ANNO CXIX – TERZA SERIE
FASCICOLO III – LUGLIO-SETTEMBRE 2017

IL DIRITTO MARITTIMO

RIVISTA TRIMESTRALE DI DOTTRINA GIURISPRUDENZA LEGISLAZIONE
ITALIANA E STRANIERA
FONDATA NEL 1899 DA FRANCESCO BERLINGIERI

DIREZIONE - REDAZIONE ED AMMINISTRAZIONE
GENOVA - VIA ROMA, 10

SOMMARIO

DOTTRINA

NOTE E OSSERVAZIONI A SENTENZA

GIURISPRUDENZA DELL'UNIONE EUROPEA*

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GIURISPRUDENZA DELL'UNIONE EUROPEA

GIURISPRUDENZA ITALIANA

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* I testi delle sentenze sono pubblicati sul sito web della *Rivista* www.dirmar.com

Scritto sottoposto a doppio referaggio anonimo – This writing has been submitted to double blind peer review

COMPARATIVE ANALYSIS OF LEGAL FRAMEWORK FOR OFFSHORE HYDROCARBON EXPLORATION AND EXPLOITATION

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ABSTRACT

This paper provides an overview of the legal framework for offshore hydrocarbon exploration and exploitation. Apart from the solutions from the Croatian law, the paper includes examples of solutions in the subject matter from several selected comparative laws. These are mostly countries from the Adriatic, i.e. Mediterranean area. In that sense, the provisions of legal sources of Italian, Greek, Montenegrin and Albanian law are studied.

Apart from the distribution of competence between international, EU and/or national legal framework, the paper emphasises the need for an integrated approach to the use and protection of the sea, as well as the establishment of mechanisms for cooperation between countries. It also indicates the issue of liability for the damage due to sea pollution from offshore facilities. In conclusion, it states the similarities and differences of the legal framework for offshore hydrocarbon exploration and exploitation in the selected countries. It indicates the need for the application of quality solutions in the subject matter, which is in accordance with the European integrated policy.

1. *Introduction*

Hydrocarbon exploration and exploitation in marine areas regularly attract increasing amounts of attention by the public and professionals. It is a complex undertaking which in recent times had to face with new demands and challenges. These challenges especially lie in the area of safety and realization of efforts in the area of maintaining satisfactory climate and other ecological values.

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In particular after the global financial crisis many countries of the Adriatic and Ionian region, such as Italy, Greece, Croatia and Montenegro, have formulated new plans for the exploration and exploitation of their offshore petroleum resources as a strategy to reduce their energy dependence but also to boost economic recovery by attracting foreign investments and by exploiting oil and gas rent. However, such plans are being met with ever increasing resistance due to the threats of pollution of the environment, especially marine environment, on which main industries of the economies of the countries in this region are based on, primarily tourism, followed by mariculture and fishing. "Opponents" also represent the need to turn to non-fossil fuels i.e. building post-fossil societies based on renewable energy sources, which is an area where this region has great potential. It is apparent that numerous issues appear with regard to the inadequacy of the legal framework to deal with all the issues and problems of hydrocarbon exploitation which is required at this point to enable necessary cooperation among countries and which needs to maintain general principles of precaution, prevention and environmental sustainability within the scope of maintaining good environmental status.

More precisely, in general, when it comes to offshore hydrocarbon exploration and exploitation, three related aspects are important: economic, legal and environmental. In this paper we will pay special attention to the second aspect, i.e. the legal one and we will present main characteristics of the legal framework in the comparative analysis of legal regulations for the offshore hydrocarbon exploration and exploitation. In doing so, we will start from the legal systems of the countries which share certain geographic and/or legal and/or economic common points. In that sense, the following countries were selected: Croatia, Italy, Greece, Montenegro and Albania. So, this comparative analysis of the legal framework includes most of the Adriatic, i.e. several Mediterranean countries. Our intention is, in some further explorations, to follow these solutions in their development, particularly in light of the new legal regulation for which the European Union (EU) becomes a global environmental leader.

In the field of hydrocarbon exploration and exploitation we will highlight the Directive 2013/30EU of the European Parliament and of the Council of 12 June 2013 on safety of offshore oil and gas operations and amending Directive 2004/35/EC.[1] This Directive primarily regulates the subject matter for offshore hydrocarbon exploration and exploitation in all EU member states.

2. *Legal framework for offshore hydrocarbon exploration and exploitation in the EU*

In the EU issue of cooperation and regulation of exploitation of underwater hydrocarbons is regulated by international, EU and/or national legislation. In

[1] OJ L 178, 28 June 2013, pp. 66-106.

addition, increasing number of countries is currently engaged in an intensive process of adopting new legal standards adapted to the current level of technology and environmental protection.

To understand the legal framework for offshore hydrocarbon exploration and exploitation, it is important to consider the following issues:

a) Establishment of the distribution of competences between the international, EU and/or national legal framework,

b) Establishment of the need for an integrated approach to the issues of use and protection of the sea – namely, encouraged by large sea accidents in the area of sea pollution from ships, the EU wants to assume more authority and more responsibility by creating an integrated policy towards the sea,

c) Establishment the cooperation mechanisms between countries and internationally, while using and protecting the sea – it is important to emphasise that precisely this issue, i.e. the establishment of cooperation mechanisms on regional level, is an imperative, and

d) Clearly establish the issue of liability for damages from sea pollution from offshore facilities – some legal systems (such as Croatian) have not clearly determined within the legal framework who would be held as liable in the event of such pollution.

In continuation we will individually examine main characteristics of each of the given issues.

