Current Fishing Dispute in the South China Sea: A Vietnamese Perspective

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Abstract The South China Sea is one of the world's security hotspots regarding territorial sovereignty disputes between China, Taiwan and some South-east Asian countries such as Vietnam, the Philippines, Malaysia and Brunei. Currently, the dispute situation in the South China Sea is increasingly complicated and tends to be more stressful because the region's situation is not only heated up by territorial sovereignty disputes, geostrategic competition among great powers, but also heated up by various non-traditional security issues, including fisheries security issues such as overfishing, illegal fishing activities, conflicts over fisheries activities between countries. However, at present, there are no effective cooperative and rational mechanisms for fisheries in the South China Sea. Meanwhile, ASEAN is an important mechanism for managing regional security issues, including non-traditional security in the South China Sea. However, ASEAN's role in this region is still relatively weak. Given that situation, the article analyses the current situation of fisheries security issue in the South China Sea and clarifies how ASEAN's role in this sector plays out in the current period. What actions should ASEAN take to contribute to ensuring non-traditional security in the South China Sea in general and fisheries security in particular?

Keywords: Fishing Dispute, South China Sea, Fisheries, UNCLOS, ASEAN, IUU Fishing

Introduction

The dispute on interests in the South China Sea has been brought to a rather serious level of conflict in recent years. The main reason is not only the concurrent existence of many conflicts, disputes, and overlaps of interests, a large number of objects, subjects participating or involved, but also the lack of a good feasible mechanism or solution proposed and implemented. This trend is having a profound impact on the regional security and cooperation environment, changing perceptions and strategic actions of many countries, including the arms race and the force gathering to adapt with unpredictable fluctuations. In addition to the hot spot on territorial sovereignty

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conflicts and geostrategic competition, a number of non-traditional security issues in the South China Sea are heating up and having a strong impact on regional security, as well as diplomatic relations between countries surrounding this maritime region. Therefore, the South China Sea region is a hotspot for security, because disputes are complex and interrelated between traditional and non-traditional security issues. Cooperation is one of the main solutions outlined to address security issues in the South China Sea, but this has yet to be realised. Increased stress in territorial sovereignty disputes, as well as strategic competition between powers, have undermined the ability of cooperation among countries in solving non-traditional security issues in this sea region. Challenges of traditional and non-traditional security are mixed; the picture of regional security is not bright much. Cooperation between China and South-east Asian countries on non-traditional security in the South China Sea is relatively weak; although China's interest in non-traditional regional security is on the rise, many of China's actions are more proclamation than substantive. China is unlikely to play the main role in non-traditional maritime security in Southeast Asia in the short and medium-term, mainly due to disputes in the South China Sea.

The South China Sea is considered a "hotspot" for non-traditional security issues Asia-Pacific region, especially fisheries security. Asia's marine waters generate about half of the global marine fish catch. Understanding the impact that the South China Seas fisheries have on our global marine ecosystem is vital (Teh et al. 2019; Sherman, K.,2014). The South China Sea dispute not only involves competing for sovereignty claims over small islands, rocks, reefs and semi-or fully-submerged maritime features but involves competing for broad areas of overlapping maritime claims. While largely perceived as a fight over oil resources, clashing assertions of sovereignty and competing for maritime claims, however, the heart of the South China Sea conflict is really all about fisheries. After all, the South China Sea fisheries are vital to the economies of the claimant states, especially China, Vietnam, Indonesia and the Philippines. Moreover, "for coastal countries, fish is an extremely important source of nutrition, and fisheries employ at least 3.7 million people there" (FNI. 2017, October). The aquatic product line is also one of 12 integration priority lines and sectors of ASEAN with a roadmap focusing on four main topics: food safety, research and development, human resource development and information sharing. However, this most important fishing ground in the world faces the danger of exhaustion, directly threatening fisheries security. Although ASEAN has made efforts to strengthen fisheries cooperation to protect fisheries development sustainably, it seems that the commitments remain largely at the theoretical negotiation. In practice, the overfishing and conflicts between countries regarding fishing activities tend to be more and more stressful. At the same time, ASEAN does not seem to properly recognise the new security risk from the increasing stress of the fisheries security issue in the South China Sea currently.

In addition to the introduction, the article is organised as follows. The first section discusses the current fisheries security issue. This part mainly analyses the risk of depletion of fish resources due to over-exploitation of seafood resources and the destruction of the marine environment reducing the number of fish in the South China

Sea. At the same time, in this part, the article also analyses the current situation of fishing conflicts between countries surrounding the South China Sea related to illegal fishing activities and the impact of political intention in claiming the sovereignty of the countries that increase stress in bilateral relations between countries and creates the risk of humanitarian crisis related to law enforcement of countries. The second part of the article focuses on the analysis of ASEAN's role in ensuring fisheries security in the region. Among them, the article analyses the current status of the mechanisms to promote fisheries cooperation and management that ASEAN has created as well as the direction for ASEAN to strengthen its larger role in fisheries security today. The concluding section discusses the research results of the above parts and gives some findings.

1. Fisheries as a source of tension between the littoral states of the South China Sea

As we know, "the South China Sea has historically been a very rich and important resource for seafood in the region. The countries bordering the South China Sea, such as China, Brunei, Cambodia, Indonesia, Malaysia, the Philippines, Thailand, and Vietnam, that rank among the top fish-producing and consuming countries in the world in terms of both marine catch and aquaculture industry, with many people relying on the fishing industry for both their food security and income" (DNI. 2013, July). Security in the South China Sea is an extremely important issue in the Asia-Pacific region. In this region, the South China Sea has some of the world's largest transportation and trade routes. The South China Sea is not only famous for its important geopolitical position but also for its economic and environmental importance. In the South China Sea, coral reefs are widely distributed and form clusters of atolls. This is the most important and vulnerable ecosystem, the home of about 3,000 species of creatures in the South China Sea. In particular, the south region of the South China Sea, around the Spratly Islands group and extending into the coasts of Luzon island (Philippines), Brunei and Khanh Hoa - Ninh Thuan (Vietnam) is having the highest diversity of coral species (about 517 species), roughly equal to the coral diversity (566 species) of the International Coral Triangle, centred on the sea region of Indonesia and the Philippines. "A study by the UN Environment Programme in 2004 cited the high concentration of coral reefs in the seas of the region - 34% of the world's coral reefs, despite occupying only 2.5% of the total ocean surface. The South China Sea, as the biggest body of water connecting the marginal seas of the region, plays a critical role in sustaining this vibrant marine environment" (Louie Dane C. Merced. 2015, May). This shows that protecting the marine environment and offshore coral ecosystems will ensure environmental security and biodiversity resources throughout the South China Sea.

Therefore, the level of biodiversity and conservation potential in the South China Sea is very high. This sea is considered the sea "Amazon rainforest" and identified as one of 20 sea areas with the world's largest ability of natural fisheries exploitation and salt-brackish aquaculture (Thuysanvietnam. 2020, July). The main fishing hotspots in the region include countries embroiled in the South China Sea dispute. The South China Sea is one of the world's top five most productive fishing zones. More than half

of the fishing vessels in the world operate in these waters, which employ 3.7 million people, and likely many more engaged in illegal, unregulated, and unreported fishing (IUU) (The ASEAN Post Team. 2018, September). However, the issue of fisheries security in the South China Sea is increasing. We can consider some aspects as follows: Firstly, the problem of overfishing in the South China Sea. The risk of resource depletion from over-exploitation of marine resources. "While the South China Sea is a biodiversity-rich tropical sea, supporting abundant fisheries, its unique environment and invaluable marine living resources are in increasing peril. The most important fishing ground in the world is in danger of exhaustion after years of indiscriminate exploitation, fish quantity in the South China Sea is in danger of being depleted due to overfishing, directly threatening fisheries (food) security as well as marine economic development prospects of the countries bordering in this sea area. These resources have been overexploited for decades and are currently under enormous pressure. Overfishing today is exacerbated by the huge scale of IUU fishing" (FNI. 2017, October). Beyond the damage to the reef, the lack of any agreed-upon regulation has meant that each country has been doing its best to exploit the fish stock in the South China Sea to the point of destroying it altogether. Professor John McManus of Miami University stated that "When we have a present fisheries crisis and a looming fisheries catastrophe, you shouldn't go to one of the most important places for fisheries and destroy it' (Akshat Rathi. 2016, July).

