Marine Awareness and Ocean Governance: Arafura, Timor Seas, and Torres Strait

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Abstract. Declaring a state's jurisdictional limits for managing marine biotic and mineral resources, defining cooperation zones where dispute settlement is at a stalemate, and introducing maritime border protection legislation are official actions adopted by States when deemed necessary. This narrative offers a brief overview of select agreements relating to maritime boundary delimitation in the seas separating northern Australia from Indonesia, Papua New Guinea, and Timor-Leste. The study highlights inherent problems post-naval boundary delimitation between the Parties to the relevant agreements. In summary, Australia negotiated agreements relating to maritime boundary delimitation with its northern neighbors with intense diplomacy and good intentions. However, dissatisfaction with the alignments was raised.

Keywords: Marine awareness; ocean governance

1 Introduction

1.1 International Law, Obligation, and Rights

Semi-enclosed oceans have been a cause of contention between national governments and their subordinate political subdivisions, as well as between management agencies within governments, as a result of the increased use of maritime space and marine biotic and mineral resources. For these issues to be resolved, national assessment and development programs must be conducted and enforced with the utmost care while being led by clearly stated policy goals[1].

Because of this explosion of information, people are beginning to see the oceans and seas not just as a source of money for our future needs but also as a source of responsibility. It is the responsibility of all nations, especially those near the coast or islands, to guarantee that the resources derived from the ocean remain safe for future generations. Because of pollution, population expansion, and food shortages, the concept of sustainable development is being promoted on a worldwide scale. The air above the seas, the seafloor and substrata below, and the coastal Zone are all under the jurisdiction of individual nations. Article 192 of the 1982

[1] Scholars and others have produced several research studies and publications within and outside of Australia relating to the delimitation of maritime boundaries in our region. The present author acknowledges this fact and cautions that he does not mention all publications; as such, a list word would exceed the word limit for this proceedings. Much of this narrative is based, amongst others, on three of his major publications, namely, Conflict and Cooperation in Managing Maritime Space in Semi-enclosed Seas (SUP, 2001), Australia's Arc of Instability (co-edited, Springer, 2007) and Indonesia's Delimited Maritime Boundaries (Springer, 2014)

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United Nations Convention on the Law of the Sea (1982 Convention) states, "States shall conserve and maintain the marine environment [1].“

Defining and delimiting territorial maritime claims and zones of national jurisdiction and demarcating terrestrial borders are only a few issues that arise whenever a conversation turns to the management and development of resources. The seas have their particular challenges, issues, and processes. Until about 1930, fishing operations, marine transportation, and close inshore mining were the main human activities connected with the oceans. Fishing possibilities appeared to be constrained only by the physical limitations of the craft involved and offshore mining by the depth of exploitation. For marine transportation, the 'high seas' was considered.

The waters beyond the coastal and island states' territorial sea were generally a nominal width of three nautical miles (M). (1M=1.85km) International developments during the 1970s and 1980s raised acute issues in several nations regarding the appropriate divisions of obligations and responsibilities in managing maritime jurisdiction[2]. These concerns first came to a head for Australia during Federal-State talks in the 1960s over the legal framework for offshore hydrocarbon exploration and extraction. Australia and other coastal and island states have declared their jurisdictional limits for the management of marine biotic and mineral resources, defined zones of cooperation in cases where dispute settlement was at a standstill, and implemented maritime border protection legislation where necessary in accordance with the provisions of the 1982 Convention.

1.2 Australia and Its Immediate Northern Neighbours

Australia has defined many marine zones under the Seas and Submerged Lands Act of 1973, all following international law as set down in the Four Geneva Conventions on the Law of the Sea of 1958[3]. Expansion of the territorial sea is the most notable of several important changes. A state may claim a width of up to 12 nautical miles (M) seaward of its publicly stated and recorded straight baseline (or basepoint) in its territorial sea, despite the international standard width being 3M. This is in accordance with the requirements of the 1982 Convention. A country's territorial sea is the body of water directly next to its shoreline. Thus, they may establish certain laws in this region, with the crucial proviso that it must not impair the freedom of innocent passage of foreign vessels. The baseline system of the territorial waters establishes the extent of the Contiguous Zone, which is 12–24 nautical miles (M–M). In the contiguous zone, governments may exercise some control over customs, taxes, sanitation, immigration, and other matters pertaining to public safety and security.

While it is the responsibility of coastal and island governments to maintain and conserve the marine environment, these nations also have the freedom to explore and use the area's living and nonliving resources. Between 12 nautical miles (M) and 200 Km (N) from a country's territorial sea baselines is considered its Exclusive Economic Zone (EEZ). State sovereignty is limited to the management, exploitation, and harvesting of particular resources; nevertheless, the interpretation of the relevant sections of the Articles related to the EEZ is subject to guesswork, including regarding activities connected to a marine scientific study by foreigners.

