Offshore transboundary petroleum deposits: cooperation as a customary obligation

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Acronomies

EEZ	**Exclusive Economic Zone**
ICJ	**International Court of Justice**
ILA	**International Law Association**
ILC	**International Law Commission**
JDA	**Joint Development Agreement**
JDZ	**Joint Development Zone**
UNCLOS III	**Third United Nations Conference on the Law of the Sea**
UNEP	**United Nations Environment Programme**
UN LOSC	**United Nations Convention on the Law of the Sea**

1. INTRODUCTION

1.1. Main objectives and structure of the thesis

On 7th June 2011 Foreign Ministers of the Russian Federation and the Kingdom of Norway met in Oslo for exchange of ratification protocols.[1] It makes Treaty between Norway and Russia concerning delimitation and cooperation in the Barents Sea and the Arctic Ocean entered into force and binding.[2] The Treaty plays important role for development of different industry sectors in the Barents Sea and the Arctic Ocean regions, and, first of all, oil and natural gas exploration and exploitation. It is not a novel to include in delimitation agreements provisions regulating oil and gas deposits which can appear in a border region and become a stumbling block for neighboring States. The remarkable feature of this treaty is that, besides standard article regulating transboundary deposits, it contains whole annex describing in detail procedure of establishing cooperative regime.[3] This procedure is not a new as well, being used more or less widely, but appearance of such an annex in a delimitation agreement arises some legal questions. One of them is to what degree the practice to cooperate in the field of transboundary oil and natural gas deposits is recognized by States?

In its judgment in the *North Sea Continental Shelf*[4] cases the International Court of Justice expressed main problem arising in case of transboundary resources, the same deposit lying on both sides of the line dividing a continental shelf between States. The problem is that given the fact that it is possible to exploit such deposit from either side, it can lead to prejudicial or wasteful exploitation by one or the other of the interested States.[5]

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[1] http://www.regjeringen.no/en/dep/ud/press/news/2011/maritie_delimitation.html?id=646614 [visited 17.08.2011].
[2] Treaty between the Kingdom of Norway and the Russian Federation concerning Maritime Delimitation and Cooperation in the Barents Sea and the Arctic Ocean, Murmansk,15 September 2010. http://www.regjeringen.no/upload/SMK/Vedlegg/2010/avtale_engelsk.pdf [visited 17.08.2011].
[3] Ibid., annex II, *"Transboundary Hydrocarbon Deposits"*.
[4] North Sea Continental Shelf cases (FRG/Den., FRG/Neth.)., ICJ Reports 1969, p. 3.
[5] Ibid., para. 97.

The importance of present topic can be supported by the following facts. An economical development of any State depends strongly on natural resources at its disposal. The oil and natural gas resources, being relatively cheap and widely used energy source, play very important role in it. While those resources that are at the undisputed disposal of states are not a subject of a big concern, these of transboundary nature present one of the most controversial and less developed issues. The land frontiers is clearly established almost everywhere, but the continental shelf delimitation has less than a hundred years history and, therefore attracts much more attention.

In the present analysis two questions with regard to transboundary hydrocarbon resources are considered. The first is how shall neighboring states act in case when oil and natural gas resources cross the border delimiting their continental shelf and what a legal basis for such actions? For this purpose the next subchapter considers the notion and classification of transboundary resources in general. Chapter II makes short overview of the historical development of the law regulating using of the resources falling under this definition.

The third chapter deals particularly with oil and natural gas resources. To decide what law shall be applicable to that problem it is necessary look in the article 38 of the Statute of the International Court of Justice,[6] which provides the list of the sources of international law. For the purpose of the present analysis they can be divided in three groups of sources of international law. All of them will be considered below one by one.

The subchapter 3.3 deals with the first group including widely recognized international legal instruments regulating common hydrocarbon resources. Here focus is made on two international instruments. The first of them is the UN LOS Convention,[7] the core element of the Law of the Sea. The second one is the work of ILC on the topic “Shared natural resources”, shared oil and gas in particular, which was aiming to adopt international legal instrument to regulate this issue, as it was made by it for transboundary aquifers. The second group being considered in subchapter 3.4 considers international custom and general principles arising from states practice on this issue, particularly, from bilateral agreements between them. Here special attention is paid to cross-border unitization and

[6] Statute of the International Court of Justice. Adopted June 26, 1945, 59 Stat. 105, article 38.
[7] United Nations Convention on the Law of the Sea. Montego Bay, 10 December 1982. 1833 UNTS 3. Hereinafter UN LOSC.

joint development agreements getting increasing acceptance worldwide. And the last, third, group, in subchapter 3.5, takes into consideration judgments in cases, mostly delimitation disputes, brought before international tribunals, the ICJ in particular.

This analysis shows that the most reasonable and widely accepted solution of the transboundary resources problem is the cooperation between the neighboring states.[8]

Because of that and the fact that attempts to adopt comprehensive legal instrument regulating transboundary hydrocarbons have failed, the second question of the present paper arises whether the obligation to cooperate is already an international customary rule. The chapter IV trying to answer this question also considers international law sources of different levels. And some conclusive remarks at the end of the paper finalize analysis of the questions posed.

Pursuing the main goals of the present work, a basic method used was the method of analysis of legal sources of international law as it was described above. In analysis of the sources of international law, descriptive and analytical methods were applied.

1.2. Definition and classification of transboundary resources

For the purpose of this paper, a scope of transboundary natural resources has to be defined. Along with term 'transboundary natural resources' this type of natural resources is also called as a 'common' or 'shared natural resources'. The latter is widely used by ILC in its work on the law of transboundary aquifers and hydrocarbons resources. In accordance with some opinions the term 'transboundary' is more appropriate than 'shared'. Using word transboundary it describes the state of the resource itself. It is accurate and precise in denoting a thing which traverses a boundary, while the word 'shared' speaks about the actions and attitudes of parties with respect to the resource (i.e. 'sharing').[9] It is also argued that "even accepting the inevitable natural unity of a given deposit of resources, the sovereignty of a State over its territory and natural wealth cannot be fragmented, much less

[8] Hereinafter, by "cooperation" and "general obligation to cooperate" is meant cooperation in the field of exploration and exploitation of transboundary natural resources.

[9] Beyene, Zewdineh and Wadley, Ian L.G. *Common goods and the common good: Transboundary natural resources, principled cooperation, and the Nile Basin Initiative.* Berkeley, UC Berkeley: Center for African Studies 2004. (Breslauer Symposium on Natural Resource Issues in Africa;), at 4.

shared".[10] Even when states cooperate, mostly because of economic or ecological reasons, with its neighbors for exploration and exploitation of transboundary resources, such resources may be regarded as shared from a purely physical, natural, or ecological point of view, but not from a legal one.[11] That's why "transboundary" is the most correct describing of such resources, but in the present work term "shared", "common" and some others are used as well, being equal to the "transboundary" for the purpose of the thesis.

There is no single definition of the term "transboundary natural resources" and debates about what should be included in that notion is still going on.[12] But two inherent geographical features of it can be outlined: (1) two or more States have access to the same resource and (2) activities by one State have an impact on the capability of the other to use the resource. Resources may be transboundary either when their deposit is divided by a boundary, for instance, gold or timber, or when they straddle from one side of the border to the other, *e.g.* oil, natural gas, straddling fish stocks and other migratory species.[13] Boundaries transecting natural resources may involve as the boundaries between the two States as, in case of maritime boundaries, that between State's territorial sea or EEZ and the high sea, which is legally open to the community of States as a whole, or between States continental shelf and international seabed area, which is reserved for mankind as a part of its common heritage.[14] Those resources that cross intrastate border also fall under the notion of transboundary resources, but in the present work only those that affect interstate border will be considered.

It is also worth to make a simple classification of transboundary natural resources. First of all, such resources contain as living as non-living natural resources. This division doesn't

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[10] Szekely, Alberto. *International Law of Submarine Transboundary Hydrocarbon Resources: Legal Limits to Behavior and Experiences for the Gulf of Mexico*. In: Nat. Resources J. Vol. 26 (1986), pp. 733-768, at 735-736.

[11] Ibid.

[12] On example see *Co-operation in the field of the environment concerning natural resources shared by two or more States. Report of the Executive Director*. UN Environment Programme. UN Doc. UNEP/GC/44 (1975) para. 86; *Report of the Intergovernmental Working Group of Experts on Natural Resources Shared by Two or More States on the Work of its Fifth Session*, UN Environment Programme. UN Doc. UNEP/IG.12/2 (1978) para. 16; Adede, A.O. *United Nations Efforts toward the Development of an Environmental Code of Conduct for States Concerning Harmonious Utilization of Shared Natural Resources.* In: Albany Law Review. Vol. 43 (1978-1979), pp. 488-512

[13] Matz-Lück, Nele. *The Benefits of Positivism: The ILC's Contribution to the Peaceful Sharing of Transboundary Groundwater*. In: Peace through International Law. (Springer Dordrecht, Heidelberg, London, New York) 2009, pp. 125-150, at 130.

[14] Szekely, *supra* note 10, at 736.

need detailed consideration. In turn, category of non-living resources is divided in two groups, mobile and static. Mobile transboundary resources can be described as "a natural resource which is not only transected by a national frontier, but which is capable of traversing that frontier by virtue of its state of flux".[15] Static resources are not mobile ones, such as gold, timber and diamonds. Some commentators argue necessity to distinguish between mobile and static natural resources by "the physical properties of static natural resources […] and the processes required for their extraction and commercial exploitation", concluding that "static natural resources present a relatively 'easy case', which may be resolved with reference to the boundary line agreed between two disputing parties or established through judicial determination" unlike 'hard case' of mobile transboundary natural resources.[16]

[15] Beyene and Wadley, *supra* note 9, at 3.
[16] Ibid., at 3.

2. HISTORICAL DEVELOPMENT OF THE LAW OF TRANSBOUNDARY RESOURCES

2.1. Introduction

Since law of oil and gas transboundary resources is not well developed yet it is worth to consider other kinds of transboundary resources and legal regime of their management. In this chapter history of state's concern about transboundary resources is presented, starting from early XIX century. Here, not only hydrocarbons, but almost all kind of resources falling within the scope of notion and classification described in chapter 1.2., are considered. The basic principles arose from their regimes can be applicable for oil and gas resources as well.

