *1972 London Convention*,⁴⁴ is more restrictive than the *Convention* as it adopts a 'precautionary approach' and a 'reverse list approach'. The precautionary approach requires that appropriate preventive measures are taken when there is reason to believe that wastes or other matter introduced into the marine environment are likely to cause harm, even when there is no conclusive evidence establishing a link between inputs and their effects.⁴⁵ The reverse list approach prohibits all dumping unless it is explicitly permitted in the approved list.⁴⁶ This effectively limits a range of waste materials that may be disposed of at sea, and presents a new approach to regulating the use of the sea as a depository of wastes.⁴⁷ In addition, the definition of 'dumping' in the *1996 Protocol* has a wider coverage than its earlier version.⁴⁸ [Figure 2 lists parties to the *1972 London Convention* and the *1996 London Protocol*.]

Parties to the 1972 London Convention

Afghanistan	Kenya
Antigua & Barbuda	Kiribati
Argentina	Libyan Arab Jamahiriya
Australia	Luxembourg
Azerbaijan	Malta
Barbados	Mexico
Belarus	Monaco
Belgium	Morocco
Bolivia	Nauru
Brazil	Netherlands
Canada	New Zealand
Cape Verde	Nigeria
Chile	Norway
China	Oman
Costa Rica	Pakistan
Cote d'Ivoire	Panama
Croatia	Papua New Guinea
Cuba	Peru
Cyprus	Philippines
Dem. Rep. of the Congo	Poland
Denmark	Portugal
Dominican Republic	Republic of Korea
Egypt	Russian Federation
Equatorial Guinea	Saint Lucia
Finland	St Vincent and the Grenadines
France	Seychelles
Gabon	Slovenia
Germany	Solomon Islands
Greece	South Africa
Guatemala	Spain
Haiti	Suriname
Honduras	Sweden
Hong Kong, China (Associate Member)	Switzerland
Hungary	Tonga
Iceland	Tunisia
Iran (Islamic Republic of)	Ukraine
Ireland	United Arab Emirates
Italy	United Kingdom
Jamaica	United States
Japan	Vanuatu
Jordan	Yugoslavia

Parties to the 1996 London Protocol

Angola
Australia
Barbados
Belgium
Bulgaria
Canada
China
Denmark
Egypt
France
Georgia
Germany
Iceland
Italy
Ireland
Luxembourg
Mexico
New Zealand
Norway
Saudi Arabia
Slovenia
South Africa
Spain
St Kitts and Nevis
Sweden
Switzerland
Tonga
Trinidad and Tobago
United Kingdom
Vanuatu

Figure 2: Parties to the 1972 London Convention and the 1996 London Protocol
 Source: *The London Convention (2006)* <<http://www.londonconvention.org>> viewed 21 November 2006

MARPOL 73/78

*MARPOL 73/78*⁴⁹ is primarily concerned with ships, but it also applies to fixed and floating offshore platforms when they are in mobile configuration.⁵⁰ *MARPOL* requires offshore structures to be equipped with the same pollution control devices required for ships of 400 gross tonnes and above, including oil discharge monitoring and controlling systems, as well as oily-water separating equipment and sludge tanks.⁵¹ The convention prohibits the discharge of sewage into the sea,⁵² and discharge of oil in mixtures greater than fifteen parts per million in certain areas.⁵³ It also requires a record to be kept of all operations.⁵⁴ Although *MARPOL* generally applies to offshore platforms in mobile configuration it does not address many other operational aspects of offshore oil and gas exploration and

production which may cause harm to the marine environment.⁵⁵

OPRC 1990

*OPRC 1990*⁵⁶ sets out the requirements for pollution emergency plans that vessels, offshore drilling units, production platforms, and onshore facilities must have.⁵⁷ The *OPRC* defines offshore units comprehensively to include both floating and fixed structures engaged in exploration, production, loading, and unloading of oil.⁵⁸ State parties to the *OPRC* must require offshore unit operators to report discharges.⁵⁹ The convention encourages states to cooperate and establish national, as well as regional systems for oil pollution preparedness and response.⁶⁰ It also covers requirements relating to mutual assistance and international cooperation in matters such as the exchange of information on the capabilities of states to

respond to oil pollution incidents, preparation of oil pollution emergency plans, the exchange of reports on incidents of significance that may affect the marine environment, as well as research and development aspects of combating oil pollution.⁶¹ This convention contains very specific and detailed provisions, which efficiently deal with the prevention of marine pollution from offshore installations. Because of the lack of a specific convention, the *OPRC* is probably the most important international legal document that regulates pollution of the marine environment resulting from offshore oil and gas activities.⁶²

