

Article

Illegal, Unreported, and Unregulated Fishing Governance in Disputed Maritime Areas: Reflections on the International Legal Obligations of States

Xidi Chen ¹, Qi Xu ^{2,*} and Lun Li ³¹ School of Law, Tsinghua University, Beijing 100084, China² School of Law, Jinan University, Guangzhou 510632, China³ College of International Studies, National University of Defense Technology, Changsha 410003, China

* Correspondence: xuqi2019@jnu.edu.cn

Abstract: Illegal, unreported, and unregulated (IUU) fishing in the disputed maritime areas causes significant damage to the marine ecology and authorized fisheries, increases the risk of conflicts among disputed states, and violates human rights at sea. Both unilateral measures and cooperative governance for IUU fishing are often inadequate in these areas. In light, this study aims to clarify the regulatory obligations of relevant states and explore feasible solutions based on international cooperation to promote IUU governance in disputed areas worldwide. The rapidly evolving international fisheries legal framework requires that states, such as coastal states, flag states, port states, or market states, fulfill their respective obligations to prevent and deter IUU and that the presence of disputes in a specific maritime area does not typically constitute grounds for derogation from these obligations or exemption from possible state responsibility. However, the implications of the conflicting claims in disputed maritime areas should be taken into consideration while interpreting and applying international legal rules. Therefore, this study suggests that regional and inter-regional cooperation is necessary for states to fulfill their obligations to regulate IUU fishing and prevent state responsibilities under international law. Parties to the dispute, as well as third parties, are encouraged to participate in the cooperative mechanism in order to coordinate legislative and enforcement measures and advance the institutionalization of IUU fishing regulation in the disputed maritime areas, which will not only advances the effective governance of IUU fishing but also reduces tensions among the disputing states and contributes to the peaceful settlement of the dispute.

Keywords: IUU fishing; disputed maritime area; competition of jurisdiction; cooperative mechanism

Citation: Chen, X.; Xu, Q.; Li, L. Illegal, Unreported, and Unregulated Fishing Governance in Disputed Maritime Areas: Reflections on the International Legal Obligations of States. *Fishes* **2023**, *8*, 36. <https://doi.org/10.3390/fishes8010036>

Academic Editors: Yen-Chiang Chang and Dimitrios Moutopoulos

Received: 29 November 2022

Revised: 18 December 2022

Accepted: 29 December 2022

Published: 3 January 2023



Copyright: © 2023 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

1. Introduction

Since the 1950s, the ability to exploit living marine resources has become easier with the advancement of human knowledge of marine science and the rapid development of motorized fishing vessels and trawl fisheries [1]. At the same time, the worldwide consumption of fish and fish products is also significantly increasing. The world per capita fish consumption increased from an average of 9.9 kg in the 1960s to 14.4 kg in the 1990s, 19.7 kg in 2013, and over 20 kg in 2015 [2]. According to the Food and Agriculture Organization of the United Nations (FAO), approximately one billion people worldwide rely on seafood as their main source of animal protein [3]. Due to excess fishing capacity and increasing demand for fisheries, large fish stocks are facing over-exploitation, and humans are experiencing widespread declines in the total biomass of marine resources [4].

In order to protect the global marine ecosystem and ensure the sustainability of the fishing industry, the international community works to improve and advance the international fisheries law. However, attracted by the enormous benefits at hand, some countries still continue to engage in illegal, unreported, and unregulated fishing (IUU fishing) activities in major waters around the world, especially in the exclusive economic zones (EEZs) and high seas. According to some authors, IUU fishing significantly undermines national, regional, and global efforts to conserve and manage fish stocks, hinders sustainable development, and significantly harms responsible, honest, and lawful fishermen and must be prohibited [5]. Today, the international community has agreed to reduce and eliminate IUU fishing.