International law's Continental Shelf idea has clouded investigation. What is known as a

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[2] The rapid developments in operations and technology overtook the concepts and provisions of the 1958 Four Geneva Conventions and discussions that led to the Third United Nations Convention on the Law of the Sea in 1982.

[3] Australia enacted the Seas and Submerged Lands Act of 1973 to manage its maritime space and hydrocarbon exploration and exploitation in offshore regions.

state's natural continental shelf is the region of the seafloor between the state's coast and a depth of 200 meters in the sea immediately to the east. Aside from that, the region beyond the baseline of the territorial sea, which is 12 nautical miles out to 200 nautical miles out, is also included (that is, it covers much of the same area as the EEZ). Article 76 of the 1982 Convention states that any portion of the natural prolongation beyond 200M must be claimed and given international approval by the United Nations before it can be considered part of a country's territory [1].

1.3 Transboundary Cooperation

Transboundary cooperation in trade and resource exploitation between countries has been a fact of European life for centuries. Perhaps it was the same in many parts of Asia and Africa. Such a concept is required both to reduce the risk of border disputes deteriorating into conflict and to manage the economic, environmental, and social problems that manifest on both sides of the border. Illegal migration, the destruction of ecosystems across national lines, the reliance of economies on one another, the use of ordinary water supplies, and global pollution all contribute to the growing complexity of these issues. According to the terms of the 1982 Convention, if declared, Australia would have rights to marine biological and mineral resources within the boundaries of the ocean space and seabed area (almost 16 million square kilometers), which is more than twice the extent of the Australian continent. The Commonwealth Government has exclusive control over most of Australia's marine territory.

Several significant shifts, most notably the expansion of the maritime Zone. Australian marine zones were established following international law and the Seas and Submerged Lands Act of 1973. The low water mark along the coast is the most common reference point for determining the outer limits of these areas, but the territorial sea baseline also includes the closing lines of bays and rivers, as well as some straight baselines between the mainland and adjacent islands and across parts of the beach that are deeply indented.

All coastal and island states have the right to explore and exploit the non-living and harvest natural and legal continental shelf living resources under their jurisdiction. Such actions to support the state's blue economy policies must consider the sustainable development of resources for reef conservation and protection. The conditions must adopt adequate marine pollution policies and counteractions to prevent oil spread and preserve and protect marine flora and fauna by establishing marine parks and reserve areas[4]. A description of the geographical setting and political background follows.

1.4 Geographical Setting and Political Background

The littoral states of the Arafura and Timor Seas and the Torres Strait are Australia (to the south), Indonesia, Timor-Leste, and Papua New Guinea (to the north). Australia and Indonesia are also separated by the waters of the southeastern sector of the Indian Ocean. The collective east-west extent of these bodies of water span from Longitudes 105º E (just west of Christmas Island, Australia) to 144º East (the eastern limit of the Torres Strait) is nearly 2,400M. The Arafura Sea is about 600M in its east-west extent, and its north-south alignment (excluding the Gulf of Carpentaria, is about 480M (See Figure 1). The north-south width varies throughout – wide in the west in the vicinity of the area bordering the Indian Ocean to very narrow, about 80M in the Torres Strait.

[4] Numerous international conventions emphasize these issues, for example, IMO.

The delineation of the western limit of the Timor Sea is an imaginary line, about 280M, joining Cape Londonderry to the southwest point of Roti Island (Lat. 10º 56' S, Lon. 122º 48'E). The eastern limit of the sea is an imaginary line from Cape Don (Northern Territory, Australia) to Tanjong Aro Oesoe, the southern point of Selaroe Island. The Timor Sea has a surface area of about 610,000km^2 [2]. The Arafura Sea and Torres Strait overlay the Arafura Shelf, which is part of the natural Australian continental shelf, and depths vary from relatively shallow to about 80 meters (m). A bathymetric feature of the Timor Sea is the Timor Trough which reaches depths of 3,300m – a foreland trough to Timor Island. Further west of the Timor Trough is the Sunda Shelf which stretches over 3,200km and attains a depth of nearly 7,300m. in the Indian Ocean off Sumatra Island and south of Java Island.

Several islands and reef complexes are on the edge of the natural continental shelf of Australia in the Timor Sea and Torres Strait. These marine features, for example, the Ashmore Reef complex, Browse Island, Rowley Shoals, and Scott Reef, are internationally recognized as Australian territory – under Australian jurisdiction. In geopolitical parlance and international law, for example, the 1982 Convention, Indonesia is defined as an Archipelagic State; Australia as an island continent; Timor-Leste as a relatively young sovereign nation whose territory occupies eastern Timor Island and an enclave in the western half and two offshore islands (Indonesia possesses the western sector of Timor Island), Furthermore, Papua New Guinea shares part of New Guinea Island with Indonesia. In economic terms, Australia is considered a developed country, and the three others are developing states; each is a democratic and sovereign nation. Since the mid-1970s, Australia has established bilateral agreements in maritime boundary delimitation. Australia has negotiated numerous cultural, defense, economic, trade, and social contracts with its immediate neighbors. A brief commentary on each of the marine boundary agreements is presented in the following section.

