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Peaceful Utilization of Transboundary Reservoir in Continental Shelf of Ambalat

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Abstract
Maritime boundaries between Indonesia and Malaysia in Ambalat have not been settled yet. This block is located on a continental shelf that is rich in transboundary reservoirs of hydrocarbons such as oil and gas. Malaysia as a coastal state wants to apply archipelagic state's boundary, whereas Indonesia as an archipelagic state has applied for an extension of its continental shelf to the United Nations. Therefore, there is still unsettling business to be done in this area to fully utilize transboundary reservoirs in peace. This artide aims to seek for way of solving the recurring conflict and utilizing transboundary reservoir in peaceful manner. This artide is formulated using normative legal research based on statute, case, and conceptual approaches. This article concludes that differences between states on setting its boundaries is based on interpretation and is driven by economic value of resources, while there is opportunity to peacefully utilize transboundary reservoir by means of joint development based on international practices.

Keywords: *Ambalat; Continental shelf; Economic value; Shared resources; Transboundary reservoir.*

1. INTRODUCTION

The continental shelf area is where most hydrocarbon deposits reside. Most of those are the transboundary reservoirs, which need certain consideration between states and state-of-the-art mechanisms to extract and refine into a valuable product. Many hydrocarbon dependant countries have transboundary reservoirs or located in disputed boundaries. [1] Therefore, the need to collaborate between states and also with private corporations is a must.[2] Therefore, the development of transboundary oil and gas fields on the continental shelf is one of the most pressing problems for countries with hydrocarbon resources, especially for emerging countries.[3] The uncertainty arising from ambiguous situation is more often deterring private entities such as oil and gas companies or even consortium of banks to finance projects in such countries. As a result, such countries are lagging

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[1] Karla Urdaneta, "Transboundary Petroleum Reservoirs: A Recommended Approach For The United States and Mexico in The Deepwaters of The Gulf of Mexico," *Houston Journal of International Law* 32, no. 2 (2010): 338.

[2] Vladimir Litvinenko, "The Role of Hydrocarbons in the Global Energy Agenda: The Focus on Liquefied Natural Gas," *Resources Review* 9, no. 59 (2020): 15.

[3] *Ibid.*

behind in terms of industrial hydrocarbon development.[4] For example is the Liza-1 deposit, which cannot be developed due to the sovereignty dispute between Venezuela and Guyana.[5] There is also the Ambalat Block which still lingers between Indonesia and Malaysia without any clear resolution. Even until now, there is no agreement related to oil and gas in Ambalat that has been signed by both states.

The contested Ambalat area is located in North Borneo, right on the Indonesia-Malaysia border. The Ambalat Block itself is divided into several blocks. The East Ambalat Block is located on the Indonesia-Malaysia border in the Tarakan basin with a distance of about 80 km east of Tarakan City and a sea depth of around 2,000 m. There is an overlap in the East Ambalat Block operated by Pertamina Hulu Energi (PHE) East Ambalat with the Shell Malaysia block boundary. Although it has been owned by PHE East Ambalat since 2016, this political condition has prevented PHE East Ambalat from carrying out any exploration activities in this area.[6] The Geological Survey Center (Pusat Studi Geologi, abbreviated as PSG), a part of the Geological Agency in Ministry of Energy and Mineral Resources, through the Oil and Gas Resources Division, already studied the surroundings of East Ambalat area, precisely in the Tarakan Basin and nearby, through several field activities and the preparation of Recommendations for Oil and Gas Working Areas. The PSG survey team succeeded in identifying several potential petroleum systems in this area, both Cenozoic and Mesozoic.[7] Moreover, there is one mining point in this block that holds potential reserves of 764 million barrels of oil and 1.4 trillion cubic feet of gas. That is only a small part because Ambalat has no less than nine mining points.[8] The oil and gas deposits there are said to be usable for up to 30 years, which will benefit any country that controls it. This reservoir is estimated to be productive for up to decades and therefore has high economic value for Indonesia and Malaysia. On the other side, the Aster field of Malaysia in Ambalat Block contains substantial oil reserves of around 30,000-40,000 barrels per day, which are produced and managed by the Italian oil and gas company Eni S.p.A.[9]

As this block is located on a continental shelf area whose boundaries have not been agreed upon by Indonesia and Malaysia, each country will have to propose a territorial claim line. Therefore, PSG hopes that the disclosure of data and oil and gas potential in the East Ambalat area will

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[4] *Ibid.*

[5] Canute James, "Venezuela saber-rattles over Guyana, US wades in," https://www.argusmedia.com/en/news/2175764-venezuela-saberrattles-over-guyana-us-wades-in

[6] ESDM RI, "Eksplorasi Migas di Ambalat Penambahan Cadangan Nasional dan Kedaulatan NKRI," https://www.esdm.go.id/id/berita-unit/badan-geologi/eksplorasi-migas-di-ambalat-penambahan-cadangan-nasional-dan-kedaulatan-nkri

[7] *Ibid.*

[8] National Geographic, "Sejarah Panjang Kemelut RI-Malaysia di Ambalat," https://nationalgeographic.grid.id/read/13299388/sejarah-panjang-kemelut-ri-malaysia-di-ambalat?page=all

[9] Pulung Widhi Hananto, *et. al.*, "Legal scenario towards the policy of marine natural resources on the continental shelf: Ambalat case study," *IOP Conference Series: Earth Environtal Science* 530, (2020): 3.

encourage the resolution of border disputes in this area, and will kickstart oil and gas exploration in the Ambalat area. The control of the East Ambalat Block has strategic significance for Pertamina in an effort to develop domestic asset exploration activities, especially in the deepwater and frontier areas. So far, Indonesia and Malaysia began to renegotiate the Ambalat boundary line in 2005 after the Ligitan and Sipadan islands ownership case was resolved.[10] Both countries then agreed to refrain from any agitation or provocative actions and to resolve the case through diplomatic and peaceful means in 2009.[11] However, both countries have not yet concluded an agreement regarding delimitation. Therefore, the authors would like to examine on how to utilize the transboundary reservoir between two or more countries, by using Ambalat Block as a pivot.