2.1. *Division of competences between the international, EU and/or national legal frameworks*

When it comes to international competences in the matter of offshore hydrocarbon exploration and exploitation as one of the ways of economic exploitation of the sea, we must start from the principles of the United Nations Convention on Law of the Sea.[2] Namely, the provisions of the United Nations Convention on the Law of the Sea refer to the conclusion of bilateral agreements between states. In accordance with the mentioned convention, the basis of the conclusion of bilateral agreements is the clear demarcation of maritime borders. The obligation of preserving the marine environment is contained in the United Nations Convention on the Law of the Sea, which stipulates the following in Article 192: "States have the obligation to protect and preserve the marine environment."

Such provision clearly indicates that the national legislatures are obliged to

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[2] The Convention is the globally recognized regime dealing with all matters relating to the law of the sea. It entered into force on 16 November 1994 i.e. 12 months after the date of deposit of the sixtieth instrument of ratification or accession. More about the Convention see in A. LUTTENBERGER, *Osnove me unarodnog prava mora*, University of Rijeka, Maritime Faculty, Rijeka, 2006.

Text of the Convention in English is available in Official gazette of the Republic of Croatia International agreements, no. 9/00.

adopt and implement national laws on the marine environment in accordance with the Convention. However, in practice we took note of a whole series of issued in implementation of such efforts. For example, Croatia is faced with many open issues regarding demarcation with neighbouring countries. Thus, due to the problems with the borders with Montenegro, US Marathon Oil gave up on the exploration in the fields in the south Adriatic Sea, citing the problem of unresolved border between Croatia and Montenegro as the reason for withdrawal.[3] Apart from this, Croatia and Italy signed an agreement with the goal of joint economic exploitation of the gas fields located in the northern part of the Adriatic Sea (Annamaria gas field) even though the line between those two countries has still not been determined.

Also, Italy and Albania signed a continental shelf agreement, so we point out that Italy is the only one among the countries included in this paper that signed international agreements with all the relevant parties.

We also point out Greece and Albania, who signed the agreement that was subsequently annulled by the Albanian Constitutional Court due to, as they said, a violation of the principles of the United Nations Convention on the Law of the Sea in terms of procedures and contents. The conclusion of this agreement was preceded by as many as four years of negotiations among the parties.

When it comes to legal sources of the EU in the matter of offshore hydrocarbons exploration and exploitation, we start from the provisions of the Treaty on the Functioning of the European Union (TFEU).[4] First of all, according to the provision of Article 194(1) of TFEU, each member state has the responsibility to decide whether or not it will allow prospecting, exploration and/or production of fossil fuels resources within its jurisdiction, with due regard to the need to preserve and improve the environment. Also, regarding to the TEFU, and in particular Article 292, several Commission recommendation[5] and Notices[6] on minimum principles for the exploration and exploitation of hydrocarbons have been adopted which member states must ensure appropriate regimes for assessment, licensing and issuance of permits as well as through monitoring and inspections activities that any exploration or exploitation of energy resources complies with the requirements of the existing legal framework in the EU, including provisions on the protection of human health and the environment.

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[3] In July 2015 consortium of companies Marathon Oil and OMV withdrew from all seven exploratory fields in the Croatian part of the Adriatic sea, which it had won in the public procurement procedure of the Agency for Hydrocarbon Exploration, citing in its official notice unresolved border issued between Croatia and Montenegro as the reason for the withdrawal.

[4] OJ C 326, 26 October 2012, pp. 47-390.

[5] For example, 2014/70/EU Commission Recommendation of 22 January 2014 on minimum principles for the exploration and production of hydrocarbons (such as shale gas) using high-volume hydraulic fracturing, OJ L 39, 8 February 2014, pp. 72-78.

[6] For example, Petition no. 1214/2013 by Raul Fernandez Perez (Spanish), on the search for hydrocarbons in Cantabria (Spain), using the hydraulic fracturing (fracking) method, European Parliament, Committee on Petitions of 26. August 2015, Petition no. 0253/2015 on behalf of M.A.V. (Spanish) on shale gas extraction in Burgos, European Parliament, Committee on Petitions of 30 March 2016.

It is necessary to mention the most important EU directives that regulate this matter and that are binding for EU member states:

– Directive 2013/30/EU on 12 June 2013 on safety of offshore oil and gas operations and amending Directive 2004/35/EC; [7]

– Directive 85/337/EEC of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment, has harmonized the principles of the environmental impact assessment of projects by introducing general minimum requirements;[8]

– Directive 92/91/EEC of 3 November 1992 on protection of workers in the mineral extracting industries through drilling i.e. extraction of minerals (on shore and offshore), preparation of extracted materials for sale, etc.;[9]

– Directive 94/22/EC of 30 May 1994 on the conditions for granting and using authorizations for the prospection, exploration and production of hydrocarbons;[10]

– Directive 2008/98/EC of 19 November 2008 on waste and repealing certain Directives.[11] This directive lays down measures to protect the environment and human health by preventing or reducing the adverse impacts of the generation and management of waste. The directive applies to oil spills including those from offshore installations, as upheld by the Court of Justice of the EU. It also introduces the polluter pays principle;

– Directive 2004/35/EC of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage.[12] This directive establishes an administrative system to prevent and/or remediate environmental damage caused by operators carrying out dangerous activities;

– Regulation no. 1406/2002 of 27 June 2002 of the European Parliament and of the Council for the establishment of the European Maritime Safety Agency (EMSA),[13] which has recently been amended as to include new tasks for EMSA in the field of responding to spills originating from offshore installations.