Fig. 1. An extract of Map 3 in S23, IHO's Limits of Oceans and Seas, 1953, Monaco. (Depicting the limits of the Timor Sea, Arafura Sea, Torres Strait, and the Coral Sea). (Christmas Island is located Lat. 10º the 30S and Lon. 105º 40' E - northwest of #45 on the map).

2 Result

2.1 Agreements and Treaties

Bilateral agreements between Australia and its three near northern neighbors were reached, and lines of allocation for marine biotic and mineral resources were delineated to sustainably manage the resources and the marine environment. Several agreements relating to shared maritime space with Indonesia since the early 1970s demonstrate the importance that the two

nations place on the sustainable development of the resources of the Arafura and Timor Seas.

2.2 Seabed Boundaries: Australia with Indonesia, 1971 and 1972

Australian and Indonesian teams jointly determined a boundary in the Arafura Sea and a portion of the Timor Sea in the early 1970s. The first Agreement, signed on May 18, 1971, in Canberra, established the seabed limit across the Arafura Sea for a distance of around 530 meters. Turning points A1 through A12 are connected by geodesics, which define the boundary. The Agreement itself contains the locations in question. Water depths of less than 200 meters mark the seabed barrier (analogous to the continental shelf limit) [3]. In addition to the pact mentioned above, Jakarta signed a second one on October 9, 1972. It marked the bottom edge of the Arafura and Timor Seas. The intersections designated A13–A16 and A17–A25 have been pinpointed. There is a deliberate 'Gap' between points A16 and A17 because of the use of geodesics that connect points A13 to A16 and points A17 to A25 (See Figure 2).

The chasm was located south of what was then Portuguese East Timor. Informally, it was called the "Timor Gap." There were fundamental concerns in Indonesia regarding how this border was drawn. The 1958 Geneva Convention on the Continental Shelf served as the basis for Australia's negotiating stance prior to the delimitation of these borders, namely the geographical limitations of the continental shelf, the 200-meter isobath, and the natural extension of the landmass. November 8, 1973, saw the formal approval of both treaties.

On the other hand, Indonesia had a different opinion, holding that the delimitation should be based on the equidistance concept. Indonesia and Australia had attempted to negotiate a permanent delimitation of the seafloor in the 'Gap' by drawing a single line across the area but were unsuccessful. They did, however, have a joint proposal [4], [5]. The Treaty between Australia and Papua New Guinea is acknowledged as one of the most creative answers in international law to maritime boundaries affecting the lives of traditional inhabitants

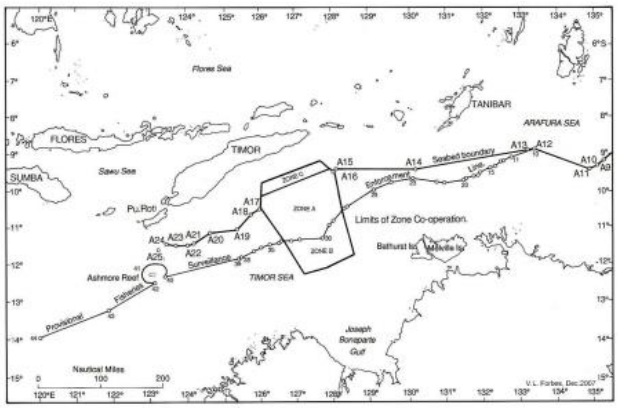

Fig. 2. The 1971 and 1972 Seabed Boundary Delimitation and 1989 Zone of Cooperation. (Source: Present author)

2.3 The Torres Strait Treaty, 1978

On December 18, 1978, Australian and Papua New Guinea (PNG) governments signed the Torres Strait Treaty, which became legally binding on February 15, 1985. It established the geographical divide between Australia and Papua New Guinea and provided a strategy for

governing the shared border region. The treaty's local implementation is regularly discussed with liaison officials from both nations. The marine awareness and ocean governance practices shown in this Agreement might serve as a template for the shared border region.

The treaty not only establishes marine borders between Torres Strait nations, but it also establishes a protected zone there to safeguard indigenous cultures (Protected Zone). The Seabed Jurisdiction Line and the Fisheries Jurisdiction Line are the two principal limits established by the treaty. In the former, Australia enjoys exclusive sovereignty over all resources above and below the seabed south of this line, while PNG does so to the north. Australia has jurisdiction south of this line over free-swimming fish, whereas PNG does the same to the north. The Parties to the Treaty have committed to dividing these privileges equally.