Previously, there was research by Evi Purwanti entitled "*Equitable Principle Dalam Penentuan Delimitasi Perbatasan Indonesia Dengan Negara-Negara Lain di Zone Ekonomi Eksklusif dan Landas Kontinen*" focusing on equitable principle in determining the Delimitation of the Single Maritime Boundaries of the Exclusive Economic Zone (EEZ).[12] There was also research on the continental shelf by Djarot D.A. Andaru entitled "*Joint Development Agreement Sebagai Solusi Penyelesaian Sengketa Wilayah Zona Ekonomi Eksklusif Laut Natuna*" focusing on Joint Development Agreement as dispute settlement regarding EEZ in Natuna Sea.[13] The two studies focused on different issues compared to this article because this article focuses on utilizing the economic value of the transboundary reservoir in the continental shelf through economical and business point of view.

This article does not only serve the general purpose to weed out problems in determining boundaries of continental shelf between countries, but also specific purpose to identify and describe ways to utilize the economic value of the transboundary reservoir in continental shelf or in overlapping boundaries. This article, therefore, is expected to be an alternative reading for international law students focusing on sea and energy, as well as the wider community who have limited access to primary information sources. It is formulated by using normative legal research which is supported by statute, case, and conceptual approaches. The explanative analysis does not only use primary legal materials (multilateral treaties, bilateral agreements, and court decisions), but also secondary legal materials in the form of textbooks and journal articles, as well as tertiary legal materials.

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[10] Tempo, "AL RI-Malaysia Sepakat Kasus Ambalat Selesai," https://nasional.tempo.co/read/59709/al-ri-malaysia-sepakat-kasus-ambalat-selesai

[11] Tempo, "Indonesia-Malaysia lanjutkan Perundingan Ambalat," https://nasional.tempo.co/read/172196/indonesia-malaysia-lanjutkan-perundingan-ambalat

[12] Evy Purwanti, "Equitable principle dalam penentuan Delimitasi perbatasan Indonesia dengan negara-negara lain di Zona Ekonomi Eksklusif dan Landas Kontinen" (Master's Thesis, Universitas Gadjah Mada, 2016), 1-120.

[13] Djarot D.A. Andaru, "Joint Development Agreement Sebagai Solusi Penyelesaian Sengketa Wilayah Zona Ekonomi Eksklusif Laut Natuna," *Masalah-Masalah Hukum* 49, no. 4 (2020): 345-358.

2. RESULT AND ANALYSIS

2.1. Different Interpretations of Territorial Boundaries in Ambalat

The dispute over the Ambalat Block began in 1969, when Indonesia and Malaysia reached an Agreement regarding Continental Shelf Boundary on 27 October 1969.[14] Indonesia then ratified the bilateral agreement on 7 November 1969, yet Malaysia unilaterally published a map defining its territory in 1979 that incorporates large areas of the Ambalat Block into Malaysian territorial waters as Blocks ND6 and ND7.[15] This unilateral claim immediately drew protests from many of its neighbors, not only Indonesia, Singapore, the Philippines, Thailand, Vietnam, but also China and the United Kingdom of Great Britain and Northern Ireland (UK).[16] Indonesia then formally protested over Malaysia's unilateral claim in 1980. Malaysia's claim is considered a political decision that has no legal basis, because the boundary line which was determined by Malaysia exceeds the EEZ line of 200 nautical miles as regulated in the United Nations Convention on the Law of the Sea (UNCLOS) 1982.[17] However, this issue did not result in conflict until 2002, when the International Court of Justice (ICJ) ruled over ownership of the islands of Ligitan and Sipadan, which nearby Ambalat area, to Malaysia.[18] The dispute was submitted to the International Tribunal and also to the ASEAN High Council, but in the end, the two countries decided to resolve the issue through the ICJ.[19] Through Decision dated 23 October 2001, the ICJ granted ownership rights of Ligitan and Sipadan to Malaysia based on considerations of effective control.[20] The passing of effective control to Malaysia is based on the Treaty between the Netherlands and the UK.[21] During this period, not only the British had build existing infrastructure in the form of a beacon, but also had taken administrative actions in the form of a decree on tax collection for turtle farmers on the islands of Ligitan and Sipadan in the 1930s.[22] By then, Malaysia has proven to have control over the two islands as the successor of British territory.

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[14] The Geographer, "Continental Shelf Boundary: Indonesia-Malaysia," https://www.state.gov/wp-content/uploads/2019/10/LIS-1.pdf, 1-8.

[15] Pulung Widhi Hananto, *et. al.*, *op.cit.*, 4.

[16] Aziz I. Bakhtiar, "Penyelesaian Sengketa antara Indonesia dan Malaysia di wilayah Ambalat menurut Hukum Laut Internasional", *Jurnal Hukum Universitas Brwijaya* 36 (2015): 6.

[17] John G. Butcher, "The International Court of Justice and the Territorial Dispute between Indonesia and Malaysia in the Sulawesi Sea," *Contemporary Southeast Asia* 35, no. 2 (2013): 238-239.

[18] Sovereignty over Pulau Ligitan and Pulau Sipadan (Indonesia v. Malaysia), Judgement, I.C.J. Reports 2002, p.102.

[19] *Ibid*, 2.

[20] Wildani Angkasari, *et. al.*, "Review Article Indonesia – Malaysia Dispute over Maritime Boundaries in the Northern Region of the Malacca Straits: Implication to Fisheries Management Regime," *Journal of Critical Reviews* 7, no. 3 (2020): 595.

[21] Nur Fareha Binti Mohammad Zukri, *et. al.*, "Dispute International between Indonesia and Malaysia Seize on," *International Journal of Law Recontruction* 3, no. 1 (2019): 6.