This new legislation aims at reducing the risk of a major accident in the EU offshore oil and gas sector. Especially we would like to draw attention to Directive 2013/30/EU on safety of offshore oil and gas exploration and production activities which regulates, in great detail and very extensively, offshore oil and gas activities between EU member states. The objective of this Directive is, according to item 2. of the introductory part, to reduce, as much as possible, the occurrence of major accidents relating to offshore oil and gas operations and to limit their consequences, thus increasing the protection of the marine environment and coastal economies

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7 See *supra* pint 1.
8 OJ L 175, 5 July 1985, pp. 40-48.
9 OJ L 404, 31 November 1992, pp. 10-25.
10 OJ L 164, 30 June 194, pp. 3-8.
11 OJ L 312, 22 November 2008, pp. 3-30.
12 OJ L 312, 22 November 2008, pp. 3-30.
13 OJ L 208, 5 August 2002, pp. 1-11.

against pollution, establishing minimum conditions for safe offshore exploration and exploitation of oil and gas and limiting possible disruptions to EU indigenous energy production, and to improve the response mechanisms in case of an accident.

Although the European Commission initially proposed a 'Regulation' which is directly binding upon the member states. The European Parliament and the Council agreed to recommend the adoption of a Directive – establishing objectives while leaving the means to the member states to avoid redrafting of similar existing national legislation. The Directive 2013/30/EU on safety of offshore oil and gas exploration and production activities is intended to create a complex but comprehensive and coherent regulatory environment among coastal member states to optimize the whole lifecycle of both the safety and environmental aspects of offshore oil and gas activities. The aim of the Directive is to achieve higher safety levels and to reduce risks by making rules concerning the safety of offshore installations consistent and coherent throughout the EU and neighboring countries.

This integrated and regional approach include non-member states in achieving the objectives of this Directive, where non-member countries are not excluded from their obligation to comply with Directive, particularly when it comes to the countries which are currently in pre-accession negotiations.

On the other hand, when it comes to national legal sources, most countries included in this paper regulate offshore hydrocarbons exploration and exploitation with special national laws.

Namely, within the scope of adopting Directive 2013/30/EU, in 2012 European Commission commissioned and drafted a report which contained a comparison of national legislation of EU member countries with regard to the regulations on offshore exploration and exploitation and protection of the sea from pollution from offshore facilities. Aim of the report was to establish what should be listed in the goals of the Directive in order to strengthen integration processes and increased regional cooperation. Therefore, it is a point of interest to separate national law which serve as the basis for this analysis.

The Hydrocarbons Exploration and Exploitation Act from 2013, with amendments from 2014 is in force in Croatia.[14] Therefore, this is Croatian *lex specialis* legal source in the matter of hydrocarbons exploration and exploitation. It was adopted at a high point of wide-ranging national debate on the exploration of hydrocarbons in the Adriatic. Assurances from the Croatian Hydrocarbon Agency (AZU) that Croatia adheres to "highest world standards" are not helped by the fact that in Croatia there are no implementation procedures and no clear procedures in the tendering procedure or in the process for issuing licences.

Among the countries selected, there are different procedures for carrying out tendering procedures and licensing, but it is important to emphasize that these countries are signatories of the Convention on Access to Information, Public

[14] Official gazette of the Republic of Croatia, no. 94/13, 14/14.

Participation in Decision-making and Access to Justice in Environmental Matters to Community institutions and bodies (Aarhus Convention)[15] and it is accordance with this Convention that the public participation when making decisions is mandated at the EU level. This Convention establishes a number of rights of the public (individuals and their associations) with regard to the environment. The Parties to the Aarhus Convention are required to make the necessary provisions so that public authorities (at national, regional or local level) will contribute to these rights to become effective.

Pursuant to the goals of the EU with regard to the protection of the sea from pollution and requirements arising for the Aarhus Convention (whole series of EU directives pertaining to assessments and plans of environmental impact and public discussions related to them), tendering procedure and procedure for issuance of licenses for hydrocarbon exploration necessarily make such procedures public with an obligation to ensure that the public is timely informed on all information by the bodies of public administration charged with this task. As is the case in most countries trying to intensify processes of exploration and exploitation at sea, Croatia is also encountering a series of problems and resistance from the public which arise from unsatisfactory legislation.

In Italy, Law no. 613 of 21 June 1967 is in force.[16] This law defined the regime for exploration and exploitation of offshore resources and identified the marine areas open for such activities. In particular, Law no. 613 defined seven marine areas (so called "zone marine"), in which offshore activities should have been developed by operators after obtaining a concession from the Ministry of Economic Development.

Italy has taken several steps towards the implementation of the Directive 2013/30EU. By virtue of the Law no. 154 of 7 October 2014 the Italian Parliament authorised the government to implement the provisions of the Directive 2013/30EU. A preliminary draft of the Legislative Dress drawn up with this aim is in the process of being reviewed by the competent legislative offices of the Italian Parliament.

In Greece, the subject matter is regulated by Law no. 4001/2011 on the Operation of Electricity and Gas Energy Markets, for Exploration, Production and Transmission Networks of Hydrocarbons and other provisions. Before this act, the process for the granting of exploration for hydrocarbons in Greece was regulated by Law 2289/1995 on the Research, Exploration and Production of Hydrocarbons which harmonized the Greek legislation with the EU regulation 92/22EC.[17]

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[15] Aarhus Convention was adopted on 25 June 1998 in the Danish city of Aarhus (Århus) at the Fourth Ministerial Conference as part of the "Environment for Europe" process. It entered into force on 30 October 2001.

