
How to Resolve the Joint Development Zone Issues in the East China Sea? With Special References to the 1974 Agreement between Korea and Japan

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The UNCLOS prescribes basic principles on maritime boundary delimitations, but interpretation and application of the relevant provisions differ, and the views expressed on them still leave ample room to be unilaterally interpreted and applied. So, it is undeniable that conflicts over ocean waters among the concerned countries are serious and difficult to overcome. To solve these problems, the UNCLOS calls for the countries concerned to make every effort to enter into provisional arrangements of a practical nature. Korea and Japan have maritime boundary problems in the waters surrounding the Korean peninsula, and so, in order to solve those problems, both nations established a joint development zone (JDZ) in the East China Sea in 1974. The zone can be terminated in 2028. Therefore, this study examines and analyzes the impact of the JDZ agreement between Korea and Japan over the East China Sea as to the delimitations of the continental shelf/EEZ.

Keywords

Maritime Boundaries, UNCLOS, Joint Development Arrangements, 1974 Korea-Japan Agreement for JDZ, East China Sea

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I. Introduction

Today, there are many disputes regarding continental shelf (CS) boundary delimitations and Exclusive Economic Zones (EEZs) between opposite or adjacent states although the United Nations Convention on the Law of the Sea (UNCLOS)¹ has provided regulations to resolve these matters.² In particular, boundaries on the continental shelf for an EEZ where the distance between countries with opposite coasts is less than 400 nautical miles (nm) have become a serious issue for such countries.³ Korea and Japan have maritime boundary issues over the East Sea and the East China Sea that are not easily solved for several reasons like political conflict, sovereignty over islands, national sentiments, etc. In 1974, both nations concluded an agreement for a joint development zone (JDZ) in part of the East China Sea to explore and exploit natural resources, especially crude oil, which came into force for the 50 years from 1978 to 2028 (hereinafter 1974 Korea-Japan Agreement for JDZ).⁴ On the one hand, Japan not only agreed with Korea to develop the resources in the area jointly, but it also accepted Korea's entitlement in the East China Sea extending beyond 200 nm. On the other hand, Japan and China made an agreement for joint development in part of the East China Sea in 2008.⁵ The UNCLOS prescribes that the delimitations on a continental shelf⁶ and in an EEZ⁷ shall be resolved by an agreement based on international law in principle, and if an agreement cannot be reached within a reasonable period of time, the concerned countries shall follow the procedures provided for in Settlement of Dispute (Part XV).⁸ Unfortunately, Korea and Japan have not yet agreed on the delimitation of the CS and the EEZ, although a reasonable period of time, as required by the UNCLOS, has already passed.⁹

¹ UN General Assembly, United Nations Convention on the Law of the Sea Overview and Full text, Dec 10, 1982, https://www.un.org/Depts/los/convention_agreements/convention_overview_convention.htm.

² For details on cases regrading maritime boundaries, see A.G. OUDE ELFERNK (ET AL.), *MARITIME BOUNDARY DELIMITATION: THE CASE LAW* (2018); S.FIETTA & R.CLEVERLY, *A PRACTITIONER'S GUIDE TO MARITIME BOUNDARY DELIMITATION* (2016); V. PRESCOTT & C. SCHOFIELD, *THE MARITIME POLITICAL BOUNDARIES OF THE WORLD* 217-8 (2005).

³ J. CHARNEY & L. ALEXANDER (EDS.), *INTERNATIONAL MARITIME BOUNDARIES VOL. I* (1993) & *VOL. III* (1998); J. CHARNEY & R. SMITH (EDS.), *INTERNATIONAL MARITIME BOUNDARIES VOL. IV* (2002); D. COLSON & R. SMITH (EDS.), *INTERNATIONAL MARITIME BOUNDARIES VOL. V* (2005) & *VOL. VI* (2011).

⁴ Agreement between the Republic of Korea and Japan concerning Joint Development of the Southern Part of Continental Shelf Adjacent to the Two Countries art. 31. For details, see CHARNEY & ALEXANDER (EDS.), *id.* 1073-89 (1993).

⁵ T. MENSHA, *Joint Development Zones as An Alternative Dispute Settlement*, in, *MARITIME DELIMITATION* 151 (R. Lagoni & D. Vignes eds., 2006).

⁶ UNCLOS art. 74.

⁷ *Id.* art. 83.

⁸ *Id.* arts. 74(2) & 83(2).

⁹ Korea, China, and Japan ratified the UNCLOS on January 29, 1996, June 20, 1996, and June 7, 1996, respectively.

The 1974 Korea-Japan Agreement for JDZ would continue even after 2028 unless it is terminated upon three years' notice by either Party.¹⁰ Therefore, both parties should decide if they continue to keep this agreement before 2028 and reach a final solution to developing the resources on the CS or in the EEZ. In this context, Korea and Japan need to examine the legal effects of the 1974 JDZ Agreement between them over the East China Sea as to delimitation of the CS, even though a provisional agreement has nothing to do with final delimitation. In practice, coordinates and other issues already discussed and consulted on by the parties concerned may have an effect on the question of maritime delimitation having a substantial impact on, or at least contribute to, the settlement of the maritime boundary delimitation of the CS and the EEZ in the East China Sea.

The primary purpose of this research is to suggest possible options on how to resolve maritime boundaries on the CS and in the EEZ in the East China Sea in consideration of the 1974 Korean-Japan Agreement for JDZ, and its legal and practical effect on maritime boundaries under the UNCLOS. This paper is composed of seven parts including Introduction and Conclusion. Part two will examine geological and geographical characteristics of the East China Sea. Part three will analyze the JDZ. Part four will review selected and similar cases to the JDZ. Part five will discuss the JDZ between Korea and Japan. Part six will look into the roles of JDZ for peaceful use of ocean.

II. Geological and Geographical Characteristics of the East China Sea

The dominant morphological features in the southern and southwestern offshore boundaries for Korea are the broad and gentle-sloped East China Sea shelf and the narrow and NE-to-SW Okinawa Trough basin,¹¹ which are well defined and described as the two main basins in the eastern margins of the Eurasian plate.¹² In the sense

See Chronological lists of ratifications of, accessions and successions to the Convention and the related Agreements, https://www.un.org/Depts/los/reference_files/chronological_lists_of_ratifications.htm#The%20United%20Nations%20Convention%20on%20the%20Law%20of%20the%20Sea.

¹⁰ *Supra* note 4, art. 31(2).

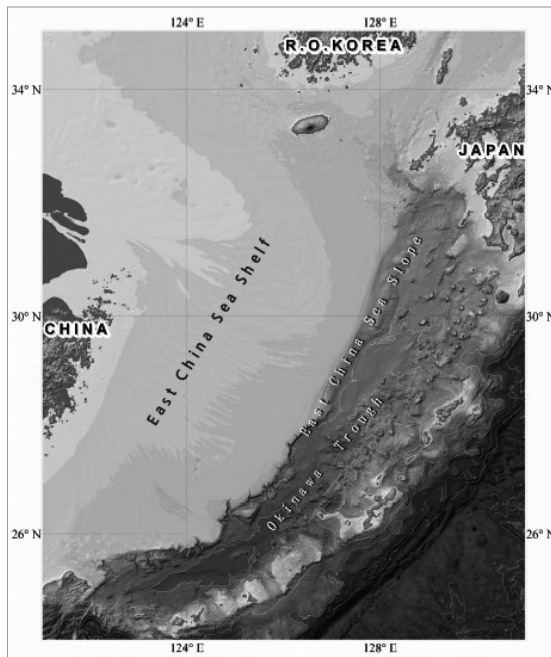
¹¹ For details on the geographical features of the Okinawa Trough, *see* J. GREEFIELD, CHINA'S PRACTICE IN THE LAW OF THE SEA 137 (1992).