2.2. First attempts of legal regulation of transboundary resource: international watercourses

The first international community's concerns about transboundary natural resources relates to transboundary rivers. A number of bilateral and multilateral arrangements emerged in Europe in the late XVIII and early XIX century.[17] The earliest arrangements regulated only navigational use of international rivers and were at first almost totally concerned with the rights of the freedom of navigation.[18]

The 1966 ILA Helsinki Rules on the Uses of the Waters of International Rivers[19] was one of the first attempts to regulate non-navigational uses of transboundary rivers. In 1970 UN

[17] The 1804 Convention between French and German Empires dealt with the Rhine River is, probably, the first of the bilateral ones. The first multilateral consideration of the transboundary rivers' legal status took place in the Congress of Vienna in 1815. And the Danube Commission established in 1856 is the earliest example of modern international organization in this field.

[18] See Schrijver, Nico. *Sovereignty over natural resources.* Cambridge (Cambridge University Press) 1997; Beyene and Wadley, *supra* note 9; Yamada, Chusei. *Shared natural resources: first report on outlines.* Doc. A/CN.4/533

[19] *The Helsinki Rules on the Uses of the Waters of International Rivers.* ILA Report of the Fifty-second Conference, Helsinki, 1966 (London, 1967).

General Assembly in its Resolution 2669 (XXV) recommended that "International Law Commission should […] take up the study of the law of the non-navigational uses of international watercourses".[20] The ILC work on this issue started in 1971 and continued until 1994 when final draft articles were presented to General Assembly. And in 1997, by a vote of 104 to 3, with 26 abstentions, the Convention on the Law of the Non-Navigational Uses of International Watercourses was adopted, but still has not entered into force due to lack of ratifications. [21] Part II of the Convention sets up the general principles: (1) equitable and reasonable utilization and participation and, (2) obligation not cause significant harm, and (3) general obligation to cooperate.[22] These principles can be applied to the issue of transboundary oil and natural gas resources by analogy.

2.3. Legal regime of the natural resources shared by two or more States

2.3.1. The first mentions of the problem of transboundary natural resources at international level

The 1972 Stockholm United Nations Conference on the Human Environment has attracted international attention to the need to elaborate a general legal regime for transboundary resources,[23] but no substantive paragraph on shared resources was included in the UN Declaration on the Human Environment, because of serious differences of opinion between, for instance, between Argentina and Brazil, on the issue of using of La Plata river basin for a Brazilian hydroelectric project.[24]

In September 1973 the Economic Declaration adopted by the Fourth Conference of Heads of State or Government of Non-Aligned Countries in Algiers denoted importance to develop an effective system of co-operation for the conservation and exploitation of natural resources shared by two or more States.[25] And already in December of the same year

[20]UN GA Resolution 2669 (XXV). *Progressive development and codification of the rules of international law relating to international watercourses.* 1920th plenary meeting, 8 December 1970
[21]Convention on the law of the Non-navigational Uses of International Watercourses (Adopted by the UNGA Resolution 51/229 on 21 May 1997)*;* see also A/CN.4/533, *supra* note18; Beyene and Wadley, *supra* note 9.
[22] Ibid., articles 5-8.
[23] Szekely, *supra* note 10, at 736-737.
[24] Schrijver, *supra* note 18, at 130
[25] Ibid., at 131

General Assembly adopted Resolution 3129 (XXVIII) emphasizing necessity "to ensure effective cooperation between countries through the establishment of adequate international standards for the conservation and harmonious exploitation of natural resources common to two or more States in the context of the normal relations existing between them",[26] and mandating the Governing Council of UNEP to formulate such standards, including a system of prior information and consultation.[27]

But the contrast of views on this issue still remained. The illustrative example of that is the Article 3 of the 1974 UN Charter of Economic Rights and Duties of States providing for:

> In the exploitation of natural resources shared by two or more countries, each State must co-operate on the basis of a system of information and prior consultations in order to achieve optimum use of such resources without causing damage to the legitimate interest of others. [28]

The sensitivity and disagreement involved, especially amongst developing countries, was reflected in the voting record on Article 3: 100 votes to eight, with twenty-eight abstentions. It was the only example of an article or part thereof being adopted with more than seventeen abstentions.[29]

2.3.2. UNEP Principles for the Guidance of States in the Conservation and Harmonious Utilization of Natural Resources Shared by Two or More States[30]

Pursuant to the Resolution 3129 mentioned above a Working Group of legal experts was established under auspices of UNEP and met several times between 1976 and 1978 to develop Principles on Shared Natural Resources. The Principles were drawn up for the guidance of States with respect to conservation and harmonious utilization of natural resources shared by two or more States and presented to the UNEP Governing Council for consideration and approval. The latter in its report on the work of its sixth session

[26] UN GA Resolution 3129 (XXVIII). *Co-operation in the field of the environment concerning natural resources shared by two or more States*. 2199th plenary meeting, 13 December 1973.
[27] See Schrijver, *supra* note 18; and Adede, *supra* note 12.
[28] Charter of Economic Rights and Duties of States (adopted by UN GA Resolution 3281(XXIX), 12 December 1974, UN Doc. A/Res/29/3281), article 3.
[29] Schrijver, *supra* note 18, at 110
[30] Draft Principles of Conduct in the Field of the Environment for the Guidance of States in the Conservation and Harmonious Utilization of Natural Resources Shared by Two or More States (adopted by the Governing Council of the United Nations Environment Programme, Decision 6/14 of May 1978). Hereinafter UNEP Principles.

represented controversial opinions of delegations.[31] The basic question arose is whether or not binding nature of Principles depended only on incorporation into future bilateral or multilateral treaties.[32] Some delegations expressed their opinion that "the principle of permanent, absolute and exclusive sovereignty of States over their natural resources was clearly recognized in international law; the work of the Group must therefore be seen as in no way prejudging that sovereignty".[33] Analyzing all opinions, the main question was: "Do the principles as adopted have an intrinsic value which would permit their use as a basis for development of uniform or at least parallel legislation in various states, or are they devoid of such value, depending solely on incorporation into legally binding instruments?" The latter view clearly prevailed.[34]

Finally, the UNEP Principles were adopted and transmitted to the General Assembly, which had mandated UNEP to undertake this project. In its Resolution 34/186 the former requested States:

> to use the principles as guidelines and recommendations in the formulation of bilateral or multilateral conventions regarding natural resources shared by two or more States, on the basis of the principle of good faith and in the spirit of good neighborliness and in such a way as to enhance and not adversely affect development and the interests of all countries, in particular the developing countries.[35]

According to the Principles, it is necessary that States co-operate with a view to controlling, preventing, reducing, or eliminating adverse environmental effects that may result from the utilization of resources shared by two or more States consistently with the concept of equitable utilization of shared natural resources. Such co-operation is to take place on an equal footing, taking into account the sovereignty, rights, and interests of the States concerned.[36]

The fact that the Principles is only of recommendatory character indicates that at the time of their adoption considerable resistance to the development of such international environmental law still existed.[37]

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[31] See *Report of the Governing Council on the work of its sixth session.* UN Environment Programme. UN Doc. A/33/25.
[32] Adede, *supra* note 12, at 510.
[33] Ibid., at 511 (referring A/33/25, *supra* note 30).
[34] Ibid., at 511.
[35] UN GA Resolution 34/186. *Co-operation in the field of the environment concerning natural resources shared by two or more States.* 107th plenary meeting, 18 December 1979.
[36] *Shared Resources: Issues of Governance.* Edited by Hart, Sharelle. Gland, (IUCN) 2008, at 22.
[37] Adede, *supra* note 12, at 512.

2.3.3. 1982 UN LOS Convention and 1995 UN Fish Stock Agreement

Several provisions of the LOS Convention deal with the issue of transboundary resources. Article 63 relates to fish stocks occurring within the exclusive economic zones of two or more coastal States or both within the exclusive economic zone and in an area beyond and adjacent to it, and establishes a duty to seek to agree upon the measures necessary to coordinate and ensure the conservation and development of such stocks. Containing the wording "without prejudice to the other provisions of this Part"[38] it does not affect the property rights of coastal State over the part of the resources inside its zone of marine jurisdiction. Article 64 deals with highly migratory species and provides for basically the same duty as Article 63 does. Articles 66 and 67 deal with anadromous and catadromous species respectively which can be of transboundary nature as well. It is worth to note that all four articles preserve the sovereign rights of the coastal State over resources.

Developing the idea of regulation of transboundary marine living resources, the UN Fish Stock Agreement[39] was concluded in 1995. It sets out principles for the conservation and management of straddling and highly migratory fish stocks. The Agreement elaborates on the fundamental principles, such as the precautionary approach, the best available scientific information and the cooperation to ensure conservation and to promote the optimum utilization of fisheries resources.

It is remarkable that LOSC being result of almost 10 years negotiations and supposed to establish a comprehensive regime for the Sea, neglects the issue of transboundary hydrocarbon resources, besides article 142 restricted to the issue of resource deposits crossing border between the Area and Continental Shelf of a coastal State. It is all the more surprising that five years before the beginning of substantive negotiations at the UNCLOS III, the International Court of Justice clearly recognized the problem of such transboundary wealth and, more importantly, its legal, economic, and ecological consequences.[40] The

[38] LOSC, *supra* note 7, art. 63.
[39] The United Nations Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 September 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (adopted on September 8th, 1995. UN Doc. A/CONF. 164/37). Hereinafter UN FSA.
[40] Szekely, *supra* note 10, at 741(referring the *North Sea* cases, *supra* note 4).

issue of the Law of the Sea in connection with transboundary oil and gas resources more widely will be considered below in chapter III.

2.3.4. The work of International Law Commission on the topic "Shared natural resources"

At its fifty-second session, in 2000, the International Law Commission included topic "Shared natural resources of the States" in its long-term programme of work.[41]

In 2002 this topic was included on the Programme of work of the Commission, by the name of "Shared natural resources".[42] In 2003, it was decided to limit the scope of the topic to confined groundwaters, oil and gas, and to begin first with the former.[43]

The Commission's work on the issue of confined groundwaters lasted from 2003 until 2008 and finished with the adoption by ILC of "The draft articles on the law of transboundary aquifers".[44] The General Assembly commended them to the attention of Governments without prejudice to the question of their future adoption or other appropriate action.