AFS Convention 2001

Another international convention worth mentioning is the *AFS Convention*.⁶³ When the *AFS Convention* enters into force, it will prohibit the use of harmful organotins in anti-fouling paints and will establish a mechanism to prevent the potential future use of other harmful substances in anti-fouling systems.⁶⁴ The convention applies to ships and offshore platforms, both fixed and floating. It provides that, after 1 January 2008, offshore installations will not be allowed to bear organotin compounds on their external parts and surfaces, or they will be required to have a special sealer coating that creates protection from such compounds.⁶⁵ Offshore units that have not been in dry-dock since 31 December 2002, are exempt from this requirement.⁶⁶

Draft Offshore Units Convention

In 1977 the first serious attempt was made to create an international legal document covering not only pollution, but also other important aspects relating to offshore units and their operation. The Comité Maritime International (CMI) at the request of the IMO prepared a draft convention known as the *Rio Draft*.⁶⁷ The draft was submitted to the IMO for consideration, but the IMO gave priority to other matters of international maritime law which were regarded as more important at the time. Consequently, the *Rio Draft* was not actively considered until the early 1990s, when the IMO requested the CMI to review the *Rio Draft* in light of developments that had occurred since 1977.⁶⁸ In 1994 the *Rio Draft* with certain

modifications was presented at the CMI conference in Sydney, and a revised version was adopted, which became known as the *Sydney Draft*.⁶⁹ The conference concluded that the *Sydney Draft* was an improvement on the *Rio Draft*, but it needed further development to become an effective regulatory framework for the operation of offshore units, and the CMI was invited to undertake further study on a comprehensive international convention on offshore units.⁷⁰

Following the 1994 Sydney conference, the CMI established an international working group to consider the need for and feasibility of a convention on offshore units. The working group initiated consultations with various maritime law associations and other interested parties, and was able to identify a number of topics which were not covered by the *Sydney Draft*, but needed to be addressed in any future drafts of the proposed convention.⁷¹ The responses of the consulted parties indicated that there was general support for the development of an international convention.⁷² The working group continued its work and held a number of meetings on that subject. However, in the late 1990s the Maritime Law Association of the United States changed its initial supportive position and challenged the need for a comprehensive international treaty on offshore units.⁷³ At the 83rd Session of the IMO Legal Committee in October 2001, the delegates debated whether this subject should continue to be included in the IMO's long-term working plan, and concluded that it should be removed from the IMO work program.⁷⁴ In light of the IMO's decision, the CMI also decided to officially cease work on this topic and not incur any additional effort in pursuing it.⁷⁵

As part of the work done over the years by the CMI working group on offshore units, the Canadian Maritime Law Association (CMLA) produced the *Draft Offshore Units Convention*⁷⁶ (the *Canadian Draft*), which is a more comprehensive document than the *Sydney Draft*. In 2004 the draft document was published in the *CMI Newsletter* to create wider awareness of this work in the international maritime community and stimulate debate and further work on this subject.⁷⁷

The *Canadian Draft* was discussed by the working group in June 2004, at the CMI conference in Vancouver.⁷⁸ Despite strong opposition from the USA, and subsequent removal of this initiative from both the IMO's and the CMI's active agendas, the majority of the working group members (with the exception of the USA representatives) continued to support the development of a comprehensive international treaty on offshore structures. At the Vancouver meeting, it was agreed that the working group should remain active and work towards improving the *Canadian Draft*.⁷⁹ Fortunately, the CMI Executive Council had no objection to the working group remaining in existence.⁸⁰

The *Canadian Draft* is a fairly comprehensive document that applies to all types of offshore units, artificial islands, and other related structures, excluding pipelines.⁸¹ It covers a range of aspects relating to offshore units, including their registration and ownership.⁸² It is important to note that many of the topics covered by this document have never been subject to any clear or uniform international rules.⁸³ In terms of environmental regulation, the *Canadian Draft* contains a number of provisions dealing with the removal of offshore units, and liability for pollution damage arising from offshore activities;⁸⁴ however, other aspects of marine pollution are not addressed in detail. It is suggested that marine pollution should be addressed more fully in any subsequent drafts to cover issues such as environmental impact assessments and pollution emergency plans. The inclusion of detailed environmental provisions into the proposed convention may assist the draft convention in gaining wider international recognition and support.

While there is an evident desire by many interested parties to adopt an international convention, such convention has not yet come into existence. There is also no international organisation directly concerned with offshore units.⁸⁵ Governments have been reluctant to press forward the idea of creating a global regulatory regime that would cover all aspects of offshore oil and gas installations and at present no government wishes to take this initiative.⁸⁶ Regional conventions and agree-

ments are still considered to be an effective way of regulating marine pollution from the offshore petroleum industry.⁸⁷ Some of these regional conventions are discussed below.