[22] Areej Torla, *et. al.*, "The Dispute between Malaysia and Indonesia over the ND6 and ND7 Sea Blocks: A Malaysian Perspective," *Journal of East Asia and International Law* 8, no. 1 (2015): 177.

Ligitan and Sipadan ruling to Malaysia then was used as a foothold to Malaysia's claim on the Ambalat Block. Malaysia, which has the status of a coastal state, later claimed to be an archipelagic state on the basis that they already had management rights over two islands, which are Ligitan and Sipadan.[23] Nevertheless, up to this day, Malaysia's status remains as a normal coastal state. This status therefore is only allowed to draw normal baselines or straight baselines, which is off Ambalat.[24] On the other hand, Indonesia is, both by *de jure* and *de facto*, indeed an archipelagic state. The concept of the archipelagic state itself is a result of Indonesia's international diplomacy based on the Djuanda Declaration in 1957 to protect its maritime national interest, until the adoption of the concept in the UNCLOS.[25] In 2008, Indonesia changed the baseline from the east coast of Sebatik Island to Karang Unarang and three other points in the southeast. This has resulted in the Ambalat Block being no longer located in all of Indonesia's inland waters.[26]

The conflict subsided in 2009 when the governments and leaders of the two countries agreed to refrain from various activities that could be interpreted as a provocation by other parties. There are several explanations for this decline; Indonesia and Malaysia are neighboring countries and have the same socio-cultural and historical background for hundreds of years; the bilateral relationship between these countries support the solidarity and development of the ASEAN region; there are more than 1 million Indonesian citizens in Malaysia with various backgrounds, including tens of thousands of students. However, there are three factors that may instigate the conflict between Indonesia and Malaysia in Ambalat. Those factors are[27] (i) Economic factors. Indonesia and Malaysia want to utilize the economic value of the transboundary reservoir contained in the Ambalat Block; (ii) Media and national sentiment. The media can influence state policies and public attitudes towards an event. Druce and Baikoeni describe how the media in Indonesia and Malaysia are able to lead public opinion to defame other parties; (iii) Government and law enforcement. The governments of the two countries may unintentionally carry out provocative actions in the waters of the Ambalat Block.

2.2. Peaceful Utilization of Transboundary Reservoir in Continental Shelf

Utilization of natural resources shall be done appropriately and carried out for the benefit of the community, and ideally shall be aimed at meeting the needs as well as increasing the prosperity of the people

[23] Stephen C. Druce and Efri Y. Baikoeni. *Circumventing Conflict: The Indonesia – Malaysia Ambalat Block Dispute*. (Singapore: Springer, 2016): 137-156.

[24] Pulung Widhi Hananto, *et. al.*, *op.cit.*, 4. See also UNCLOS. 1982, Art. 14 and Art. 15.

[25] UNCLOS. 1982, Art. 46 and Art. 47.

[26] Agustina Merdekawati, "The Identification of Facts and Legal Issues as First Steps Towards Fair Settlement of the Delimitation Dispute Over the Ambalat Block Between Indonesia and Malaysia," The 1st ICSEAS, (2016).

[27] Stephen C. Druce & Efri Y. Baikoeni, *op. cit.*, 143-146.

around the area.[28] This general principle can also be put into practice in international realm. There are two situations regarding resources. In the first situation, the resources are traversing the boundary between countries. Whereas in the second situation, the resources are located in an area which is claimed by two or more countries. First, transboundary resources are resources that cross the borders of two or more countries, in which each state has the right over the natural resources found within its territorial boundaries under international law.[29] However, resources that transcend national borders present difficulties in managing access to these resources and the possible usage. No country can claim the exclusive right to access, use, and manage the resources with or without consent from other neighboring countries.[30] Therefore, all states shall be involved in its managerial and operational activities.

Natural resources can be in any form, but there is a close parallel between the mechanism and principle of the transboundary reservoir (underground deposits of oil and gas) to the transboundary aquifer (underground water). Based on the draft article on The Law of Transboundary Aquifers, there are several general legal principles related to the use of transboundary water resources, among others, equitable and reasonable utilization, duty not to cause significant harm, and duty to cooperate.[31] In the utilization of transboundary resources, each state where resources are located has sovereignty over part of those resources or those within its territory.[32] Undeniably, state can exercise sovereignty.[33] Philosophically speaking, the transboundary aquifer concept quite similar to transboundary reservoirs and therefore can be followed through.

Transboundary reservoir is a reserve of oil and gas where two or more states recognized rights or asserted claims on such reservoir in an area.[34] The extraction of transboundary hydrocarbons by one state automatically affects the rights of other states toward same resources in its area.[35] Without any agreement in force, the country concerned cannot unilaterally use transboundary resources without the risk of conflict from neighboring countries. Therefore, the country can arrange for joint development in such agreed proportions with its neighbour.[36] The country may also decide to refrain from delimiting and, conversely, designate an area for joint

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[28] Cheikh Mbow, *et. al.*, in Putu Gede Arya Sumerta Yasa, "Distribution and Revenue Sharing of Natural Resources in Indonesia: Autonomous Region and Legal Pluralism Perspective," *Udayana Journal of Law and Culture* 5, no. 2 (2021): 172.

[29] Kariuki Muigua, "Managing Transboundary Natural Resources in Kenya," http://kmco.co.ke/wp-content/uploads/2018/11/Managing-Transboundary-Natural-Resources-in-Kenya-Kariuki-Muigua-26th-November-2018.pdf, 2.

[30] *Ibid,* 6.

[31] International Law Commission, "Draft articles on the Law of Transboundary Aquifers," https://undocs.org/en/A/RES/71/150, Art. 4, 6, 7.

[32] *Ibid,* Art. 3.

[33] *Ibid.*

[34] Rene Lefeber, "International Law and the Use of Maritime Hydrocarbon Resources," https://www.clingendaelenergy.com/inc/upload/files/IGU-2015_Law_of_the_Sea_TF3_IGU_Final_May_2015.pdf.