Regarding overfishing and destructive fishing, especially IUU fishing. IUU fishing is a major cause of the degradation of marine fish resources in the South China Sea. In IUU fishing, destructive fishing is also used. Meanwhile, the sanctions for this activity are also too gentle, leading to almost no deterrence. Simultaneously, the fisheries' management is poor, so fishers use destructive fishing means such as closemeshed grid, electricity, high-powered lights, explosives, and cyanide. There are too many newly built and modernly equipped ships and boats, so fishing productivity is getting higher and higher, leading to depleting almost-depleted fish stocks. The issue of ocean conservation, including dealing with the degradation of fish stocks while waste increase, is an urgent need in the South China Sea today.

The situation of some country's fishing vessels illegally fishing in sea areas of other countries in the South China Sea is becoming a new hot spot in the non-traditional security field. Along with the increasingly complicated situation of sovereignty disputes in the South China Sea, fishing vessels of some countries, especially China's fishing vessels, often operate illegally in the sea areas of Vietnam, the Philippines, Indonesia and Malaysia. According to the Global Fishing Watch (GFW), China's fishing activities reach the longest in the world and are of the largest scale, even outstripping the total scale of the next ten countries combined. China's ships amassed approximately 17 million hours of fishing in 2016, most of the southern coast of their home country, including the South China Sea, and as far away as Africa and South America. Meanwhile, David Kroodsma, Global Fishing Watch's research and development director, who was the study's lead author, said in an interview, China is "the most important fishing nation," "The extent of the Chinese fleet is even bigger than

it seems." According to the report of Greenpeace, China's distant-water fishing fleet, with 2,500 vessels estimated as the world's largest, has not always been welcome in far-off waters. Those ships are not allowed to work without permission in the EEZs of other countries, which extend by United Nations convention no more than 200 nautical miles from a country's territorial sea baseline (Teng Jing Xuan. 2018, February; Chris Mooney and Brady Dennis. 2018, February; Gerry Doyle. 2018, February). According to those research organisations, it is concerned that China's fishing vessel illegally fishing in the sea areas of other countries is increasing, and those vessels' level of resistance against the competent forces of these countries is also increasingly drastic, reckless and dangerous.

However, these resources have been overexploited for decades and are currently under enormous pressure. Fish stocks have declined since the 1950s, and overfishing today is exacerbated by the huge scale of illegal, unreported and unregulated fishing According to the Center for Strategic and International Studies (CSIS) published in September 2017, "total fish quantity in the South China Sea has decreased by 70-95% since the 1950s and catch rates have decreased by 66-75% in the past 20 years; currently, in the South China Sea there may be roughly 5% of fish quantity compared to the 1950s and the recovery process of fish stocks in the South China Sea today is very low." (Amti.CSIS. 2017, September). Data from the Seas Around Us project (sponsored by the Pew Charitable Trusts) indicates that "roughly 20% of the South China Sea's marine stocks are developing or rebuilding while about 50% are currently rated as fully exploited. And, the remaining roughly 30% of marine stocks have been overexploited or have collapsed entirely in the South China Sea." (DNI. 2013, July). Marine resources cannot recover or recover slowly, mainly due to the renovation and destruction of the ecological environment of China, which causes the creatures to lose habitat, lay eggs and raise babies.

What are the causes? Fisheries in the South China Sea is not simply a story about "fish and fishers", but has become a matter of "fisheries security" - part of national security and global security because of its profound social impacts and long-term effects on the development potential of regional fisheries, as well as on food security in countries in the region and in the world. Finding the cause of the insecurity of fisheries in this sea area, China seems to be one of the culprits leading to such a situation. Offshore atoll clusters in the South China Sea contain interwoven strategic interests of countries inside and outside the region. Therefore, China's unilateral statements and actions when Beijing announced that the annual fishing ban on the South China Sea and when building artificial islands on seven coral shoals in the Spratly Islands that are occupied by Beijing's force from Vietnam in 1988. Such actions have been and will threaten environmental security, ecological security and fisheries not only in the Spratly Islands sea area but also to the rest of the South China Sea.

China's island reclamation activities in the South China Sea destroy the environment and reduce fish species. China's illegal rock-island reclamation in the Spratly Islands has caused the environmental pollution in the South China Sea to become one of the leading challenges in a non-traditional security issue. The South

China Sea is one of the regions with the world's most diversified marine ecosystems, accounting for 76% of the world's coral species and 37% of the fish living in coral reefs. According to the South-east Asian Fisheries Development Center (SEAFDEC), in every decade, there is 30% of the grass growing in the sea, 16% of living coral reefs is lost due to environmental pollution and unsustainable exploitation. However, according to experts' calculations, Beijing's building artificial islands in the Spratly Islands and Paracel Islands destroyed up to 160 km² of coral reefs and destroyed nearly 60 km² of ring corals in the surrounding areas. Mr. John McManus (Miami University) said that "about 10% of the coral area in the Spratly Islands and 8% of the coral area in the Paracel Islands in the South China Sea has been completely depleted due to Chine's activities". According to Edgardo Gomez (The Philippines), "it is estimated that with the current level of coral destruction, the South China Sea coastal countries will suffer losses of 5.7 billion USD per year, causing negative impacts across borders" (Anthony Bergin. 2017, April).

In 2014 - 2016, when building more than 1,370 hectares of artificial islands from 7 coral reef shoals in the Spratly Islands, China, nearly 160 km² of coral in the seabed was destroyed to get sand to build the island and caused damage to the coral reef ecosystem services in the South China Sea with an estimated value of about 4 billion USD per year. Simultaneously, according to the International Arbitration Court's decision, China has permanently destroyed the coral reef environment in the Spratly Islands sea area (MIC. 2020, May).

Dredging and construction on coral reefs in the South China Sea are severely destroying one of the most diversified ecosystems on the Earth. Most of the attention focusing on the South China Sea has revolved around China's military activities. However, quiet ongoing natural disaster in the area is also a matter of serious concern. A recent environmental report mentioning concrete data and evidence shows that large coral reefs are being "depleted" by warming seawater. However, besides the changing factors of the natural environment, the disappearance of many coral reefs is caused by another factor: the Chinese government's overfishing and island reclamation activities (MIC. 2020, May).

The Arbitral Tribunal's decision in The Hague in July 2016 on the lawsuit between the Philippines and China emphasises that China's construction of seven artificial islands in the Spratly Islands violates its environmental protection obligations within the framework of the United Nations Convention for the Law of the Sea (UNCLOS). Meanwhile, Beijing claimed its artificial island-building activities were under the "Green Project" scope. The techniques it used simply simulated processes that still take place in nature, for example, storms at sea wash away debris and dead marine organisms, causing them to agglomerate into marine entities gradually. John McManus, at Rosenstiel School, at Miami University, emphasised that topographical reclamation in Scarborough Shoal, Prata's archipelago, Paracel Islands and the Spratly Islands may be making the terrain and the natural environment in these areas is so destroyed that they cannot be restored (RFA. 2016, July). It is estimated that China's illegal activities in the South China Sea have damaged up to 98% of the coral area in this sea area.