The Draft articles is still non-binding instrument and serves as guidance for States willing to accept legal guidance on the co-operative management of shared water resources. In general, the transboundary aquifers draft seeks to apply the principles of the 1997 Convention on the Law of the Non-Navigational Uses of International Watercourses[45], *mutatis mutandis*, to transboundary groundwater. Indeed, most of the substantive articles in the aquifers draft are based on the watercourses articles. The draft articles are intended to conform a set of substantive principles of customary international law and environmental law, such as the principle of equitable and reasonable utilization of aquifers; the obligation not to cause significant harm to other aquifer states; the prevention, reduction and control of pollution to aquifers and their ecosystems, and of procedural principles deriving from

[41] *Report on the work of its fifty-second session.* UN International Law Commission. UN Doc. A/55/10, para. 729.
[42] *Report on the work of its fifty-fourth session.* UN International Law Commission. UN Doc. A/57/10, para. 518, 519.
[43] A/CN.4/533, *supra* note 18.
[44] The draft articles on the law of transboundary aquifers (adopted by the ILC at its 60th session in 2008), see also Yamada, Chusei. *Firth report on shared natural resources: transboundary aquifers.* Doc. A/CN.4/591
[45] *Supra* note 21.

the general duty of cooperation and relating to management, monitoring and exchange of information between aquifer states.[46]

The work of the Commission on the issue of oil and gas resources will be considered in detail in Chapter III below. The only things to note are that it lasted from 2007 until 2010 and at its sixty-fifth session, the Commission endorsed the recommendation of the Working Group, namely "not to take up the consideration of the transboundary oil and gas aspects of the topic "Shared natural resources".[47]

2.4. Conclusion

The present survey of different attempts to adopt an international legal instrument for transboundary resources shows that such resources present a controversial issue. The main obstacle to develop binding rules regulating management of transboundary wealth is reluctance of several states to compromise on that issue and that they rely on the absolutely recognized sovereignty over that part of resources which is located within state's territory.

But anyway, on the base of the present analysis, some basic principles of states' behavior in case of transboundary resources can be outlined. They are: (1) general obligation to cooperate; (2) not to cause significant harm to other parties involved; (3) to inform and consult; (4) optimum and reasonable utilization of resources; (5) principles of good faith and good neighborliness; and others.

[46] See Matz-Lück, Nele, *supra* note 13; Candioti, Enrique. *Commen:International Law of Shared Natural Resources and Peace* . In: Peace through International Law. (Springer Dordrecht, Heidelberg, London, New York) 2009. pp. 151-155; McCaffrey, Stephen C. *The International Law Commission Adopts Draft Articles on Transboundary Aquifers.* In: The American Journal of International Law. Vol. 103 (2009), pp. 272-29 .
[47] See *Report on the work of its sixty-second session.* UN International Law Commission. UN Doc. A/65/10.

3. THE LAW OF TRANSBOUNDARY OIL AND NATURAL GAS RESOURCES

3.1. Introduction

The present chapter deals particularly with transboundary oil and natural gas resources. As it was mentioned in Chapter I the analysis will consider separate groups of sources of international law, three different levels: international regime, bilateral state practice and related case law. But before it the definition of transboundary oil and natural gas resources will be given and the issue of sovereignty and sovereign rights over transboundary hydrocarbon resources, and territorial integrity issue will be overviewed to show how topical the present subject is.

The definition of transboundary resources was already considered above. It is broad and complicated. For the purposes of the present chapter it is worth to outline the main features of the notion of transboundary oil and natural gas resources. First of all, it is a deposit of oil or natural gas that lies on the both sides from the border between states or between state and a community of states as a whole, and has ability to traverse that border. The second element of the definition is that portion of deposit lying on the one side from a border can be exploited, wholly or in part, from another side. There are five possible cases when hydrocarbon deposits can “cross a border line”: (1) land boundary between two States; (2) boundary between States’ continental shelves (almost the same as the previous, but distinction should be made because of formal difference between sovereignty and sovereign rights); (3) joint development zone, disputed area without defined boundary; (4) boundary between State’s continental shelf and international seabed area, the Area; (5) boundary between joint development zone and the state’s territory where it exercises absolute and undisputed sovereignty.

3.2. Sovereignty, sovereign rights and territorial integrity

The sovereignty of states extends to the mineral resources in the soil and subsoil of their land territory and territorial sea to an unlimited depth and doesn't depend on whether or not the deposit has been discovered or the state is able or intends to exploit it. Any other state is to get consent of the territorial state for exercising any right over these resources.[48] This also applies to the continental shelf's mineral resources, though in that case states have "exclusive sovereign rights" rather then full territorial sovereignty, but for the purpose of exploitation of mineral resources, there is practically no difference between these rights.[49] Territorial sovereignty and sovereign rights end spatially at the frontiers and dividing line of the continental shelf respectively, thus any mineral deposit extending across a boundary line is to be divided into physical areas, each of which falls under the jurisdiction of the superjacent state. But it is hardly applicable to resolve the problems of deposits of liquid minerals, such as oil and natural gas, because, firstly, no state is able to determine precise amount of deposit accruing to it without the cooperation with the other states involved and, secondly, because of capability of such resources to traverse border delimiting it.[50]

The principle closely relating to the principle of territorial sovereignty is the principle of territorial integrity, which implies that territory of a state is inviolable from encroachment by other states. Within the subject matter this principle would be violated in two possible cases. First, if unwarranted mining is conducted through the boundary line into that part of a common deposit on the territory of continental shelf of neighboring state. Second, if mining conducted on one side of the boundary caused material damage on the other.[51]

The rule of state's responsibility for the material damage to another state's territory was widely developed with regard to extraterritorial environmental effects, and it arguably seems to be applicable for the mining operations as well. But establishing of violations of the principle of territorial integrity seems to be even more difficult than to resolve the

[48] Lagoni, Rainer. *Oil and Gas Deposits Across National Frontiers.* In: The American Journal of International Law. Vol. 73(1979), pp. 215-243, at 216.
[49] Ibid., at 216 (referring the *North Sea* cases, *supra* note 4).
[50] Ibid., at 216.
[51] Ibid., at 217.

problem of the division of authority for common deposits of oil and gas, mostly, because these deposits are characterized by a complicated "equilibrium of rock pressure, gas pressure and underlying water pressure".[52]

It is obviously that any extraction operation of hydrocarbons at one point unavoidably changes conditions of the whole deposit. It can result, for instance, in that one state cannot extract the minerals from its part of deposit, even if the first state has extracted only that portion originally situated in its territory or continental shelf. And without knowing geological features of deposit it is difficult to argue that a state has suffered material damage from another's exploitation or to determine the amount of such damage.[53]

Another problem related to a violation of the territorial integrity derives from the fact that mining operations are usually performs by private companies, getting right to it from the state owning mineral resources. In case of material damage caused by that company to the territory of another states, licensing state is responsible, in accordance with international law, only if and when it has known or should have known that its territory would be used to infringe on the rights of the other state.[54]

3.3. International legal regime of transboundary hydrocarbon resources

3.3.1. Transboundary oil and natural gas resources and the Law of the Sea

Since the main topic of the present analysis relates to continental shelf which is regulated, in general, by the international Law of the Sea, it is strongly necessary to analyze how the latter, and its core element the United Nations Convention on the Law of the Sea, regulate issue of the transboundary mineral resources.

Articles 82 and 142 are the only articles dealing especially with non-living resources. Article 142 refers to "activities in the Area, with respect to resource deposits in the Area

[52] Ibid., at 217 (citing Ely. *The Conservation of Oil.* In: Harv. L. Rev. Vol. 51, at 1219).
[53] Ibid., at 217.
[54] Ibid., at 218.

which lie across limits of national jurisdiction".[55] It provides for duty of consultation including a system of prior notification. Article 82 deals with payments and contributions with respect to the exploitation of the continental shelf beyond 200 nautical miles. The revenue sharing system established by this provision implies that mankind has a right over portion of the resources located on the outer edge of the shelf. Probably, it can even be said that this provision turns such resources into these of transboundary nature.[56]

As it was already said, there is no provision regulating transboundary mineral resources of the continental shelf between neighboring States, but it does not mean that those resources did not play any role in the negotiations at the UNCLOS III. Concerning preservation of the sovereign rights over oil and natural gas resources under their jurisdiction, especially those located in close vicinity to the boundaries, the delegations tried to avoid adopting of precise provisions regulating such resources. [57] It is not surprising that at the latter stage of negotiations the delimitation issue between States with adjacent or opposite coasts was the most hard-core issue in the entire proceedings of UNCLOS III. The negotiations ended with the adoption of the articles 74 and 83 dealing respectively with the delimitation of the exclusive economic zone and the continental shelf and providing a delimitation formula which is so vague and contentious as to be virtually worthless. Aroused number of delimitation disputes taken to the ICJ at that time is one of the consequences of ambiguity and imprecision of these provisions.[58] These articles were the main reason why Turkey and Venezuela voted against the adoption of the Convention arguing that it did not adequately protect claims of named states *vis-à-vis* their neighbors.[59]

The provisions of LOSC seem to provide that each State has independent rights to explore and exploit its continental shelf resources without regard to other states. However, from one point of view "a comprehensive reading of UNCLOS reveals an underlying principle of cooperation between the states with regard to the exploration and exploitation of common deposits".[60] Both article 74 and article 83 provide for the same provisions,

[55] LOSC., *supra* note 7, article 142.
[56] Szekely, *supra* note 10, at 740.
[57] Ibid., at 741.
[58] Ibid., at 741-742 (citing Brown. *Delimitation of Offshore Areas: Hard Labour and Bitter Fruits at UNCLOS III.* In: Marine Pol'y. Vol.5 (1981), at 179).
[59] Ibid., at 742.
[60] Urdaneta, Karla. *Transboundary Petroleum Reservoirs: A Recommended Approach for the United States*

"Pending agreement […], the States concerned, *in a spirit of understanding and cooperation*, shall make every effort to enter into provisional arrangements of a practical nature and, during this transitional period, not to jeopardize or hamper the reaching of the final agreement".[61] Article 123, dealing with an enclosed or semi-enclosed sea, also calls for cooperation. More wide consideration of the question whether or not the obligation to cooperate in case of transboundary hydrocarbon resources is the customary international law will be provided below in Chapter IV.