[35] *Ibid.*

[36] *Ibid.*

development in utilizing resources that is identified in that area.[37] Transboundary oil and gas (reservoir) is basically bilateral, and thus includes not only political, but also technical matters to cope in different situations. The utilization of transboundary reservoirs is currently not subjected to the rules of universally applicable international law, but based on practices.[38]

Moreover, Article 74 (1) and Article 83 (1) of UNCLOS express that territorial boundaries between countries shall be enforced by agreement as referred to Article 38 of the ICJ Statute to achieve a fair solution. ICJ explained in Libya v. Tunisia case that the equidistance method can be applied if such method leads to a fair solution.[39] In Qatar v. Bahrain case, ICJ stipulates that designation of a maritime zone beyond 12 nautical miles shall draw a line based on equal distance, before considering whether there are circumstances requiring adjustment of that line.[40] Whereas, the ICJ in the 2009 Black Sea case, introduced a method to maritime delimitation by; (i) Utilizing temporary equidistant line; (ii) Achieving fair results by equal distance line; and (iii) Considering to strike disproportion between respective shore length ratios and the ratio between relevant sea areas with reference to the boundary line.[41]

The International Tribunal for the Law of the Sea (ITLOS) preferred Joint Development Arrangement (JDA) to the delimitation of the continental shelf in its decision in Bangladesh v. Myanmar case.[42] Meanwhile, UNCLOS recognizes the constraints for countries to conclude a legally binding boundary treaty in an area of overlapping boundary claims and therefore intended to provide a temporary solution based on Article 74 (3) and Article 83. The solution is based on the country's obligation to make temporary arrangements which include a moratorium on resources.[43] Furthermore, it says that if delimitation cannot be carried out by agreement, the countries concerned will have to make every effort to not jeopardize or hinder the achievement of peace. Moreover, the arrangement must be without prejudice to final limitation.[44]

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[37] *Ibid.*

[38] *Ibid.*

[39] Continental Shelf (Tunisia v. Libyan Arab Jamahiriya), Judgement, I.C.J. Reports 1982, p. 62.

[40] Maritime Delimitation and Territorial Questions between Qatar and Bahrain, Merits Judgement, I.C.J. Reports 2001, p. 176.

[41] Maritime Delimitation in the Black Sea (Romania v. Ukraine), Judgement. I.C.J. Reports 61, 2009, p.116-122.

[42] Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh v. Myanmar), Judgment, ITLOS Reports 2002, p. 455.

[43] Hazel Fox, *et. al. Joint Development of Offshore Oil and Gas: A Model Agreement for States with Explanatory Commentary* (Great Britain: British Institute of International and Comparative Law, 1990), 34.

[44] Maritime Boundary Delimitation (Guyana v. Suriname Arbitration), Judgement, P.C.A. Reports, p. 461.

2.2.1. Joint Development

The concept of joint development for shared resources is widely used as a general term for the unification of resources across borders, to common resources where delimitation has not been established by agreement.[45] Therefore, joint development is an arrangement of practical nature. However, there is no universal definition of joint development regarding hydrocarbon resources aside from state practices that will be explained further in the following sub-sections.[46] The legal basis for this concept comes from Article 74 (3) and Article 83 (3) of UNCLOS, and leave it to the discretion of each country regarding provisional arrangements, which are based on good faith. International courts and tribunals have also endorsed joint development agreements as a way to sort the situation between countries. For example, as in the North Sea Continental Shelf Case, where ICJ argues that a joint exploration agreement is very appropriate to maintain a unified deposit in areas of overlapping claims.[47] In the 1982 Tunisia v. Libya case, Judge *ad hoc* Evensen introduced a system of joint exploration on oil and gas as a fair alternative solution to boundary disputes which were eventually adopted by the parties.[48] In the Eritrea and Yemen Arbitrations, the court held that the parties should give every consideration to the joint or combined shared resources.[49]

States have a duty to cooperate in utilizing natural resources, whether the normative content of the regulation has been, or not, determined.[50] The cooperation may serve as a solution toward the utilization of economic value of overlapping areas rather than a long negotiation process to reach an agreement on boundary delimitation. However, there are a number of factors that must be considered apart from the utilization and legal rights, such as; (i) The recognition on the existence of overlapping claims to an areas; (ii) Political intentions; (iii) Opinions of the people in which country concerned; (iv) Other factors, such as history; economics; available third parties as mediators; and the number of countries involved.[51] Furthermore, when the states have decided to implement joint development as a solution in utilizing the economic value of resources in the area, there are several concerns such as (i) Assurance that their national interest will not be jeopardized using this mechanism; (ii) The need of the negotiating countries to specify the working

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[45] Hazel Fox, *loc.cit.*

[46] Rainer Lagoni and Daniel Vignes. *Maritime Delimitation* (The Netherlands: Martinus Nijhoff Publishers, 2006): 146.

[47] North Sea Continental Shelf Sea Cases (Federal Republic of Germany v. Denmark; Federal Republic of Germany v. Netherlands), Judgement, I.C.J. Reports 1969, p. 99.

[48] David M. Ong, "Joint Development of Common Offshore Oil and Gas Deposits: 'Mere' State Practice or Customary International Law?," *Asian Journal of International Law* 93, no. 4 (1999): 792.

[49] Maritime Delimitation (The Government of the State of Eritrea v. The Government of the Republic of Yemen), Judgement, ITLOS Reports 1999, p. 417.