OSPAR Convention 1992

The *1992 OSPAR Convention*,⁸⁸ which covers the North-Atlantic region, regulates marine pollution arising from various sources including exploitation of offshore hydrocarbons.⁸⁹ It applies to both fixed and floating offshore platforms, and addresses the prevention of pollution arising from the offshore petroleum industry in some detail. Under the *Convention*, contracting parties are required to take all possible steps to prevent and eliminate pollution from offshore activities.⁹⁰ In particular, the *Convention* calls for the use of 'best available techniques' and 'best environmental practice', and requires states to adopt programs and measures for the prevention of pollution from the offshore industry.⁹¹ The *Convention* prohibits dumping of wastes and other matter from offshore installations.⁹² It also prohibits dumping of disused platforms without proper permit.⁹³ Discharges and emissions from offshore platforms and pipelines are not prohibited;⁹⁴ however, the use, discharge or emission of substances that may affect the marine environment is subject to authorisation and strict regulation by the competent authority.⁹⁵ The *OSPAR Convention* also covers reporting of any suspected contraventions of its provisions.⁹⁶

Barcelona Convention 1976

The *1976 Barcelona Convention*⁹⁷ deals with the prevention of marine pollution in the Mediterranean region. It represents one of the earlier regional attempts to establish a mechanism for protection of the marine environment from pollution. One of the objectives of this convention is the combating of pollution resulting from offshore activities.⁹⁸ The *1994 Madrid Protocol*⁹⁹ to the *Barcelona Convention* sets out a comprehensive legal regime that covers various aspects of offshore petroleum exploration and production. It provides that states should take necessary safety measures with respect to design, construction, operation, and maintenance of offshore

installations.¹⁰⁰ Similarly to the *OSPAR Convention*, the *1994 Madrid Protocol* contains provisions relating to measures to combat and control pollution, the use of the best available environmentally effective techniques,¹⁰¹ environmental impact assessment,¹⁰² discharges of sewage and garbage from offshore platforms,¹⁰³ and plans for removal of platforms.¹⁰⁴ There are also a number of specific provisions for operational discharges of oil, oily mixtures, and drilling fluids.¹⁰⁵ These provisions generally take into account internationally accepted standards.

Kuwait Convention 1978

The *1978 Kuwait Convention*,¹⁰⁶ which addresses the Persian Gulf area, has a set of well-developed standards for environmental protection. In 1989, the contracting parties adopted the *1989 Kuwait Protocol*,¹⁰⁷ which deals with pollution from seabed activities. The *Protocol* requires the contracting states to take all appropriate measures for the prevention and control of pollution from offshore exploration and production.¹⁰⁸ For example, it provides that the coastal state shall not allow any offshore operations to begin unless an operator completes an environmental impact assessment.¹⁰⁹ The coastal state is required to take all practicable measures to ensure that offshore operations, including their safety procedures, equipment, and overall maintenance, are conducted in accordance with good industry practice.¹¹⁰ Amongst other things, the *Protocol* regulates discharges of oil and oil-based drilling fluids from platforms, and the disposal of garbage and sewage.¹¹¹ It also covers the use of chemicals in offshore operations and requires operators of offshore platforms to prepare a chemical use plan.¹¹²

Helsinki Convention 1992

The *1992 Helsinki Convention*,¹¹³ which applies to the Baltic Sea, is another important regional treaty dealing with marine pollution from various sources. It contains detailed provisions on measures concerning the prevention of pollution from land-based sources,¹¹⁴ ships,¹¹⁵ and offshore activities.¹¹⁶ The convention also regulates the dumping of wastes and other matter in the Baltic Sea area,¹¹⁷ and completely

prohibits incineration of ship-generated wastes and other matter at sea.¹¹⁸ Contracting parties are also required to eliminate and prevent pollution caused by harmful substances from all sources.¹¹⁹ The *Convention* defines 'harmful substance' as any substance that may cause pollution if introduced into the sea,¹²⁰ and provides a list of harmful substances including substances banned for all final uses.¹²¹ In addition, the *1992 Helsinki Convention* requires state parties to adopt 'best environmental practices' and 'best available technology', sets out criteria for the use of 'best environmental practices' and 'best available technology', and specifies measures to be applied by state parties in order to satisfy this requirement.¹²² The *Convention* defines concepts such as 'offshore activity', 'offshore unit', 'exploration', and 'exploitation',¹²³ and regulates discharges during exploration and exploitation stages.¹²⁴ Abandoned, disused, or accidentally wrecked offshore units must be entirely removed and brought to the shore, and disused drilling wells must be plugged.¹²⁵ Similar to regional conventions discussed above the *Convention* contains traditional provisions on environmental impact assessment, monitoring, notification of pollution incidents, exchange of information, cooperation in combating marine pollution, and it also specifies measures for responding to marine pollution incidents including contingency planning.¹²⁶