In addition to the applicable rules provided by the United Nations Convention on the Law of the Sea (the LOS Convention) for marine ecology and resource conservation, states and international organizations have established a series of legal instruments, both obligatory and regulatory in nature, for IUU fishing. The 1993 FAO Compliance Agreement specifies the obligations of flag states to ensure that vessels flying their flag do not violate international conservation and management measures [6]. After 2000, attempts to regulate IUU fishing became increasingly targeted. In 2001, the FAO published the International Plan of Action to Prevent, Deter, and Eliminate IUU Fishing (IPOA-IUU), which calls on respective states to “coordinate their activities and cooperate directly” [7] against IUU fishing. The Agreement on Port State Measures to Prevent, Deter, and Eliminate IUU Fishing (PSMA) [8] is regarded as the primary legal tool for governing IUU fishing. It is the first binding international instrument for governing IUU fishing, which was adopted in 2009 and enforced in 2016.

In recent years, according to the 2021 NOAA report, a growing number of countries are developing and enforcing regulatory measures in accordance with international standards and rules to regulate IUU fishing, where the contribution of developing countries has increased significantly [9]. However, due to the lack of commitment, input, and capacity, IUU fishing remains a significant challenge for global ocean governance and has to be further addressed through international cooperation [10].

Since the 1990s, the regulation of IUU fishing is a topic that has been widely studied when it first began to attract the attention of authors [11,12]. Subsequent studies have shown that IUU fishing has been found to be prevalent in small-scale fisheries all over the world and has significant negative effects on the biology, economy, and environment of the ocean [13]. The expected benefits from IUU fishing far exceed the expected cost, which has contributed to its rapid increase [14]. Current measures are insufficient to regulate IUU fishing [15,16] and, therefore, national and regional efforts needed to be strengthened [17,18]. Although international legal instruments that regulate IUU fishing have been developed, IUU fishing has not been significantly decreased, which has stimulated discussions to explore more paths to address the issue in the last decade [19]. Regulation in a single region was deemed to be rarely effective on a global scale, and inconsistent enforcement in different areas makes it impossible to cut off the supply chain of IUU fishing [20,21]. Therefore, actors with various roles in the IUU fishing chain, in addition to the flag state as well as the coastal state, are being compelled to take on more responsibilities. Port states and potential market states are considered important regulators of IUU fishing activities to prevent the undetected diversion of IUU catch to destinations and international markets [22–24].

The legal aspects of IUU fishing have become a welcome topic, but the dilemma posed by the coupling of disputed maritime areas and IUU fishing has not received sufficient attention. It is argued that IUU fishing vessels usually operate in disputed waters, where enforcement is weak because the respective maritime enforcement agencies rarely patrol such areas [25]. In the disputed waters, fishing vessels engaging in IUU fishing activities are more likely to resist enforcement actions in a drastic manner. According to some authors, the overlapping jurisdiction of IUU fishing due to confrontational claims and the negative effects brought by such competition are emerging,

and situations happening in the South China Sea and the Circumpolar Arctic are often mentioned [26,27]. In some cases, states are encouraged to take action to reduce the damage caused by IUU fishing until disputes in the respective waters are resolved, even though this may worsen the dispute [28]. So far, there has been no systematic analysis of the rights and obligations of respective state actors associated with IUU fishing activities in the disputed maritime areas. The states also seem to be unclear about their respective obligations and potential responsibilities, which is one of the key reasons for the poor governance of IUU fishing in these areas.

Therefore, this study discusses the allocation of legal obligations to regulate IUU fishing in the disputed maritime areas and proposes a viable approach to address the IUU governance dilemma at present. Part II explains the serious threat posed by IUU fishing in the disputed waters and analyzes the reasons for the rapid increase in IUU fishing in the disputed maritime area and the difficulty of regulating them compared to non-disputed areas. Part III explores in detail the international law obligations and responsibilities of the states involved in the disputed maritime areas when taking different roles, particularly those that appear to be in conflict with each other. Part IV presents proposals to promote the cooperation among states in regulating IUU fishing in the disputed maritime area by strengthening and specifying legal obligations.

2. Lack of IUU Fishing Governance in the Disputed Maritime Areas

In general, a sea area in the absence of delimitation, where there are competing claims of sovereignty or sovereign rights of two or more states, is known as a disputed maritime area [29]. In this part, this study illustrates comprehensive hazards that resulted from the coupling of IUU fishing issues and disputed maritime areas and further discusses the causes of the complex situation.