Summing up the role of LOSC on the present issue one may note that strict interpretation of the Convention leads to conclusion that there exists rather a rule of capture than that of cooperation. But others argue that LOSC purpose is "to establish a legal framework within which the states will cooperate in order to define and exercise their maritime jurisdiction, as well as to determine the best use of the shared resources".[62] In support of the latter statement, the UN FSA can be mentioned. Although it regulates only living resources of transboundary nature, it clearly expresses the idea of cooperation on utilization of resources. And its Article 5 states that duty to cooperate *ex facte* prescribed by the Convention.[63]

3.3.2. The work of the International Law Commission on the topic"Shared natural resources" concerning oil and natural gas resources

As it was noted in chapter 2.3.4., International Law Commission dealt with the topic of shared natural resources from 2002 until 2010 which was divided in two subtopics: law of the transboundary aquifers and that of the transboundary oil and natural gas resources. In the present subsection only the latter will be considered.

At its fifty-second session, in 2000, the International Law Commission included topic "Shared natural resources of the States" in its long-term programme of work.[64]

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and Mexico in the Deepwaters of the Gulf of Mexico. In: Houston Journal of International Law. Vol. 32 (2010), pp. 333-392, at 372.

[61] LOSC, *supra* note 7, articles 74, 83 (emphasis added).

[62] Urdaneta, *supra* note 60, at 374.

[63] UN FSA, *supra* note 39, article 5 states:" In order to conserve and manage straddling fish stocks and highly migratory fish stocks, coastal States and States fishing on the high seas shall, in giving effect to their *duty to cooperate in accordance with the Convention*…", (emphasis added).

[64] A/55/10, *supra* note 41, para 729.

Transboundary oil and natural gas resources were chosen as one of the only two issues within shared natural resources topic.[65] Due to the fact that the issue of the law of transboundary aquifers was chosen as a first to consider the work on topic of oil and gas started only in 2007.

In his fourth report,[66] in 2007, the Special Rapporteur raised the question of relatedness of both subtopics. The work on the draft articles on transboundary aquifers was almost completed while the topic of oil and gas resources was not developed at all. Analyzing similarities and differences of the two subtopics, it appeared that the latter constitute much bigger bulk. The only similarity between groundwaters on one hand and oil and natural gas on the other is that the reservoir rock and the natural condition of the oil and natural gas stored therein are almost identical to a non-recharging and confined aquifer. In contradistinction to groundwaters oil and natural gas are important resources, but are not essential for life and there are various alternative resources and the consideration of vital human needs does not arise here.[67] One of the main differences noted in the report is that "the consideration of environmental problems of oil and natural gas requires an entirely different approach from that of groundwaters".[68] Nevertheless, appointed Special Rapporteur considered that some of the regulations of the law of the non-recharging transboundary aquifer might be relevant to the question of oil and natural gas, but concluded, finally, that a separate approach is required for the latter.[69]

At its 59th session, in 2007, the Commission admitted the proposal made by Mr. Yamada about separate approach and established a Working Group on Shared natural resources which, inter alia, prepared a questionnaire on State practice concerning oil and gas for circulation to Governments.[70] The questionnaire included five questions about states practice and domestic legislation regarding transboundary hydrocarbons.[71]

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[65] A/CN.4/533, *supra* note 18.
[66] Yamada, Chusei. *Fourth report on shared natural resources: transboundary groundwaters.* Doc. A/CN.4/580.
[67] Ibid., para. 14.
[68] Ibid., para. 14.
[69] Ibid., para. 15.
[70] *Report on the work of its fifty-ninth session.* UN International Law Commission. UN Doc. A/62/10, para. 159.
[71] See *Shared natural resources: comments and observation received from Governments.* UN Doc. A/CN.4/607

In their responses the overwhelming majority of the Governments supported the Commission suggestion pointing the same reason as these outlined by Mr. Yamada. Supporting suggestion made by the Commission the Governments expressed their views on the work on oil and natural gas. These views range from support for the initiation of work on oil and natural gas by the Commission on a priority basis to opposition to any such work.[72] In 2009, Mr. Yamada, in his paper on oil and natural gas, summarized these views.[73] In accordance with them, there exist many bilateral agreements and arrangements between the States and between their national oil and gas companies, providing for cooperation, exchange of information, effective exploitation, equitable sharing and protection of environment as basic principles. There also exist joint mechanisms but they are as yet rather informal and embryonic. Several States support the view that the question of oil and natural gas is bilateral, highly technical and politically sensitive and that it must be dealt with case by case. Therefore they urge the Commission to take a cautious approach. The Nordic countries, Mexico and Indonesia stressed the importance of the concept of unitization, which implies the consideration of the transboundary oil and natural gas field as one unit with a single operator but where earnings and costs are shared.[74]

In 2010, in his report, the Special Rapporteur, summarized the views of the Member States concerning the issue of oil and gas, noting that the majority of them were largely negative. There was noted that each case had its own specific and distinct features and need to be addressed separately. Therefore doubts were expressed as to the need of any codification relating to this issue, including the development of universal rules. It was feared that an attempt at generalization might inadvertently lead to additional complexity and confusion in an area that had been adequately addressed through bilateral efforts to manage it. Finally, Mr. Murase recommends the Working Group to admit that the topic of oil and gas will not be pursued any further.[75]

At its 62nd session in 2010, the Commission decided once more to establish a Working Group on Shared natural resources, which finally recommended that the Commission should not take up the consideration of the transboundary oil and gas aspects of the

[72] A/CN.4/591, *supra* note 44, para. 5.
[73] Yamada, Chusei. *Shared natural resources: paper on oil and gas.* UN Doc. A/CN.4/608.
[74] Ibid., para. 6,7.
[75] Murase, Shinya. *Shared natural resources: feasibility of future work on oil and gas.* UN Doc. A/CN.4/621.

topic.The Commission took note of the oral report of the Chairman of the Working Group and endorsed that recommendation.[76]

Evaluating the importance of the ILC work on the issue of transboundary oil and natural gas deposits and the contribution made by it in the international law of such resources, one conclusion may be firmly done. To be successful, the development of the law of transboundary hydrocarbon resources has to avoid a way of international generalization and codification. It is more reasonable for it to be derived from the bilateral cooperation practice of the states in this sphere.

3.3.3. Conclusion

Summarizing it can be said that attempts to adopt comprehensive legal instrument on shared oil and natural gas resources have failed and it is hard to believe that they will be remade, because of significant disagreements between states on that issue. This failure leads to arising of the question about customary nature of any possible pattern of behavior in case of transboundary hydrocarbon deposits.

3.4. Managing common resources in bilateral state practice

3.4.1. Possible solutions of the problem of transboundary oil and natural gas resources

Analyzing relative state practice three different answers can be found on the question concerning the rights and the duties of the states in the case of transboundary oil and gas resources.[77]

First, the *prior appropriation rule* is to be applied, *i.e.*, the rule that the first to undertake extraction has the right to exploit the whole deposit. The application of that rule, also known as a *rule of capture* in domestic petroleum laws and adjudication, especially in the United States, will result in competitive drilling, and consequently, in economic and

[76] See A/65/10, *supra* note 47, para. 376-384.
[77] Lagoni, *supra* note 48, at 219.

physical waste of resources. Nowadays, the domestic laws of the most states provide for cooperative or unitized exploitation of common petroleum deposits and therefore this rule can not be regarded as a general principle of law recognized by civilized nations.[78]

Second, in the absence of an agreement on cooperation or production sharing of common deposits between nations, the rule of sovereignty over the subsoil applies. This solution is similar in its effect to the prior appropriation rule, although it worth to note that it rests not on the rule of capture, but on that of sovereignty. Since this rule will also result in competitive drilling, other special rules applicable to such deposits should be developed.[79]

A third solution argues for cooperation in order to avoid competitive drilling, because of existing opinion, it is contrary to international law. For instance, it was contended that "the application of the principle of territorial sovereignty over the subsoil together with the obligation not to cause material damage to another states, and an additional obligation to exchange information and consult on matters concerning the common deposit, would sufficiently resolve the legal problems of those deposits". Here, the crucial point is whether or not obligations to inform and consult about common deposits already exist in international law. It can be said that it does, mainly on the basis of several resolutions of the UN General Assembly.[80]

Another call for cooperation is based on different grounds. It is assumed that the states possess joint property rights and vested interests in the common deposit and, therefore, no state may unilaterally exploit a common petroleum deposit. Unilateral exploitation of such deposits is contrary to existing international law, therefore exploitation of those deposits must be exercised by mutual agreement between states concerned.[81]

It is hard to say whether there are binding rules or customs under international law requiring the unitization of transboundary deposits, rather states are compelled to cooperate for practical and economic reasons.

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[78] Ibid., at 219-220.
[79] Ibid., at 220.
[80] Ibid., at 220-221.
[81] Bastida, Ana E.et. al. *Cross-Border Unitization and Joint Development Agreements: An International Law Perspektive.* In: Houston Journal of International Law. Vol. 29 (2006-2007), pp. 355-422, at 374 (referring Onorato, William T. *Apportionment of an International Common Petroleum Deposit.* In: Int'l & Comp. L. Q. Vol. 26 (1977), at 327).

Since there is no one standard how to act in the case of transboundary resources, especially in the absence of an agreement, an analysis of the state practice on common deposits can be helpful and shed some light on the development of appropriate rules for such situations.