Fifteen cays, islands, and rocks to the north of the Seabed Jurisdiction Line constitute Australian territory, even though this line serves as the primary maritime border between Australia and Papua New Guinea. Unless otherwise stated in the treaty, the islands to the north of the line also have a territorial sea three nautical miles wide. (Check out Image 3). The Parties have designated a specific section of Torres Strait as the Protected Zone because they believe it requires special protection. The primary purpose is to save the local ecosystems, especially the natural flora and wildlife. In the Zone, individuals of both nations' traditional cultures can travel and engage in everyday activities without requiring special paperwork or government permission. Australia was hesitant to have these islands essentially shut off from the mainland by a single all-purpose maritime border. At the same time, Papua New Guinea negotiators desired to establish a single maritime boundary via the Torres Strait and the cession of certain uninhabited islands.

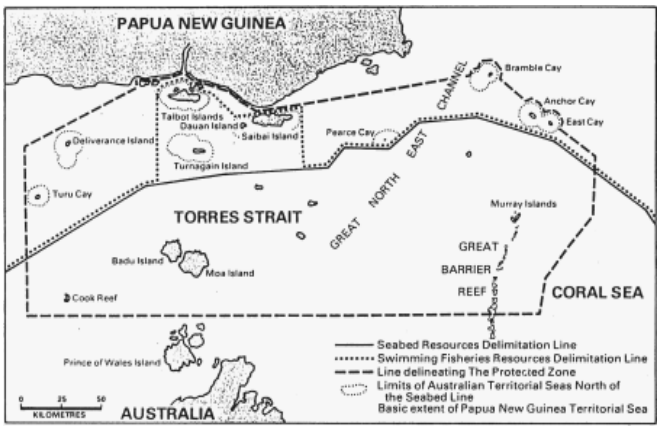

Fig. 3. The Torres Strait lines of jurisdiction and resource allocation.
(Source: Map attached to the Torres Strait Treaty document, Australian government)

2.4 Australian Fishing Zone (AFZ)

Australia established its exclusive economic Zone (EEZ) and exclusive fishing grounds (AFZ) 200 nautical miles (M) from its territorial sea baselines on November 1, 1979. Circular arcs and the physical coordinates of 750 arc crossings, intermediate points on angles, and points on intermediate demarcated lines established the outer perimeter of the AFZ surrounding the island continent. About 7 million square kilometers, or the entirety of the American continent, was included in the Restricted Zone. The AFZ was mapped out by the

Royal Australian Navy's Hydrographic Service and published as Chart AUS 5060. Australia has a defined middle ground when its claim overlaps with its neighbors [4], [5].

Fifty-eight compass points form the border between Australia and Indonesia between the Arafura and Timor Seas. These compass points are designated by the geographical coordinates (Points) 91 to 148. Lines drawn between these coordinates showed the halfway point between the two nations in these oceans. Points 139–148 correspond to Points A12–A3 in the 1971 Australia–Indonesia Seabed Boundary Agreement. The center line between these coordinates is between A12 and A25, which is to the south of the border between land and water. The median line veered northwest from A25, going via Ashmore and Cartier Islands. About 52,120 square nautical miles fell inside the region delimited by the median line and the agreed-upon seafloor border [6]. In early November 1980, during bilateral talks, Indonesia proposed that the median line should be drawn without considering Australia's far-offshore Ashmore and Cartier Islands. Indonesia said it was at a disadvantage in this area.

2.5 Memorandum of Understanding Box (MOU Box)

Each country was allowed to manage sedentary fish species within its territorial waters up to the agreed-upon seabed borders from 1971 to 1972, as outlined in the MOU. Article 6 of the MOU established without ambiguity that the arrangement was temporary and would not affect the legal standing of any government. Also, it was stated that the applicability of Australian fisheries legislation to traditional Indonesian fisherman working in Browse and Cartier Islets and Ashmore Islands, Scott and Seringapatam Reefs would be unaffected by the '1980 MOU' as per the '1974 MOU' between the two nations. (As shown in Figure 3) According to Prescott (1985), "control over around 70 percent of the disputed region" was effectively transferred to Indonesia when a Memorandum of Understanding (MOU) was signed between Australia and Indonesia in late October 1981 [4]–[7] 3.5 Provisional Fisheries and Surveillance Enforcement Line (PFSEL).