2.1. Comprehensive Hazards of IUU Fishing in Disputed Maritime Areas

IUU fishing has proved to be harmful in several aspects, not only causing the degradation of natural resources and ecosystems but also threatening the livelihoods of fishermen in coastal areas and the economic growth of developing countries [30]. IUU fishing has more severe and complicated effects in the “disputed waters,” which is alarming. Due to the lack of jurisdiction resulting from unclear attribution of maritime areas, IUU fishing activities may be less expensive and more prevalent in undisputed areas. Meanwhile, jurisdictional competition among the respective states may intensify disputes and lead to intense confrontations or even armed conflicts, which may undermine the peaceful atmosphere in the region. Moreover, IUU fishing is closely related to violations of human rights at sea due to the difficulty of enforcing the law in these areas.

2.1.1. Threatening Marine Ecology and the Authorized Fisheries

IUU fishing significantly damages marine ecology and violates the legitimate rights and interests of honest fishermen who engage in fishing activities under authorization. On the one hand, fish stocks continue to decline due, in large part, to unauthorized fishing activities, threatening the resilience of marine ecology as well as the global food security of human society [31]. According to a report released by China International Economic and Trade Arbitration Commission in April 2022, IUU fishing is statistically responsible for 20% of global catches, and, as a result, global economic losses range from 10 to 23.5 billion dollars per year [32]. In some disputed maritime areas, this negative impact of IUU fishing was found to be more pronounced. In the South China Sea, IUU fishing is considered to be one of the main reasons for the depletion of fishery resources and the deterioration of the ecological environment [33]. Both the quantity and quality of fishery resources in this area’s traditional fishing grounds have shown a significant decrease compared to the mid-20th century. Since the 1950s, the total fish resources in the South China Sea have decreased by more than 70–95%, and the catch rate per unit has decreased

by 66–75% [34]. The diminishing fishery resources in the South China Sea are also reflected in the fishing effort and catch rate of the coastal countries [35,36]. Similarly, the relationship between the presence of maritime boundary disputes and irrational IUU fishing activities has been identified in the Circumpolar Arctic [37].

On the other hand, IUU fishing is a serious threat to the economic interests and the food security of coastal areas, as well as to the livelihoods of fishermen in these countries. IUU fishing not only causes significant damage to fisheries and marine ecology but also indirectly deprives countries of income from their fishing industries, in particular, damaging the economies of developing countries that depend on fisheries [22]. In addition, IUU fishing is extremely detrimental and discriminatory to those fishermen who act responsibly and honestly and in accordance with the terms of their fishing permits. If IUU fishermen target vulnerable stocks that are subject to strict management controls or moratoriums, efforts to rebuild these stocks to healthy levels will not be achieved, thus, threatening marine biodiversity and food security of communities that consume fisheries resources for major sources of protein [38]. Perhaps more worryingly, in disputed waters, a “honest” fisherman who work under one state’s authorization could face IUU allegations from another state to the dispute, which will be discussed in detail later.

2.1.2. Increasing Tensions and Frictions in Disputed Maritime Areas

In addition to the direct negative impact of IUU fishing itself, the secondary harm caused by the issue in the disputed waters is equally serious. IUU fishing can quickly worsen maritime disputes, triggering accusations and tensions among parties to the dispute.

In the disputed waters, the boundary between IUU fishing and authorized fishing activities has been unclear in many cases. Due to the competing maritime claims in these areas, a fishing activity that is authorized by one party to the dispute or conducted in accordance with its domestic legislation may be defined as “IUU fishing” by other parties and, therefore, subject to penalties. For example, the conflict between Sri Lanka and India over traditional fishing rights in the Bay of Bengal has resulted in the arrest of fishermen and the confiscation of vessels from both countries. As of March 2016, Indian authorities claimed that the Sri Lanka Navy had seized 99 Indian fishermen and 83 vessels, some of which involved fishing activities that are, according to the Indian authorities, clearly legitimate and authorized [39].

In some cases, the claimant state also expresses its disapproval of the unilateral measures taken by a certain party in a more general manner, which results in constant arguments regarding the identification of IUU fishing activities. In the past few years, both Vietnam and the Philippines did not recognize China’s fishing moratorium in the South China Sea and publicly claimed that China had “no right” to control their fishermen’s activities in the respective areas. However, China is still enforcing its domestic laws for fishing vessels operating in such areas. Due to this, there have been numerous conflicts, frictions, and even more violent clashes involving vessels of the respective states [40,41]. In addition, even for an activity that is commonly referred to as IUU fishing, competing jurisdictions may present the problem that the claimant states may still accuse the one pursuing enforcement measures of violating their jurisdiction as the coastal state.