3.4.2. Classification of cooperative agreements

The majority of the state practice on the present topic consists of bilateral agreements between interested states. They may be divided into two groups. The first group deals with common deposits that have been already discovered. This type shows how states have actually cooperated and consists of four sub-types. The second group deals with common deposits that may be discovered in the future and reflects the extent and virtual uniformity to include some sort of "mineral deposit clause" in the delimitation agreements.[82]

As it was just mentioned, the first type of the agreements can be divided in four groups, four types of cooperation. The first, so-called "geological cooperation", have been mentioned in 1960 agreement between Czechoslovakia and Austria for the exploitation of a common deposit of natural gas in the Vysoka-Zwerndorf frontier area.[83] The main features of such cooperation are (1) neither party has jurisdiction over a common deposit as a whole; (2) each party works its proportionate share in accordance with annual calculations. The parties must periodically exchange data about previous month's output and conditions of the deposit. Summing up, this geological cooperation implies limitation of each party's production by means of data exchange and periodic consultation.[84]

The second sub-type can be found, *inter alia*, in the 1962 Supplementary Agreement to the Ems-Dollart Treaty between the Netherlands and the Federal Republic of Germany.[85] It encourages joint operations by the concessionaires of both parties. It deals with the estuary of the Ems River, which has long been claimed by both countries. The parties agreed on a

[82] Lagoni, *supra* note 48, at 222.
[83] Agreement Between the Government of the Czechoslovak Republic and the Austrian Federal Government Concerning the Working of Common Deposits of Natural Gas and Petroleum. Prague, 23 January 1960. 495 UNTS 125
[84] Lagoni, *supra* note 48, at 222-223.
[85] Supplementary Agreement to the Treaty Concerning Arrangements for the Co-Operation in the Ems Estuary Signed Between the Kingdom of the Netherlands and the Federal Republic of the Germany on 8 April 1960. Bennekom, 14 May 1962, 509 UNTS 140.

preliminary dividing line and each exercises jurisdiction on its side. The concessionaires of both sides are bound to cooperate closely with each other by concluding contracts about the calculation of reserves and output and about details of production or revenue sharing, risk bonuses, and the settlement of disputes.[86]

The third one provides for unitized exploitation of common deposit or certain well-defined fields. It "calls for a single operator to manage the common deposit on behalf of all parties".[87] This practice can be found at both international level and in domestic mining legislation of several states. The main purposes are to avoid wasting of resources or duplicating drilling installations, wells, and producing facilities; and, talking about inter-state cooperation, peaceful exploitation of mineral deposits, especially in areas disputed by two or more states.[88] The good examples of such agreements are two agreements between Japan and South Korea,[89] and Norway-UK cooperation in the North Sea.[90]

The last, fourth kind of cooperation, is one when the parties exercise joint power over the mineral resources of an area. It can be characterized as a functionally limited condominium, and is typical for agreements have being concluded between a number of Middle Eastern states. The distinctive feature of it is that in this cooperation, in contrast to the first three types, states possess joint property rights and vested interests in the common field or deposit. It may be in the form of a common sovereign authority over the area itself or in the form of conventionally established equal sovereign rights to the natural resources of a certain zone.[91]

Another bulk of agreement is those dealing with common deposits which may be discovered in the future. The distinctive feature of such agreements is that they contain

[86] Lagoni, *supra* note 48, at 223-224.
[87] Ibid., at 224.
[88] Ibid., at 224-225.
[89] Agreement Concerning the Establishment of Boundary in the Northern Part of the Continental Shelf Adjacent to the Two Countries. Japan – Republic of Korea. Seoul, 30 January 1974. 1225 UNTS 103. And Agreement Concerning Joint Development of the Southern Part of the Continental Shelf Adjacent to the Two Countries. Japan – South Korea. Seoul, 30 January 1974. 1225 UNTS 113.
[90] See, e.g., Agreement between the Government of the United Kingdom of Great Britain and Northern Ireland and the Government of the Kingdom of Norway relating to the exploitation of the Frigg Field Reservoir and the transmission of gas therefrom to the United Kingdom. London, 10 May 1976. 1098 UNTS 4. Hereinafter Frigg Agreement. And Agreement relating to the exploitation of the Statfjord Field Reservoirs and the offtake of petroleum therefrom. UK – Norway. Oslo, 16 October 1979. 1254 UNTS 380.
[91] Lagoni, *supra* note 48, at 226-227.

"mineral deposit clause". The practice to include it "is striking to its uniformity".[92] The first clause of this type was included in an agreement between Great Britain and Norway in 1965. It reads:

> Article 4
>
> If any single geological petroleum structure or petroleum field, or any single geological structure or field of any other mineral deposit, including sand or gravel, extends across the dividing line and the part of such structure or field which is situated on one side of the dividing line is exploitable, wholly or in part, from the other side of the dividing line, the Contracting Parties shall, in consultation with the licensees, if any, seek to reach agreement as to the manner in which the structure or field shall be most effectively exploited and the manner in which the proceeds deriving therefrom shall be apportioned.[93]

This article became a kind of standard for "mineral deposit clause". There also exists slightly different clause, which might be called the "Iranian type", referring only to deposits that can be exploited from the other side of the boundary line by "directional drilling".[94]

Regardless of type or form of the cooperative arrangement, the essential question is how to apportion the proceeds from the exploitation of shared resources. One way is to allocate benefits in proportion to the volume of deposit located respectively on either side of boundary. The basis for it is the principle of state's territorial sovereignty or exclusive sovereign rights. Another option is the equitable share of the benefits. As opposed to first model, it takes under consideration not only geographical allocation of deposit, but also others that could be relevant as, for instance, a change in geological conditions, amount of minerals already extracted, the costs of exploration and exploitation, and others. And finally, for the areas of overlapping claims, parties mostly choose an "equal" sharing of the proceeds.[95]

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[92] Ibid., at 229

[93] Agreement Between the Government of the United Kingdom of Great Britain and Northern Ireland and the Government of the Kingdom of Norway Relating to the Delimitation of the Continental Shelf Between the Two Countries, London 10 March 1965, 551 UNTS 214

[94] Lagoni, *supra* note 48, at 230.

[95] Ibid., at 236.

3.4.3. Cross-Border Unitization and Joint Development Agreements

Apart above mentioned classification of bilateral cooperation in case of transboundary oil and natural gas deposit, there are numerous others. Cross-border unitization and joint development agreements, being particular examples of cooperative agreements described in previous subchapter,[96] become the most popular kind of cooperation in recent years. Both of them are the special case of the wider notion "unitization". It came from the United States where private ownership of minerals has often resulted in fractionalized ownership of the oil and gas in a common reservoir. The main purpose of it is to preserve unity of the deposit and to avoid competitive drilling and production with consequent economic and physical waste. Otherwise, each separate owner, being guided by the common law "rule of capture", will "attempt to secure his or her "fair share" of the underground resource by drilling more and pumping faster than his neighbor".[97] Outside the United States, unitization wasn't so prevalent simply because it wasn't necessary, but the interest in it has been growing in the past three decades.[98] The notion unitization can be defined as "the joint, coordinated operation of an oil or gas reservoir by all the owners of rights in the separate tracts overlying the reservoir or reservoirs".[99] There are several reasons to call it the best method of producing oil and gas efficiently and fairly. They are (1) avoiding the economic waste of unnecessary well drilling and construction of related facilities; (2) possibility to share development infrastructure; (3) maximization of the ultimate recovery of petroleum from a field; (4) it gives all owners of rights in the common reservoir a fair share of the production; (5) minimization of the surface use of the land and surface damages by avoiding unnecessary wells and infrastructure.[100] It is also worth to give definitions of the special cases of unitization.

[96] Third type of agreements dealing with already discovered deposits, chapter 3.4.2.
[97] Weaver, Jacqueline Lang and Asmus, David F. *Unitizing Oil and Gas Fields Around the World: A Comparative Analysis of National Laws and Private Contracts.* In: Houston Journal of International Law. Vol. 28 (2006) pp. 3-198, at 7.
[98] Ibid., at 7.
[99] Ibid., at 6.
[100] Ibid., at 11-12.

Cross-Border Unitization is the "unitization which takes place for a reservoir underlying two or more countries that have a delimited border between them. Such unitization will typically involve two or more different licensees".[101]

Joint Development Agreement for a Joint Development Zone is "an agreement between countries that authorizes the cooperative development of petroleum resources in a geographic area that has (or had) disputed sovereignty".[102] The JDA establishes cooperative development of petroleum regime within an area calling a joint development zone (JDZ). The JDZ is generally a temporary solution, without prejudice to subsequent delimitation, but it also can be permanent one. An establishment of JDZ also may be a part of delimitation agreement, where the boundary has been defined.[103] It can happen that deposit crossing the boundary between JDZ and the defined border of another country. Here, the possible solution is cross-border unitization agreement between the body managing JDZ and the state that exercises sovereign rights over the other part of the reservoir.[104]

The main difference between these two types of unitization arises from their definitions. Cross-border unitization is applied in case of defined boundary, while joint development is for not delimited areas. The other basic differences between cross-border unitization and JDA include the following: (1) a cross-border unitization is required after discovery is made, while a JDA is ideally formed before any exploration occurs; (2) a cross-border unitization regulates defined individual reservoir or field, but the JDA deals with the area of disputed jurisdiction, which is generally larger than any individual reservoir or field; (3) In a cross-border unitization, the licensees prepare a single development plan and a unit operating agreement that is subject to the approval of the involved countries. In a JDA, a single body which has the authority to develop its own regulations, create fiscal terms, and manage the jointly shared jurisdiction is commonly established; (4) The benefits and costs is divided on the proportionate share (called the participation factor) of the field's for a cross-border unitization, and on a pre-defined basis (usually, but not always, on a fifty-fifty basis) for the JDA.[105]

[101] Ibid., at 14.
[102] Ibid., at 15.
[103] Bastida et. al., *supra* note 81, at 371.
[104] Weaver and Asmus, *supra* note 97, at 16
[105] Ibid., at 14-16.

Existing cross-border unitization agreements and JDA show a wide variation in structure. It is possible to identify six major issues as being particularly important for any JDA. It can be safely said that they are also pertain to cross-border unitization agreements. They are (1) sharing of resources, (2) management structure, (3) applicable law, (4) operator and position of contractors, (5) financial provisions, and (6) dispute resolution. The *sharing of resources* is the core element of the agreement. It defines proportion of the resources allocated to each state. The *management structure* provides a satisfactory basis for the protection of the rights and obligations of both states. It is possible to outline three categories of management structure for the JDA: (1) Single state model, when one state managing on behalf of both states; (2) two states/join venture model; and, (3) joint authority model. The *applicable law* is the legal system that will regulate proceeding of the cooperation. The necessity of it is obvious since all parties have its own legal system, which will very likely be significantly different from each other. The "*operator and position of contractors*" means that the agreement will either specify the basis for licensing or will designate to some body (Joint Authority) the obligation to develop the rules for selecting contractors. The *financial provisions* establishes taxation regime applicable to operations and activities. The *dispute resolution* mechanism usually involves internal mechanism to be pursued prior to resorting to external or to third party resolution.[106]

3.4.4. Conclusion

Summarizing state practice on the issue of transboundary resources, it can be firmly said that states seeking solution of the problem look for cooperation during negations on delimitation or when it is strongly believed that such resources can be found in the area where a border is already established. States have a number of possible models of cooperation, but the cross-border unitization and joint development for JDZ becoming more and more popular nowadays, seem to be most reasonable and widely accepted models.

[106] Bastida et. al., *supra* note 81, at 414-420.