¹² S. Hsu, J. Sibuet & C. Shyu, *Magnetic Inversion in the East China Sea and Okinawa Trough: Tectonic Implications*, 333 TECTONOPHYSICS 111-22 (2001).

of sedimentology, these two morphological features are the major basins (shelf and trough) in the region. They are separated by a well-defined shelf break (edge of the shelf) to a water depth of 180m to 200m.

The East China Sea basin extends from Korea to Taiwan including the huge delta features of the Changjiang River, with a total area of about 800,000 km² between the shore and the 200m contour along the prominent shelf break.¹³ Figure 1 illustrates the morphological profiles depicting continuity of the continental shelf and the slope of the East China Sea trough. The average gradient of the CS and the slope are about 0.1-0.3 percent, respectively. Morphological continuity is relatively better established on the northwestern side of the Okinawa Trough¹⁴ than the southeastern side, where it is often disrupted by the presence of volcanic and offshore islands.

Figure 1: Geomorphology of the East China Sea¹⁵



¹³ K. EMERY & H. NIINO, STRATIGRAPHY AND PETROLEUM PROSPECTS OF THE KOREA STRAIT AND THE EAST CHINA SEA 249-63 (1967).

¹⁴ Z. GAU ET AL., TECHNICAL AND LEGAL ASPECTS OF THE REGIMES OF THE CONTINENTAL SHELF AND THE AREA 130-2 (2011).

¹⁵ Submissions by the People's Republic of China Concerning the Outer Limits of the Continental Shelf beyond 200 Nautical Miles in Part of the East China Sea, Executive Summary (Dec. 14, 2012) (Submission No.63), https://www.un.org/Depts/los/clcs_new/submissions_files/chn63_12/executive%20summary_EN.pdf.

Geological information for the area of concern has accumulated since the onset of petroleum exploration in the late 1970s. An extensive database of seismic surveys and drilling programs reveals that the region of the East China Sea includes two contrasting geological features, namely, the East China Sea shelf and the Okinawa Trough. These two regions have evolved through many tectonic stages.¹⁶ The East China Sea shelf basin is a typical back-arc basin separated from the Okinawa Trough by the Taiwan-Sinzi Folded Uplift Zone. Two types of rifting and extension processes are involved in the creation of the East China Sea shelf basin. The initial rifting process started in the late Cretaceous period and continued until the Paleocene-Eocene period.¹⁷ The Okinawa Trough develops in a NE-to-SW direction between Taiwan and the Kyushu Islands. On the basis of tectonic and geomorphological characteristics, the trough is divided into three small basins: the southern Okinawa Trough, the middle Okinawa, and the northern Okinawa Trough. The Okinawa Trough is a continental rift basin formed by rifting, or extension, of the Eurasian Plate.¹⁸ The opening of the Okinawa Trough is mainly due to oblique subduction of the Philippine Sea Plate during the early Miocene period, and formation of the Okinawa Trough basin has involved multiple extensional stages. It is generally believed that rifting in the Okinawa Trough is still in progress, although the rifting chronology is controversial and spatially different from south to north.¹⁹ The Okinawa Trough, showing a steep-sided flank, is the continental slope of the East China Sea shelf basin. The base of the slope can be observed along the boundary area between the foot of slope (FOS) for the East China Sea shelf basin and the relatively smooth relief floor of the Okinawa Trough.²⁰ Therefore, the East China Sea shelf shows a morphology²¹ that is featureless, with a flat seafloor. Meanwhile, the seafloor of the Okinawa Trough has a very rugged topographical relief, mostly as a result of volcanic activity and rifting processes therein.²²

¹⁶ S. Yang et al., *Present Day Heat Flow, Thermal History and Tectonic Subsidence of the East China Sea*, 21 J. MARINE PETROLEUM GEOLOGY 1095-106 (2004); G.H. Lee et al., *Geologic Evolution and Aspects of the Petroleum geology of the Northern East China Sea Shelf Basin*, 90 AAPG BULL. 237-60 (2006).

¹⁷ Z. Zhou et al., CHINESE SEDIMENTARY BASINS: CHARACTERISTICS AND TECTONIC EVOLUTION OF THE EAST CHINA SEA 165-79 (1989).

¹⁸ J. Letouzey & M. Kimura, *The Okinawa Trough: Genesis of a Back-arc Basin Developing Along a Continental Margin*, 125 TECTONOPHYSICS 209-30 (1986).

¹⁹ M. Kimura, *Back-arc Rifting in the Okinawa Trough*, 2 MARINE PETROLEUM GEOLOGY 222-40 (1985).

²⁰ For detailed figures and explanations on the Foot of the Continental Slope (FOS) in the East China Sea, see Commission on the Limits of the Continental Shelf (CLCS), Outer limits of the continental shelf beyond 200 nautical miles from the baselines: Submissions to the Commissions: Submission by the Republic of Korea, Executive Summary (Dec.26, 2012), https://www.un.org/Depts/los/clcs_new/submissions_files/kor65_12/executive_summary.pdf.

²¹ For details on the role of geological and geomorphological factors in delimitation beyond 200nm, see S. FIETTA & R. CLEVERLY, A PRACTITIONER'S GUIDE TO MARITIME BOUNDARY DELIMITATION 615-8 (2016).

²² For details on the geomorphological character of Okinawa Trough in the East China Sea, see Preliminary Information

III. The JDZ under the UNCLOS

If the disputes over maritime boundaries between countries are not settled, those countries may want to identify alternative ways to either jointly participate in the development of natural resources, or share common interests in terms of resources in those disputed areas. Accordingly, relevant countries may try to agree on provisional accords, such as a JDZ agreement. The UNCLOS also clearly states: “...the States concerned shall make every effort to enter into provisional arrangements...”²³ Article 83(3) of the UNCLOS with regard to delimitation of the continental shelf²⁴ has the same regulation with Article 74(3) regarding the EEZ delimitation. Unfortunately, there is no legal definition of JDZ in the UNCLOS.²⁵ In the Guyana/Suriname Arbitration, the International Tribunal on the Law of the Sea (ITLOS) observed: “... this obligation constitutes an implicit acknowledgement of the importance of avoiding the suspension of economic development in a disputed maritime area, as long as such activities do not affect the reaching of a final agreement.”²⁶ Accordingly, it may be assumed that an international judicial body officially recognized establishment of a JDZ as a practical and temporary status.

Generally, when states want to establish a JDZ they would prescribe their sovereign rights to the development of natural resources, such as exploration and exploitation of resources within the JDZ, and other types of cooperation over use of the JDZ.²⁷ Thus, joint development arrangements that will be used to establish and operate joint development zones can easily be found in international agreements and practices over undecided boundaries among countries, particularly when there are maritime boundary delimitation problems in undetermined, disputed, or overlapping zones.²⁸ As mentioned, there is no generally recognized definition of joint development under the UNCLOS, but a JDZ or zones similar to a JDZ can be created by provisional arrangement based on mutual agreement between the concerned countries under the terms of the UNCLOS. Also, sovereign states may use a JDZ for their own purposes,

regarding the Outer Limits of the Continental Shelf, Republic of Korea (May 11, 2009), https://www.un.org/Depts/los/clos_new/submissions_files/preliminary/kor_2009preliminaryinformation.pdf.

²³ UNCLOS arts. 74(3) & 83(3).

²⁴ *Id.* art. 83(3).

²⁵ For details on the provisional arrangements, see ELFERINK ET AL., *supra* note 2 at 119-28.

²⁶ Maritime boundary delimitation (Guyana v. Surin.) at 153, ¶ 460 (Perm. Ct. Arb. 2007), <https://pcacases.com/web/sendAttach/902>.

²⁷ D. ROTHWELL & T. STEPHENS, *THE INTERNATIONAL LAW OF THE SEA* 409-10 (2010).