Within the northern seas of the AFZ, the MOU established a Provisional Fisheries Surveillance and Enforcement Line system for Indonesian fishermen to follow (PFSEL). A list of 44 sites and their respective coordinates were included as an appendix to the MOU, forming the boundary of the line. To define the AFZ, Turning Places were used at 35 of the first 39 points of this border. The corresponding locations that defined the AFZ were somewhat off at coordinates (36–39). To reach point 44 (Lat. 13° 56'S., Lon. 120° 01'E.), the PFSEL followed arcs of circles with a radius of 12M drawn from the baseline of Ashmore Islands. Point 123 of Indonesia's archipelagic baseline system was established in 1960, and Dana Island is located 200 M to the south of this point.

2.6 The Timor Gap Treaty of December 11, 1989

Between Points 16 and 17 of the 1972 Seabed Boundary Agreement, the area of Portuguese-administered Timor (or East Timor) extended southward, creating a West (Indonesian portion) and an East (Portuguese part). Australia's negotiating stance leading up to the delimitation of these borders relied on the parameters established by the 1958 Geneva Convention on the Continental Shelf. These parameters included the 200-meter isobath and the natural extension of the landmass. Generally, Indonesia has misgivings regarding establishing this particular barrier below the ocean's surface. On the other hand, Indonesia had a different opinion, holding that the delimitation should be based on the equidistance concept. A permanent

delimitation of the seabed in the 'Gap' as a single line was not achieved via initial discussions between Indonesia and Australia. A suggestion for cooperation, however, was presented [4], [5].

In the early 1980s, negotiation teams of legal and technical experts from Australia and Indonesia were chosen to attempt to resolve the nations' opposing claims to seabed jurisdiction in the Timor Sea and other related concerns. The task assigned to them was to "consider the feasibility of creating an interim "joint development" regime for operating petroleum licenses inside the "Gap" until full delimitation of the seabed between Points A16 and A17" [8]. The Agreement was signed on September 5, 1988, marking the conclusion of the discussions. On October 27, 1989, representatives from both nations began work on what would become the treaty's text and four annexes. Two months after cabinet ministers signed the treaty, on February 9, 1991, it became effective [8]. Three distinct regions make up the Cooperation Zone in the Gap. Lines of equal distance marked the Zone's eastern and western boundaries. The simplified 1,500-meter isobath marks the northern limit of "Area A," the shared operational Zone. The median line between Indonesia and Australia, which corresponded to a stretch of the Provisional Fisheries Surveillance and Enforcement Line (PFSEL) [described below], formed the southern boundary of Area A.

Significant aspects of 'Area A' included equal ownership of all resources and shared responsibility for their discovery and development. In this region, you may find the geological Kelp structure, which was found to have probable hydrocarbon resources in the Timor Sea's substratum. Area B of the Zone was closest to Australia, while Area C was nearer to Indonesia. Within the Zone's original boundaries, Australian law prevailed. However, Australia did agree to split its Resource Rent Tax with Indonesia. Last I checked, the applicable legislation was Indonesian. As seen in Figure 1. Theoretically, the seabed border south of Timor Island between the two parties was not affected by the boundary lines that created the Zone of Cooperation (Article 2:3 of the Treaty). Such a clause would have negated the claim that the Timor Gap Treaty reflected actual territorial limits. It has been stated that if the treaty remained in effect, the drawn boundary would probably include permanent lines owing to the divergent delimitation philosophies between Indonesia and Australia [9].

2.7 International Court of Justice's (ICJ) Decision

On February 22, 1991, Portugal filed actions against the signatories to the treaty before the International Court of Justice (ICJ), casting doubt on the future success of the Zone of Cooperation. Whether or not the treaty is invalid was brought before the ICJ for a ruling. Nevertheless, specific steps needed to be taken before a matter could even be submitted before the ICJ's Chamber (Article 30, Statute of the ICJ). On June 30, 1995, the ICJ ruled 14-2 that it lacked the jurisdiction to rule on the question cited by Portugal in its decisions involving Australia and Indonesia under the Timor Gap Treaty.

Australia's argument that the actual conflict' lay between Indonesia and Portugal was investigated, and the ICJ ultimately sided with Australia and Portugal in a legal battle. It noted that it could not "rule on Portugal's claims on the merits, whatever the importance of the questions raised by those claims and of the rules of international law which they bring into play," and thus could not rule on Australia's conduct without first deciding why Indonesia could not lawfully have completed the 1989 Treaty while Portugal could have done so [10].

2.8 The 1997 Certain Maritime Boundaries Agreement (The March 1997 Perth Treaty)

Professionals from both Australia and Indonesia met in March and again in the middle of October of 1993 to talk shop on legal and technological issues. There was disagreement during these discussions, as well as others held in 1994 and 1995, regarding the location of the boundary between Java and Christmas Island in the Indian Ocean and whether or not the boundary should be extended westward from Point A25, which had been established nearly two decades earlier. The technical issue of which geodetic datum will be used to calculate the geographical coordinates of the seabed boundary's turning points was discussed in meetings held on September 11 and 12, 1996, and again in December 1996, in Sydney. The Parties signed this 'Package Deal' Agreement on March 14, 1997, in Perth, Western Australia. A failure to ratify this "Package Deal" before August 30, 2022 [5]3.7.1 The Sea Area Surrounding Christmas Island.