Other Relevant Legal Instruments

It is important to mention some of the other conventions and legal instruments that were not discussed above, but which also attempt to regulate marine pollution from the offshore oil and gas industry. These include the *1958 Geneva Conventions*,¹²⁷ the *1992 Bucharest Convention*,¹²⁸ *SPREP Convention*,¹²⁹ the *1991 Antarctic Protocol*,¹³⁰ the *1988 SUA Protocol*,¹³¹ as well as liability agreements such as *OPOL*,¹³² *CLEE*,¹³³ and the *1992 CLC Protocol*.¹³⁴ In addition, there are a number of internationally recognised instruments produced by the IMO such as the *MODU Code 1989*,¹³⁵ the *Safety Guide for Towed Ships and Other Structures on Sea*,¹³⁶ and the *Guidelines and Standards for the Removal of Offshore Installations*.¹³⁷

Summary of the Global Regime

The offshore petroleum industry is subject to relatively few international regulations, and little international effort has been put into the development of a universal convention that would provide effective regulation for all aspects of offshore oil and gas activities.¹³⁸ This may be explained by a number of factors. Firstly, the offshore petroleum industry contributes very little pollution to the marine environment compared to other sources of pollution. Secondly, there is still a strong opposition to adoption of a global convention, particularly from the USA oil industry.¹³⁹ Another reason may be that different maritime regions experience environmental challenges specific to that region, and a number of comprehensive regional treaties such as the Barcelona and Kuwait Protocols are already in place. Many existing bilateral agreements also appear to adequately satisfy the needs of the parties.¹⁴⁰ However, the most important reason is that, at this stage, advocates for the international convention on offshore units have been unable to muster sufficient governmental support, without which there is very little possibility of such convention being adopted internationally.¹⁴¹

While a number of legal instruments covering pollution from offshore installations have been implemented in regions such as the North-Atlantic and Mediterranean, other areas with offshore activities, such as the North-West Pacific, do not have such conventions.¹⁴² Most oil and gas operations are conducted on the continental shelf under the direct control of the coastal state. All states that participate in the offshore industry have an obligation to regulate hydrocarbon development in accordance with international law; however, domestic legislation becomes of critical importance in the areas where there is no effective regional instrument or applicable international agreement governing this activity. Many coastal nations have already developed national legislation and standards that effectively deal with pollution aspects of the offshore petroleum industry, but some states have failed to do so.¹⁴³ This is because every country faces a different set of problems, and successful implementation of a sophisticated

environmental regime is largely dependent upon the country's economic development, political factors, and the relative importance of the offshore industry for the national economy.¹⁴⁴

For Russia the offshore industry is very important because Russia is at the very beginning of developing its large oil and gas resources located on the continental shelf. Protection of the marine environment from pollution is also very important. To ensure environmental safety of its coastal ecosystems, Russia needs to have stable and effective legal safeguards against potential adverse impacts associated with offshore petroleum operations. The Russian environmental regime and its application to the offshore oil and gas industry will be examined in Part II.

[Part II of this article will follow in the next edition of *Maritime Studies*]

ENDNOTES

- ¹ M Gavouneli, *Pollution from Offshore Installations*, 1995, p. 40.
- ² Canadian Maritime Law Association, *Discussion Paper on the Need for an International Legal Regime for Offshore Units, Artificial Islands and Related Structures Used in the Exploration for and Exploitation of Petroleum and Seabed Resources*, 1996, <<http://www.cmla.org/papers/MAR96.htm>> viewed 25 July 2006.
- ³ S Patin, *Environmental Impact of the Offshore Oil & Gas Industry*, (Elena Cascio, trans.), 1999, p. 3.
- ⁴ *ibid.*, p. 1.
- ⁵ *ibid.*, p. 47.
- ⁶ E Gold, A Chircop & H Kindred, *Essentials of Canadian Law Series: Maritime Law*, 2003, p. 715.
- ⁷ J Swan, J Neff & P Young, *Environmental Implications of Offshore Oil and Gas Development in Australia: The Findings of an Independent Scientific Review*, Independent Scientific Review Committee, Australian Petroleum Exploration Association, 1994, p. 4.
- ⁸ Patin (1999), *op. cit.*, p. 60.
- ⁹ Swan, Neff & Young, *op. cit.*, p. 5.
- ¹⁰ Patin (1999), *op. cit.*, p. 63.
- ¹¹ Sakhalin Energy Investment Company, *Environmental Impact Assessment: Project Description: Offshore Field Development* (2003) [2.2.3] <http://www.sakhalinenergy.com/en/documents/doc_38_eia_2_chapter2.pdf> viewed 16 July 2006.
- ¹² C Brown, 'International Environmental Law in the Regulation of Offshore Installations and Seabed Activities: The Case for a South Pacific Regional Protocol', *Australian Resources and Energy Law Journal*, vol. 17, 1998, p. 110.
- ¹³ Organisation for Economic Cooperation and Development (OECD), *Russia Energy Survey 2002*, p. 244. (Joint publication of OEDC and International Energy Agency), 2002.