In which China's illegal filling and construction of artificial floating islands caused a loss of about 14/15km², China's dredging activities caused a loss of about 39/40km², China's dredging activities to make parking station and navigational canals caused a loss of about 2/3 km², and China's giant clam mining caused a loss of about 104/104 km² (Hà. 2020, June).

It can be seen that the burying of coral reefs in the South China Sea in just a few years of China's building artificial islands has caused the most rapid and almost permanent losses in human history. The destruction of many thousands of hectares of coral reefs, seagrass beds, and other shallow marine ecosystems as material to make China's artificial islands in the Spratly Islands is too rough and gets out of standards. The above behaviours of China not only alter the inherent natural structure and function of the shoals, rocks and atolls in the Spratly Islands but also "sever" the ecological connection between this archipelago and the rest of the South China Sea. This has a broader impact on the nutritional, breeder and seed, and aquatic resources availability for much of the South China Sea and its surrounding sea parts of this sea region. (Vietnamnet.)

In addition, China's construction of artificial islands and illegally bringing soldiers to a garrison in the South China Sea also indirectly affects and destroys the ecological environment. While China was bringing soldiers to the garrison, heavy metals, persistent organic pollutants (POPs) and wastewater that may contain heavy metals or persistent organic was discharged directly into the sea without treatment. This causes serious impacts on the environment and marine ecosystems. China's construction of illegal structures in the Spratly Islands and Paracel Islands in China also changes the flow in coastal areas, adversely affects the marine ecosystem, and changes the conditions of the seabed and sediment balance, directly destroys marine ecosystems. China has embellished and expanded "artificial islands" from the Spratly Islands and Paracel Islands' shoals in the South China Sea. It has destroyed thousands of hectares of nearby coral reefs and other shallow marine ecosystems to get materials to embellish such artificial islands. These activities have caused severe damage to countries along the South China Sea, including China. This has resulted in a total loss of about 4 billion USD per year, and the loss of fisheries alone is more than 400 million USD per year. The number of coral reefs and fish species in disputed sea areas in the South China Sea has decreased from 460 to 261, and the endangered species list now includes green turtles, giant clams and tortoiseshell turtles. According to John McManus, estimated that human activity had destroyed about 16,200 hectares of coral reefs, with 98% of which has been done by China alone. That would put the region's economic damage at roughly 6 billion USD per year. China disputes these scientific claims, saying that it does little ecological damage to coral reefs. (Akshat Rathi. 2016, July) Dr. Edgardo Gomez, an eminent marine scientist from the University of the Philippines-Marine Sciences Institute (UP-MSI), studied how the massive scale of China's construction over the rocks and shallow reefs in the South China Sea are a clear source of environmental concern in this region, as these involve dredging sand from the ocean floor and dumping them over entire coral reef systems (Louie Dane C. Merced. 2015, May).

Obviously, China has seriously violated relevant international conventions, such as UNCLOS (Articles 60, 192, 193, 196), especially Article 208 on marine environmental pollution; Convention on Biological Diversity (CBD); Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and violates Article 5 of the Declaration on the Conduct of Parties in the South China Sea (DOC) to which China has committed itself. In particular, such violation of China was clearly stated in the international tribunal decision in The Hague (July 12, 2016) established under Annex VII, UNCLOS in the Philippines's suing to China about the South China Sea (litigation in January 2013).

Accordingly, the Court considered the impact on the marine environment of China's artificial accretion and construction activities on seven structures of Spratly Islands and found that China had caused serious harm to the environment of coral reefs and violated the obligation to conserve and protect vulnerable ecosystems and the habitats of degraded, threatened and destroyed species. At the same time, it considered that China's authorities are aware of the fact that Chinese fishers catch rare sea turtles, corals and giant clams on a large scale in the South China Sea (through causing serious harm to the reef environment) and failed to fulfil obligations to prevent and terminate these activities. Another point to note is that the Chinese government does not control and manage fishers. Beijing allows fishers to over-exploit, illegally exploit and use destructive fishing methods (fishers used destructive fishing means such as close-meshed nets, electricity, high-powered lights, explosives, cyanide). This makes fish resource and other creatures, especially creatures of high economic value (sea turtles, sea clams), unable to recover. According to Dr. Edgardo D. Gomez, "the poaching of giant clam shells, corals, and other marine species by Chinese fishing vessels has repeatedly caused damage to the area's ecological balance." And, "illegally harvested shells are brought to mainland China, particularly to its Hainan province, where they are processed and sold as various coral crafts, shell bracelets, shell necklaces and mounted shell carvings" (GOVPH. 2015, April).

It can be seen that the indiscriminate fishing activities and actions degrading the marine environment of the countries surrounding the South China Sea are leading to a major disruption in the fisheries sector, and this environmental disaster will affect the lives of millions of people. The complex dispute context in the South China Sea has led to the "dispute of fishing areas" under the sovereignty claim of each country and led to increased stress. This has pushed fishers in the region into an invisible "fishing war", coupled with an increase in illegal fishing in disputed areas, of which about 70% are Chinese fishers. With the depletion of near-shore fish stocks, fishers in countries around the South China Sea are forced to go further to find new sources of fish, and they have to go into disputed sea areas to exploit. This is also the time for China to act to increase its presence in the South China Sea. Accordingly, China increases support for their fishers when fishing in these sea areas. Beijing has financed fishers with money, freshwater, fuel and costs for fishers to build larger and more solid ships and even retrofitted fishing boats for use if necessary. The Chinese government has subsidised fisheries with 4 billion USD per year since 2010. China has also organised military

training for vessels, equipped modern communications systems, and the Chinese Coast Guard also increased in the South China Sea to support fishers when they go fishing. After all, the South China Sea fish resources became even more exhausted. A recent map of the United Nations Food and Agriculture Organization (FAO) 's survey on fish resources in the South China Sea has shown that important fishing grounds in the South China Sea have been nearly exhausted due to overfishing.

Secondly, the problem of illegal fishing and the risk of a "humanitarian crisis". The illegal fishing situation and the risk of humanitarian crisis related to the conflicts between the parties involved in fishing, and the negative reaction of some surrounding countries related to the illegal fishing, which increases stress in the relations among countries surrounding the South China Sea. According to the ASEAN Post: "One main reason that overfishing occurs in this region is due to IUU fishing. While it's a region-wide phenomenon, it has been particularly highlighted in two areas. The first is the Gulf of Thailand, where the overall catch per unit effort has plummeted by 86% since 1966, making those waters among the most overfished on the planet. The second is Indonesia, which is estimated to lose nearly 4 billion USD a year to illegal fishing. The most frequent violators are from China, Thailand and Vietnam." (The ASEAN Post Team. 2018, September).

Illegal fishing activity is a significant challenge for countries surrounding the South China Sea and is one of the major challenges for ASEAN. For example, "Vietnam has a major problem with illegal fishing by large foreign boats, which in 2003 numbered as many as 300 to 500. The foreign boats fish offshore by day and inshore by night, often landing and selling their catches in Vietnamese ports. In November 2011, a Vietnamese Coast Guard ship chased and sideswiped a China Marine Surveillance boat that penetrated Vietnam's EEZ. At the same time, because of overfishing and other pressures on coastal stocks, Vietnamese fishers increasingly have been venturing into the Chinese-controlled Paracels, leading to a growing number of incidents with Chinese fisheries patrol boats." (DNI. 2013, July). Thailand has also faced the infiltration of foreign fishing vessels in the Gulf of Thailand, while its fishers often fish illegally in Indonesian sea areas. Indonesia has long been suffered from this problem due to its abundant marine resources in a large territory that is difficult to control. The main problem is that foreign fishing vessels both illegally fish and overfish.