Forbes suggested the possibility of a border being drawn on the ocean floor somewhere north of Christmas Island in the Indian Ocean [11]. The researcher argued that Australia would lose a large portion of the EEZ and seabed north of Christmas Island without the central line concept. The suggestion that the border is in the middle of the waterway between the Christmas and Java Islands was vetoed by Indonesia (See Figure 4). At first, Indonesia insisted that Point C2 be situated just 12M north of Christmas Island. Point C2's exact position was a "floating point" throughout the eight discussions between 1993 and December 1996, ranging from 12M to 50M north of Christmas Island.

It was discovered that the C2 was located 38.75M north of Christmas Island. In terms of distance, this location is 59 kilometers south of the main problem. The Jan Mayen Case formed the basis for Indonesia's position that Christmas Island was too far from the Australian mainland to be considered part of Australia. Point C2 was determined using a complicated procedure that took into account the relative sizes of the landmass and the two coastlines that comprise its boundaries. For Article 121 of the Law of the Sea Convention of 1982, a sovereign Christmas Island would be entitled to a complete territorial sea and contiguous Zone. If the island's population and economy are stable, it may affect a large portion of the surrounding EEZ and continental shelf. Years of evidence show that Christmas Island is suitable for these purposes [12]. Recent political developments in East Timor have brought renewed attention to several previously unresolved geopolitical concerns in Australia's exclusive economic Zone. These include the validity of the Timor Gap Treaty and the effectiveness of the Zone of Cooperation.

[5] The author has made several inquiries to relevant authorities about the Agreement's status

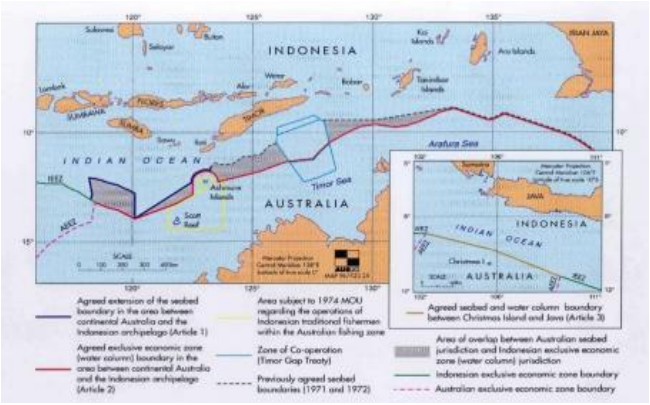

Fig. 4. Lines of Resource Allocation of the March 1997 Agreement.
(Source: Map included in the Treaty, DFAT, Australian government)

2.9 MOU for the Continuity of the TGT

In order to ensure that the people of East Timor continue to benefit from the conditions of the Timor Gap Treaty throughout the transitional period, UNTAET (United Nations Transitional Administration in East Timor) and Australia signed a Memorandum of Understanding. UNTAET's efforts under Resolution 1272 of the Security Council were aided by the MOU (1999). However, the MOU did not affect how the East Timorese government would feel about the treaty after it became independent. Based on Australian Treaty Series No. 9, 2000, an Exchange of Notes was signed in Dili on February 10, 2000, with the effective date set for October 25, 1999.

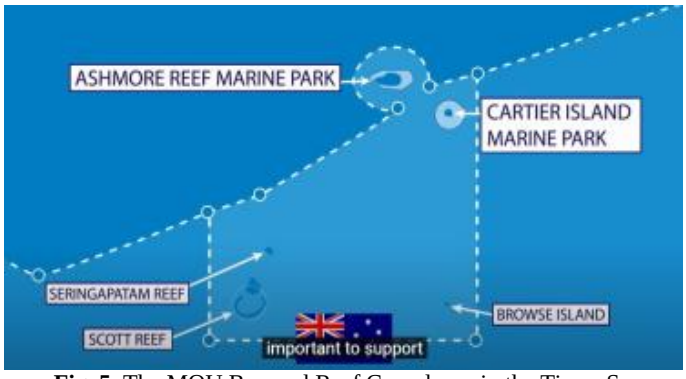

Fig. 5. The MOU Box and Reef Complexes in the Timor Sea
(Source: Australian Government and numerous Agencies)

Even though they signed the MOU, the National Council for Timorese Resistance (CNRT) has said they may try to renegotiate the treaty to get a more significant cut of the profits from the Timor Sea's oil resources. It was speculated that CRNT would be adamant about a marine border based on the median line approach. Following early opposition to the Treaty, East Timorese authorities reassured the Australian government and the oil sector that they wanted the development to continue under the current conditions as long as East Timor remained under

the U.N. administration. However, the CNRT did not want to provoke the Australian government or scare off the oil business by demanding a greater cut of the profits.