- ¹⁴ Patin (1999), op. cit., p. 77.
- ¹⁵ Gold, Chircop & Kindred, op. cit., p. 712. For a detailed discussion of international law principles relating to conflicts between the use of offshore oil rigs and other uses of the sea, see H Esmaili, *The Legal Regime of Offshore Oil Rigs in International Law*, 2001, pp. 228-49.
- ¹⁶ Brown, op. cit., p. 110.
- ¹⁷ S Patin, *Decommissioning, Abandonment and Removal of Obsolete Offshore Installations*, Offshore-Environment <<http://www.offshore-environment.com/abandonment.html>> viewed 15 August 2005.
- ¹⁸ M White, *Marine Pollution Laws of the Australasian Region*, 1994, p. 4.
- ¹⁹ Swan, Neff & Young, op. cit., p. 11.
- ²⁰ California Coastal Commission, *Coastal Energy Development: The California Experience – A Guide for Coastal Local Governments*, 1981, p. 43; see also Gold, Chircop & Kindred, op. cit., p. 709.
- ²¹ Brown, loc. cit..
- ²² Office of Transport Security, *Offshore Oil & Gas Risk Context Statement* (2005), Department of Transport and Regional Services <http://www.dotars.gov.au/transport/security/oil_and_gas/index.aspx> viewed 7 July 2006.
- ²³ OECD, op. cit., p. 244.
- ²⁴ Patin (1999), op. cit., p. 2.
- ²⁵ Gavouneli, op. cit., p. 110.
- ²⁶ H Esmaili, op. cit., pp. 150-51.
- ²⁷ Gold, Chircop & Kindred, loc. cit.
- ²⁸ *United Nations Convention on the Law of the Sea 1982*, adopted 10 December 1982, 1833 UNTS 3, (entered into force 16 November 1994) ('UNCLOS'). In force in Russia since 2 November 1997.
- ²⁹ *ibid.*, arts 60, 80.
- ³⁰ *ibid.*, arts 145, 147, 142(3), 192; see also Gavouneli, op. cit., p. 17.
- ³¹ *UNCLOS*, adopted 10 December 1982, 1833 UNTS 3, art 194 (entered into force 16 November 1994).
- ³² *ibid.*, art 208.
- ³³ *ibid.*, art 197.
- ³⁴ *ibid.*, arts 214, 215.
- ³⁵ *ibid.*, art 235(2).
- ³⁶ *ibid.*, art 194(3)(c).
- ³⁷ Brown, op. cit., p. 121; see also Esmaili, op. cit., p. 156.
- ³⁸ M Tsamenyi, 'Maritime Regulation and Enforcement in EEZ: Emerging Issues', (Speech delivered at the Maritime Regulation and Enforcement Short Course, University of Wollongong, 4 July 2006).
- ³⁹ *Convention on the Prevention of Marine Pollution by Dumping Wastes and Other Matters 1972*, adopted 29 December 1972, 1046 UNTS 120, (entered into force 30 August 1975) ('1972 London Convention'). In force in Russia since 29 January 1976.
- ⁴⁰ *ibid.*, arts IV(1)(a), IV(1)(b).
- ⁴¹ *ibid.*, art III.
- ⁴² *ibid.*, art V(1).
- ⁴³ *1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1972*, adopted 7 November 1996, 36 ILM 1, (entered into force 24 March 2006) ('1996 Dumping Protocol'). Russia is not a party to the 1996 Dumping Protocol.
- ⁴⁴ The 1996 Dumping Protocol superseded the 1972 London Convention as between contracting parties to the Protocol, which are also parties to the 1972 London Convention (see the 1996 Dumping Protocol, art 23).
- ⁴⁵ *ibid.*, art 3(1).
- ⁴⁶ *ibid.*, art 4(1).
- ⁴⁷ IMO, *1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1972* <http://www.imo.org/Newsroom/mainframe.asp?topic_id=1337&doc_id=6147> viewed 28 June 2006.
- ⁴⁸ *1996 Dumping Protocol*, adopted 7 November 1996, 36 ILM 1, art 1(4) (entered into force 24 March 2006). The 1996 Protocol's definition of 'dumping' includes any storage of wastes or other matter in the seabed and the subsoil from platforms, and any abandonment, or toppling at site of platforms for the sole purpose of deliberate disposal.
- ⁴⁹ *International Convention for the Prevention of Marine Pollution from Ships 1973*, adopted 2 November 1973, 1340 UNTS 184, (entered into force 2 October 1983), amended by *Protocol of 1978 Relating to the International Convention for the Prevention of Marine Pollution from Ships 1973*, adopted 17 February 1978, 1340 UNTS 61, (entered into force 2 October 1983) ('MARPOL 73/78'). In force in Russia since 3 February 1984.
- ⁵⁰ *ibid.*, art 2.
- ⁵¹ *ibid.*, annex I, reg 21(a).
- ⁵² *ibid.*, annex IV, reg 8.
- ⁵³ *ibid.*, annex I, reg 21(c).
- ⁵⁴ *ibid.*, annex I, reg 21(b).
- ⁵⁵ Gold, Chircop & Kindred, op. cit., p. 710.
- ⁵⁶ *International Convention on Oil Pollution Preparedness, Response and Co-operation 1990*, adopted 30 November 1990, 30 ILM 1991, (entered into force 13 May 1995) ('OPRC 1990'). Russia is not a party to OPRC 1990.
- ⁵⁷ *ibid.*, art 3.
- ⁵⁸ *ibid.*, art 2(4).
- ⁵⁹ *ibid.*, art 4.
- ⁶⁰ *ibid.*, art 6.
- ⁶¹ *ibid.*, arts 7, 8, 9.
- ⁶² Esmaili, op. cit., pp. 157-8.
- ⁶³ *International Convention on the Control of Harmful Anti-fouling Systems on Ships*, adopted on 5 October 2001, RMC II 7 240, (not in force) ('AFS Convention'). Russia is not a party to the AFS Convention.
- ⁶⁴ IMO <http://www.imo.org/Conventions/mainframe.asp?topic_id=258&doc_id=1494> viewed 22 June 2006.
- ⁶⁵ *ibid.*
- ⁶⁶ Det Norske Veritas, 'New IMO Requirements: Present and Future Amendments', *Information Note*, no 9, 2006, p. 5.
- ⁶⁷ *Draft Convention on Offshore Mobile Craft 1977*, (not in force) ('Rio Draft').
- ⁶⁸ M White, 'Offshore Craft and Structures: A Proposed International Convention', *Australian Resources and Energy Law Journal*, vol. 18, 1999, p. 21.
- ⁶⁹ *Draft Convention on Offshore Mobile Craft 1994*, (not in force) ('Sydney Draft').
- ⁷⁰ N Frawley, W Sharpe & J Joy, 'The Origins of the CMLA Draft Convention on Offshore Units, Artificial Islands and Related Structures Used in the Exploration