²⁸ PRESCOTT & SCHOFIELD, *supra* note 2, at 262-3.

referred to in the arrangements for a limited time, until a final agreement on maritime boundaries is agreed upon.²⁹

Accordingly, a JDZ for developing natural resources may be useful for temporary settlement over a boundary delimitation of a CS based on Articles 74(3) and 83(3) of the UNCLOS in an overlapping zone, particularly in a so-called “grey area.”³⁰ Therefore, a JDZ agreement may vary depending on the degree of joint investments, the number of participating countries, the amount of resource deposits, the types of ocean interests, etc. As of March 2022, consequently, 22 provisional agreements including establishment of joint development zones (e.g., Thailand-Malaysia, South Korea-Japan, Saudi Arabia-Kuwait, Iceland-Norway, Australia-Indonesia, South Africa-Timor Leste)³¹ had been concluded and activated.³²

A JDZ resulting from provisional arrangements plays an affirmative role in settling maritime boundaries provisionally caused by diverse and different claims over maritime zones that overlap boundaries of the concerned countries in disputed areas. So, this matter will be considered diplomatic or political, rather than legal, because of its intrinsic nature. Also, it will (or may) take time to determine a maritime boundary in areas of conflict, even if the concerned states have a legal duty to solve boundary issues within a reasonable period of time as signature parties to the UNCLOS. In this context, Charney stated: “Such arrangements enable States to make use of the disputed areas and to conduct normal relations there. In the absence of such arrangements, States may feel compelled at some cost, to forcefully challenge each other’s actions in the area to maintain their legal rights.”³³ Nonetheless, a JDZ is not a permanent solution to the maritime boundaries issues owing to its own inherent characteristics as a provisional solution, particularly when the concerned countries claim overlapping zones to be sovereign areas. Since the concept of JDZ can be applied only in limited cases, only a few JDZs have been activated so far.³⁴

In sum, there is no legal obligation between countries to agree to joint development in an overlapping zone; they just have a duty to negotiate sincerely to solve boundary problems. However, a provisional arrangement prior to a final delimitation agreement

²⁹ Z. Gao, *The Legal Concept and Aspects of Joint Development in International Law*, 13 OCEAN DEV. & INT’L L. 123 (1988).

³⁰ For the details about the grey area, see O. Elferink, *Does Undisputed Title to a Maritime Zone Always Exclude Its Delimitation: The Grey Area*, 13 INT’L J. MARINE & COASTAL L. 143-92 (1998).

³¹ M. Valencia, *Taming Troubled Waters: Joint Development of Oil and Mineral Resources in Overlapping Claim Areas*, SANDIEGO L. REV. 661 (1986).

³² I. KARAMAN, DISPUTE RESOLUTION IN THE LAW OF THE SEA 341-53 (2012). See also PRESCOTT & SCHOFIELD, *supra* note 2 at 594.

³³ J. Charney, *Progress in International Maritime Delimitation Law*, 88 AM. J. INT’L L. 227 (1994).

³⁴ PRESCOTT & SCHOFIELD, *supra* note 2, at 264.

may prompt, and help to reach, an agreement on maritime boundary delimitation within a relatively short period time and can be an equitable solution for the purpose of fixing a boundary in disputed areas.³⁵ Therefore, JDZ seems to be a method to settle disputes flexibly and reasonably in overlapping zones with opposite or adjacent countries having relatively narrow coastal waters under the UNCLOS; accumulate state practices; and conclude international treaties.³⁶

Nevertheless, a JDZ cannot be a panacea for all boundary issues, particularly when the parties concerned claim overlapping zones for their sovereign jurisdiction. In addition, JDZ has a positive function as a provisional measure, even if only a few JDZs may be successful, because the concept of JDZ can be applied only in a limited number of cases.³⁷ Furthermore, issues surrounding JDZs bring direct challenges to the countries over the matters of national sovereign rights and natural resources. Thus, any JDZ agreement should proceed as a pre-negotiation step requiring a strong political will between the parties concerned for a successful outcome. If parties directly negotiate maritime boundaries without any draft arrangements or relevant compromises, it may be difficult to agree to a final delimitation within a short period time. Therefore, it is important to solve boundary problems based on mutual understanding and common interests in terms of relevant international law and principles.³⁸

IV. The JDZ Cases: Legal and Policy Analyses

There are several cases regarding the establishment of a so-called JDZ in a disputed area, particularly where the distance between an opposite or adjacent coast is less than 400nm, such as the Yellow Sea, the East Sea, and the East China Sea. Most JDZs for the development of natural resources on a continental shelf were only provisionally agreed to and established before settling final delimitations of maritime boundaries among the concerned countries. Therefore, all JDZs have different natures and characteristics based on their purpose, the amount and types of natural resources, the degree of possible exploration, and other factors. In addition, the International Court

³⁵ ELFERINK ET AL., *supra* note 2 at 127.

³⁶ Treaty between the Democratic Republic of Timor-Leste and Australia Establishing their Maritime Boundaries in the Timor Sea 2018. For details, see Understanding on Japan-China Joint Development in the East China Sea, <https://www.mofa.go.jp/files/000091726.pdf>.

³⁷ *Id.* at 111.

³⁸ For details on the factors affecting maritime delimitation, see M. EVANS, INTERNATIONAL LAW 648-9 (2006).

of Justice (ICJ) officially recognized the possibility of a joint jurisdiction regime.³⁹ In this regard, this part will look into JDZs in and around East China Sea where there are no maritime boundary agreements between the concerned countries, as in the case of the 1974 Korea-Japan Agreement for JDZ.

A. China-Japan

China and Japan have several times exchanged perspectives on joint development in the East China Sea. In particular, China suggested joint development of petroleum resources in the areas surrounding the Senkaku/Diaoyutai Islands.⁴⁰ China, for the first time, officially expressed willingness to solve maritime disputes with neighboring countries “through joint development with a reservation on current disputes.” However, Japan did not accept China’s suggestion for joint development and opposed China’s intention to develop natural resources beyond the median line claimed by China.⁴¹

Right after Korea and Japan concluded the Agreement concerning Joint Development of the Continental Shelf in 1974, the Chinese Foreign Ministry announced that China could not accept the agreement because it is prejudicial to the sovereignty of China.⁴² China also claimed the following four requirements. First, China argued against the application of a natural prolongation principle over the continental shelf boundary in the East China Sea. Secondly, the boundary on the continental shelf in the East China Sea should be decided by negotiation among the countries concerned. Third, China would not recognize a JDZ agreed to only by Korea and Japan, regardless of China’s position, which China said is an infringement on China’s sovereignty. Fourth, both Korea and Japan have to take responsibility for all consequences resulting from their development activities in the ECS.⁴³

Such a strong attitude against the agreement between Korea and Japan appeared in 2003, when China submitted its document on the outer limit of the continental shelf to the Commission on the Limits of the Continental Shelf (CLCS).⁴⁴ China’s

³⁹ *Supra* note 21.

⁴⁰ For details on the Senkaku, see Gau et al., *supra* note 14, at 115-7.

⁴¹ HEECHUL YANG ET AL., CHANGE OF INTERNATIONAL OCEAN ORDER AND MARINE POLICY OF THE NORTH EAST ASIA [국제 해양질서의 변화와 동북아 해양정세] 319 (2009).

⁴² Korea National Oil Corporation, 25 Years History of Korea National Oil Corporation [한국 석유공사 25년사] 160 (2005).

⁴³ JIHYUN CHOI ET AL., RESEARCH FOR RESUMING THE OPERATION OF THE KOREA-JAPAN JOINT DEVELOPMENT AGREEMENT [한일 대륙붕 공동개발 재개를 위한 대응방안 분석] 39-40 (2019). See also *id.* at 160.