3.5. International case law regarding delimitation disputes

In the above mentioned *North Sea Continental Shelf* cases, the ICJ did not consider the unity of a deposit as a "special circumstance" for drawing final boundary, but to be taken into consideration in the delimitation process.[107] Yet at early stages of the process, the Court recognized the need to preserve the unity of the deposit for the economical and efficient exploitation of petroleum resources.[108] Two recently concluded treaties for the regulation of transboundary resources in a then not delimited area, have been regarded by the ICJ as being "particularly appropriate when it is a question of preserving the unity of deposit" in areas of overlapping, but equally justifiable claims.[109] It was also noted that the principle of joint exploitation might have a wider application in agreement dealing with overlapping continental shelf, that is, yet to be delimited, especially in case when states have equally justifiable claims.[110] Taking into consideration UK – Norway Continental Shelf Agreement of 1965 and the Supplementary Agreement to the Ems-Dollart Treaty, the Court noted:

> To look no farther than the North Sea, the practice of States shows how this problem has been dealt with, and all that is needed is to refer to the undertakings entered into by the coastal States of that sea with a view to ensuring the most efficient exploitation or the apportionment of the products extracted.[111]

These Court's statements were argued to be *obiter dictum*. Thus they cannot be considered as more than an endorsement of such arrangements. But regarding cross-border unitization and joint development they can serve to "aid the identification of rules created by States" and contribute to establishing "the general principles of law recognized by civilized nations".[112]

The other call for cooperation is the recommendation of the Conciliation Commission on the Continental Shelf Area between Iceland and Jan Mayen. The Commission recommended establishing of joint development arrangement for the area where any significant prospect of hydrocarbon production exist. It is worth to note that the

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[107] Ong, David M. *Joint Development of Common Offshore Oil and Gas Deposits:"Mere" State Practice or Customary International Law?* In: American Journal of International Law. Vol. 93(1999) pp. 771-804, at 785.
[108] Bastida et. al., *supra* note 81, at 382.
[109] Ibid., at 383 (citing *North Sea* cases, *supra* note 4, at 52).
[110] Ibid., at 383-384 (referring *North Sea* cases, *supra* note 4, at 66-67 (separate opinion of Judge Jessup)).
[111] *North Sea* cases, *supra* note 4, para 97.
[112] Ong, *supra* note 107, at 785.

Commission favored joint development rather than the mere establishing of maritime boundary.[113] Although these recommendations were not binding on Iceland and Norway, this approach was adopted. The Agreement on Continental Shelf between Iceland and Jan Mayen of 1981[114] established detailed JDZ and provided for unitization if cross-border deposit was discovered either across delimitation line or across the boundary of the southern part of the JDZ.[115] It is obviously that the Commission, as well as the ICJ in the *North Sea Continental Shelf* cases, recognized the importance of unitization for the most effective economic recovery.[116]

Another example is the 1982 *Continental Shelf* case between Tunisia and Libya.[117] Following the ICJ's decision on that case the parties settled maritime boundary dispute amicably, designated joint exploration zone in the Gulf of Gabes area, and established Joint Libyan-Tunisian exploration company.

In seabed dispute between Australia and Indonesia parties also established three-part Zone of Cooperation.[118] In *Eritrea/Yemen Case*[119] Tribunal gave parties two possibilities: equal division of overlapping areas or agreement of joint exploitation; and stressed that the latter solution appears appropriate taking in consideration question of preserving unity of a deposit.[120]

Summarizing presented examples it can be easily said that judicial statements on delimitation issues mostly call for cooperation between interested parties and those that suggest cooperation in the form of joint development arrangement for the overlapping area, may serve as a legally viable alternative to the usual methods of delimitation.

[113] Ibid., at 786.
[114] Agreement Between Norway and Iceland on the Continental Shelf Between Iceland and Jan Mayen. Oslo, 22 October 1981. 2124 UNTS 247.
[115] Bastida et. al., *supra* note 81, at 385.
[116] Ibid., at 385.
[117] *Continental Shelf* case (Tunisia/Lybyan Arab Jamahiriya), ICJ Reports 1982, p.18.
[118] Bastida et. al., *supra* note 81, at 391
[119] Eritrea vs. Yemen (Perm. Ct. Arb., 1999). http://pca-cpa.org/upload/files/EY%20Phase%20II.PDF
[120] Bastida et. al., *supra* note 81, at 391

3.6. Conclusion

The present analysis of different sources of international law shows that, firstly, that regulation of transboundary resources at international level calls for cooperation, but dealing with hydrocarbons in particular international institutes working on this issue tried to avoid this topic at all or at least avoid precise formulation of states' rights and obligations, with a view not to be rejected by the majority of the states. Secondly, state practice shows that states mostly choose the way of cooperation during negations on delimitation or when it is strongly believed that such resources can be found in the area where a border is already established. It can also be said that states are compelled to cooperate due to economical and ecological reasons. Thirdly, the judgments in delimitation disputes also call for cooperation for the purpose of preserving of deposit's unity and to avoid competitive and wasteful exploitation.

4. OBLIGATION TO COOPERATE IN CUSTOMARY INTERNATIONAL LAW

4.1 Introduction

The core element of the present analysis is the cooperation with regard to transboundary hydrocarbon deposit. The key question is whether there is an obligation under customary international law to cooperate in case of petroleum deposit crossing border or locating in disputed area. This question may be divided in two. First, has the obligation to cooperate become an international custom and, second, shall this cooperation be in form of cross-border unitization or joint development agreement. The general obligation to cooperate is considered by legal experts containing two elements: (1) duty to inform and consult; and, (2) duty to negotiate in good faith to reach an agreement. Regarding second element it is worth to note that parties are not obliged to reach a successful conclusion.

Article 38 of the Statute of the International Court of Justice defines international custom as “evidence of general practice accepted as law”. This definition distinguishes two constituent elements of international custom: general practice and acceptance of this practice as law by international law subjects, *opinio juris sive necessitates.*

To answer the question “Does the rule to cooperate contain both elements?” it is necessary to analyze all sources of international law related to the present question.

For the first, UN LOSC will be considered as source of the international law, although it is hard to argue that it regulate transboundary mineral resources. In the case when there are no multilateral conventions or clear rules of customary international law on an issue, the legal basis for such an obligation requires analysis of the less authoritative, but nevertheless important, secondary sources of international law. Such as, General Assembly resolutions and other UN instruments, international case law and the writings of the experts. These sources will be analyzed to assess the nature and extent of the obligation to cooperate.

4.2. Obligation to cooperate at international level

4.2.1. Provisions of the UN LOS Convention calling for cooperation

The UN LOS Convention explicitly mentions arrangements similar to the JDA for the case of overlapping claims within the continental shelf or EEZ. Articles 74 (3) and 83(3) state: "the States concerned, in a spirit of understanding and cooperation, shall make every effort to enter into *provisional arrangements of a practical nature* and, during this transitional period, not to jeopardize or hamper the reaching of the final agreement. Such arrangements shall be without prejudice to the final delimitation".[121] Significantly, the language used here is similar to that used in "mineral deposit clauses" in many delimitation agreements. Only, the latter find place in undisputed area and belongs to a group of the cross-border unitization agreements, while the former definitely belongs to the JDA. Although these articles provide an obligation to cooperate, it is just a general one and the exact nature of the provisional arrangements is unspecified.[122]

Another provision of LOS Convention calling to cooperate is article 123, dealing with enclosed and semi-enclosed seas. It states: "States bordering an enclosed or semi-enclosed sea should co-operate with each other in the exercise of their rights and in the performance of their duties".[123] This provision is relevant both to JDA regarding semi-enclosed seas, e.g. Malaysia – Thailand, Malaysia – Vietnam and Indonesia – Australia agreements on the South China Sea and the Timor Sea, and to cross-border unitization agreements also related to semi-enclosed seas, e.g. the United Kingdom – Norway and the United Kingdom – the Netherlands on the North Sea. Similar examples can be found in the Persian Gulf.[124]

The question arises whether this general requirement to cooperate applies to transboundary hydrocarbons found in such seas. Two facts leave some doubts. First, the wording of the article does not contain any specific and legally enforceable obligation; it is more exhortatory than obligatory. Second, the article specifies some objects it deals with. They are living resources of the sea, marine environment, and scientific research. It is hard to find place among them for hydrocarbon or another nonliving resources. Nevertheless, it is

[121] LOSC, *supra* note 7, art. 74(3), 83(3).
[122] Ong, *supra* note 107, at 783.
[123] LOSC, *supra* note 7, art. 123.
[124] Ong, *supra* note 107, at 782.

argued that it goes beyond a mere recommendation and constitutes a legal obligation, and even if it does not apply directly to nonliving resources it serves as a useful analogy.[125]

Article 142 of the LOS Convention regulates "activities in the Area, with respect to resource deposits in the Area which lie across limits of national jurisdiction".[126] Such activities "shall be conducted with due regard to the rights and legitimate interests of any coastal State across whose jurisdiction such deposits lie".[127] Moreover, it provides a system of prior notification and consultations, and requires the prior consent of the coastal State if such activities may result in the exploitation of resources lying within national jurisdiction.[128] These requirements can arguably be ascribed to neighboring coastal states in analogous situation and form a basis for cross-border unitization or JDA regime between them.

And again it is worth to mention the UN Fish Stock Agreement, expressly supporting cooperation on utilization of transboundary resources. Article 5 of the Agreement stating "in giving effect to their duty to cooperate in accordance with the Convention",[129] clearly implies that cooperation is more than just recommendation, though it concerns only marine living resources.

4.2.2. UN General Assembly resolutions

Certain UNGA resolutions, in particular, adopted by overwhelming majority of the member states, have a more obligatory quality than others and indicate the willingness of the international community to be guided by the principles they embody.[130]

Talking about UNGA resolutions on the present issue, some experts mentions the failure of the 1972 Stockholm UN Conference on the Human Environment to accept the general principle of cooperation between states sharing natural resources (of all kind, not only of

[125] Ibid., at 782.
[126] LOSC, *supra* note 7, art. 142.
[127] Ibid., art. 142.
[128] Ong, *supra* note 107, at 800.
[129] UN FSA, *supra* note 39, art. 5.
[130] Ong, *supra* note 107, at 780.

common deposits of liquid minerals).[131] Soon after that, in December 1973, UNGA adopted Resolution 3129, which states: "it is necessary to ensure effective co-operation between countries through the establishment of adequate international standards for the conservation and harmonious exploitation of natural resources common to two or more States in the context of the normal relations existing between them".[132] Although the voting, (77 in favor, 5 against (mostly Latin America states), and 43 abstentions (industrialized states)), leaves some doubt whether it may be considered as a general *opinio juris*, it, anyway, may be regarded as an indication of growing understanding of the need for legal obligations in respect of such resources.[133]

Supporting that, UN GA adopted in 1974 the Charter of Economic Rights and Duties of States. Article 3 of that reads: "In the exploitation of natural resources shared by two or more countries, each State must co-operate on the basis of a system of information and prior consultations in order to achieve optimum use of such resources without causing damage to the legitimate interest of others".[134]

Following the just mentioned Resolution 3129, UN Environmental Program drafted principles for the guidance of States with respect to conservation and harmonious utilization of natural resources shared by two or more States.[135] These principles "encouraged states sharing natural resources to cooperate in the equitable utilization of shared natural resources as well as to avoid, to the maximum extend possible, the adverse environmental effect of such utilization".[136]

Summing up, it is worth to note that although UNGA resolutions do not create any obligations of a legal character, they indicate the willingness of the international community to be guided by the principles they embody.