2.10 Sunrise International Unitization Agreement (Sunrise IUA)

Australia and East Timor's governments signed a memorandum of understanding on July 5, 2001, on an international unitisation agreement for the Greater Sunrise Gas Field. Revenue from the Timor Sea Agreement's oil and gas resources is projected to be in the billions of millions, and royalties from goods will be shared 90/10 in favor of East Timor. The Agreement, which might be valued at as much as $5 billion over 20 years, was seen as crucial for East Timor when the country gained complete independence in 2002. 3.9 A 2002 agreement about the Timor Sea Treaty (TST).

On May 20, 2002, East Timor officially became its nation. The Timor Sea Treaty was signed that day between representatives of the Australian and East Timorese governments in Dili, East Timor (TST). According to the Timor Sea Treaty (TST), the two governments have agreed to work together to exploit the petroleum resources of the Timor Sea. Until December 31, 2002, work diligently and in good faith to reach an international unitisation agreement ("the Agreement") for the Greater Sunrise oil reserves in the Timor Sea.

The Parties agreed to unitize the Greater Sunrise hydrocarbon reserve in the northeastern corner of the JPDA, which spans the eastern lateral boundary between Indonesia and Timor-Leste, in 2004 as a means of carrying out their commitments made in the Unitisation of the Greater Sunrise Agreement of 2003. The Agreement addressed operational concerns and included the stipulation that production from the field would not begin until a development plan was evaluated and authorized by the Agreement. Reportedly, one of the stumbling blocks was (and still is in August 2022) whether the pipeline should be routed to Darwin or the south coast of Timor-Leste. Getting gas condensate from the Bayu-Undan field to Darwin was made possible by an existing pipeline. The southern shore of Timor-Leste is the likely location for any processing done farther upstream. Much worry and discussion were given to which nation would reap the greater economic advantage, with some even wishing for the southern neighbor to give up some of their continental shelf [13].

2.11 The 2006 Certain Maritime Arrangements (CMATS)

A minor concern was whether Timor-Leste would be entitled to higher earnings from Greater Sunrise if the pipeline was oriented toward Darwin. In the end, after many discussions, the two nations reached an agreement on Certain Maritime Arrangements on January 12, 2006. Legal disputes with Australia over Greater Sunrise hydrocarbon discoveries dragged on for years, hurting Timor-economy Leste's and threatening its safety. Providing exploration firms with an assurance that they are working with stable governmental institutions in which taxation regulations are handled clearly and fairly, and in which ethical business practices are maintained, will benefit Timor-domestic Leste's security and economic growth.

In 2013, the government of Timor-Leste filed a lawsuit with the ICJ in The Hague, Netherlands, alleging a wide range of wrongdoing and asking for an order requiring the return and sealing of documents related to the case. Timor-former Leste's prime minister got rid of the CMATS. Australia's eavesdropping on Timor-Leste was deemed illegal by the ICJ in March 2014. Timor-Leste filed a claim with the Permanent Court of Arbitration (PCA) in The Hague in April 2016. Because the Australian government agreed to renegotiate a (permanent) maritime

boundary [14], Timor-Leste withdrew its action against Australia at the International Court of Justice (ICJ) in early 2017.

2.12 Maritime Boundaries Treaty 2018

Disputes between nations are a regular feature in a complex world of geopolitics and international relations. While states may diverge about a range of issues, they are also obliged to explore avenues for resolving disputes by international law. Traditional dispute resolution methods such as negotiation, adjudication, arbitration, and conciliation have delivered durable solutions to states. In the context of the international law of the sea, the 1982 Law of the Sea Convention (the 1982 Convention) focuses on dispute resolution (Articles 279-285 and Part XV), emphasizing the need for states to engage with one another expeditiously to solve their disagreements (See Figure 6).

Australia and Timor-Leste signed a historic treaty in 2018 to strengthen their ties as neighbors. With the signing of the Maritime Boundary Treaty at the United Nations Headquarters in New York on March 6 2018 [15], [16], the governments of Australia and the Democratic Republic of Timor-Leste effectively re-defined their maritime borders in the Timor Sea. A "modified equidistance approach" was used to determine the maritime boundary for ease of use. Australia understands its importance for Timor-Leste and is dedicated to finding a solution that would help Timor-Leste the most in the long run, notwithstanding any difficulties that may arise. Shows the sea line between the two nations and the polygon containing the Greater Sunrise gas field in the eastern part of the map.