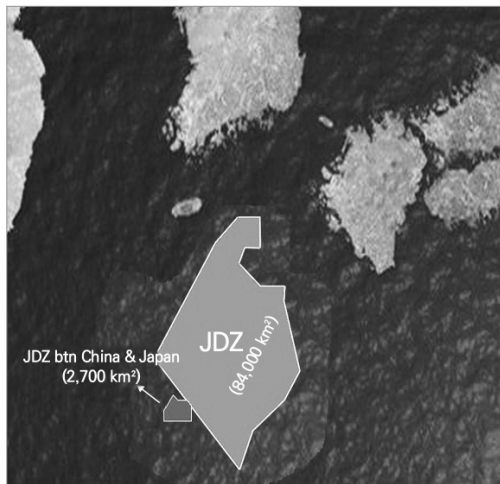
⁴⁴ CLCS, Outer limits of the continental shelf beyond 200 nautical miles from the baselines: Submissions to the Commission: Submission by the People's Republic of China, https://www.un.org/Depts/los/clcs_new/submissions_files/submission_chn_63_2012.htm.

perspective on the submission is as follows.

The geomorphological and geological features show that the continental shelf in the East China Sea (hereinafter referred to as “ECS”) is the natural prolongation of China’s land territory, and the Okinawa Trough is an important geomorphological unit with prominent cut-off characteristic, which is the termination to where the continental shelf of ECS extends. The continental shelf in ECS extends beyond 200 nautical miles from the baselines from which the breadth of the territorial sea of China is measured.⁴⁵

In 2008, China and Japan agreed to end their long-standing dispute over control of offshore natural gas fields in the East China Sea.

Figure 2: The 2008 China-Japan Agreement for Joint Development Zone⁴⁶

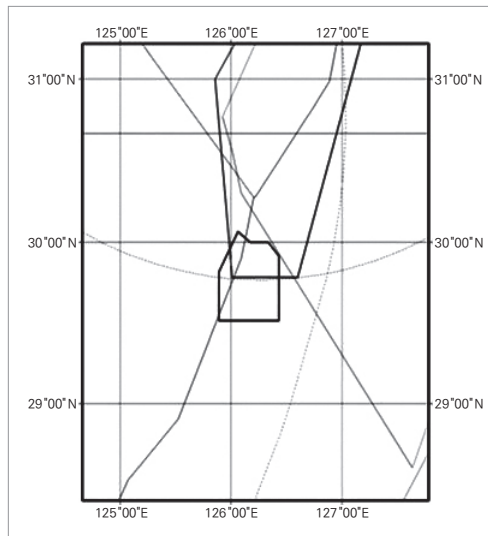


Under the 2008 China-Japan Agreement for Joint Development, the two countries are expected to jointly develop gas fields in the East China Sea where both claim exclusive economic rights.⁴⁷

⁴⁵ *Id.*

⁴⁶ The detailed shape of the JDZ between China & Japan (drawn by the author with reference to Understanding on Japan-China Joint Development in the East China Sea), <https://www.mofa.go.jp/files/000091726.pdf>.

⁴⁷ *Id.*

Figure 3: The JDZ between China and Japan⁴⁸

The two sides reached a compromise to allow China to take the lead role in exploration of at least one field, with Japanese firms investing in and sharing profits from China-led development efforts.⁴⁹ This is a good example for Japan and China to address even more difficult problems by establishing a JDZ. In addition, the two countries agreed to cooperate before final delimitation without prejudicing their respective legal positions. It means that the agreement has nothing to do with maritime boundaries between China and Japan in the East China Sea.⁵⁰

In sum, both nations agreed to cooperate first, without prejudice to the delimitation of the maritime boundary, and then decided on the establishment of a JDZ in part of the East China Sea.⁵¹ Furthermore, they agreed to conclude a bilateral agreement on details for joint development in the near future,⁵² shelving the hard issue for the time being. However, China and Japan could not implement the agreement for the

⁴⁸ Understanding on Japan-China Joint Development in the East China Sea (June 18, 2008), <https://www.mofa.go.jp/files/000091726.pdf>.

⁴⁹ For details on the necessity of joint development, see Guoxing Ji, *Sino-Japanese Jurisdictional Delimitation in East China Sea*, in *MARITIME BOUNDARY DISPUTES, SETTLEMENT PROCESSES, AND THE LAW OF THE SEA* 81 (Seoung-Yong Hong & Jon M. Van Dyke eds., 2009).

⁵⁰ CHOI ET AL., *supra* note 43, at 36.

⁵¹ *Id.*

⁵² *Id.*

dispute over sovereignty of the Senkaku/Diaoyutai islands⁵³ and following diplomatic standoff for almost 10 years. When Japanese Prime Minister Shinzo Abe visited China in 2018, both countries agreed to resume mutual efforts for joint development in the East China Sea. However, no detailed cooperative activities for joint development in the East China Sea have been conducted so far.⁵⁴

B. Japan-Taiwan

Japan and Taiwan have claimed territorial jurisdiction over the Senkaku/Diaoyutai Islands since 1894.⁵⁵ It is a big hurdle with regard to a maritime boundary in the East China Sea. Both sides have deep interest in fishing around the disputed islands, which would raise another territorial issue between them. As Japan is especially keen to obtain fishing resources, Japan is trying to claim fishing rights to the southern tip of its surrounding waters under the UNCLOS. Meanwhile, Taiwan is heavily dependent on distant-water fishing, together with coastal fishing, for its livelihood, so that it participates in the Regional Fishery Management Organization (RFMO)⁵⁶ on the basis of the United Nations Fish Stock Agreement.⁵⁷

Taiwan and Japan held 16 rounds of fishery talks between 1996 and 2009 without substantial development due to the territorial row. Nonetheless, they concluded the Fisheries Agreement in 2013.⁵⁸ The 2013 Agreement divides the area surrounding the Senkaku/Diaoyutai Islands into two parts. Part A is an area where fishing vessels from Taiwan and Japan are allowed to operate freely; Part B is a zone under joint management; and zones 1, 2, and 3 are expanded operational areas for Taiwanese

⁵³ For details on the dispute over the Senkaku islands, see HYUNSOO KIM, SOVEREIGNTY DISPUTES OVER ISLANDS IN THE WORLD AND DOK-DO ISLANDS [세계도서 영유권 분쟁과 독도] 35-52 (2009).

⁵⁴ CHOI ET AL., *supra* note 43, at 37.

⁵⁵ PRESCOTT & SCHOFIELD, *supra* note 2 at 437-8.

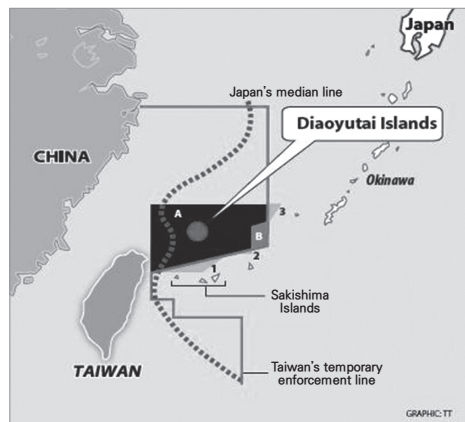
⁵⁶ Japan participated in Regional Fishery Management Organization (RFMO) agreements, such as ICCAT, IOTC, NAFO, SEAFO, SIOFA, and WCPFC, while Taiwan participated in ICCAT (non-cooperating party/fishing entity), IOTC (expert), CCSBT (observer), IATTC (non-cooperating party/fishing entity), SIOFA (contracting party) and WCPFC (fishing entity of Chinese Taipei) as a fishing entity or observer. See Yanh-Huei Song, *The Role of Taiwan in Global Ocean Governance*, in REGIONS, INSTITUTIONS, AND LAW OF THE SEA 299-300 & 307-8 (H. Scheiber & Jin-Hyun Paik eds., 2013). For details on RFMO, see European Commission Oceans & Fishers, Protecting the ocean, time for action, https://ec.europa.eu/oceans-and-fisheries/index_en.