In the face of increasing illegal fishing in the South China Sea, some countries took strong actions, such as Indonesia using a policy of destroying illegal fishing vessels to prevent IUU fishing. Indonesia's solution also brought controversy in the region as it is not the only country with territorial sea areas and exclusive economic zone (EEZ) encroached by foreign fishing vessels. Such strong treatment also caused concerns for relationships with neighbouring countries. Or Malaysia's shooting at foreign fishing vessels causing damage to life and property, as well as China's policy of allowing its fishing vessels to crash into foreign fishing vessels operating in the South China Sea to assert "claims of sovereignty" by Beijing. These activities of the countries surrounding the South China Sea not only demonstrate the lacks of regional cooperation in ensuring fisheries security but also increase stress among countries, as well as increase stress in

traditional security issues, as well as creating a humanitarian crisis related to the law enforcement of countries against fishing vessels operating in the South China Sea.

One of the biggest challenges of fisheries cooperation in the South China Sea is the fact that countries have not yet reached an agreement on the extent of fishing rights. With 12% of global fish catch in the South China Sea in 2015, and more than half of the fishing vessels in the world are estimated to operate this region. Its fisheries officially employ around 3.7 million people and unofficially many more. However, the South China Sea has been dangerously overfished by countries (Gregory B. Poling. 2019, January). Fishers are facing the risk of working harder, but the fish stocks are declining day by day. Therefore, in the coming time, the countries in the region need to negotiate on traditional fishing areas in the South China Sea based on international law and the conclusions of the Arbitral Tribunal's decisions in July 2016. This will be an important foundation for establishing regional cooperation mechanisms that control fishing in the field.

That fact shows that ending illegal fishing to prevent the degradation of marine resources completely is a job that requires the cooperation of the countries. This is also an opportunity for countries in the region to cooperate in conflict resolution and develop sustainably. Therefore, the countries bordering the South China Sea should change their approach from focusing on traditional sovereignty perspective to a cooperative perspective, especially to protect regional resources.

Many initiatives have been raised to promote cooperation among countries in the South China Sea against illegal fishing and management of fisheries in the South China Sea. At the regional level, countries can cooperate to control the exploitation of fish resources by establishing a regional fisheries organisation. In practice, many regions of the world have established regional fisheries organisations such as the Northeast Atlantic Fisheries Commission (NEAFC), the South Indian Ocean Fisheries Agreement (SIOFA). However, the provisions of international law and multilateral commitments among countries related to the fisheries in the South China Sea do not seem to have any effect on fishers in the South China Sea. Fishing activities take place in the direction of "mind one's own business". Therefore, facing illegal fishing in the South China Sea, some countries adopted a strong controversial policy to protect their seafood resources, which substantially impacted the relations among coastal countries. For example, Indonesia implemented the policy of detonating and sinking foreign fishing boats illegally fishing in its sea areas. Particularly in the illegal fishing sector, countries in the region, especially Indonesia, have applied strong measures such as sinking violation vessels to prevent this situation, but field data shows that the actual situation is not be improved. Every year, hundreds of illegal fishing boats are arrested in Indonesian sea areas. Several arrests of fishing vessels have led to stress between the two countries, such as the arrest of China's fishing vessels by Indonesia's law enforcement vessels in March 2016 (Ifan Ariansyach; Bangkokpost. 2019, May).

Indonesia's policy of exploding and sinking fishing vessels was not following international law. Ahmad Almaududy Amri at the Australian National Centre for Ocean Resources and Security (ANCORS), University of Wollongong, Australia, analysed on Diplomat that UNCLOS addresses possible measures to combat illegal fishing in the

two regions, the sovereign sea areas of a country and the EEZ of that country, where they only have sovereign rights but sovereignty. With respect to the EEZ, Article 73 UNCLOS allows a State to "board, search, arrest and initiate prosecution" of the infringing vessel, but "penalties for the violation do not include imprisonment or any form of corporal punishment". Consequently, international law does not seem to support Indonesia's policy towards the sinking of fishing vessels within its EEZ. UNCLOS tried to limit sanctions aimed at violating the EEZ. UNESCO stated that the measures that could be used did not include corporal punishment of the crew member or even imprisonment unless it was permitted under a bilateral agreement between the two countries (Ahmad Almaududy Amri. 2015, January).

On April 27, 2019, Indonesia arrested a Vietnam's fishing vessel bearing number BD 97916 TS and 12 fishers on this vessel (Hong. 2019, May). On May 04, 2019, the Indonesian government continued to sink 51 foreign fishing vessels captured by this country. Of these, there are 38 *Vietnamese*-flagged vessels, 6 Malaysian, 2 Chinese and 1 Filipino (Independent. 2019, May). In 2018, Indonesia destroyed 86 Vietnamese fishing vessels for illegally catching fish in its waters. Vietnam has several times called on Indonesia not to use violations against Vietnamese fishing vessels and fishers in a manner that goes against the strategic partnership between Vietnam and Indonesia (Lynh. 2019, May).

Indonesia also needs to pay attention to the concerns of Vietnam and the relevant countries and treat fishers humanely, as stated in the spirit of the DOC (on code of conduct in the South China Sea) in 2002. At the same time, stress between any two members of ASEAN will certainly affect more or less the solidarity and stability of the whole bloc, especially in the context of the existence of the forces that want to cause divisions within ASEAN. ASEAN is inherently divided in its response to the South China Sea disputes. The more disputes between members, the less cohesive the bloc will be.

In this case, ASEAN needs to show its role more clearly. If Indonesia and other ASEAN countries can resolve existing disputes in the sea, increase transparency in fisheries, and cooperate in combating illegal fishing in the region, the number of fishing vessels sunk will decrease significantly. Countries in the region need to work together to establish the best solution and work together to promote maritime transparency (for example, requiring a Vessel Navigation System transceiver with all) and control domestic fishing in a better manner.

Besides, sovereignty disputes in the South China Sea affect fishers' fishing activities in the South China Sea and increase the risk of a humanitarian crisis in this area. For example, the sovereignty claims in the South China Sea and increasing law enforcement activities in this sea region through actions such as sinking fishing vessels of other Southeast Asian countries having sovereignty claims in the South China Sea when China believes foreign fishing vessels have "violated the sovereignty" of this country in the South China Sea. This not only increases stress among countries on the South China Sea issue but also goes against international law provisions and commitments between the parties to provide humanitarian treatment to fishers in distress in the sea. Several cases of China's sinking foreign fishing vessel and treating inhumanely to foreign fishers that were in distress in the sea, such as China's vessel sinking a Philippine's fishing vessel

named Gimver-1. On the evening of June 09, 2019, when the Gimver-1 fishing vessel of the Philippines was operating near Rong Lawn, it was suddenly sunk by a China's fishing vessel named Yuemaobinyu 42212. There were 22 fishers on the Gimver-1 vessel at that time. China's vessel then went away and left the 22 Filipino fishers who were sinking with the ship alone. The fishers had to stick to plastic containers and were lucky enough to be discovered and rescued by a Vietnam's vessel. Filipino fishers who were in distress stayed on Vietnam's vessel until June 12, 2019, after communicating with other Filipino fishing vessels via radio waves to kindly request them to support in pulling the vessel. This is the most serious case in the disputed sea area between the two countries that have come closer together since President Rodrigo Duterte took power in the Philippines in 2016. According to international practice, seafarers must help rescue people in distress at sea. But this has not been done by China. Besides, the political intentions of the authorities over the dispute in sovereignty in the South China Sea has led to a humanitarian crisis for fishers in distress at sea (Anh. 2020, April).

Another case is that China's sinking of Vietnam's fishing vessel in early April 2020 also created stress between the two countries and a strong response from the international community to China's actions. On April 02, 2020, the fishing vessel named QNg 90617 TS and 8 Vietnamese fishers who are operating normally in the sea area belonging to Paracel Islands of Vietnam was stopped and sunk by China's coastal vessel. Vietnam's Ministry of Foreign Affairs gave a diplomatic note of protest and asked China to pay compensation for the Quang Ngai fishing vessel's sinking with eight fishers in the Paracel Islands (Anh. 2020, April).