[131] Lagoni, *supra* note 48, at 234.
[132] UN GA Res. 3129 (XXVIII), *supra* note 26.
[133] Lagoni, *supra* note 48, at 234.
[134] CERDS, *supra* note 28, art. 3.
[135] UNEP principles, *supra* note 30.
[136] Bastida et. al., *supra* note 81, at 376.

4.3. Bilateral state practice of cooperation in managing of transboundary hydrocarbon deposits

4.3.1. Classification of unitization arrangements

Numerous bilateral unitization agreements have proved that joint development and cross-border unitization is an effective option for cooperation in the exploration and exploitation of common natural resources. There are different models of unitization, but none of them predominates in numerical forms alone. It is possible to outline three basic models of them.

The first model is the simplest and oldest one. According to this model one state manages whole development of the deposits located in disputed area on behalf of both states. The other state shares benefits from the exploitation after the firs state's costs are deducted. Nowadays this model is not widely used as it was at the earlier stages of unitization concept development, mostly because of the unacceptable loss of autonomy by the state which sovereign rights are delegated to other state. Hardly any states would like to put itself in such a position, especially when it involves not delimited continental shelf.[137] Examples of this model include the 1958 Saudi Arabia-Bahrain and the 1969 Abu Dhabi-Qatar Agreements.

The next model is a joint development agreement establishing a system of compulsory joint ventures between the interested states and their national oil companies in designated JDZ.[138] The best example of such unitization cooperation is the 1974 Agreement between Japan and the Republic of (South) Korea. Other examples are the 1992 Memorandum of Understanding between Malaysia and Vietnam the 1995 Joint Declaration by Argentina and the United Kingdom.

The third unitization option is the most complex and institutionalized one. It requires a much higher level of cooperation. Under this model an international joint authority or commission with legal personality, licensing and regulatory powers to be established.[139] It should have a comprehensive mandate to manage the development of the JDZ on behalf of

[137] Ong., *supra* note 107, at 788,789.
[138] Ibid., at 789.
[139] Ibid., at 791.

all states involved.[140] Examples of this type unitization are the Malaysia-Thailand Joint Development Agreements of 1979-1990 and the Guinea-Bissau-Senegal Agreement of 1993 and its 1995 Protocol.

4.3.2. Cross-border unitization agreements in the States practice

Some good examples of cross-border unitization agreements can be found in the North Sea. These unitization agreements got their legal force from the already mentioned 1965 delimitation agreement between the United Kingdom and Norway, which was the first one containing, so called, "mineral deposit clause" and agreement between the United Kingdom and the Netherlands of the same year. The first of them is the 1976 Frigg Agreement. It "placed the unitization of the field on the level of public international law".[141] The basic feature of that agreement is concept of exploitation of the reservoirs as a single unit. The Agreement allocated benefits and costs between states in accordance with portion of the deposit lying within jurisdiction of each state. Two others agreements between the UK and Norway, for the Murchison and Statfjord fields, both signed in 1979, were largely based on the Frigg Agreement. Aiming to avoid necessity for a field-specific treaty for every cross-border unitization and to facilitate other aspects of cross-border cooperation, the UK and Norway signed a Framework Agreement in 2005.[142] It provides basis for subsequent cross-border unitizations, and already two fields, Blane and Enoch, have been unitized under this agreement.[143] And the fourth cross-border unitization agreement is that between the UK and the Netherlands, unitizing Markham field, signed in 1992.

There are also cross-border unitization agreements in other parts of the world, for instance, the 2003 International Unitization Agreement between Australia and Timor-Leste covering the Sunrise and Troubadour fields.

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[140] Ibid., at 791
[141] Bastida, *supra* note 81, at 393 (referring Grault, Ian Townsend. *Petroleum Development Offshore: Legal and Contractual Issues.* In: Petroleum Investment Policiec in Developing Countries.(Beredjick, Nicky and Wälde, Thomas eds., 1988), 101, at 146).
[142] Framework Agreement Between the Government of the United Kingdom of Great Britain and Northern Ireland and the Government of Norway Concerning Cross-Boundary Petroleum Cooperation. Oslo, 4 April 2005. https://www.og.decc.gov.uk/upstream/infrastructure/nfa_2005.doc
[143] Bastida, *supra* note 81, at 379.

The delimitation agreement between Russia and Norway[144] is the most recent example of such agreement containing "mineral deposit clause" and calling for cooperation on exploitation of transboundary deposits. It requires unitization agreement to be reached.[145] According present classification, since border between states is already established, it will be cross-border unitization agreement. The distinctive feature of the Agreement is that besides Article 5, concerning hydrocarbon resources and containing "mineral deposit clause", it devotes a whole annex to prescribing main elements of a unitization agreement and procedure of a settlement of disputes in case of disagreements.[146] This annex contains no fundamentally novel provisions, prescribing procedure that more or less repeats well established standard of such unitization agreements. As others agreements calling for cooperation, it also requires fulfillment of duty to consult and exchange information, and to negotiate in good faith. Although it prescribes nothing new for the regime of common deposits, the annex itself plays important role in the dispute about whether cooperation is already a customary obligation, weighting scale on behalf of arguments "for". It also shows that not only cooperation is required, but also that unitization agreement is a well-established practice.

4.3.3. Joint development agreements in the States practice

In 1974 Japan and Republic of Korea (South Korea) concluded joint development agreement for the part of East China Sea which was an object of overlapping claims not only of these states, but also of North Korea and China. This agreement established JDZ divided into subzones with two concessionaires for every subzone, one authorized by each state. One of the concessionaries became operator and the state authorized that concessionary set laws and regulations to be applicable in that subzone. The Joint Commission was also established to act as a consultative body for the purpose of liaison between two states.[147]

In 1974 Saudi Arabia and Sudan signed agreement creating a JDZ in the central part of the Red Sea. This agreement provides for equal and exclusive sovereign rights for both states

[144] *Supra* note 2.
[145] Ibid., art. 5.
[146] Ibid., annex II.
[147] Bastida, *supra* note 81, at 393-400.

in all the natural resources. The Joint Commission was also established. It acts as a corporate body with legal capacity to carry out all its assigned functions in both states.[148]

In 1979 Malaysia and Thailand signed a Memorandum of Understanding which established a JDZ in the Gulf of Thailand. The memorandum established a powerful Joint Authority. It was given all the rights and responsibilities on behalf of both sates for the exploration and exploitation of non-living resources in the JDZ.[149]

The similar to Malaysia-Thailand's joint authority is the Joint Authority established by Timor Gap Treaty between Australia and Indonesia, signed in 1989. That Treaty is considered to be one of the most comprehensive joint development agreements. It established a Zone of Cooperation divided into three areas. Area A being under joint control was managed by a Ministerial Council and a Joint Authority, with equal representation by each state and equal sharing of the resources. In Areas B and C each state, Australia and Indonesia respectively, retained exclusive sovereign rights subject to notifications and remittance of ten percent of income tax to other party.[150]

In 1993 Guinea-Bissau and Senegal established a JDZ beyond their territorial sea within a designated area around Cape Roxo. In contrast to most of the joint development agreements this one has some special features. First, it serves the dual purpose to regulate exploitation not only petroleum and other non-living resources, but fishery resources as well. Another distinctive feature is allocation of proceeds. The fishery resources are to be shared equally, like it is done in the majority of JDA for hydrocarbons, but the petroleum and minerals are split 85:15, for Senegal and Guinea-Bissau respectively. Agreement established joint authority, called Agency for Management and Cooperation of the JDZ, which, with regard to petroleum activities, was required to carry out all relevant petroleum operations or make arrangements to have them carried out. [151]

[148] Ibid., at 401,402.
[149] Ibid., at 402-404.
[150] Ibid., at 405-407.
[151] Ibid., at 407-409.

4.3.4. Conclusion

Summarizing, it can be firmly said that both types of unitization is an effective option for cooperation in the exploration and exploitation of common natural resources, and, probably, the best at the moment. But although the practice of unitization is considerable, there is no only model of it being universally accepted due to different political and economic systems, traditions of conflict and degrees of national sensitivity.

4.4. Judgments calling for cooperation in international case law

Basic judgments on cases related to transboundary hydrocarbon resources were widely considered in chapter III above. It is worth just to repeat that presented examples show that judicial statements on delimitation issues mostly call for cooperation between interested parties. They clearly show that some international jurists favor and support cooperative actions.

4.5. Obligation of good faith

The duty to negotiate in good faith is considered by some legal experts as an integral part of the general obligation to cooperate.

This rule of good faith is widely recognized as a general principle well-founded in international law. As examples, article 33(1) of UN Charter and article 300 of LOS Convention can be given.

In *Lac Lanoux* arbitration[152] violations of the rule of good faith is to include "an unjustified breaking off of the discussions, abnormal delays, disregard of agreed procedures, systematic refusals to take into consideration adverse proposals or interests". Hence, any prejudicial or wasteful exploration or exploitation of common deposits must be regarded as being contrary to good faith.[153]

[152] Lake Lanoux Arbitration. France vs. Spain. 16 November 1957. 24 ILR 101. also available at http://www.ecolex.org/server2.php/libcat/docs/COU/Full/En/COU-143747E.pdf
[153] Lagoni, *supra* note 48, at 235.