The jurisdictional differences of IUU fishing due to conflicting claims are likely to result in actions, confrontations, and even armed conflicts involving government vessels, worsening the situation in the disputed area. In a significant number of cases, the respective countries do not only express their views through verbal protests; they also send their own maritime police and naval vessels to “protect” their vessels or enforce operations. Clearly, such maritime encounters raise the possibility of conflicts and easily lead countries to adopt a more assertive stance due to domestic political considerations, creating a barrier to advancing peaceful settlement of the dispute [39].

2.1.3. Facilitating Organized Crimes

Currently, IUU fishing is listed as one of the top five environmental crimes identified by the EU, the G8, and the United Nations Environment Programme (UNEP). Indonesia also classifies IUU fishing alongside drug trafficking, piracy, and arms trafficking as a form of organized crime [42]. In 2020, the US Coast Guard asserted that IUU fishing had replaced piracy as the major threat to global maritime security. More worryingly, there is growing evidence linking IUU fishing to various crimes at sea and violations of human rights [39]. IUU fishing in disputed waters is extremely susceptible to developing into a haven for human rights abuses due to the lack of national jurisdiction.

It is found that IUU fishing in disputed areas can potentially trigger other organized crimes and violations of human rights at sea, such as forced labor, child labor, human trafficking, drug trafficking, wage garnishment, physical abuse, and debt bondage, among others [43]. For example, transnational crime often takes advantage of IUU fishing. Fishermen suffering from low wages and decreasing fish yields are often forced into the web of organized criminal activity in the IUU fishing industry, which includes tax crimes, money laundering, corruption, document fraud, and human, drug, and arms trafficking. In addition, large-scale IUU fishing activities build vast criminal networks to launder profits and traffic fish products to buyers and markets [44]. In a significant portion of the disputed area, the lack of state capacity to investigate, prevent, and address these human rights violations resulting from IUU fishing has significantly indulged in the commission of crimes.

2.2. Causes of the IUU Fishing Governance Dilemma in Disputed Maritime Areas

As has been discussed above, IUU fishing in disputed waters is becoming a major obstacle to the achievement of sustainable fisheries. The causes of the IUU fishing governance dilemma in disputed areas are more complex, which include obstacles to unilateral jurisdiction and cooperation measures due to disputes among respective parties. In addition, international legal rules were found to be ambiguous. Before beginning this part, this study does not focus on the factual issues of a specific dispute and, to the extent possible, does not evaluate the merits of the parties' maritime claims; instead, this paper focuses on the normative aspect of international law, although it acknowledges that there will inevitably be specific cases involved.

2.2.1. Difficulties in the Enforcement of Unilateral Jurisdiction

In general, coastal states are the main players in regulating IUU fishing activities in their own territorial seas and EEZs. They actively discourage and punish IUU fishing activities by third countries in the respective maritime areas to protect natural resource interests based on sovereignty or sovereign rights. The LOS Convention provides "exclusive" rights and obligations of the coastal state based on the requirement to give appropriate attention to the jurisdiction of the flag state. However, there are complex challenges to enforcing legislation or jurisdiction of coastal states in disputed maritime areas.

The parties to the dispute frequently adopt a cautious approach regarding the legislation and enforcement of IUU fishing activities to prevent escalating situations in respective areas. On the one hand, in several cases, geopolitical factors and inter-state relations have led disputants to avoid regional tensions in the disputed area. Each disputing party may legally assert jurisdiction over fishery resources and fishing activities in the area, which may be based on domain sovereignty, exclusive economic zone rights, or historical rights. Both legal fishing activities and IUU fishing are, in view of the disputing parties, subject to their own jurisdiction. Thus, once a party to a dispute has taken jurisdiction over what appears to itself to be a well-documented IUU fishing activity in the disputed areas, the other disputants are likely to view such action as an attack on their maritime interests and a challenge to their claims and, therefore, to strongly oppose it or even take countermeasures, as is the case of the Northern Territories [45] or the Natuna Regency [46]. The disputants will be prevented from taking unilateral measures