In addition, since 2009, China issued a fishing ban from May to August every year, stretching from the northern sea area of the South China Sea to point 12 degrees of north latitude, including part of the Gulf of Tonkin and Paracel Islands. This led to a strong reaction from countries in the region and increased stress between China and countries surrounding the South China Sea, especially Vietnam and the Philippines, on the South China Sea issue. At the same time, China's fishing ban also strongly affects the fishing activities of fishers in the region in the South China Sea.

Thirdly, the impacts of destructive fishing practices on fisheries security. Poisons and explosives are the most commonly used for destructive fishing methods in the South China Sea. This creates a heavy price on the sustainable development of the fisheries by reducing fish stocks. Besides, fisherman has long used cyanide as a fishing method in reef habitats, and other types of poison are commonly used in the South China Sea. Another destructive fishing method for harvesting fish is blast fishing, which typically involves dynamite and can dramatically harms the coral reefs in the South China Sea. The impacts of blast fishing have exacerbated the problem of overfishing on coral reefs in this sea area (DNI. 2013, July).

2. Fishing dispute resolution efforts

The most urgent issue in the South China Sea is the development of a regional cooperation mechanism for fisheries management and conservation. This mechanism

includes cooperation to reassess biodiversity, biological resources and aquatic resources in the South China Sea. At the same time, the countries surrounding the South China Sea need to base on the international arbitration tribunal's decisions and the United Nations Convention on the Law of the Sea to temporarily delimit the maritime boundaries. On that basis, the concerned parties develop fisheries management agreements in their own sea areas and cooperate to manage fisheries in the mid-South China Sea region. In addition, fishing should be completely banned, and conservation regions should be established in disputed areas such as the Paracel Islands, Spratly Islands and Scarborough Shoal. Only with those measures will it be possible to protect marine fish resources in the South China Sea and protect fishers. Cooperation in fisheries management is as challenging as sovereignty disputes in the South China Sea. Except for China, all other countries surrounding the South China Sea belong to ASEAN, comply with the ASEAN consensus principle. That means if China has a positive attitude, it will be very easy to unite other countries for common interests. Therefore, ASEAN may play an important role in finding a voice of consensus among countries in promoting fisheries cooperation between internal bloc countries and between ASEAN countries and China.

Article 123 of the United Nations Convention on the Law of the Sea (UCNLOS) provides that countries surrounding semi-enclosed sea areas such as the South China Sea have an obligation to cooperate to protect the marine environment management of fish resources. Article 192 of UNCLOS sets out a common obligation for countries to "protect and preserve the marine environment". Unlike oil and gas exploitation which can only be done based on the sovereignty right of the coastal countries to the continental shelf, the obligation to jointly manage marine resources makes fisheries management and environmental protection a sector which is easier to promote cooperation in the South China Sea. However, cooperation in protecting fish resources in the South China Sea is one of the major challenges of the region and is the reason for many incidents at sea in recent time. The provisions of international law related to marine fisheries have not been promoted their effects. ASEAN still underestimates security risks from fisheries security issue, even though fisheries in the South China Sea have been a direct factor causing some stress among countries surrounding the South China Sea. Although ASEAN has also established several mechanisms to promote cooperation and management of non-traditional security issues, notably the ASEAN Regional Forum (ARF), which is a mechanism hosted by diplomacy channel, focusing on trust-building and preventive diplomacy. Since its inception in 2004, ASEAN Regional Forum Security Policy Conference (ASPC) has opened a new channel of dialogue and exchanges among defence officials, diplomats and military research specialists. In addition, that the ASEAN Defense Ministers Meeting Plus (ADMM+) successfully held for the first time in Vietnam on October 12, 2010, became a regular forum, really opened the highest-level official and cooperative dialogue mechanism (Ministerial level) on national defence and security among ASEAN members and nonregional countries. However, a number of non-traditional security issues existing in the South China Sea, such as fisheries security and environmental security related to island

reclamation in the South China Sea, have not been properly recognised in ASEAN's security mechanisms.

For a long time, ASEAN countries have faced a deadlock regarding illegal fishing in their exclusive economic zones or territorial sea. ASEAN member countries announced that they would join a "joint war" against IUU fishing in 2016 after many countries in the region received a "yellow card" from the EU. Vietnam also showed determination in ending the situation of Vietnamese fishing vessels violating the regulations on marine exploitation. Especially the illegal fishing in foreign sea areas. According to Deputy Prime Minister Trinh Dinh Dung on November 06, 2019, Vietnam must completely resolve the situation of Vietnamese fishing vessels violating the marine exploitation regulations, especially illegal fishing in foreign sea areas. He emphasised "strengthen coordination by functions and tasks assigned to the task of combating IUU marine exploitation, especially in the handling of IUU exploitation behaviour. The Deputy Prime Minister assigned the Ministry of National Defense to host and coordinate closely with the Ministry of Agriculture and Rural Development, the People's Committees of coastal provinces, and concerned ministries and departments in implementing effective measures to prevent and stop the situation of Vietnam's fishing vessels and fishers committing illegal fishing in foreign sea areas as soon as possible, try to complete before the next EU's inspection." (Baochinhphu. 2019, December).

To promote cooperation against illegal fishing among ASEAN countries, Vietnam has also always promoted multilateral efforts to combat IUU fishing in Southeast Asia. As the Chair of ASEAN in 2020, Vietnam aims to promote its influence so that together with member countries to end illegal fishing activities of fishers in each other's sea areas. Vietnam continues to actively participate in the initiative "Building a roadmap to combat illegal, unreported and unregulated marine exploitation in ASEAN for the period of 2020-2025," as well as ideas in the ASEAN region on sustainable fisheries development and prevention of IUU exploitation (Baodautu.vn. 2020, August).

In the context that many regional countries have to receive the European Commission's "yellow cards" such as Thailand (2015), the Philippines (2014) or Cambodia's receiving a "red card" in 2014. ASEAN countries have promoted joint efforts to combat IUU fishing over the years. Furthermore, ASEAN member countries agreed on the policy of establishing an ASEAN Network for Combating IUU (AN-IUU) with the main objective of sharing information and improving the capacity to manage and combat illegal marine exploitation among member countries. ASEAN also promotes the implementation of the Regional Plan of Action to Combat Illegal, Unreported and Unregulated (RPOA-IUU). At the same time, ASEAN implements management measures and unifies cooperation among member countries to combat illegal exploitation through information exchange and transparency mechanisms. It is identified that one of such illegal fishing status in Southeast Asia is due to over-exploitation of the marine resources of the countries, and the qualifications and quality of labour in the fisheries sector and fishers are still limited. Therefore, ASEAN countries are actively implementing measures to protect and manage fish resources, unify legal provisions on fisheries and environmental protection among relevant parties.

As the Chair of ASEAN 2019, Thailand also hosted an ASEAN - EU conference on combating illegal fishing in April 2019. The above conference concluded that it is necessary to establish a special force for member countries to share information, coordinate law enforcement activities and choose measures to ensure sustainable fishing in the region. However, this plan is likely insufficient to satisfy Indonesia, which has suffered great economic losses from illegal fishing. ASEAN is requested to develop a new and effective solution to ensure that all member countries enjoy the fair and peaceful benefits of this resource.