See Regulation (EC) no. 1367/2006 of the European Parliament and of the Council of 6 September 2006 on the application of the provisions of the Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters to Community institutions and bodies, OJ L 264, 25. September 2006, pp. 13-16.

[16] Official gazette of the Republic of Italy, no. 194 of 3 August 1967.

[17] See GEORGOPOULOS, K., ISSAIAS, D., *Greek legislation on hydrocarbons*, KG DI law firm, Athens, 2012, p. 1.

Furthermore, by following the report entitled „Final Report of Safety of offshore exploration and exploitation activities in the Mediterranean: Creating Synergies between the Forthcoming EU Regulation and the Protocol to the Barcelona Convention",[18] we can single out must important aspects of offshore exploration and exploitation activities in order to notice the differences in the content of the regulations. By following the contents of this report we can notice a lack of legal provisions in the subject matter in certain countries.

Namely, in accordance with the specified report, when it comes to risk assessment (where Directive 92/91/EC on the health and safety protection of workers also imposes an obligation on operators to adopt safety measures in order to ensure the safety of the operations), no risk assessments are required in Croatia. In Italy the risk assessment aims to promote continuous improvement of health and safety and protection of workers and the environment. Operators are required to prepare a 'Document of Health and Safety' setting out its policy to prevent accidents, attached to the program for the implementation of safety management system. This document contains an external emergency plan that aims to define measures to protect the installation and its workers as well as the environment from the consequences of major accidents. Also, in Greece, no specific requirements obliging operators to conduct risk assessments were identified. However, according to the Presidential Decree 177/1997 on the safety of workers in the mineral extracting industries, transposing Directive 92/91/EEC into the national legal order, employers shall ensure that a health and safety document is drawn. This document demonstrates that the risks incurred by the workers at the workplace have been determined and assessed, the necessary safety measures have been identified and that the design, use and maintenance of the workplace and of the equipment is safe.[19]

On the other hand, when it comes to contingency planning (internal), both the Offshore Protocol and the EU Regulation refer to the operator's responsibility to put in place emergency response plans, comparative analysis shows that Italian legislation requires that all production hydrocarbons sites must have an internal Emergency Response Plan available to manage any accidental events. Also in Greece, according to the legislation transposing Directive 96/82/EC on the control of major-accident hazards involving dangerous substances, offshore exploration and exploitation of minerals, including hydrocarbons does not fall within the scope of the legislation and, consequently, operators do not have to establish major accident prevention policies under these provisions. However, according to the 'National Contingency Plan' to address pollution from oil and other harmful substances, offshore oil extraction facilities are required to have emergency plans to address

[18] The report was prepared by Milieu Ltd. for DG Environment of the European Commission under contract number 070307/2012/621038/SER/d2, May 2013.

[19] Final Report Safety of offshore exploration and exploitation activities in the Mediterranean: *Creating Synergies between the Forthcoming EU Regulation and the Protocol to the Barcelona Convention*, Milieu Ltd., May 2013, p. 41.

pollution incidents which are compatible with the relevant Local Contingency Plan and, as a consequence, with the National Contingency Plan. In addition, the 'Draft Model Lease Agreement' (which is not legislation) implies that lessees are obliged to have contingency plans. Finally, in Croatia, the operator is required to have an environmental interventions operational plan. However, the content of this plan is not stipulated in detail.[20]

When it comes to reporting and monitoring, in Italy specific monitoring requirements can be stipulated in the authorisation documents. However, the competent authorities can carry out checks and controls of the installations without notice at any time. It is noted that even when the authorisation does not require monitoring actions, they are often carried out in accordance to voluntary standards (i.e. ISO 14001 and OHSAS 18001). In Greece, the Decision Approving Environmental Conditions (AEPO) may oblige operators to monitor their activities. In addition, the 'Draft Model Lease Agreement' (which is not legislation) obliges lessees to ensure that exploration and exploitation activities are properly monitored with respect to their effects on the environment. Also, in Croatia, monitoring is not obliged, however, the operator is obliged to records during mining activities.[21]

In other countries covered by this paper, which are not EU members such as Montenegro and Albania, lack of clear legislation framework which would serve to regulate relationships within offshore exploration and exploitation is even more pronounced.

Specifically, in Montenegro, the Law on exploration and production of hydrocarbons of 23 July 2010, with amendments from 2011, is in force.[22] By their adoption Montenegro tried to provide the possibility for the future hydrocarbons production. As a small Balkan state with the lack of investments, the Montenegro also adopted Decision on designation of blocks for hydrocarbons exploration and production,[23] which specifies blocks to be awarded for the hydrocarbons production concession contracts in the offshore of Montenegro.

Although within the framework of cross-border consultations in the Adriatic between Croatia and Montenegro, a lack of implementation and other procedure for offshore exploration and exploitation at sea is indicated, despite this i.e. despite legal deficiencies in legal regulations, Montenegro has signed agreements for offshore exploration and exploitation in the Adriatic.[24]

In Albania, law which regulated offshore exploration and exploitation, Law no.

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[20] *Ibidem*, pp. 46-48.
[21] *Ibidem*, pp. 46-48.
[22] Official gazette of the Republic of Montenegro, no. 41/10, 40/11.
[23] Official gazette, of the Republic of Montenegro, no. 17/11, 51/14.
[24] On 14 September 2016 Montenegro signed a contract with a consortium of Italy's firm *Eni* and Russian *Novatek*, awarding it a 30-year concession for oil and gas exploration in the Adriatic Sea. The contract for four blocks covering an area of 1,228 square kilometers has been awarded in line with the terms of a 2014 tender, which initially covered an area of 3,000 square kilometers. Each of the partners will have 50 percent interest in the exploration licenses.