⁵⁷ The United Nations Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (in force as from 11 December 2001) Overview, https://www.un.org/Depts/los/convention_agreements/convention_overview_fish_stocks.htm.

⁵⁸ See *Japan to let Taiwanese fish near the Senkakus*, JAPAN TIMES, Apr. 10, 2013, <https://www.japantimes.co.jp/news/2013/04/10/national/japan-to-let-taiwanese-fish-near-the-senkakus/#.Uai-5D5ivCk>.

fishing vessels.⁵⁹ The deal allows Taiwanese trawlers to operate in part of Japan's EEZ near the disputed Senkaku/Diaoyutai Islands. Under the deal, Japan and Taiwan designated an area in Japan's EEZ as jointly managed waters where fishing by both Japanese and Taiwanese boats is allowed. The jointly controlled zone excludes waters within a 12 nm (19-km) radius of the Japan-held Senkaku/Diaoyutai Islands.⁶⁰ If marine resources need protection and fishing requires regulation, those waters will be designated as a special cooperation zone under the deal.

Figure 4: Areas covered by the Japan-Taiwan Fisheries Agreement⁶¹



- A. Area where fishing vessels from Taiwan and Japan will be allowed to operate freely.
- B. Zone under joint management.
- 1,2 and 3 are the expanded operational areas for Taiwanese fishing vessels.

C. China-Vietnam

China and Vietnam are heavily dependent on their marine resources in Beibu Bay (hereinafter Gulf of Tonkin) and the surrounding waters, where both nations have concerns about jurisdiction and usage. The Gulf of Tonkin is a particularly ample ground for fishing resources. In spite of keen interest, China could not easily fish in this area because most of the fishing resources are located in the waters adjacent to

⁵⁹ Taiwan Japan Fishers Agreement [臺日漁業協議], <https://www.mofa.gov.tw/cp.aspx?n=205>.

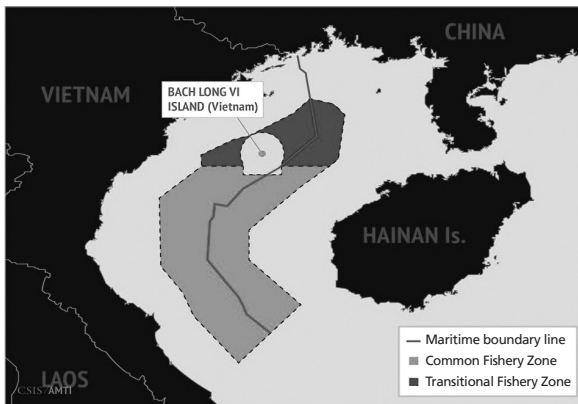
⁶⁰ Office of the President of Republic of China (Taiwan), <https://english.president.gov.tw/Default.aspx?tabid=1124&itemid=29667>.

⁶¹ The Taiwan-Japan Fisheries Agreement: Embodying the Ideals and Spirit of the East China Sea Peace Initiative, [https://www.mofa.gov.tw/Upload/WebArchive/979/The%20Taiwan-Japan%20Fisheries%20Agreement%20\(illustrated%20pamphlet\).PDF](https://www.mofa.gov.tw/Upload/WebArchive/979/The%20Taiwan-Japan%20Fisheries%20Agreement%20(illustrated%20pamphlet).PDF).

Vietnam.⁶² In the overlapping area of the Gulf of Tonkin, both sides tried to not only reach an agreement to share the profits of any development equally in the most effective way, but also explore the resources in the Gulf.⁶³ In this regard, China and Vietnam finally reached an agreement for maintaining and developing friendly relations in those waters of the Gulf of Tonkin in 2000,⁶⁴ in accordance with the UNCLOS and the Agreement on Delimitation of Territorial Seas, EEZ and Continental Shelves in the Gulf of Tonkin between the two nations,⁶⁵ general principles of international law like equity,⁶⁶ state practices, and the maritime circumstances in the Gulf of Tonkin.

Finally, China and Vietnam created the Agreed Water Area, which seems to be a JDZ, based on mutual respect for sovereignty, sovereign rights, and jurisdiction.⁶⁷ In addition, the Fishing Agreement in the Gulf of Tonkin established a Common Fishery Zone within 30.5 nm of the boundary lines.⁶⁸ Here, both agreed to take measures to preserve, manage, and sustain utilization of the living resources in the Common Fishery Zone, and undertake long-term fishery cooperation in the Common Fishery Zone for their mutual benefit.⁶⁹

Figure 5: Agreed Zones in the Gulf of Tonkin between Vietnam and China⁷⁰



⁶² Z. KEYUAN, *LAW OF THE SEA IN EAST ASIA: ISSUES AND PROSPECTS* 109 (2005).

⁶³ Agreement on Fishery Cooperation in the Beibu Gulf between the Government of the People's Republic of China and the Government of the Socialist Republic of Vietnam in 2000 (Fishery Cooperation between China and Vietnam 2000), art. 7, <http://www.fmprc.gov.cn/eng/6939.html>, See COLSON & SMITH (EDS.), *supra* note 3, at 3748.

⁶⁴ *Id.* See also KEYUAN, *supra* note 62 at 181.

⁶⁵ Signed on Dec. 25, 2000, and came into force on June 30, 2004.

⁶⁶ Agreement on Fishery Cooperation between China and Vietnam in 2000, *supra* note 61, art. 2.

⁶⁷ *Id.*

⁶⁸ Fishery Cooperation between China and Vietnam 2000, art. 3.

⁶⁹ *Id.* art. 4.

⁷⁰ COLSON & SMITH (EDS.), *supra* note 3 at 3754.

The 2000 Agreement between China and Vietnam also created two zones, a Transitional Fishery Zone and a Common Fishery Zone (measured from 20°N), and the Transitional Fishery Zone was effective for only four years after the enforcement of the Fishing Agreement.⁷¹ The Transitional Fishery Zone is only provisional due to its transitional character, but it can be connected to the maritime boundary delimitation in the future.⁷²

V. The JDZ between Korea and Japan

In January 1974, Korea and Japan concluded a Joint Development Agreement.⁷³ However, both countries could not agree on a maritime boundary in some parts of the East China Sea because a considerable part of the East China Sea overlaps China, Korea, and Japan. Therefore, they needed to find a way to develop natural resources in that area effectively and lawfully based on concession or compromise.⁷⁴ In particular, according to a geophysical survey under the sponsorship of the Economic Commission for Asia and the Far East (ECAFE),⁷⁵ huge amounts of hydrocarbon are to be deposited in the Yellow Sea and the East China Sea. This report (made public in 1969) released that “a high probability exists that the continental shelf between Taiwan and Japan may be one of the most profitable oil reservoirs in the world,” and the “second most favorable area for oil and gas is beneath the Yellow Sea.”⁷⁶

As a result, Korea and Japan established a JDZ in a disputed area south of Jeju Island to allow each country to explore hydrocarbons. Especially, these two countries tried to promote friendly relations and mutual interests through joint exploration and exploitation of petroleum resources in the southern part of the CS adjacent to their territories. In practice, they wanted to reach a final solution to develop such resources.⁷⁷ The 1974 Korea-Japan Agreement for JDZ is the first international treaty concluded by parties with boundary delimitation disputes and the first case applying

⁷¹ Fishery Cooperation between China and Vietnam 2000, art. 11.

⁷² KEYUAN, *supra* note 62 at 104.