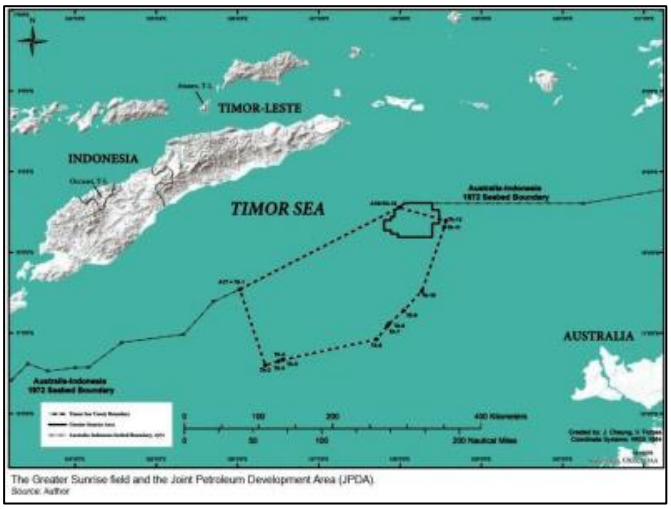

Fig. 6. Depiction of the Maritime Boundary of the 2018 Treaty
(Source: Present author, 2020)

3. Discussion

3.1 Inherent Problems

After the boundary alignment has been decided, several conflicts emerge regarding the sea and terrestrial boundaries. Before this section, maritime border delimitations between Australia and Indonesia and Australia and Timor-Leste were mentioned as instances. Since the early 20th century, Kashmir and Jammu have been at the forefront of international attention as the site of a legal dispute between India and Pakistan. However, maritime borders as we know them today are rather new. Most disagreements arise before a boundary is set and are resolved after all parties establish and accept a line. For instance, the Palk Strait maritime border between India and Sri Lanka and the Fisheries Jurisdiction Line between Australia and Papua New Guinea in the Torres Strait are two examples.

There have been occasions, though, when one side has attempted to renegotiate a maritime border. Indonesia has often expressed its preference for renegotiation with Malaysia over the Malacca Strait seabed border, with Vietnam over the southern sector of the South China Sea, and with Australia over the Timor and Arafura Seas. The former boundary's alignment is not likely to shift, while the latter's status has changed due to an agreement signed on March 14, 1997, in Perth. Since the analysis was prepared in late August 2022, the governments of Australia and Indonesia have not yet signed that Agreement.

Mild conflicts have arisen even though no one state has established maritime borders. When arguing over territorial waters, countries might point to a number of different reasons. The allocation of natural resources that cross unclear borders, the sustainable development of biotic and mineral resources, and the acknowledgment of rights (both historical and customary) to utilize those resources across regions that transcend apparent national lines are all examples.

Whenever parties to a maritime boundary dispute cannot immediately reach an amicable agreement, international customary and conventional law provides options. According to the available evidence, the conclusion reached by the arbitrators after careful consideration of the presented cases represents the result of lengthy deliberation. In most cases, they will consider everything from economics to politics to cultural norms. International conventions such as the Law of the Sea Convention of 1982 provide a legal foundation (1982 Convention). If a disagreement arises over the apparent alignment of marine jurisdictional lines between States, the 1982 Convention does not provide a remedy but proposes that States develop an equitable solution [17].

Unfortunately, the 1982 Convention could not settle on universally accepted standards for determining maritime zone borders. Therefore, there is still disagreement on where the marine limits should be drawn. For both near and opposite coastal nations, the 1982 Convention mostly adhered to the notion that the median or the 'equidistance' line between the two was sufficient to define maritime borders, especially the territorial sea and the contiguous Zone. The Convention of 1982 further emphasizes that unless otherwise agreed upon, no state may expand its territorial sea beyond the median line. However, this clause shall not apply when the delimitation of the territorial sea between two nations must be determined otherwise due to historic title or other special situations.

4 Conclusion

The treaties signed to establish marine borders were addressed. Both Indonesia and Timor-Leste have their sights set on a portion of Australia's continental shelf along the country's northern coast, and this article focuses on that conflict in those waters as well as the Torres Strait. The three countries must work together to address the many geopolitical concerns of a maritime type that arise in the vast Arafura and Timor Seas. Due to the scope of the issues at hand, regional collaboration on a global scale is required for efficient management of ocean space and resources. No disagreements should arise because Australia has shown it is willing to work with its northern neighbors and, indeed, other States in the numerous maritime boundary agreements that have been negotiated in good faith since the early 1970s, as shown in one of the illustrations above. Australia may have led by example, and the treaty's model could be used in other disputes in neighboring regional seas. It is unclear, however, how many states would be ready to give up their seabed rights in such a scenario, as has happened in the South China Sea.

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