[50] *Ibid.*

[51] Robert Beckman, *et. al. Beyond Territorial Disputes in the South China Sea: Legal Framework for the Joint Development of Hydrocarbon Resources* (UK: Edward Elgar Publishing, 2013), 141.

area of joint development; (iii) The need of the negotiating countries to agree on the form and extent of the scopes.[52]

2.2.2. Arrangement Practices

The JDA provides an opportunity to utilize transboundary resources without relinquishing claim to sovereignty or sovereign rights.[53] Although the arrangement is counted as a temporary measure, nonetheless it can last for 20 years or more if properly designed and implemented. The JDA means diverting focus on disputes for a generation or two, to the economic benefit of utilizing resources in the area. These arrangements tend to be implemented in areas where overlapping claims are occurred.[54] The joint development zone will either include the entire overlapping area or only the specific area.

The arrangement in general can be done through jointness or unitization. Jointness is any form of unification desired by the countries involved. This concept revolves around the two most important variables, namely the consideration between designated area and share ratio (defined area and share ratio), and the legal framework for exploiting resources.[55] Unitization is an arrangement between all interested parties toward petroleum reservoir as a whole unit.[56] Therefore, unitization is a legal mechanism whereby petroleum reservoirs that are in the line of jurisdiction are developed as a single entity, of which oil or gas reservoirs are located across multiple license areas developed jointly by the respective licensees.[57]The main principle is that the existing transboundary reservoir is developed as a single unit as if there are no boundaries.[58] Unitization is therefore calculating the shares between both countries, which is usually done through a procedure which requires a thorough knowledge of the reservoir, particularly if it is to be exploited as a single source. Unitization also may be needed when the reservoirs stretch across two or more areas.[59]

The unitization agreement between the parties sets out the terms on which the transboundary reservoir will be jointly developed. The most recognized among others the Unitization and Unit Operating Agreement

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[52] *Ibid.*

[53] Thomas A. Reynolds, "Delimitation, Exploitation, and Allocation of Transboundary Oil and Gas Deposits between Nation-States," *ILSA Journal of International & Comparative Law* 1, (1995): 137.

[54] Robert Beckman & Leonardo Bernard, "Framework for the Joint Development of Hydrocarbon Resources," *Asian Yearbook of International Law* 22, (2016): 87.

[55] *Ibid.*

[56] Jacqueline L. Weaver & David F. Asmus, "Unitizing Oil and Gas Fields Around the World: A Comparative Analysis of Nationl Laws and Private Contract," *Houston Journal International Law* 28, no. 1 (2006): 6-7.

[57] *Ibid,* 9.

[58] Patson Arinaitwe, "Exploitation of Offshore Transboundary Oil and Gas Reservoirs: an International Law Perspective," SSRN, (2014): 3.

[59] France-Spain. "Convention sur la delimitation des plateaux continentaux des deux Etats dans le Golfe de Gascogne (Golfe de Biscaye), signee a Paris le 29 January 1974," United Nations Document ST/LEG./SER.B/19, p. 445.

(UUOA)[60] and Unitization and Association of International Petroleum Negotiators (AIPN) Model Unit Agreement.[61]

To sum up, the unitization can be utilized where there has been a set border delimitation between adjacent countries, as happened in the North Sea, Frigg Field Reservoir Agreement (the UK and Norway), 10 May 1976; the Statfjord Field Reservoirs Agreement (the UK and Norway), 16 October 1979; Markham Field Reservoirs Agreement (the UK and the Netherlands), 26 May 1992. Thus, this arrangement has to be agreed upon prior to development operation, by determining each right and obligation. On the other hand, jointness is thus best exercised if the state concerned fails to reach an agreement on delimitation of sea boundaries, by agreeing on practical arrangements for a certain period of time instead.[62]

2.2.3. Shared Mechanism

The arrangement can take form in the mechanism of sharing revenues, which is generally established through equal distribution or any other scheme that is accepted by each party involved. There are some examples of existing agreements regarding shared mechanism between countries, such as (i) The 1993 Management and Cooperation Agreement between Senegal and Guinea-Bissau, establishing a common zone (joint zone) which also concerns not only hydrocarbon but also fishery resources. This arrangement is to be divided on a 50/50 basis;[63] (ii) The 1999 Agreement between Denmark-Faroe Islands and the UK which establish a Special Area which is mainly managing fisheries, which provides simultaneous access for both parties;[64] and (iii) the 2001 Agreement between Nigeria and Sao Tome and Principe covering other EEZ resources apart from petroleum, and provides a 60/40 share of resources for Nigeria/Sao Tome and Principe.[65]

Profit-sharing between countries is one vital component that needs to be negotiated prior to an agreement. There are some examples of the existing mechanisms of allocations between countries, such as (i) Revenue

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[60] Philip Weems & Nina Howells, "Oil and Gas Unitization: Specific Considerations for Cross-Border Unitization," https://www.jdsupra.com/legalnews/oil-and-gas-unitization-specific-17185/

[61] *Ibid.*

[62] David E. Anderson. *Modern Law of the Sea: Selected Essays* (The Netherlands: Martinus Nijhoff Publishers, 2008), 498.

[63] The Management and Cooperation Agreement between the Government of the Republic of Senegal and the Government of the Republic of Guinea-Bissau, Treaty, Delimitation Treaty Infobase, 14 October 1993, Art. 2.

[64] Agreement between the Government of the Kingdom of Denmark together with the Home Government of the Faroe Islands, on the one hand, and the Government of the United Kingdom of Great Britain and Northern Ireland, on the other hand, relating to Maritime Delimitation in the Area between the Faroe Islands and the United Kingdom, Treaty, Delimitation Treaty Infobase, 18 May 1999, Art. 2 and 3.