⁷³ Signed on Jan. 30, 1974, and came into force on June 22, 1978.

⁷⁴ CHARNEY & ALEXANDER (EDS.), *supra* note 3, at 1058.

⁷⁵ K. Emery et al., *Geological Structure and Some Water Characteristics of the East China Sea and the Yellow Sea*, UN Economic Commission of Asia and the Far East, Committee for Cooperation of Joint Prospecting for Mineral Resources in Asian Offshore Areas, 2 TECH. BULL. 3-43 (1969).

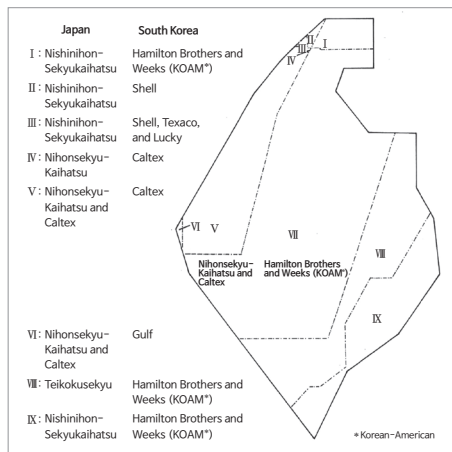
⁷⁶ Choon-ho Park, *Joint Development of Mineral Resources in Disputed Waters: the Case of Japan and South Korea in the East China Sea*, in EAST ASIA AND THE LAW OF THE SEA 125 (Choon-ho Park ed., 1988).

⁷⁷ Agreement between Japan and Korea Concerning Joint Development of the Southern Part of the Continental Shelf Adjacent to the Two Countries, in CHARNEY & ALEXANDER (EDS.), *supra* note 3, at 1073.

the idea of joint development of offshore natural resources to provisionally solve boundary issues for a certain period of time.⁷⁸

China strongly opposed the JDZ and its jurisdiction between Korea and Japan because it might have a right to sovereignty over an area of the CS⁷⁹ in terms of the 1958 Geneva Convention.⁸⁰ However, China did not participate in the negotiations of a so-called three-party maritime boundary delimitation for allegedly political reasons.⁸¹ Figure 6 shows that coordinates 1 and 6 (sections 1-6, the northwestern limit line) represent the median line between Korea and Japan as claimed by Japan; coordinates 6 and 8 (sections 6-8, the northwestern median line) are the median line between Japan and China. Coordinates 8 and 9 (sections 8-9, the lower line of the northwestern limit) are the same as the boundary line for the 7th Mining Area in the Enforcement Decree of Submarine Minerals Resources Development Act (1978) by Korea. Coordinates 9, 21, and 6 (sections 19-20-1, the southeast-eastern-northern part) are the same as the 7th Mining Area established up to the boundary line of the Okinawa Trough based on the principle of the natural prolongation of a coastal state's territory.⁸²

Figure 6: The Nine-Subzones and the Joint Development Concessionaires⁸³



⁷⁸ Joint development will be possible for two nations to use the overlapping area provisionally in terms of mutual agreement because there are overlapping EEZs in the eastern South China Sea between China and the Philippines. See C. Schofield, *Defining Areas for Joint Development in Disputed Waters*, in *RECENT DEVELOPMENTS IN THE SOUTH CHINA SEA DISPUTE 78* (S. Wu & N. Hong eds., 2014). See also C. Schultheiss, *Joint Development of Hydrocarbon Resources in the South China Sea after the Philippines Versus China Arbitration?*, 51(3) *OCEAN DEV. & INT'L L.* 242 (2020).

⁷⁹ YANG ET AL., *supra* note 41 at 319.

⁸⁰ I. BROWNIE (ED.) *BASIC DOCUMENTS IN INTERNATIONAL LAW* 117-21 (1988).

⁸¹ CHARNEY & ALEXANDER (EDS.), *supra* note 3, at 1058.

⁸² For details on the Nine Subzones and the Joint Concessionaires, see Park, *supra* note 76, at 130 (Map 4.3).

⁸³ CHOON-HO PARK, *EAST ASIA AND THE LAW OF THE SEA* 130 (1988) (modified by the author).

Korea and Japan ratified the 1974 Agreement for JDZ in 1974 and 1978, respectively. Consequently, both agreed to jointly develop natural resources in the JDZ in the East China Sea until 2028, which is a disputed area. However, Korea and Japan could not agree on a CS boundary due to different positions to applied principles and other minor issues including the small islets of Tori-shima⁸⁴ and Danjo Gunto.⁸⁵ These dissidents were barrier to an agreement on the EEZ and the CS boundaries. The southeastern boundary for the deepest part of the Okinawa Trough is roughly coincident with the outer limit detailed in Korea's Partial Submission⁸⁶ and China's Partial Submission.⁸⁷ With the 1974 Agreement for JDZ, Japan admitted that, after 1974, Korea would be entitled to claim the CS beyond 200 nm following the principle of natural prolongation⁸⁸ and there should be no maritime dispute over the CS until the termination of the 1974 Agreement in 2028 under Article 31(1) of the 1969 Vienna Convention on the Law of Treaties (VCLT).⁸⁹ Nonetheless, it is necessary to examine the joint development projects in the Zone after the 1974 Agreement came into force in 1978 in order to understand each nation's position to jointly use the Zone. Articles 1 and 4 of the 1974 Korea-Japan Agreement for JDZ provide that each party should designate one concessionaire and then notify the other of its concessionaire.⁹⁰ The concessionaires of both nations shall enter into operating agreements to carry out joint exploration and exploitation of natural resources in the JDZ.⁹¹

In this course, a few foreign companies obtained qualifications as concessionaires⁹²

⁸⁴ The main peak on the island has a height of 394 m (1,293 ft), and the island has a circumference of 6.5 km (4.0 mi.). The total area of the island is 4.79 km² (1.85 sq. mi.). For details, see Tori Shima, Tokyo Prefecture, Japan, <https://www.mindat.org/feature-2113987.html>.

⁸⁵ J. Prescott, *Maritime Jurisdiction in East Asian Seas: Occasional Papers No. 4 of the East-West Center Environment and Policy Institute*, 1987, <https://scholarspace.manoa.hawaii.edu/bitstream/10125/21627/MaritimeJurisdictioninEastAsianSeas1987%5Bpdfa%5D.PDF>.

⁸⁶ CLCS, *Outer Limits of the continental shelf beyond 200 nautical miles from the baselines: Submissions to the Commission: Submission by the Republic of Korea, Executive Summary* (Dec. 26, 2012), https://www.un.org/Depts/los/clcs_new/submissions_files/submission_kor_65_2012.htm. 5.1 of the Partial Submission by Korea reads: "In accordance with paragraphs 1 and 3 of article 76 of the Convention, the continental shelf of Korea comprises the seabed and subsoil of the submarine areas that extend beyond its territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin in the East China Sea." See *id.* at 7.

⁸⁷ CLCS, *supra* note 44.

⁸⁸ UNCLOS art. 76(1).

⁸⁹ Agreement between Japan and Korea Concerning Joint Development of the Southern Part of the Continental Shelf Adjacent to the Two Countries, pmb. & art. 31.

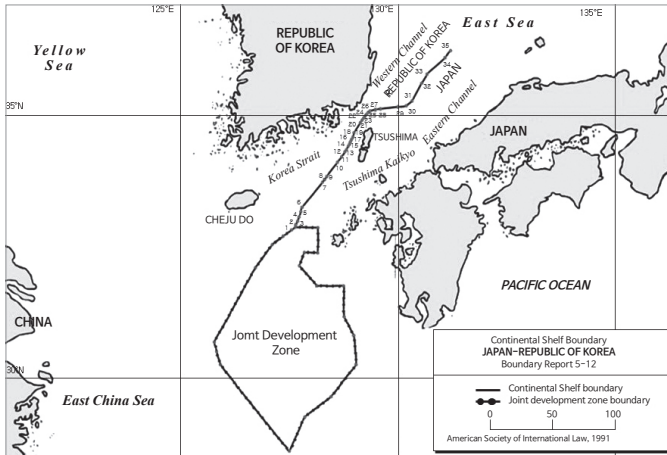
⁹⁰ *Id.* art. 3(3). It reads: "The term "concessionaires" of both Parties" means a concessionaire of one Party and a concessionaire of the other Party respectively authorized with respect to the sane subzone of the Joint Development Zone."