Up to now, ASEAN has also established several mechanisms to promote fisheries cooperation, such as the ASEAN Sectoral Working Group on Fisheries (ASWGFi), the ASEAN Fisheries Consultative Forum (AFCF). ASEAGFi also actively promotes exchange on combating IUU activities. For example, on June 27, 2019, the opening session of the 27th Meeting of the ASEAN Sectoral Working Group on Fisheries (ASWGFi) was held in Da Nang. This meeting was a part of the series of events of the 9th Meeting of ASEAN Shrimp Alliance, the 11th Meeting of ASEAN Fisheries Consultative Forum and the 27th Meeting of the ASEAN Sectoral Working Group on Fisheries lasted from June 24 to 29, 2019, in Da Nang, Vietnam. Following the discussed issues from the previous conferences, the series of events in 2019, representatives of ASEAN member countries continue to discuss issues, include: (i) Combating IUU exploitation in order to implement the Regional Plan of Actions on combating IUU fishing and closely coordinate among ASEAN countries; (ii) Perform management, exploitation and development of marine resources sustainably; (iii) Trace the origin of marine products from marine product exploitation and aquaculture; (iv) Respond and mitigate the impacts of climate change on marine product exploitation and aquaculture in the region; (v) Formulate the sustainable marine product development policies in the region; (vi) Ensure food security and harmonise plant and animal quarantine measures in the region, and (vii) Improve fisheries management capacity, especially implement the Agreement on Measures in Port Countries.

ASEAN currently plays a relatively weak role in managing non-traditional security issues in the South China Sea in general, including fisheries security. Formerly, it seems that ASEAN still considers the problem of fisheries security to be a problem for many countries surrounding the South China Sea. Meanwhile, the fisheries security issue in the South China Sea is also related to several other security issues in this sea region, in which that the island reclamation activities damage the environment and reduce the number of fish stocks, as well as the lack of cooperation between countries in delimiting fishing zones as well as resolving illegal fishing issues in the South China Sea have pushed up conflicts among nations to a higher level. This can have a strong impact on the region's general security environment. Therefore, what ASEAN needs to do in the short term is to call on countries to comply with international law and the commitments signed between the parties relating to a non-traditional security issue. Given that situation, ASEAN stated in the *Joint Communique* of the *53rd ASEAN* Foreign Ministers' *Meeting that:* "We encouraged the ASEAN Member States to intensify cooperation in promoting maritime security, safety and freedom of

navigation and overflight, addressing transnational crime at sea, creating a conducive environment for peaceful settlement of disputes, ensuring marine sustainability, providing humanitarian assistance to persons and vessels in distress at sea, combating Illegal, Unreported, and Unregulated (IUU) fishing, promoting maritime connectivity and commerce, strengthening marine scientific research, in accordance with international law, including the 1982 UNCLOS, the relevant Standards and Recommended Practices (SARPs) of the International Civil Aviation Organization (ICAO), and the relevant instruments and conventions of the International Maritime Organization (IMO)." (ASESAN. 2020, September).

However, while countries have not found a common voice in promoting fisheries security in the South China Sea, ASEAN needs to promote its role as multilateral cooperation mechanisms in the region to make the countries have a common forum to discuss and find solutions. Accordingly, ASEAN needs to show some nontraditional security issues outlined in the South China Sea, such as maritime security, environmental security and fisheries security, into its joint agenda and statement. In other words, fisheries security needs to be seen more cautiously by ASEAN and considered as a potentially large security risk in the region. Otherwise, fisheries in the South China Sea may cause armed conflicts between countries in the future. Meanwhile, the Asian Foundation has recommended that ASEAN implements an inclusive and uniform legal framework to regulate fisheries policies throughout the region. Maritime jurisdiction at sea can be complicated as boundaries may overlap, but this is exactly the reason why national action plans against IUU fishing needs to be harmonised across the region (The ASEAN Post Team. 2018, September).

Therefore, countries of the South-east Asian region – namely Malaysia, Vietnam, Philippines, Brunei and Indonesia-should work with other claimant nations to manage fish stocks without compromising claims over the sea. In fact, the South China Sea countries already have fisheries cooperation, but the results are still small. For example, the joint fishing agreement between Vietnam and Cambodia in the Gulf of Thailand. The sea delimitation for the Gulf of Thailand region is extremely complicated and takes much time to negotiate. The four concerned countries, including Vietnam, Thailand, Malaysia and Cambodia, have respectively signed agreements aimed at joint exploitation, especially for fish resources, to ensure temporary benefits while waiting for an official delimitation decision. So far, three agreements have been signed, including Thailand - Malaysia Agreement (1979), Vietnam - Cambodia (1982) and Vietnam - Malaysia (1991). However, it should be noted that the Thailand - Malaysia Joint Exploitation Memorandum of Understanding (1979) and Vietnam - Malaysia (1991) only govern joint oil and gas exploration and exploitation activities between countries in the region with overlapping the continental shelf, fishing activities are not mentioned or are just mentioned without specific regulations. Therefore, in the Gulf of Thailand, there is only the 1982 Agreement on Historical Water Areas between Vietnam and Cambodia that regulates joint fishing activities. However, the agreement content is very general, unclear, and more political. Specifically, Article 3 of the Agreement stipulates, "The marine exploitation of local people in this area continues to

follow the business practices from before to now". In fact, the absence of a mechanism to manage and conserve natural resources while the fishing race is still taking place between countries will inevitably lead to the depletion of fish resources and impact the environment and economy of coastal countries in the long run. Besides, according to the provisions of Article 123 UNCLOS in 1982, cooperation in the management, conservation, exploration and exploitation of marine resources is also an obligation imposed on semi-enclosed coastal countries of the Gulf of Thailand.

Conclusion

Fisheries in the South China Sea bring many benefits in terms of economic and contributing to stabilising socio-economic status, ensuring livelihoods for hundreds of millions of coastal people in the South China Sea. However, facing overfishing, illegal fishing, and fishers' use of fishing methods that destroy the marine environment are the main reasons for the severe decline in fish resources. This increases the risk of fisheries security in the South China Sea. Through multilateral cooperation in disputed sea areas, preserving the marine environment must be an inevitable trend. The countries in the South China Sea have a responsibility to sustainably exploit and protect the marine ecological environment, which must be done in parallel with the settlement of territorial disputes at sea. That fact shows that countries' cooperation is requested for ending illegal fishing to prevent the degradation of marine resources completely. This is also an opportunity for countries in the region to cooperate in conflict resolution and sustainable development. Therefore, the countries bordering the South China Sea should change the approach from focusing on traditional sovereignty to a cooperative perspective, especially to protect regional resources. While countries surrounding the South China Sea have not yet found a way to cooperate to ensure fisheries security, ASEAN could play a larger role in providing mechanisms for cooperation and control of threats to fisheries security in the South China Sea. These mechanisms include enhancing existing ASEAN instruments and the provisions of international law. Moreover, ASEAN can develop an inclusive non-traditional security cooperation mechanism so that all concerned countries can work together to find a solution to the problem of fisheries security.

Also, many initiatives have been launched to promote cooperation among countries in the South China Sea against illegal fishing and management of fisheries in the South China Sea. At the regional level, countries can cooperate to control the exploitation of fish resources by establishing a regional fisheries organisation. Many regions of the world have established regional fisheries organisations such as the North-East Atlantic Fisheries Commission (NEAFC), the *Southern Indian Ocean Fisheries Agreement (SIOFA*).

At the national level, coastal countries need to strengthen maritime control ability and strong regulations to deal with illegal fishing. At the same time, the countries build programs to support economic development, help coastal people stabilise their lives, propagate and disseminate the law to people, and minimise illegal fishing activities in the South China Sea. One of the biggest challenges facing fisheries cooperation in the South China Sea is that countries have not yet reached an agreement on the extent of fishing rights.

Therefore, in the coming time, regional countries need to negotiate on traditional fishing areas in the South China Sea based on international law and the conclusions of the Arbitral Tribunal's decision in July 2016. This will be an essential basis for establishing regional cooperation mechanisms that control fishing in the field.