[65] Treaty between the Federal Republic of Nigeria and the Democratic Republic of Sao Tome and Principe on the Joint Development of Petroleum and other Resources, in respect of Areas of the Exclusive Economic Zone of the Two States, Treaty, Delimitation Treaty Infobase, 21 February 2001, Art. 3.

sharing from petroleum resources is divided equally by 50/50, and jurisdiction over the area is exercised only by one of the countries involved (Bahrain and Saudi Arabia Agreement 1958);[66] (ii) A 50/50 division of resources, which is governed by the laws of one state, and an 85/15 share of the resources of the continental shelf, which applies to the laws of another country (Senegal and Guinea-Bissau Treaty 1993);[67] and (iii) The combination of a single boundary that allows one country to exercise maximum jurisdiction with the combined continental shelf zone crossing that boundary unevenly, approximately 72/28, in favor of the same country (Iceland and Norway Treaty 1981).[68] As previously described, the JDA between overlapping boundaries is driven by state practice. To be effective, the countries involved must negotiate in good faith and fairly. Furthermore, agreements and arrangements between the countries are made possible through diplomacy and science in which all the sovereign rights of the parties are considered. One of the important aspects of the JDA is joint sovereign rights in certain areas with certain frameworks. However, both parties must respect each other's sovereign rights so that both parties remain in harmony. Undoubtedly, the benefits derived from the use of transboundary reservoirs will be more stable and durable than the benefits obtained unilaterally in conflicts.

2.3. Joint Development Model for Ambalat

Indonesia and Malaysia shall cooperate in utilizing Ambalat to strengthen their foothold in the area. As neighboring states and members of ASEAN, both countries have to solidify their development and also help each other to resist China's power projection and sphere of influence in this maritime region. In general, states may choose JDA because of the following reasons, (i) To utilize resources within the area; (ii) To realize that delimitation is a complex and complicated process which may affect bilateral relations; and (iii) Its ability to serve as a basis in formulating new agreement has been proved.[69] Therefore, it is for the benefit of both Indonesia and Malaysia to utilize the economic value of transboundary reservoirs in a peaceful manner. So far, the driving force of delimitation is solely to monopolize resources (oil and gas). Nevertheless, as the nature of transboundary reservoirs is similar to shared resources, there is an

[66] Bahrain-Saudi Arabia Boundary Agreement, Treaty, Delimitation Treaties Infobase, 22 February 1958, First and Second Clause.

[67] Management and Cooperation Agreement between the Government of the Republic of Senegal and the Government of the Republic of Guinea-Bissau, Treaty, Delimitation Treaties Infobase, 14 October 1993, Art. 2. The stated proportions are subject to revision once relevant natural resource discoveries have been made. This proportion, by which the continental shelf is shared between the two countries, has also now changed. In fact, Senegal has accepted revenue share changes, currently amounting to 80/20.

[68] Agreement on the Continental Shelf Between Iceland and Jan Mayen, Treaty, Delimitation Treaties Infobase, 22 October 1981, Art. 5 and Art. 6.

[69] Adina Anghelache, "History of unitization-based cooperation in the development of offshore cross-border deposits," https://www.enpg.ro/wp-content/uploads/2017/10/EPG_2015-11-3_Adina-Anghelache_History-of-unitization_Part1.pdf, 6.

obligation according to international law, as previously mentioned, between states to cooperate in good faith. This cooperation shall be joint development arrangement, which have variety of models such as (i) The single-state model; (ii) The joint-venture model; (iii) The joint authority model/The common entity model; (iv) The trustee development model; and (v) The parallel development model.[70]

A. The Single-State Model

In this model, there is only 1 (sole) state that is given authority to exploit the natural resources. Meanwhile, the other states receive a portion of sharing after the costs incurred from the sole state's operations are deducted.[71] Nevertheless, this model may fall apart, because the other states are losing their sovereign rights and autonomy to the sole state.

B. The Joint-Venture Model

This model is popular in business and often used in disputed areas. According to this model, each state nominates its own concessionaire, which enters into a joint venture with other state's concessionaire. This model is built on an agreement which establishes compulsory joint ventures between states and their concession of oil companies to work in designated joint development zones. Therefore, all subsequent contracts in this model are subject to the production-sharing principle.[72]

C. The Joint-Authority Model/The Common Entity Model

This is the most complicated model because as it is based on a comprehensive agreement, which is then institutionalized to the highest level. An entity, such as a joint commission, is established and is given an authority not only to administer licenses but also to act on the behalf of those states.[73]

D. The Trustee Development Model

This model invites a third party to manage and develop natural resources. As a compensation each state will receive an allowance that the amount is determined based on an agreement. The advantage of this model is its professional ability to resolve resource-related disputes.[74]

E. The Parallel Development Model

This model suggests states to conduct resources-related activities independently and does not require any institutional agreement. But, it has a potency of conflict between states in the disputed area especially when natural resources have been decreased.[75]

The joint development model suitable to Ambalat shall be based on the shared natural or artificial resources that is sufficient to be used by

[70] *Ibid*, 7-9.
[71] Rongxing Guo, "Territorial Disputes and Seabed Petroleum Exploitation: Some Options for East China Sea," https://www.researchgate.net/publication/294737633, 13.
[72] *Ibid*, 14-15.
[73] *Ibid*, 15.
[74] *Ibid*, 16.
[75] *Ibid*, 14.

some users.[76] It means that it produces a limited number of resource units so that the use of one state reduces the number of resource units available to other states. When a state reduces available resources through the use, then fewer resources are left available to the rest of the area.[77] The transboundary reservoir itself is a resource unit that is highly valuable and many actors benefit from consumptive extraction, therefore unilateral state actions will raise tension of the other. Therefore, it is important to determine an institution along with 'what can be done, ought to be done, or cannot be done in certain situations'. The joint development framework to resource management is applied in a sharing costs and benefits between stakeholders to ensure a fair distribution of resources and proportionate benefits to each state. Based on what the authors have found, a model that is suitable for Ambalat is either the joint authority model or the trustee development model. As both Malaysia and Indonesia are emerging countries that still need professional private entity's capacity to develop their deep-water resources, the authors deemed that the trustee model is more appropriate to set up with adjustments that suit the need of both countries.