⁹¹ *Id.* art. 5(1).

⁹² Four companies-Texaco (US); Gulf (US); Shell (Netherlands); and the Korea-American Oil Company (KOAM)-were recognized as operators until 1978 and then KOAM for Korea and Japan Oil Company and Imperial Oil Company for Japan were designated as operators after 1978. See *supra* note 48, at 74.

and began exploration activities in the First Subzone from 1972, the Second Subzone from 1972, the Third Subzone from 1971, the Fourth Subzone from 1972, the Fifth Subzone from 1972, the Sixth Subzone from 1971, and in the JDZ from 1972.⁹³

Figure 7: Joint Development Zone between Korea and Japan⁹⁴



Nonetheless, all concessionaires returned without any positive result on exploration. In particular, the Korea Petroleum Development Oil Company (PEDCO) and Kyungin Energy established exploration rights along with British Petroleum (BP), which joined them to explore the JDZ in 1986. Japan also authorized concessionaires to two oil companies, including the Japan National Oil Company (JNOC).⁹⁵ In 2001, both countries began to re-explore part of Subdivision 2,⁹⁶ but could not find any oil rigs, despite several trials from seismic surveys and diggings. They had to give up their status as concessionaires in the end.⁹⁷ In 2004, Japan declared stopping joint exploration because there are no commercially exploitable resources in that area.⁹⁸ However, the

⁹³ Joint explorations were conducted only two times, as follows: the first exploration (1979-87) and the second exploration (1991-94). See CHOI ET AL., *supra* note 43, at 1.

⁹⁴ CHARNEY & ALEXANDER, *supra* note 3, at 1062 (modified by the author).

⁹⁵ See 40 years since the Korea-Japan Continental Shelf Joint Development Agreement entered into force... Concerned about termination after 10 years without results [한일 대륙붕공동개발협정 발효 40년... 성과없이 10년뒤 종료 우려], YONHAP NEWS [연합뉴스], May 10, 2018, <https://www.yna.co.kr/view/AKR20180510095300051>.

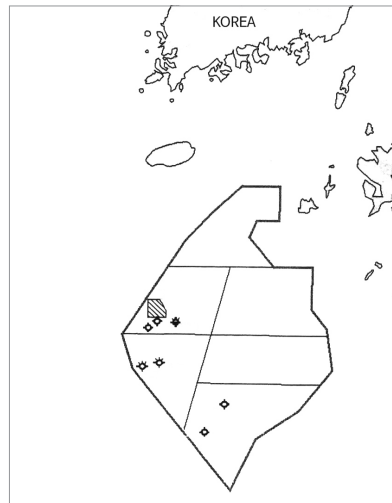
⁹⁶ See Figure 8.

⁹⁷ For details, see *supra* note 43, at 74-5; Jee-Hyun Choi, *Korea-Japan JDZ to End in Deadlock?: The Potential for Unilateral Korean Exploration and Exploitation*, 51(2) OCEAN DEV. & INT'L L. 162-3 (2020).

⁹⁸ CHOI ET AL., *supra* note 43 at 30.

two countries agreed to conduct a joint three-dimensional seismic survey (3D survey) in Subdivision 2 of the JDZ, which was done by the KNOC and JNOC in 2002.⁹⁹ Again, Korea and Japan adopted an agreed upon framework to engage in joint exploration of the CS by 2018. KNOC agreed with JNOC to resume the cooperation that began in 1986.¹⁰⁰ In 2004, both companies agreed that they found some prospects and leads based on the 3D survey.¹⁰¹ Nonetheless, survey and exploration activities in the JDZ did not continue.

Figure 8: 3D Seismic Survey Area¹⁰²



In 2010, even if there were some surveys jointly conducted by commercial companies and institutes, Japan unilaterally ceased all these surveys without consulting Korea, while Korea tried to implement the 1974 JDZ Agreement sincerely authorizing a concessionaire to KNOC from 2009 to 2017.¹⁰³ For resuming a joint development project, Korea needed to formally require the authorization of concessionaires by

⁹⁹ Choi, *supra* note 97, at 164.

¹⁰⁰ CHOI ET AL., *supra* note 43, at 20.

¹⁰¹ *Id.* See also *Estimated oil and natural gas reserves 10 times larger than Saudi Arabia, Korea-Japan Joint Development Zone Continental Shelf 'Sector 7'.. 5,870 trillion Won of Oil Where Does It Go?* [사우디 매장량 10배 규모 원유·천연가스 매장 추정 한일공동개발구역 대륙붕 '7광구' .. 5870조원 원유 어디로 가나], KOOKMIN NEWS [국민뉴스], Mar. 2, 2019, <http://www.kookminnews.com/20782>.

¹⁰² CHOI ET AL., *supra* note 43, at 29.

¹⁰³ *Id.*

Japan¹⁰⁴ and resume the Korea-Japan Joint Commission¹⁰⁵ for implementing the 1974 Agreement.¹⁰⁶ The following are the provisional grounds for Japan to implement the 1974 Agreement.

1. Article 4(1): “Each Party shall authorize one or more concessionaires with respect to each subzone within three months after the date of entry into force of this Agreement...”
2. Article 30: “The Parties shall take all necessary internal measures to implement this Agreement.”¹⁰⁷
3. Article 5(1): “Concessionaires of both Parties shall enter into an operating agreement to carry out joint exploration and exploitation of natural resources in the Joint Development Zone.”
4. Article 5(2): “The operating agreement and modifications thereof shall enter into force upon approval by the Parties.”¹⁰⁸

VI. Roles of JDZs for Peaceful Use of Ocean

Joint development zones are claimed to be an effective means of solving maritime boundary disputes when the concerned parties strongly stick to overlapping claims on specific areas. In fact, as a boundary line is not easily agreed upon within a relatively short period time, it is necessary to find another option to solve the problem until a final resolution is reached. In particular, joint development arrangement have proven to be temporarily helpful in solving disputes arising from overlapping claims to maritime jurisdiction.¹⁰⁹

Even though joint development arrangements simply affirm a temporary solution of the boundary issues, if the parties to a dispute are unable to resolve their conflicts on overlapping claims, it may be improper to establish such an arrangement.¹¹⁰ In addition, political commitment from the parties to a dispute should be considered

¹⁰⁴ Agreement between Japan and Korea Concerning Joint Development of the Southern Part of the Continental Shelf Adjacent to the Two Countries, art. 4(1).

¹⁰⁵ *Id.* art. 24.

¹⁰⁶ *Id.* art. 29.

¹⁰⁷ CHARNEY & ALEXANDER (EDS.), *supra* note 3 at 1085.

¹⁰⁸ *Id.* at 1075.

¹⁰⁹ ROTHWELL & STEPHENS, *supra* note 27, at 290.