7746/1993 of 28 July 1993, On Hydrocarbons - Research and production falls into the category of laws which equally regulates hydrocarbon exploration and exploitation at sea and on land. We also point to the Law no. 104/2013 on the ratification of the agreement between Albania, Greece and Italy for the project for the pipeline Trans Adriatic (TAP Project). Also, Law no. 116/2013 on the ratification of the agreement with the government of the hosting country between Albania, represented by the Council of Ministers and Trans Adriatic Pipeline Ag, in relation to Trans Adriatic (TAP Project), as well as the agreement between Albania represented by the Council of Ministers and Trans Adriatic Pipeline Ag, in relation to Trans Adriatic (TAP Project), which Albania will implement. Furthermore, Regulation no. 547 on the establishment of the Albania's National Agency of Natural Resources, which similarly to other countries issued tenders for exploratory fields in the Adriatic and Ionian Sea, despite the lack of legal regulations.[25]

Finally, we can see from the overview of the contents of these laws, Croatia, Italy, Greece, Montenegro and Albania, that apart from Italy which differentiates various tender areas and procedures when issuing licenses for offshore activities (depending on the maritime areas), all mentioned countries have laws oriented towards the exploitation of mining resources, where the fact that these jobs are carried out at sea is neglected to a certain extent.

2.2. *Integrated approach to the issues of sea exploitation and sea protection*

Regarding the need to create a joint integrated policy in the EU, it is important to found the EMSA – European Maritime Safety Agency as a joint body who will guide the efforts of the community in the area of maritime safety and prevention of pollution of the sea on an international stage. EMSA was established by The European Parliament and Council Regulation no. 1406/2002 as one of the EU decentralized agencies. Founding of the EMSA was given impetus by the "Erika" oil spill,[26] whose name was used for the entire package of measures starting from the Directive 2005/35/EC, which introduces effective and deterrent sanctions, which can be criminal or administrative, with the aim to effectively deter and punish those responsible for releasing polluting substances into the sea.

From the area of offshore hydrocarbon exploration and exploitation, Action

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[25] Albania's National Agency for Natural Resources (AKBN) has issued the invitation for interested hydrocarbon companies to apply for exploration of free offshore blocks in Albania's territorial seas. After the head of Albanian Ministry of Energy and Industry announced in March 2015 that the Albanian government will carry out the seismic profiling in the free marine blocks, AKBN invited interested companies to apply for Joni 5 and Rodoni free offshore blocks. The blocks are located in the Ionian and the Adriatic Sea, respectively, offshore Albania. The deadline for application was June 2015. The AKBN has also invited all interested hydrocarbon companies to apply for free onshore blocks including Blocks 4, 5 and Block of Dumre, with same deadline.

[26] On 12 December 1999, the oil tanker Erika sank off the coast of Brittany, leading to the contamination of more than 400 km of coastline and caused one of the most extensive oil pollution incidents in maritime history.

Plan for response to Marine Pollution from Oil and Gas Installations adopted by EMSA's Administrative Bord at its meeting held in Lisbon (Portugal) on 13 – 14 November 2013 is currently in force. Same Action Plan is binding for EU member states, and to a certain extent is also binding for countries in pre-accession negotiations, therefore, it applies to all the countries covered in this paper. On the other hand, national legislations establish special agencies which deal with the issues of hydrocarbons explorations and exploitation and which in some way deny the need for an integrated approach. Thus, for example, the Hellenic Hydrocarbon Management Company was founded in Greece in 2011, then Croatian Hydrocarbon Agency (AZU) was founded in Croatia in 2013, while the system of state monitoring of exploration and exploitation has been active in Italy since 1960 through Ufficio Nacionale Minerario per gli Idrocarburi e le Georisorse.

Among other things, national agencies have the task to initiate a wide public discussion for works on offshore exploration and exploitation based on documentation (strategy, especially the strategy of environmental protection and framework plans of exploration and exploitation). Also, they have a purpose to carry out a public discussion on all aspects of the offshore activity for which the procedure was motioned. Professional public discussions are conducted in parallel with the public discussions with the wider public. All strategic documents in the public discussion have to meet the EU standards in this area.

2.3. *Establishment of cooperation mechanisms for exploitation and protection of the sea, between countries and internationally*

First of all, we need to emphasize that the EU considers exactly this issue as an imperative i.e. establishment of cooperation mechanisms at a regional level. Due to the need to harmonize various and often conflicting maritime activities in order to achieve sustainable exploitation of the oceans and the sea, improved quality of life in the coastal regions of the EU and creating knowledge and innovation base which would allow the EU to take a leading role in international maritime matters and create its own, recognizable maritime policy. First it was necessary to develop integrated littoral and maritime EU policy, based on regional cooperation within the framework of already existing maritime conventions, established by geographical borders.[27]

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[27] Creating an Integrated Maritime Policy for the EU began with the proposal COM (2007)0575, better known as Blue Book, with a suitable action plan (SEC (2007)1278). Work group composed from the Committee for Transport and Tourism, Committee for the Environment, Public Health and Food Safety, Fisheries Committee, Committee for Industry, Research and Energy and Committee for Regional Development gave its report on the maritime policy in the Green Book. Based on these proposals and report, the Committee submitted a Proposal for a establishing a Programme to support the further development of an Integrated Maritime Policy (SEC (2010) 1097), adopted by the European Parliament and the Council, which comprises current legal person of integrated maritime policy.