- for and Exploitation of Petroleum and Seabed Mineral Resources', *CMI Newsletter*, no 1, 2004, p. 2.
- ⁷¹ *ibid.*
- ⁷² White, (1999), *op. cit.*, p. 22.
- ⁷³ Frawley, Sharpe & Joy, *loc. cit.*
- ⁷⁴ Oil Companies International Marine Forum, 'IMO Legal Committee – 83rd Session', *OCIMF Newsletter* no. 15, 2001, p. 9.
- ⁷⁵ R Shaw, 'Report of the CMI Working Group on Offshore Mobile Craft', *CMI Yearbook*, 2004, p. 421.
- ⁷⁶ *Draft Convention on Offshore Units, Artificial Islands and Related Structures Used in the Exploration for and Exploitation of Petroleum and Seabed Mineral Resources 2001*, (not in force) ('*UOC 2001*').
- ⁷⁷ Frawley, Sharpe & Joy, *op. cit.*, p. 3.
- ⁷⁸ Shaw, *loc. cit.*
- ⁷⁹ N Frawley & R Shaw, 'Minutes of the Working Group Considering the Need for and Feasibility of an Offshore Units Convention', *CMI Yearbook*, 2004, pp. 419-20.
- ⁸⁰ Shaw, *loc. cit.*
- ⁸¹ *OUC 2001*, (not in force), art II.
- ⁸² *ibid.*, arts III, IV.
- ⁸³ White (1999), *op. cit.*, pp. 21-27.
- ⁸⁴ *OUC 2001*, (not in force), arts X, XI.
- ⁸⁵ White (1999), *op. cit.*, p. 21.
- ⁸⁶ Email from R Shaw to M Kashubsky, 7 August 2006.
- ⁸⁷ Brown, *op. cit.*, p. 126.
- ⁸⁸ *Convention for the Protection of the Marine Environment of the North Atlantic 1992*, adopted 22 September 1992, 32 ILM 1069 1993 (entered into force 25 March 1998) ('*OSPAR Convention*'). Russia is not a party to the *OSPAR Convention*.
- ⁸⁹ *ibid.*, art 5, annex III; see also definitions in Article 1.
- ⁹⁰ *ibid.*, art 5.
- ⁹¹ *ibid.*, annex III, art 2.
- ⁹² *ibid.*, annex III, art 3(1).
- ⁹³ *ibid.*, annex III, art 5.
- ⁹⁴ *ibid.*, annex III, art 3(2).
- ⁹⁵ *ibid.*, annex III, art 4(1).
- ⁹⁶ *ibid.*, annex III, art 10(2).
- ⁹⁷ *Convention for the Protection of the Mediterranean Sea against Pollution 1976*, adopted 16 February 1976, 1102 UNTS 27 (entered into force 12 February 1978), ('*1976 Barcelona Convention*'). The 1976 *Barcelona Convention* was revised on 10 June 1995. When the amended *Convention* enters into force, it will be called the '*Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean*'.
⁹⁸ *ibid.*, art 7.
- ⁹⁹ *Protocol for the Protection of the Mediterranean Sea against Pollution resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil 1994*, adopted 14 October 1994 (not in force), ('*1994 Madrid Protocol*'). The 1994 *Madrid Protocol* is also known as the *Offshore Protocol*.
¹⁰⁰ *ibid.*, art 15(1).
- ¹⁰¹ *ibid.*, art 3.
- ¹⁰² *ibid.*, annex IV, art 5(1)(a).
- ¹⁰³ *ibid.*, arts 11, 12.
- ¹⁰⁴ *ibid.*, arts 5(1)(g), 20.
- ¹⁰⁵ *ibid.*, art 8.
- ¹⁰⁶ *Regional Convention for Cooperation on the Protection of the Marine Environment from Pollution 1978*, adopted 24 April 1978, 17 ILM 1978 (entered into force 1 July 1979), ('*1978 Kuwait Convention*').