to regulate IUU fishing as a result of the potential pressure to escalate tensions. On the other hand, the lack of jurisdiction in the disputed area encourages vessels from disputing states or other states to engage in reckless IUU fishing because they understand that there is a jurisdictional gap. In the case of third-state vessels, the disputants may avoid having jurisdiction over these vessels whenever possible because they tend to avoid upsetting third parties and pushing them to the side of their “rivals”. In addition, the symbolic significance of fishing activities in the disputed area has encouraged IUU fishing activities. Fishing in disputed areas is often given a “political dimension”: for several disputants, fishing in disputed areas is an important way of demonstrating the “legitimacy” of rights and effective control of maritime areas.

Therefore, some countries often provide lenient incentives to encourage their fishermen to fish in the disputed area instead of enforcing strict fishing standards and regulations [47]. At the same time, they impose blanket bans or stringent standards on the activities of fishermen from other countries. This has resulted in a lack of coordination of the jurisdictions among the respective states and a perpetual state of confrontation and offsetting, which has greatly reduced the effectiveness of the measures and made it difficult to impose sufficient constraints on IUU fishing activities.

2.2.2. Cooperative Governance Measures Hindered

According to some studies, coastal state jurisdiction in undefined maritime zones heavily relies on the agreement and tacit consent among the parties to a dispute and between the parties to a dispute and a third state, i.e., the flag state [48]. However, in several disputed areas, such cooperative governance measures, in particular, multilateral ones, are challenging to accept and even more challenging to effectively enforce due to the conflicting political interests of states. In the South China Sea, multilateral measures are essential to regulate IUU fishing activities due to the prevalence of multiple disputants in the same area and the interconnected nature of the areas in which fishermen from different countries operate. However, there is not yet a fisheries cooperation agreement in the South China Sea in which all countries in the region participate. Most of the neighboring countries manage their fisheries cooperation through bilateral agreements, but bilateral agreements can hardly meet the needs for sustainable development of fisheries in the South China Sea. In fact, a number of bilateral agreements have been concluded between China, Vietnam, Indonesia and the Philippines since 2000. For example, China and Vietnam have made detailed arrangements for fisheries development and protection in the demarcated areas of the Beibu Gulf/Gulf of Tonkin, requiring both sides to cooperate in monitoring and promptly informing each other of the situation in the common fishing area. However, few bilateral agreements attempt to include fisheries management arrangements concerning the disputed area because of the political sensitivity of the topic as well as potential oppositions from third parties [49].

At the same time, the South China Sea region has not yet developed a multilateral fisheries organization with credibility and enforcement power, nor has it established full monitoring, control, and surveillance measures: the geographical scope of the current cooperation measures is either too broad and involves complex subjects, in which their actual operation often contradicts the ideas of the countries surrounding the South China Sea, or too narrow to regulate the entire South China Sea waters as a whole. These organizations such as Asia-Pacific Fishery Commission and Southeast Asian Fisheries Development Center perform a variety of tasks, each of which demonstrates fragmentation, a lack of communication and coordination, and is often administrative, consultative, or technical in nature, with only advisory and suggestion responsibilities [50].

Deep within this dysfunctional cooperative governance measure for IUU fishing, this study identifies the underlying causes that influence the choices of states in various ways: first, the parties to a dispute may fear that they won't be able to lead the cooperative governance process and, instead, will need to give “consent” to the other party enforcing

jurisdictional measures in the disputed area, thereby, “legitimizing” the action in question, recognizing the other state’s sovereignty and creating uncertainty about its own sovereignty claim [51]. In general, such agreements and measures will, to some extent, likely strengthen the *de facto* control of the other state over the disputed area.

Second, cooperative governance of disputed areas requires a compromise among the parties, but the rise of nationalism on a global scale makes it difficult for disputing governments to adopt a compromising cooperative stance [52]. Territorial and maritime disputes have long been a common issue used by politicians in various countries to stir up nationalist sentiments, and several minor conflicts have been unresolved because of such sentiments, eventually growing into a regional “security issue.” It is difficult for governments involved in the dispute to avoid domestic nationalist sentiment and, thus, they tend to refuse to compromise when dealing with disputes, yet mutual compromise is the essential factor to achieve cooperation [53].