See COM (2007)0575 final, Brussels, 10 October 2007 and COM (2010)0494 final, Brussels, 20 September 2010.

Furthermore, starting from the idea that by harmonization of its policies within the EU, and their internationalization, greater benefits can be reaped from the seas and oceans with smaller environmental impact,[28] a foundations were created for the Integrated Maritime Policy EU which includes various areas of sea protection and exploitation.[29]

Within the scope of comparative analysis of countries covered by this paper, it is exactly this regional approach which allows for comparisons to be made between national legislatures of non-member countries (Montenegro, Albania) with the legal framework of EU countries (other countries covered by this paper) within the scope of Mediterranean cooperation.

In order to realize the integration goals of the EU and establish regional cooperation, the continuation of monitoring of the already undertaken international obligations from this field is important, especially goals of the Barcelona Convention, which developed into one of the strongest tools of regional cooperation in the Mediterranean.

Furthermore, the accession of the EU to the Offshore Protocol (to Barcelona Convention) might give the discussion a new impetus. By acceding to the Offshore Protocol, there will be a responsibility for the EU and its member states to take part in the discussion on the security of offshore activities within the context of the Barcelona Convention.

On the other hand, on the international level according to the objectives of Integrated Maritime Policy EU will promote cooperation under the Enlargement and European Neighborhood Policies, to cover maritime policy issues and management of shared seas, in which the Mediterranean Sea as a common denominator of the countries of this comparative analysis belongs. Also, integration processes are based on international conventions. In addition to previously mentioned provisions of the United Nations Convention on Law of the Sea, for the needs of the paper, we can also mention International Convention on Civil Liability for Oil Pollution Damage (CLC convention).[30]

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[28] Goals of integrated maritime policy aim to achieve the highest level of sustainable exploitation of the oceans and the seas, creation of knowledge and innovation base for maritime policy by comprehensive European strategy for sea exploration, support to the research of climate changes and of their influences on maritime activities, environment, littoral areas and islands.

[29] For example, fishery and aquaculture, shipping and ports, sea environment and exploration, offshore energy sources, shipbuilding and naval industries, maritime surveillance, nautical and coastal tourism, employment in the nautical sector, development of coastal regions and foreign relations in maritime affairs.

[30] CLC convention was adopted at the time of the accident involving the tanker Torrey Canyon, which transported persistent oil which caused great pollution, where it was made apparent that such spillages cannot simply disappear by actions of nature (as opposed to non-persistent oils) and due to the fact that transport of raw oil comprises almost 80 % of the entire transport of oils by sea.

Text of the CLC Convention in English is also available in Official gazette of the Republic of Croatia International agreements, no. 2/97, 3/99.

Namely, when it comes to the CLC convention, we must keep in mind that, pursuant to the International Maritime Organization (IMO) guidelines, since July 1993 the double hull amendments stipulating the obligation of double hull tankers in hydrocarbons transportation have been applied in the domain of national legislations. Also, in terms of the CLC convention, the interpretation of the notion 'responsibility for damage caused by pollution of the sea' should be considered as a preventive system which must also include cases of pollution caused by negligence referred to by legal doctrine[31] and legislation[32] citing the Convention on Civil Liability for Oil Pollution Damage caused by exploration and exploitation of seabed mineral resources[33] provisions which imposes a strict liability on offshore facilities operators.

Furthermore, considering a large number of maritime accidents causing significant sea pollutions (e.g. accidents of tankers *Agip Abruzzo*, *Erica* and *Prestige*),[34] a further development of liability institute for sea pollution damage is essential. In fact, there is an obvious gap/deficiency in the CLC convention in view of the full regulation of the compensation for pollution since the CLC convention applies to pollution of the sea by oil, where the oil does need to be from a ship, therefore the convention for the most part is not related to the issued of offshore exploration and exploitation. The question then arises as to the interpretation of the term *ship* in terms of liability according to the CLC convention, particularly when it comes to floating storage units (FSUs) and floating production, storage and offloading units (FPSOs),[35] these units can be considered ships for the needs of the CLC convention when they transport oil as cargo on the way from the port terminal outside the oil field in which they usually act. Otherwise, they would not be considered as a ship within the meaning of the CLC convention.[36]

However, in the case of the floating production, storage and offloading units (FPSO), *Slops,* the Supreme Court of Greece decided that *Slops* can be defined as a

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[31] See COMENALE PINTO, M. M., *La responsabilità per inquinamento da idrocarburi nel sistema della C.L.C. 1969*, Cedam, Padova, 1993.

[32] For example, details of the italian legislation see in FOGLIANI, E., *Aspetti giuridici della tutela del mare dall'inquinamento da hidrocarburi*, available at http://www.fog.it/articoli/idrocarburi.htm.

[33] Text of the Convention is available in *International Legal Materials* (1977), vol. 16, no. 6, p. 1451.

[34] For more details on the topics see ĆORIĆ, D., *One išćenje mora s brodova, me unarodna i nacionalna pravna regulacija*, Pravni fakultet Sveučilišta u Rijeci, Rijeka, 2009, ROBERT S., *L'Érika: responsabilités pour un désastre écologique*, Pedone, Paris, 2003, ARROYO, I. *Problemi giuridici relativi alla sicurezza della navigazione marittima (con particolare riferimento al caso Prestige)*, *Il Diritto Marittimo*, 2003, 4, 1193.

[35] For more on the topic of these units see D. LANG, P. GREENING, P., *Floating FLNG facilities: are they 'vessels' for purposes of liability limitations?*, OE Offshore Engineer, 1 July 2014, digital edition.