¹¹⁰ Hyun Soo Kim, *The Impact of the Joint Development Agreement Between Korea and Japan in the East China Sea on the Delimitation of the Continental Shelf*, 17(2) INHA L. REV. 94-5 (2014).

in order not underestimate their strong political cause and willingness, because JDZs cannot be separated from domestic political context of the concerned parties. Stormont and Townsend-Gault maintained: “The conclusion of any joint development arrangement, in the absence of the appropriate level of consent between the parties, is merely redrafting the problem and possibly complicating it further.”¹¹¹ In this sense, joint development arrangements on one hand are a positive, functional, and flexible means, while they are, on the other hand, vulnerable to security issues and thus reluctant to transfer technology for joint development and natural resources that are so crucial to each party. Therefore, the parties concerned should bear in mind the pros and cons of joint development arrangements, because effectiveness in such arrangements are dependent on inter-state cooperation, resource management mechanisms, and diplomatic will.

Provisional arrangements are often helpful to reach the final accord under international law.¹¹² In practice, however, these arrangement may have an undesirable effect on the process of delimitation negotiations because JDZ is generally drawn in some part of the overlapping areas of the concerned countries. And so if the parties are not satisfied with the basepoints in the arrangements, new basepoints might be established for the final delimitation negotiation in the disputed area. For instance, the 2000 Sino-Vietnamese Fishery Agreement might be very critical in the determination of their boundary lines, because the agreement had an important component and factor to be considered during the maritime boundary negotiations in line with the UNCLOS. Furthermore, all coordinates applied to the 2000 Fishery Agreement are to be based on geographic circumstances of the Gulf of Tonkin,¹¹³ and as a result, the coordinates were used for the Delimitation Agreement on the Gulf of Tonkin.¹¹⁴

Therefore, even if countries having maritime boundaries are not legally obliged to agree on creating a JDZ for the temporary settlement of boundary dispute, those countries should do something that will be helpful for resolving the boundary issues. A JDZ will, or can be, one of the ways to resolve the problems, especially in comparatively narrow maritime areas like the East China Sea, which is less than 400 nm. Thus, the countries involved need to negotiate to find any practical solution, including the establishment of the JDZ. In this regard, JDZ would be one of the most effective and lawful measures to settle maritime boundaries in overlapping zones

¹¹¹ W. Stormont & I. Townsend-Gault, *Offshore Petroleum Joint Development Arrangements: Functional Instrument? Compromise? Obligation?* in *THE PEACEFUL MANAGEMENT OF TRANSBOUNDARY RESOURCES* 52 (G. Blake et al. eds., 1995).

¹¹² UNCLOS arts. 74(3) & 83(3).

¹¹³ *Id.* arts. 5, 7, & 10.

¹¹⁴ *Id.* art. 21.

with opposite or adjacent countries until a final delimitation is made. Also, it may be a good model for other countries with similar boundary problems.¹¹⁵

VII. Conclusion

The JDZ between Korea and Japan in the East China Sea was established to provisionally settle their boundary dispute, especially the CS issue. It will be in force until 2028 unless terminated upon three-years notice given by either Party because the 1974 Agreement shall remain in force for a period of fifty years and shall continue in force thereafter until terminated.¹¹⁶ Absent an affirmative act to cancel it, the 1974 Agreement continues in force indefinitely. In this respect, both countries should decide the future of the 1974 Agreement before 2028. Currently and provisionally, there is no active legal dispute over the CS boundary between the two nations due to the JDZ Agreement. Professor A. V. Lowe described a dispute as “a specific disagreement relating to a question of rights or interests in which the parties proceed by way of claims, counter-claims, denials and so on.”¹¹⁷ That is not the case here. There is currently no specific disagreement between Korea and Japan with regard to the 1974 Agreement.¹¹⁸

Unless Korea and Japan actively take any action or measures for settling the boundary disputes on the CS or the EEZ before 2028, the East China Sea would be an area without boundary. Here, any country having maritime entitlement can unilaterally or excessively claim its maritime rights without considering the relevant rule of law, like the UNCLOS. In this case, the East China Sea will be a chaotic and lawless water. At the same time, maritime tensions, conflicts, or disputes will arise considerably more than expected. The countries in the region should thus have serious concerns about jurisdiction over parts of the East China Sea that could be future maritime zones of the countries, in particular on the CS or in the EEZ under the UNCLOS.

Given the above circumstances, all possible, reasonable, and lawful solutions or options need to be suggested to resolve the boundary problems in the East China Sea

¹¹⁵ Hyun Soo Kim, *supra* note 110, at 95.

¹¹⁶ 1974 Korea-Japan Agreement for JDZ, art. 31(2) (3). Article 31(3) reads: “Either Party may, by giving three years’ written notice to the other Party, terminate this Agreement at the end of the initial fifty-year period or at any time thereafter.”

¹¹⁷ J. COLLIER & A.V. LOWE, *THE SETTLEMENT OF DISPUTES IN INTERNATIONAL LAW* 1 (1999).

¹¹⁸ EVANS, *supra* note 38, at 533. *See also* J. MERRILLS, *INTERNATIONAL DISPUTE SETTLEMENT* 1 (2011).

urgently, effectively and legally, especially between Korea and Japan as follows. Firstly, in order to implement the 1974 Agreement, Korea may strongly ask for designation of concessionaires to Japan¹¹⁹ through diplomatic channels, because both parties must enter into an operating agreement to carry out exploration and exploitation of natural resources jointly.¹²⁰ In addition, Korea needs to remind Japan of its legal obligation to designate concessionaires under the terms and purposes of the 1974 Agreement. Namely, this option is important to implement the 1974 Agreement as contracting parties under international law.¹²¹ In particular, the designation of concessionaires is the first step to faithfully implementing a mutual agreement.

Secondly, Korea may consider extension or revision of the 1974 Agreement itself, including detailed management and implementation. Article 31 of the 1974 Agreement provides: “If no agreement is reached as to the revision or termination of this Agreement, this Agreement shall remain in force...”¹²² Thus, if both Korea and Japan may consider the possibilities of exploiting or exploring the natural resources in the East China Sea, it would be quite pragmatic to extend the Agreement because Korea especially is entitled to a certain portion of the area now covered by the JDZ. Otherwise, both nations, for more feasible solution, may revise ambiguous and questionable provisions, which would negatively impact mutual development of the natural resources and consequently be prejudicial to its implementation. Without the designation of concessionaires, joint exploration or development may be virtually impossible. Also, it may be possible to suggest development by one party and then share the development interests with other party at a certain ratio.

Thirdly, a new agreement is another option to solve the boundary issues, including joint development of natural resources for a certain period of time until a final delimitation agreement is concluded. A new agreement would necessarily reflect all solutions to the negative factors or unrealistic contents to implementing the current agreement. The new agreement may include matters of joint development, the types and degrees of participating agencies, companies, or the governments, diverse models to effectively operate the agreement,¹²³ a sharing structure of interests, a dispute settlement mechanism more practical,¹²⁴ etc.

¹¹⁹ 1974 Korea-Japan Agreement for JDZ, art. 4.

¹²⁰ *Id.* art. 5.

¹²¹ VCLT art. 26. It reads: “Every treaty in force is binding upon the parties to it and must be performed by them in good faith.”

¹²² 1974 Korea-Japan Agreement for JDZ, art. 31(4).

¹²³ H. FOX ET AL., JOINT DEVELOPMENT OF OFFSHORE OIL AND GAS: A MODEL AGREEMENT FOR STATES FOR JOINT DEVELOPMENT WITH EXPLANATORY COMMENTARY 53-114 (1989).

¹²⁴ 1974 Korea-Japan Agreement for JDZ, art. 26. It states: “Any dispute between the Parties concerning the interpretation

Finally, negotiations for maritime boundary delimitation in the East China Sea will be a progress for maintaining the ocean order and maritime peace under international law without any political or diplomatic considerations.

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and implementation of this Agreement shall be settled, first of all, through diplomatic channels.” As Article 26 can be interpreted differently between Korea and Japan, it may not be well applicable to a dispute over interpretation and implementation of this Agreement. Accordingly, more succinct and practical provisions should be adopted in a new agreement.