3. CONCLUSION

This article concludes that disputes over boundaries on the continental shelves, such as the case in the Ambalat Block between Indonesia and Malaysia, are generally triggered by territorial claims which is driven by economic value of resources. Until now, the two countries have not finalized an agreement on the boundary line. However, there are three factors that may bring potential conflict over this issue, namely economic factors; media and national sentiment; and government and law enforcement. Nevertheless, there are ways to utilize transboundary reservoirs in the continental shelf of Ambalat by using certain arrangements, that is based on UNCLOS. This convention expresses to settle such disputes by arrangement of practical nature. Furthermore, those countries are obliged to cooperate in good faith and not to jeopardize peace. Therefore, it is important to implement the JDA as a way to utilize transboundary reservoirs in the continental shelf of Ambalat without compromising each state's position. There are some models of JDA, which are; (i) The single-state model; (ii) The joint-venture model; (iii) The joint authority model/The common entity model; (iv) The trustee development model; and (v) The parallel development model. As for model suitable is the trustee model in the form of joint-venture legal entity.

[76] Martha Claudia Lopez & Emilio F. Moran, "The legacy of Elinor Ostrom and its relevance to issues of forest conservation," *Current Opinion in Environmental Sustainability* 19, (2016): 49.

[77] Maria Allo & Maria L. Loureiro, "Evaluating the fulfillment of the principles of collective action in practice: A case study from Galicia (NW Spain)," *Forest Policy and Economics* 73, (2016): 4.

BIBLIOGRAPHY

Book

Anderson, David E. *Modern Law of the Sea: Selected Essays*. The Netherlands: Martinus Nijhoff Publishers, 2010.

Beckman, Robert. *et. al. Beyond Territorial Disputes in the South China Sea: Legal Framework for the Joint Development of Hydrocarbon Resources*. United Kingdom: Edward Elgar Publishing, 2013.

Fox, Hazel. *Joint Development of Offshore Oil and Gas: A Model Agreement for States with Explanatory* Commentary. Great Britain: British Institute of International and Comparative Law, 1990.

Legoni, Rainer and Daniel Vignes. *Maritime* Delimitation. The Netherlands: Martinus Nijhoff Publishers, 2006.

Druce, Stephen C., and Efri Yoni Baikoeni. "Circumventing Conflict: The Indonesia–Malaysia Ambalat Block Dispute." In *Contemporary Conflicts in Southeast Asia*, 137-156. Singapore: Springer, 2016. https://doi.org/10.1007/978-981-10-0042-3_7

Journal Article

Allo, Maria and Maria L. Loureiro. "Evaluating the fulfillment of the principles of collective action in practice: A case study from Galicia (NW Spain)." *Forest Policy and Economics* 73, (2016): 1-9.

Andaru, Djarot D.A. "Joint Development Agreement Sebagai Solusi Penyelesaian Sengketa Wilayah Zona Ekonomi Eksklusif Laut Natuna." *Masalah-Masalah Hukum* 49, no. 4 (2020): 345-358. https://doi.org/10.14710/mmh.49.4.2020.345-358

Angkasari, Wildani, Kamarulnizam Abdullah, Asmar Abdul Rahim, and Mohammad Zaki Ahmad. "Indonesia – Malaysia Dispute over Maritime Boundaries in the Northern Region of the Malacca Straits: Implication to Fisheries Management Regime." *Journal of Critical Reviews* 7, no. 3 (2020): 593–598. http://doi.org/10.31838/jcr.07.03.104

Bakhtiar, Aziz I. "Penyelesaian Sengketa antara Indonesia dan Malaysia di wilayah Ambalat menurut Hukum Laut Internasional." *Jurnal Hukum Universitas Brwijaya* 36, (2015): 1-23.

Beckman, Robert and Leonardo Bernard. "Framework for the Joint Development of Hydrocarbon Resources." *Asian Yearbook of International Law* 22 (2016): 86-108. https://doi.org/10.1163/9789004379633_006

Butcher, John G. "The International Court of Justice and the Territorial Dispute between Indonesia and Malaysia in the Sulawesi Sea." *Contemporary Southeast Asia* 35, no. 2 (2013): 235-257. https://doi.org/10.1355/cs35-2e

Hananto, Pulung Widhi, Anggita Doramia Lumbanraja, Rahandy Rizki Prananda, and Aisyah Ayu Musyafah. "Legal scenario towards the policy of marine natural resources on the continental shelf: Ambalat case study." The 5th International Conference on Tropical and Coastal Region Eco Development. *IOP Conference Series: Earth Environtal Science* 530, (2020): 1-8. https://doi.org/10.1088/1755-1315/530/1/012003

Litvinenko, Vladimir. "The Role of Hydrocarbons in the Global Energy Agenda: The Focus on Liquefied Natural Gas." *Resources Review* 9, no. 59 (2020): 1-22. https://doi.org/10.3390/resources9050059.

Lopez, Martha Claudia and Emilio F. Moran. "The legacy of Elinor Ostrom and its relevance to issues of forest conservation." *Current Opinion in Environmental Sustainability* 19, (2016): 47-56. https://doi.org/10.1016/j.cosust.2015.12.001.

Ong, David M. "Joint Development of Common Offshore Oil and Gas Deposits: 'Mere' State Practice or Customary International Law?." *American Journal of International Law* 93, no. 4 (1999): 771-804. https://doi.org/10.2307/2555344

Reynolds, Thomas A. "Delimitation, Exploitation, and Allocation of Transboundary Oil and Gas Deposits between Nation-States." *ILSA Journal of International & Comparative Law* 1, (1995): 135-170.

Sumerta Yasa, Putu Gede Arya. "Distribution and Revenue Sharing of Natural Resources in Indonesia: Autonomous Region and Legal Pluralism Perspective." *Udayana Journal of Law and Culture* 5, no. 2 (2021): 172-184. https://doi.org/10.24843/UJLC.2021.v05.i02.p05

Torla, Areej, Salma Yusof, and Mohd Hisham Mohd Kamal. "The Dispute between Malaysia and Indonesia over the ND6 and ND7 Sea Blocks: A Malaysian Perspective." *Journal of East Asia and International Law* 8, no. 1 (2015): 171-193. https://doi.org/10.14330/jeail.2015.8.1.08

Urdaneta, Karla. "Transboundary Petroleum Reservoirs: A Recommended Approach For The United States and Mexico in The Deepwaters of The Gulf of Mexico." *Houston Journal of International Law* 32, no. 2 (2010): 334-391.