Although the amount of fish in the South China Sea maybe only 5% compared with 1950, efforts to cooperate in managing fisheries and conserving marine resources face many obstacles from China. Cooperation in fisheries management is as challenging as sovereignty disputes in the South China Sea, as cooperation in fisheries management in the South China Sea is facing many obstacles due to sovereignty disputes as well as increasingly assertive attitudes and actions of China. The entire fisheries in the South China Sea are in danger of being devastated if the claimants do not promptly resolve this decline. Besides, critical habitats such as coral reefs, seagrass beds, and mangroves were destroyed. The coral reefs have been destroyed because China exploited giant clam shells and artificial island-building activities. The damage caused by China's activities is enormous. According to some assessments, due to China's artificial islandbuilding and exploitation of giant clams, up to 160 square kilometres of healthy coral reefs in the Spratly Islands and Scarborough Shoal have been partially destroyed or damaged, causing economic losses of up to USD 4 billion per year to fisheries in the South China Sea. On the other hand, marine conservation is very weak. According to the Aichi Biodiversity Targets and the United Nations Sustainable Development Goals, by 2020, about 10% of the national sea area needs to be preserved (CBD. 2018, September). However, this is very difficult. In Vietnam, for example, only less than 1% of the national sea area has been preserved, and preservation is also facing many difficulties (ZingNews.vn. 2018 June).

The issue of territorial and maritime disputes in the South China Sea has caused many difficulties for management and international cooperation in fisheries management. Due to China's authoritarian attitude, disregard for international law of China, efforts to build international and regional cooperation mechanisms to prevent IUU fishing, better manage the fisheries in the South China Sea to facilitate for the fish stocks to recover has not been successful so far. (ZingNews.vn. 2018 June) It can be seen that as long as territorial disputes take place, the regional marine environment will continue to pay a heavy price. The South China Sea is a large marine ecosystem with many marine species migrating throughout the South China Sea, so to preserve this sea, the cooperation of regional countries is required. Therefore, to solve the problem of marine fish resources degradation in the South China Sea, countries inside and outside the region need to unite and have a common voice to persuade China to comply with international law, together with efforts to cooperate in fisheries management.

It can be seen that the reason ASEAN has not yet fully played its role in ensuring fisheries security is mainly that ASEAN still considers the fisheries security issue as a narrow area, mainly related to cooperation on "agriculture - fishery – forestry" among countries. Therefore, ASEAN has not really emphasised the risk of affecting the regional security situation from the fisheries security issue, especially the dispute in fisheries activities and the fact that fisheries become a factor in the territorial

sovereignty disputes between countries and fisheries become a victim for political intention among countries. Tensions over fisheries disputes in the South China Sea have affected the security environment in this maritime area. Fishery disputes have become political-diplomatic disputes among countries; fishers may continue to be victims of harsh treatment by countries when fisheries activities are no longer considered ordinary economic activities.

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References

- Ahmad Almaududy Amri. (2015, January). Is Indonesia's 'Sink the Vessels' Policy Legal?. *The Diplomat.* January 17, 2015. https://thediplomat.com/2015/01/is-indonesias-sink-the-vessels-policy-legal/
- Akshat Rathi. (2016, July). The most ignored aspect of the South China Sea brawl might be the key to solving it. *QUARTZ*, July 27, 2016. https://qz.com/741989/the-most-ignored-aspect-of-the-south-china-sea-brawl-might-be-the-key-to-solving-it/
- Ali Abdullah Wibisono. (2017). ASEAN-China Non-Traditional Security Cooperation and the Inescapability of the Politics of Security. *Global & Strategis, Vol 11, No 1 (2017), 39-54. DOI:* http://dx.doi.org/10.20473/jgs.11.1.2017.39-54
- Amti.CSIS. (2017, September). A Blueprint for Fisheries Management and Environmental Cooperation in the South China Sea, by SOUTH CHINA SEA EXPERT WORKING GROUP. *Amti.CSIS*, September 13, 2017. https://amti.csis.org/cocblueprint-fisheries-environment/
- Anh (2020, April). Việt Nam yêu cầu Trung Quốc bồi thường tàu cá bị đâm chìm (Vietnam asks China to pays compensation to Vietnamese fishermen for sinking their boats). *Vnexpress.* net, 3/4/2020. https://vnexpress.net/viet-nam-yeu-cau-trung-quoc-boi-thuong-tau-ca-bi-dam-chim-4079305.html
- Anthony Bergin. (2017, April). A looming environmental disaster in the South China Sea. *The Strategist*, 10 Apr 2017. https://www.aspistrategist.org.au/looming-environmental-disaster-south-china-sea/#:~:text=Beijing%20suggests%20that%20its%20island,an%20oasis%20on%20the%20sea
- ASESAN. (2020, September). Joint Communique of The 53rd ASEAN Foreign Ministers' Meeting. *Asean.org*, 9 September 2020. https://asean.org/storage/2020/09/FINAL-Joint-Communique-of-the-53rd-AMM.pdf
- Bangkokpost. (2019, May). Indonesia sinks 51 fishing boats. *Bangkokpost*, 4 May 2019. https://www.bangkokpost.com/world/1672020/indonesia-sinks-51-fishing-boats
- Baochinhphu. (2019, December). Chấm dứt khai thác hải sản trái phép ở vùng biển nước ngoài (Terminate illegal fishing in foreign waters). *Baodientu.chinhphu.vn*, 30/12/2019. http://baochinhphu.vn/Chi-dao-quyet-dinh-cua-Chinh-phu-Thu-tuong-Chinh-phu/Cham-dut-khai-thac-hai-san-trai-phep-o-vung-bien-nuoc-ngoai/383848.vgp

Baodautu.vn. (2020, August). Nỗ lực thúc **đẩy** hợp tác chống **đánh** bắt hải sản trái phép ở **Đông** Nam Á (Efforts to promote cooperation against illegal fishing in Southeast Asia). *Baodautu.vn*, 31/08/2020. https://baodautu.vn/no-luc-thuc-day-hop-tac-chong-danh-bat-hai-san-trai-phep-o-dong-nam-a-d128688.html

- CBD. (2018, September). Aichi Biodiversity Targets. Convention on Biological Diversity (CBD), September 18, 2020. https://www.cbd.int/sp/targets/
- Chris Mooney and Brady Dennis. (2018, February). New maps show the utterly massive imprint of fishing on the world's oceans. *The Washington Post*, February 23, 2018. https://www.washingtonpost.com/news/energy-environment/wp/2018/02/22/new-maps-show-the-utterly-massive-imprint-of-fishing-on-the-worlds-oceans/
- David G. Rose. (2018, October). 'China calls it fishing, Indonesia calls it crime': Pudjiastuti finds her target for Oceans summit. *SCMP*, 18 Oct, 2018. https://www.scmp.com/week-asia/geopolitics/article/2169153/china-calls-it-fishing-indonesia-calls-it-crime-pudjiastuti
- DNI. (2013, July). The Future of Indian Ocean and South China Sea Fisheries: Implications for the United States. The National Intelligence Council (NIC). *DNI*, 30 July 2013. https://www.dni.gov/files/documents/nic/NICR%202013-38%20Fisheries%20Report%20FINAL.pdf
- FAO. (2014, July). Part I Overview and main indicators. *The Food and Agriculture Organization (FAO)*, July 21014. http://www.fao.org/fishery/facp/IDN/en
- FAO. (2018). The State of World Fisheries and Aquaculture 2018 Meeting the Sustainable Development Goals. Rome, 2018. 227p. http://www.fao.org/3/i9540en/i9540en.pdf
- FAO. (2020). The State of World Fisheries and Aquaculture 2020. *Rome*, 2020. 224p. http://www.fao.org/3/ca9229en/CA9229EN.pdf
- FNI. (2017, October). Fish, not oil, at the heart of the South China Sea conflict. *Fridtjof Nansen Institute*. October 24, 2017. https://www.fni.no/news/fish-not-oil-at-the-heart-of-the-south-china-sea-conflict-article1556-330.html
- France24. (2019, May). Indonesia to sink scores of boats to deter illegal fishing. *France24*, May 04, 2019. https://www.france24.com/en/20190504-indonesia-sink-scores-boats-deter-illegal-fishing
- Gerry Doyle. (2018, February). Chinese trawlers travel farthest and fish the most: study. *Reuters*. February 23, 2018. https://www.reuters.com/article/us-global-fishing-idUSKCN1G62M4
- GOVPH. (2015, April). DA-BFAR, National Scientist condemn the destruction of marine resource in the West Philippine Sea. *GOVPH*, April 23, 2015. https://www.officialgazette.gov.ph/2015/04/23/da-bfar-national-scientist-condemn-the-destruction-of-marine-resources-in-the-west-philippine-sea/
- Gregory B. Poling. (2019, January). Illuminating the South China Sea's Dark Fishing Fleets. *CSIS*. January 9, 2019. https://ocean.csis.org/spotlights/illuminating-the-south-china-seas-dark-fishing-fleets/
- Hà. (2020, June). Nhận diện hành vi hủy diệt môi trường sống ở Biển Đông (Identify acts of destroying habitats in the South China Sea). *Anninhthudo*, 11/06/2020. https://anninhthudo.vn/the-gioi/nhan-dien-hanh-vi-huy-diet-moi-truong-song-o-bien-dong/856852.antd
- Hannah Beech. (2016, May). What's New on China's Artificial Islands in the South China Sea? Basketball Courts. *TIME*, May 22, 2016. https://time.com/4341510/south-china-sea-artificial-islands/