- ¹⁰⁷ *Protocol concerning Marine Pollution Resulting from Exploration and Exploitation of the Continental Shelf*, adopted 29 March 1989, 19 EPL 1989 (entered into force 17 February 1990), ('*1989 Kuwait Protocol*').
- ¹⁰⁸ *ibid.*, art II.
- ¹⁰⁹ *ibid.*, art IV.
- ¹¹⁰ *ibid.*, art VII.
- ¹¹¹ *ibid.*, arts IX, X.
- ¹¹² *ibid.*, art XI.
- ¹¹³ *Convention for the Protection of the Marine Environment of the Baltic Sea Area 1992*, adopted 9 April 1992, 1507 UNTS 167 (entered into force 17 January 2000), ('*1992 Helsinki Convention*'). Ratified by Russia on 15 October 1998. The 1992 *Helsinki Convention* replaced the *Convention on the Protection of the Marine Environment of the Baltic Sea Region 1974*, adopted 22 March 1974, 13 ILM 1974 (entered into force 3 May 1980), ('*1974 Helsinki Convention*'). In force in Russia since 6 October 1996. Discharges of oil and garbage from fixed and floating offshore platforms are regulated by the 1992 *Helsinki Convention* similarly to *MARPOL 73/78* provisions.
¹¹⁴ *ibid.*, annex III, art 6.
- ¹¹⁵ *ibid.*, annex IV, art 8.
- ¹¹⁶ *ibid.*, annex VI, art 12.
- ¹¹⁷ *ibid.*, annex V, art 11.
- ¹¹⁸ *ibid.*, annex IV, art 10, reg 7.
- ¹¹⁹ *ibid.*, art 5.
- ¹²⁰ *ibid.*, art 3(7).
- ¹²¹ *ibid.*, annex I, pt 2.
- ¹²² *ibid.*, annex II, art 3(3), annex VI, reg 2.
- ¹²³ *ibid.*, annex VI, reg 1. 'Offshore unit' is defined as 'any fixed or floating offshore installation or structure engaged in gas or oil exploration, exploitation or production activities, or loading or unloading of oil'. Compare this definition with the definition of 'ship' in article 2(3).
¹²⁴ *ibid.*, annex VI, regs 4, 5.
- ¹²⁵ *ibid.*, annex VI, reg 8.
- ¹²⁶ *ibid.*, arts 7, 13, 14, 16, annex VI, regs 3, 6, 7, 9, annex VII.
- ¹²⁷ *Convention on the High Seas 1958*, adopted 29 April 1958, 450 UNTS 82 (entered into force 30 September 1962); *Convention on the Territorial Sea and the Contiguous Zone 1958*, adopted 29 April 1958, 516 UNTS 205 (entered into force 10 September 1964); *Convention on the Continental Shelf 1958*, adopted 29 April 1958, 499 UNTS 311 (entered into force 10 June 1964). These *Conventions* contain provisions that require states to take appropriate means to prevent marine pollution from exploration and exploitation of the seabed and its subsoil. Russia is not a party to the 1958 *Geneva Conventions*, but they are subsumed in *UNCLOS 1982*, to which Russia is a party.
- ¹²⁸ *Convention on the Protection of the Black Sea against Pollution*, adopted 21 April 1992, 32 ILM 1110 (entered into force 15 January 1994) ('*1992 Bucharest Convention*'). In force in Russia since 15 January 1994.
- ¹²⁹ *Convention for the Protection of the Natural Resources and Environment of the South Pacific*, adopted 24