Weaver, Jacqueline L. and David F. Asmus. "Unitizing Oil and Gas Fields Around the World: A Comparative Analysis of Nationl Laws and Private Contract." *Houston Journal International Law* 28, no. 3 (2006): 3-197.

Zukri, Nur Fareha Binti Mohammad, Ong Argo Victoria, and Fadli Eko Apriliyanto. "Dispute International between Indonesia and Malaysia Seize on." *International Journal of Law Recontruction* 3, no. 1, (2019): 1–10. http://dx.doi.org/10.26532/ijlr.v3i1.4367

Thesis or Dissertation

Purwanti, Evy. "Equitable principle dalam penentuan Delimitasi perbatasan Indonesia dengan negara-negara lain di Zona Ekonomi Eksklusif dan Landas Kontinen." Master's Thesis, Universitas Gadjah Mada, 2016.

Legal Documents

Agreement between the Government of the Kingdom of Denmark together with the Home Government of the Faroe Islands, on the one hand, and the Government of the United Kingdom of Great Britain and Northern Ireland, on the other hand, relating to Maritime Delimitation in the Area between the Faroe Islands and the United Kingdom, Treaty, Delimitation Treaty Infobase, 18 May 1999.

Agreement on the Continental Shelf Between Iceland and Jan Mayen, Treaty, Delimitation Treaties Infobase, 22 October 1981.

Bahrain-Saudi Arabia Boundary Agreement, Treaty, Delimitation Treaties Infobase, 22 February 1958.

Convention sur la delimitation des plateaux continentaux des deux Etats dans le Golfe de Gascogne (Golfe de Biscaye), France and Spain, signee a Paris at 29 January 1974.

Frigg Field Reservoir Agreement,10 May 1976.

Management and Cooperation Agreement between the Government of the Republic of Senegal and the Government of the Republic of Guinea-Bissau, Treaty, Delimitation Treaties Infobase, 14 October 1993.

Markham Field Reservoirs Agreement, 26 May 1992.

Protocol of Agreement Relating to the Organisation and Operation of the Agency for Management and Co-operation between the Republic of Senegal and the Republic of Guinea-Bissau, 12 June 1995.

Statfjord Field Reservoirs Agreement,16 October 1979.

The Management and Cooperation Agreement between the Government of the Republic of Senegal and the Government of the Republic of Guinea-Bissau, Treaty, Delimitation Treaty Infobase, 14 October 1993.

Treaty between the Federal Republic of Nigeria and the Democratic Republic of Sao Tome and Principe on the Joint Development of Petroleum and other Resources, in respect of Areas of the Exclusive Economic Zone of the Two States, Treaty, Delimitation Treaty Infobase, 21February 2001.

United Nations Convention on the Law of the Sea, 1982.

Case Law

Continental Shelf (Tunisia v. Libyan Arab Jamahiriya), Judgement, I.C.J. Reports 1982, p. 62.

Dispute concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh v. Myanmar), ITLOS Reports 2002, p. 455.Maritime Delimitation and Territorial Questions between Qatar and Bahrain (Qatar v. Bahrain). Merits Judgement, I.C.J. Reports 2001, p. 176.

Maritime Boundary Delimitation (Guyana v. Suriname Arbitration), Judgement, P.C.A. Reports, p. 461.

Maritime Delimitation in the Black Sea (Romania v. Ukraine), Judgement, I.C.J. Reports 2009, p. 61.

Maritime Delimitation (The Government of the State of Eritrea v. The Government of the Republic of Yemen), ITLOS Reports 1999, p. 417.

North Sea Continental Shelf Sea Cases (Federal Republic of Germany v. Denmark; Federal Republic of Germany v. Netherlands), Judgement, I.C.J. Reports 1969, p. 99.

Sovereignty over Pulau Ligitan and Pulau Sipadan (Indonesia v. Malaysia), Judgement, I.C.J. Reports 2002, p. 102.

Other Documents

Anghelache, Adina. “History of unitization-based cooperation in the development of offshore cross-border deposits.”

https://www.enpg.ro/wp-content/uploads/2017/10/EPG_2015-11-3_Adina-Anghelache_History-of-unitization_Part1.pdf

Arinaitwe, Patson. "Exploitation of Offshore Transboundary Oil and Gas Reservoirs: an International Law Perspective." http://dx.doi.org/10.2139/ssrn.2486488

Guo, Rongxing. "Territorial Disputes and Seabed Petroleum Exploitation: Some Options for East China Sea." https://www.researchgate.net/publication/294737633

International Law Commission. "Draft articles on the Law of Transboundary Aquifers." https://undocs.org/en/A/RES/71/150

Lefeber, Rene. "International Law and the Use of Maritime Hydrocarbon Resources." https://www.clingendaelenergy.com/inc/upload/files/IGU-2015_Law_of_the_Sea_TF3_IGU_Final_May_2015.pdf

Muigua, Kariuki. "Managing Transboundary Natural Resources in Kenya." http://kmco.co.ke/wp-content/uploads/2018/11/Managing-Transboundary-Natural-Resources-in-Kenya-Kariuki-Muigua-26th-November-2018.pdf

The Geographer. "Continental Shelf Boundary: Indonesia-Malaysia." https://www.state.gov/wp-content/uploads/2019/10/LIS-1.pdf

Website Content

James, Canute. "Venezuela saber-rattles over Guyana, US wades in." https://www.argusmedia.com/en/news/2175764-venezuela-saberrattles-over-guyana-us-wades-in