- Hong. (2019, May). Vietnam demands Indonesia release fishermen arrested in delimitation area. *Vnexpress. net*, May 1, 2019. Available at: https://e.vnexpress.net/news/news/vietnam-demands-indonesia-release-fishermen-arrested-in-delimitation-area-3916906.html
- Hongzhou Zhang. (2018). Fisheries cooperation in the South China Sea: Evaluating the options. Maine Policy, Volume 89, February 2018, Pages 67-76. DOI: https://doi.org/10.1016/j.marpol.2017.12.014
- *Ifan Ariansyach.* Fisheries Country Profile: Indonesia. *SEAFDEC*. http://www.seafdec.org/fisheries-country-profile-indonesia/
- Independent. (2019, May). Indonesia sinks 51 foreign boats to fight illegal fishing. *The Independent*, 4 May 2019. https://www.independent.co.uk/news/world/asia/indonesia-sinks-foreign-boats-illegal-fishing-vietnam-malaysia-china-a8899836.html
- J. Y. Liu. (2013). Status of Marine Biodiversity of the China Seas. *PLOS ONE*, January 2013, Volume 8, Issue 1. DOI: 10.1371/journal.pone.0050719
- John W. McManus. (2017). Offshore Coral Reef Damage, Overfishing, and Paths to Peace in the South China Sea. *The International Journal of Marine and Coastal Law*, 32 (2017), 199–237. DOI: 10.1163/15718085-12341433
- Louie Dane C. Merced. (2015, May). An environmental turn in the South China Sea disputes. *Rappler*, May 17, 2015. https://rappler.com/world/cirss-commentaries-environmental-turn-south-china-sea-disputes
- Lynh (2019, May). Vietnam opposes Indonesia's use of force on fishers. *Vnexpress.net*, May 2, 2019. https://e.vnexpress.net/news/news/vietnam-opposes-indonesia-s-use-of-force-on-fishers-3917475.html
- MIC. (2020, May). Nhận diện các mối đe dọa "An ninh môi trường và Hòa bình ở Biển Đông" (Identifying Threats of "Environmental Security and Peace in the South China Sea). Bộ Thông tin và Truyền thông (Ministry of Information and Communications of the Socialist Republic of Vietnam, MIC), 29/05/2020. https://frt.mic.gov.vn/Pages/TinTuc/142294/Nhan-dien-cac-moi-de-doa--An-ninh-moi-truong-va-Hoa-binh-o-Bien-dong-.html
- NGUYEN DANG (2011). Fisheries Co-operation in the South China Sea and the (Ir)relevance of the Sovereignty Question. *Asian Journal of International Law*, 04 November 2011. DOI: https://doi.org/10.1017/S2044251311000099
- RFA. (2016, July). South China Sea Verdict Contains Environmental Message for China. *RFA*, 2016-07-22. https://www.rfa.org/english/commentaries/southchinasea-07222016152633. html
- Shicun Wu, Keyuan Zou. (2016). Non-Traditional Security Issues and the South China Sea: Shaping a New Framework for Cooperation. *Routledge*, 23 May, 2016. 310 pages. DOI: https://doi.org/10.4324/9781315598482
- Teh, LSL., Cashion, T., Alava Saltos, JJ., Cheung, WWL, Sumaila, UR. (2019). Status, Trends, and the Future of Fisheries in the East and South China Seas. *Fisheries Centre Research Reports* 27(1): 101pp. http://fisheries.sites.olt.ubc.ca/files/2019/07/Taking-Stock-Report_FCRR_July-2019-Final.pdf
- Teng Jing Xuan. (2018, February). Chinese Trawlers Dominate World Fishing Industry. *Caixin*. Feb 23, 2018. https://www.caixinglobal.com/2018-02-23/chinese-trawlers-dominate-world-fishing-industry-101213155.html
- The ASEAN Post Team. (2018, September). The threat of overfishing. The ASEAN Post, 17

- September 2018. https://theaseanpost.com/article/threat-overfishing
- Thuysanvietnam. (2020, July). An ninh nghề cá vì một Biển Đông xanh (Fishery security for a green South China Sea). *Thuysanvietnam*, 06/07/2020. https://thuysanvietnam.com.vn/anninh-nghe-ca-vi-mot-bien-dong-xanh/
- U. Rashid Sumaila and William W. L. Cheung. (2015, November). Boom or Bust: The Future of Fish in the South China Sea. *FishSCSea*, November 5, 2015. https://drive.google.com/file/d/0B oUJE4kCTZrbVI4N2tTVjlpYTA/view
- UN. United Nations Sustainable Development Goals- Goal 14: Conserve and sustainably use the oceans, seas and marine resources. https://www.un.org/sustainabledevelopment/oceans/
- Vietnamnet. Xây đảo nhân tạo, Trung Quốc huỷ hoại nghiêm trọng rạn san hô ở Biển Đông (Building artificial islands, China has seriously damaged coral reefs in the South China Sea). *Vietnamnet*. https://vietnamnet.vn/vn/chu-quyen-hoang-sa-truong-sa/xay-dao-nhantao-trung-quoc-huy-hoai-nghiem-trong-ran-san-ho-o-bien-dong-420505.html
- Vnexpress.net. (2019, April). Việt Nam yêu cầu Indonesia thả ngư dân bị bắt trên biển. (Vietnam demands Indonesia release fishermen arrested on the sea), *Vnexpress.net*, April 30, 2019. https://vnexpress.net/viet-nam-yeu-cau-indonesia-tha-ngu-dan-bi-bat-tren-bien-3916819.html
- Xue Gong. (2020). Non-traditional security cooperation between China and south-east Asia: Implications for Indo-Pacific Geopolitics. *International Affairs 96*: 1 (2020) 29–48. doi: 10.1093/ia/iiz225
- ZingNews.vn. (2018 June). Nghè cá Biển **Đông**: Thách thức không kém tranh chấp chủ quyền (South China Sea Fisheries: As challenging as sovereignty disputes). *ZingNews.vn*, June 08, 2018. https://zingnews.vn/nghe-ca-bien-dong-thach-thuc-khong-kem-tranh-chap-chu-quyen-post849409.html