November 1986, 26 ILM 38 (entered into force 22 August 1990), ('SPREP Convention').

¹³⁰*Protocol on Environmental Protection to the Antarctic Treaty 1991*, adopted 4 October 1991, 30 ILM 1455, (entered into force 14 January 1998) ('1991 Antarctic Protocol'). Russia is a party to the *1991 Antarctic Protocol*. Article 7 of the *1991 Antarctic Protocol* completely prohibits any offshore and onshore activities relating to exploitation of mineral resources, except scientific research. Signed in Madrid, the *1991 Antarctic Protocol* is also often referred to as the *Madrid Protocol*. The *1991 Antarctic Protocol* established the Committee for Environmental Protection (CEP) as an expert advisory body to provide advice and formulate recommendations to the Antarctic Treaty Consultative Meetings in connection with the implementation of the Protocol. The CEP meets every year at the same time as the Antarctic Treaty Consultative Meeting. The *Antarctic Treaty 1959*, adopted 1 December 1959, 402 UNTS 71, (entered into force 26 June 1961) ('*Antarctic Treaty*'). The Soviet Union was one of the original parties to the *Antarctic Treaty* and Russia assumed those rights and responsibilities in 1991. The *Antarctic Treaty* provides in its Preamble that Antarctica is to be used only for peaceful purposes.

¹³¹*Protocol for the Suppression of Unlawful Acts against the Safety of Fixed Platforms located on the Continental Shelf 1988*, adopted 10 March 1988, 11 LOS 1988 (entered into force 1 March 1992), ('1988 SUA Protocol'). The *1988 SUA Protocol*, particularly as amended by the *2005 Protocol* (not in force), contains rules designed to prevent and punish acts of sabotage or terrorism involving offshore platforms, which indirectly help to prevent or minimise marine pollution incidents caused by intentional damage to offshore installations by unlawful acts.

¹³²*Offshore Pollution Liability Agreement 1974*, came into effect 1 May 1975, amended 1 August 1986. *OPOL* applies only to offshore facilities within the European Union Coastal State jurisdiction and Norway.

¹³³*Convention on Civil Liability for Oil Pollution Damage resulting from Exploration for and Exploitation of Seabed Mineral Resources 1977*, adopted 1 May 1977, 16 ILM 1451 (not in force), ('CLEE'). The convention followed the outline of the *International Convention on Civil Liability for Oil Pollution Damage 1969*, adopted 29 November 1969, 973 UNTS 3 (entered into force 19 June 1975) ('CLC 1969') and is also based on the principle of strict, but limited, liability.

¹³⁴*Protocol to Amend the International Convention on Civil Liability for Oil Pollution Damage 1969*, adopted 27 November 1992, UKTS 1996 No 87, (entered into force 30 May 1996), ('1992 CLC Protocol'). A question of whether the *1992 CLC Protocol* applies to offshore structures is discussed in Gold, Chircop & Kindred, op. cit., pp. 691-92.

¹³⁵*Code of Conduct for the Construction and Equipment of Mobile Offshore Drilling Units 1989* (1989) IMO Assembly Resolution A649(16), came into effect 1 May 1991, ('MODU Code 1989').

¹³⁶*Guide on Safety of Towed Ships and Other Floating Objects, Including Plants, Structures and Platform's Substructure on Sea* (1995), IMO Resolution A765(18).

¹³⁷*Guidelines and Standards for the Removal of Offshore Installations and Structures on the Continental Shelf and in the Exclusive Economic Zone 1989*, (1989) IMO Resolution A.672(16).

¹³⁸White (1994), op. cit., p. 241.

¹³⁹White (1999), op. cit., p. 26.

¹⁴⁰R Shaw, 'The FPSO – Is It A Ship? The Proposed CMI Offshore Mobile Craft Convention – An Update' *AMPLA Yearbook*, 2000, p. 83.

¹⁴¹Shaw, (email, 2006) op. cit..

¹⁴²White (1999), p. 23.

¹⁴³Gold, Chircop & Kindred, op. cit., p. 712.

¹⁴⁴Gavouneli, op. cit., p. 120.