[36] The issue was brought up again at the session of the General Meeting of the fund held in October 2011, but the General Meeting reaffirmed its stance that these units do not fall under the term of a ship in accordance with the CLC convention. See, International Oil Pollution Compensation Funds (IOPC), "Consideration of the Definition of *ship*", IOPC/OCT11/4/4.

ship according to the provisions of the CLC convention considering that it has the characteristic of a floating facility, which, after a modification into a floating storage, stores oil products as cargo as has the possibility of moving by towing with the possibility of pollution risk, without the need for the incident to happen during the transport of oil as bulk cargo.

Moreover, countries whose legislations have been compared in the area of prevention of sea pollution, also apply provisions relating to the environmental protection, especially with regard to pollution prevention regulation measures in the zones in which the hydrocarbons transportation and exploration are not allowed and the Ecological Network of Protected Areas in the territory of the EU – i.e. *Natura 2000.*[37] However, the existence of all these rules together with the international conventions, in particular the CLC Convention, does not exclude the existence of considerable misgivings in the area of liability for damage caused by marine pollution both in the countries whose territory is exposed to maritime accidents and with the offshore exploration facilities owners/operators.[38]

From this it can be seen that in the international system of liability for the damages caused by exploration and exploitation of hydrocarbons for offshore facilities, and even in the cases of countries which we are analyzing, and this judgment was from one of those countries, it can be established that there is no satisfactory normative system, and that concluding international agreements and internationalization could be a good direction for finding a solution to this significant problem.

2.4. *Regulation of the compensation for damages due to sea pollution caused by offshore activity*

In the introductory part we pointed out the importance of determining the issue of compensation for the damages due to sea pollution from offshore activities. It has been noticed in countries such as Croatia or Montenegro, which are just starting to

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[37] About Ecological Network of Protected Areas in the territory of the EU – *Natura 2000*, see details on the website http://ec.europa.eu/environment/nature/natura2000/index_en.htm (pristupljeno 25. velja e 2017.).

[38] The ruling of the Court of Messina, on the oil tanker *Patmos*, said the compensation for environmental damage is not regulated by the CLC and must therefore have different solution depending on law of the state which have undergone the pollution, shall refer the matter judicially. The Court of Appeal of Messina considered the existing law of the Italian State to pay damages to marine resources in accordance with art. 21 of Law 1982/979 for the protection of the sea, instead stating that it falls between the damages payable under the CLC. Therefore, it is not disputed that the various issues on aspects compensable ecological damage are covered by the discipline of the CLC, being largely governed by the regulations of the individual instead contaminated called to judge upon the application, to the detriment of the intended uniformity of the CLC.

Trib. Messina July 30, 1986, in *Dir. transp.*, 1988/I, 181, with comment of M.M. COMENALE PINTO, *In margine ad alcuni problemi nell'applicazione della CLC 1969 e della IFC 1971*; App. Messina December 24, 1993, in *Dir. transp.*, 1994, 585, with comment of F. PELLEGRINO, *Quali criteri per qualificare il danno all'ambiente marino?*

intensify the offshore activities, that the legal framework related to the performance of these activities does not include any specific provisions covering the liability issue.

In Croatia, the Hydrocarbons Exploration and Exploitation Act as a *lex specialis* legal source, unfortunately, does not contain the provisions on the compensation of the non-contractual damage that could be caused by the hydrocarbons exploration and exploitation activity. Prof. ori and prof. Tuhtan Grgi warned about this several times.[39] Also, the Mining Act, to which the Hydrocarbons Exploration and Exploitation Act directly refers, has no provision on the liability for the damage from sea pollution, so national proposers usually turn to maritime codes and international conventions from the field. It is necessary to add here that the CLC convention and International Convention on Liability for Bunker Oil Pollution (Bunker convention)[40] (as well as the International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea (HNS Convention), which has not entered into force) regulate the liability and compensation for the damages from pollution that originate from ships, while pollutions that originate from offshore devices are not covered by them.

Within the scope of the subject of regulating compensation for damages due to sea pollution caused by offshore activity, it is also important to point out other activities at an international level. In the year 1977, a draft of Convention on Civil Liability for Oil Pollution Damage from Exploration for and Exploitation of Seabed Mineral Resources, but it did not come into force so the problem of regulating this issue was left to national legislations. Draft Convention followed the most important institutions of the conventions from the field of liability for oil pollution for example, limiting of liability, mandatory insurance, establishing a fund, direct law suit against the insurer.

New attempt to internationally regulate this issue was initiated by Indonesia following the Montara oil spill in the year 2009[41] and a debate was started at the International Maritime Organization (IMO).

At the 101st session of the IMO, held in July 2014, it was concluded that for the moment there is no consensus for adopting an international convention which would regulate compensation for damages caused by offshore exploration, and it was recommended to conclude bilateral and multilateral agreements (for example The Nordic Environmental Protection Convention, Voluntary Offshore Pollution Liability Agreement). Here a reference is made to the provisions of the United

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[39] Ćorić, D., Tuhtan Grgić, I., *Exploration and Exploitation of Hidrocarbons in the Adriatic: the Problem of Non-Contractual Liability for Marine Pollution in the Croatian Legislation*, *Naše more* 62(4) 2015, pp. 113-119.

[40] The Bunker convention was adopted on 23 March 2001 and it was entered into force on 21 November 2008. Text of the Bunker Convention in English is also available in Official gazette of the Republic of Croatia International agreements, no. 9/06.