In the proof of this duty, it is worth to mention well-established precedents, such as the *Tacna Arica* arbitration, the case of the *Railway Traffic* between Lithuania and Poland, [154] and the *North Sea Continental Shelf* cases.[155] In the *North Sea Continental Shelf* cases, for instance, the rule of good faith is met by application of the so-called equitable principle.[156]

4.6. Obligation of mutual restraint

Besides positive obligation to cooperate, there also can be distinguished negative obligation of mutual restraint. The mutual restraint obligation may be followed in the case of disagreement over the development of the transboundary resources. It means "that if one interested state refuses to agree with the other in the exploitation of a common deposit, it will have practically a veto power over the other state or states that propose common development of the shared resources".[157] This concept has received much doctrinal support. This is also supported by Article 83(3) of UN LOS Convention, which provides that states concerned "…shall make every effort […] not to jeopardize or hamper the reaching of the final agreement".[158] "This provision has been interpreted to mean that states are obliged to refrain from unilateral action when it risks depriving other states of the gains they might realize by exercising their sovereign right of exploitation".[159] This is also supported by the fact that unilateral exploitation of transboundary deposits, affecting the rights of other states concerned, violates customary rule not to cause significant and irreversible harm to other states, and is actually prohibited under international law.[160]

While the positive obligation to cooperate can be disputed to be an international custom, the negative obligation arguably requires less consistency to become established custom.[161] Therefore it can firmly said that obligation of mutual restraint is already exist as a part of international customary law.

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[154] Ibid., at 235 (referring *Judicial Decisions Involving Questions of International Law.* In: Am. J. Int'l. L. Vol. 19 (1925), 393-432. and *Railway Traffic* case (Lithuania/Poland). 1931 PCIJ, ser. A/B, No. 42, p. 108.).
[155] Ibid.,at 235.
[156] Ong, *supra* note 107, at 784 (referring *North Sea* cases, *supra* note 4, at 54-55).
[157] Urdaneta, *supra* note 60, at 377 (referring Ong, *supra* note 107, at 801).
[158] LOSC, *supra* note 7, art. 83.
[159] Ong, *supra* note 107, at 798.
[160] Ibid., at 799,800.
[161] Ibid., at 794.

The stalemate situation may occur if one of states obliged to cooperate refuses to negotiate in finding common solution. In this case state initiating negotiations is not allowed to exercise their lawful rights over natural resources effectively and without undue interference, that is provided for by the principle of effectiveness under international law.[162] Some commentators argue that such situation may be averted by the argument that a stale refusing to negotiate forfeits the ability to hold another state responsible for violation of it sovereign rights. Another suggested that this negative obligation should be coupled with mentioned positive one.[163] This suggestion makes a contribution to conclude that the positive obligation is an international custom as well as negative.

4.7. Conclusion

Considering obligations to cooperate in general and that to cooperate in the form of unitization as a rules of international customary law, it can be firmly said that first requirement, settled state practice, is definitely fulfilled. Considerable number of coastal states with opposite or adjacent continental shelves have chosen a cooperation for managing transboundary hydrocarbon deposits. Not only increasing numbers, but also their geographical diversity refutes any attempt to dismiss their repeated occurrence as merely coincidental. Assessing state practice, it has to be taken into consideration that the practice of so called specially affected states contributes significantly to the formation of any rule of customary international law. The judgment in the *North Sea Continental Shelf* cases, for instance, underlies the role of the practice of the specially affected states. The ratio of delimitation agreements prescribing unitization of common deposits to all types of maritime delimitation agreements is relatively low. But if consider how often transboundary resources had been detected or they had been supposed to be detected during negations of delimitation agreement, then presumably higher ratio will be obtained, supporting existence of consistent practice.[164]

[162] Ibid., at 801.
[163] Ibid., at 801.
[164] Ibid., at 793.

Thus, arguing non-customary character of both obligations, it is nothing to say about noncompliance of first requirement, rather it can be argued on the base of the lack of the psychological or subjective element of acceptance of the obligations as binding in law, namely *opinio juris*.

Considering fulfillment of second requirement to become an international custom it is better to consider these two obligations in question separately.

Extensive number of international law sources of different levels can be cited in support of a general obligation to cooperate. On international level they are UN GA resolutions, including those by which the Charter of Economic Rights and Duties of States and UNEP Principles were adopted, and, of course, articles 74 and 83 of LOS Convention compelling states, in case of delimitation dispute, to "make every effort to enter into provisional arrangements of a practical nature". It is obvious that state consider them as the sources of binding obligation. The binding nature of that obligation is also confirmed by bilateral state practice to include "mineral deposit clause" in delimitation agreements and entering in cooperative arrangements to preserve unity of deposit and avoid competition in exploration and exploitation of common deposit. There hardly can be found any case of application of the rule of capture. Even if so, then it is rather violation of existing norms, than one of the possible ways to resolve problem of common deposit. From the level of international case law the separate opinion of Judge Jessup in the *North Sea Continental Shelf* cases can be given as an example, where he notes that the principle of international cooperation is well established under customary international law.[165]

Although unitization practice in form of cross-border unitization and joint development for JDZ is extensive, there are no considerable evidences that cooperation in form of unitization is obligatory under international customary law. Perhaps, unitization obligation can be regarded as an established custom in domestic legislation of the United States where it is originated from, but not at international level. Several international cases decided before the ICJ indicate that regime of joint development and JDZ are strongly recommended, but, nevertheless, both unitization options are just among several possible legal outcomes. One more fact that weights the scale on behalf of arguments "against" is

[165] *North Sea* cases, *supra* note 4, at 66-67.

that although the practice of unitization is considerable, there is no only model of it being universally accepted due to different political and economic systems, traditions of conflict and degrees of national sensitivity.[166] Moreover, the general obligation to cooperate implies that interested states are obliged to negotiate, but not to reach a successful conclusion. However, while there is yet no obligation to cooperate in any form of unitization, a trend towards it obviously exists. The law and practice of cross-border unitization and joint development continues to evolve, and probably in the near future would be crystallized in international customary law.

Summing up present analysis about whether general and specific obligations to cooperate are already a part of international customary law following conclusion may be made. The general obligation to cooperate is well-established international custom, including an obligation to cooperate in reaching agreement on the exploration and exploitation of transboundary deposits, and an obligation to exercise mutual restraint with respect to unilateral exploitation of deposits in case when agreement is not reached. Unitization options themselves, however, is not specifically required by international law and represent possible legal outcomes.

[166] Ong, *supra* note 107, at 788.

5. CONCLUSION

Two questions have been considered in the present paper: (1) What pattern of behavior is prescribed for neighboring states in managing of transboundary oil and natural gas resources on a continental shelf? (2) Does obligation to cooperate in managing transboundary hydrocarbon resources already crystallized in international customary law. The latter question arises because all attempts to adopt international legal instrument regulating exploration and exploitation of such resources have failed. It is divided into two sub-questions dealing with general obligation to cooperate in managing common hydrocarbons, and with particular obligation to cooperate in the form of unitization.

Seeking answer on the first question legal sources of international law in accordance with Article 38 of the Statute of the ICJ were considered. Concerning the highest level of legal source, international conventions *etc*., the ILC's work on the topic "Shared natural resources" regarding oil and gas resources and the attempts of negotiating parties at UNCLOS III to include some provisions regulating mineral resources of transboundary nature on continental shelf in UN LOS Convention are worth to be mentioned. But both, ILC and UNCLOS III, have failed in their attempts, due to significant differences in states' positions on this issue. Bilateral state practice has been more successful in that and it can be firmly stated now that cooperation in the field of transboundary mineral resources in general, and hydrocarbons in particular, is well-established and widely recognized state practice. A huge number of bilateral agreements, mostly delimitation ones, having cooperative nature, supports this point. International courts' decisions also support preserving unity of transboundary deposits and a peaceful solution of the problem of their exploitation. Concluding, it can be said that although there is still no international legal instrument regulating the present issue, states have chosen cooperation as a best way of resource management. Saying that states have chosen cooperation, it rather means they are compelled to cooperate due to economical and ecological reasons. Choosing cooperation states try to avoid competitive drilling and inherent in it considerable losses.

On the second question, first of all, the obligation to cooperate has been divided into two sub-questions, dealing with general and particular obligation to cooperate. Then the legal sources of international law were considered as well as in the research on the first question. The main purpose of this analysis was to find evidences of the fulfillment of two requirements imposed to any rule to be regarded as an international custom. Increasing numbers and geographical diversity of cooperation in general, and unitization practice in particular, clearly show that the first requirement, settled state practice, is obviously fulfilled. Regarding the second requirement, *opinion juris*, the position of these obligations is different. While general obligation, namely its two elements, duty to inform and consult and duty to negotiate in good faith to reach an agreement, is widely accepted as binding in law, the specific obligation doesn't seem to be recognized at the same degree. Although practice of cooperation in the form of unitization is considerable, it is still just among several possible legal outcomes. And the absence of the only model of unitization, due to different political and economic systems, traditions of conflict and degrees of national sensitivity, supports non-recognition of this obligation as a customary law.

Summing up present analysis it can be concluded that the general obligation to cooperate, being dual and including an obligation to cooperate in reaching agreement on the exploration and exploitation of transboundary deposits, and an obligation to exercise mutual restraint with respect to unilateral exploitation of deposits in case when agreement is not reached, is well-established international custom. Regarding cross-border unitization and joint development, the conclusion is that unitization is not specifically required by international law and represents possible legal outcomes. However, while there is yet no obligation to cooperate in any form of unitization, a trend towards it obviously exists. The law and practice of cross-border unitization and joint development continues to evolve, and probably in the near future become a part of the international customary law.

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2010 Norwegian-Russian Treaty	Treaty between the Kingdom of Norway and the Russian Federation concerning Maritime Delimitation and Cooperation in the Barents Sea and the Arctic Ocean, Murmansk,15 September 2010.
CERDS	Charter of Economic Rights and Duties of States (adopted by UN GA Resolution 3281(XXIX), 12 December 1974, UN Doc. A/Res/29/3281).
Statute of the ICJ	Statute of the International Court of Justice. Adopted June 26, 1945, 59 Stat. 105.
UNEP Principles	Draft Principles of Conduct in the Field of the Environment for the Guidance of States in the Conservation and Harmonious Utilization of Natural Resources Shared by Two or More States (adopted by the Governing Council of the United Nations Environment Programme, Decision 6/14 of May 1978).
UN FSA	The United Nations Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 September 1982 relating to the Conservation and

Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (adopted on September 8th, 1995. UN Doc. A/CONF. 164/37).

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