[41] Accident happened on 21 August 2009. The rig was located 140 nautical miles to the northwest of the coast of Australia. Spillage was stopped on 03 November 2009, and it is believed that 400 barrels (around 64 tons) of crude oil flowed out daily.

Nations Convention on the Law of the Sea pursuant to which countries adopt laws and other regulations for preventing, reducing and monitoring pollution of the marine environment which is directly or indirectly caused by activities on the sea bottom subject to their jurisdiction or comes for artificial islands, devices and instrument which are under their jurisdiction. Also, in accordance with their legal system, ensure the possibility for legal protection for quick and appropriate compensation or other manner of remedying the damage caused by the pollution of marine environment which was caused by natural or legal persons under their jurisdiction and cooperate in the application and development of international liability law, considering the assessment and compensation for damages and resolving disputes which arise with regard to the above, and also, where appropriate, in the establishing the criteria and the procedures for payment of an appropriate fee, such as mandatory insurance or compensation funds.

By adopting directive 2013/30/EU with regard to the liability for damages from pollution, it is expected from the member countries to ensure that the approval holder is financially responsible for preventing and remedying the environmental damage in a manner established in this Directive, and which was caused by offshore oil and gas activities performed by the approval holder or the operator.

Adoption of the Directive 2013/30/EU however did not resolve implementation regulations and other legal acts of member countries, which includes the countries we analyzed in this paper. In Croatia and Greece operators are liable for environmental damage (strict and fault-based) and are required to remediate environmental damage but there are no implementing regulations. We can again establish that Italy stands apart from the rest, where competent authority conducts financial and technical checks of offshore operators to ensure ability to pay compensation. Operators are required to pay compensation for environmental damage.

3. *Conclusion*

Increased interest of the professional and wider public for the issues of hydrocarbon exploration and exploitation in maritime areas is a consequence of complex subject matter and substantial risks which necessarily arise in these activities.

Using the example of comparative analysis of legal regulations for offshore hydrocarbon exploration and exploitation of several countries from the area of the Adriatic and the Ionian Sea (Croatia, Italy, Greece, Montenegro and Albania) i.e. part of the Mediterranean as an enclosed and especially sensitive maritime area, in this work we tried to point to some of the most important issues which currently arise in offshore exploration and exploitation.

From the review of the content of legal regulations of the countries covered in this paper, we have notices certain deficiencies in the legal regulations for offshore hydrocarbon exploration and exploitation: 1) in all examined countries we have noticed a lack of legal regulations pertaining to liability for damages in offshore exploration and in pollution prevention and with regard to criminal liability for

damages in sea pollution, and 2) except for Italy which defines various areas and tendering procedures for issuance of licenses for offshore activities, in all other countries covered in this paper, regulations are not specifically tailored for sea areas, but are in fact laws on exploitation of mineral wealth, where the fact that all these operations are taking place at sea which calls for different legal solutions, especially with regard to liability for environmental damage are for the most part ignored.

In all the countries covered by this paper, including Italy, which has the most complete set of the marine pollution by carbohydrates prevention standards, we can single out two issues that have not been effectively resolved. The first question refers to the regulation of liability for marine pollution by persons who are not the owners of the vessel, and the other to the danger that the compensation for pollution damage would not be regulated by common rules, i.e. that the international conventions are not fully incorporated in national legislations, what, considering the possible amount of marine oil pollution damage compensations, causes considerable uncertainty and hazard.

Both noticed deficiencies in the regulation of offshore hydrocarbon exploration and exploitation are indicative of a same problem on the level of the entire EU, where we notice the lack of a comprehensive legal framework at the EU level led to the development of different regulatory frameworks and practices by the member states, in particular regarding licensing practices, safety and environment protection regimes.

As a positive direction in regulating offshore hydrocarbon exploration and exploitation, we can point to the Directive 2013/30/EU, however, we can also notice certain deficiencies in its incorporation in the national legislature, especially when it requires from each member state to regulate this subject matter with special regulations accompanied by the establishment of a special oversight supervisory body which would be technically competent and responsible for licensing procedure and monitoring the system for liability for damages at the offshore operator. Lack of such regulation and institutionalized structure makes already risky offshore hydrocarbon exploration and exploitation additionally dangerous.

The absence of an international legal instrument regulating specifically the operation of offshore installations further highlights the need for developing a comprehensive regulatory system at the EU level, which would overcome these differences in national legislatures by providing a clear, comprehensive and transparent system through which the safety of offshore operations can be ensured.

At an international level, efforts that have been made to date to adopt special conventions for damage liability system in offshore activities, modeled on the international liability system for compensation of damages due to sea pollution caused by oil spill, have not resulted in the adoption of such convention despite the initiatives by IMO or at an EU level.

Therefore, increased resistance by the public, associations and representatives of other industries, especially tourism industry towards offshore hydrocarbon exploration and exploitation, which is also present in the countries whose legislatures we have analyzed in this paper is not surprising.

Further to the above, EU should act as an initiator for adoption of legal regulations, international conventions and in accordance with its orientation by which it encourages regional merging of regional agreements, by which all three important aspects of offshore hydrocarbon exploration and exploitation: economic, legal and environmental, would be resolved in accordance with the EU's intention to be at the forefront of global initiatives to protect the environment, especially maritime environment, but also to protect its own economic and other interests.

It is our hope that, in the field of growing interest for offshore hydrocarbon exploration and exploitation issues, on the example of regionally conditioned needs for cooperation and improvement of legal regulations with the aim of protecting the maritime environment by prevention and liabilities systems for compensation of damages, this paper will contribute to a better understanding of this very complex topic.

ISSN 0012-348x