Last, for their own fisheries or geopolitical interests, countries with no or weak claims to the disputed area often take a position of non-cooperation or even hinder the cooperation of the respective parties, which hinders the formation and operation of multilateral measures [48]. The impact of U.S. intervention in the South China Sea on relevant domestic cooperation mechanisms is a good example [54].

2.2.3. Limitations of International Legal Rules

Examining international legal documents regarding the regulation of IUU fishing, the rules governing disputed areas are considered to be rather unclear. The LOS Convention, commonly referred to as the “Constitution of the Oceans”, prescribes that the coastal state be given exclusive rights and obligations to regulate IUU fishing and provides rules governing the temporary delimitation of the exclusive economic zone, assuming that states should seek peaceful solutions to avoid escalating tensions, and develops a complex dispute settlement measure for the disputing parties [55]. However, such provisions are too vague with no operational and concrete measures: Is it an aggravation of a dispute for a state to regulate IUU fishing when one or more parties to the dispute are not involved?

In addition, the LOS Convention does not provide rules governing the settlement of the territorial sovereignty dispute. However, several disputed maritime areas result from disagreements among the respective states over islands or mainland territories (e.g., Northern Cyprus, Black Sea), the so-called territorial-maritime disputes [56]. The logical sequence of the two is well illustrated in China’s opposition to the South China Sea arbitration, though the tribunal does not appear to have accepted this view, which has led to China’s “Three Don’t” policy [57]. In addition, the dispute is not resolved by choosing maritime zones without considering the question of sovereignty. Other international laws outside of the LOS Convention are almost silent on such a difficult subject as disputed maritime areas and contribute little to help resolve the issue.

In this context, it is unclear what legal status the parties involved in the disputed area have to regulate IUU fishing, which even puts the states actively enforcing regulations at risk of violating international law. Coastal states (or potential coastal states) in the disputed area often address the issue of IUU fishing with the perception that they lack a clear legal basis for jurisdiction because the area in question has not yet been fully established. Therefore, they are reluctant to enact and enforce domestic legislation to avoid “violating” the LOS Convention and general international law. States’ uncertainty about the legitimacy of their own and each other’s authority, as well as the disputes that arise in practice, is one of the main causes of the hesitation to regulate IUU fishing in the disputed area. This study will further discuss this issue in the next paragraphs.

3. Obligations of States to Regulate IUU Fishing in Disputed Maritime Areas

Under the current regime of international law, flag states, coastal states, port states, and market states all have respective legal obligations regarding IUU fishing activities and may incur state responsibility for their breaches. It should be noted (but is often overlooked) that the existence of a dispute in the respective maritime area rarely lessens the obligations of the respective state or exempts it from any responsibilities. Therefore, the rules governing the regulation of IUU fishing activities in disputed sea areas are different from those in other sea areas. However, this cannot be a valid justification for the respective states to engage in IUU fishing but should be taken as a driving force and opportunity for cooperation in IUU fishing in the disputed area.

3.1. *Obligations and Responsibilities of the “Coastal State”*

According to Article 56.1 of the LOS Convention, “in the exclusive economic zone, the coastal state has sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources...” As the other side of such rights, the coastal state shall, taking into account the best scientific evidence available to it, ensure through proper conservation and management measures to maintain the living resources in the exclusive economic zone from over-exploitation and cooperate with “competent international organizations, whether sub-regional, regional, or global, to this end.” In addition, the sovereign rights and jurisdiction of the coastal state are subject to other provisions of the LOS Convention, such as marine environmental protection and conservation. Therefore, coastal states are required, under Article 192–193, to fulfill “the obligation to protect and preserve the marine environment” within the territorial sea, exclusive economic zone, and high seas and properly regulate IUU fishing.

The draft articles on the responsibility of states for Internationally Wrongful Acts provide that “[t]here is an internationally wrongful act of a state when conduct consisting of an action or omission: (a) is attributable to the state under international law; and (a) is attributable to the state under international law; and (b) constitutes a breach of an international obligation of the state” [58]. It is clear that in non-disputed territorial seas or EEZs, coastal states have an obligation under international law to regulate disproportionate damage to marine ecology and resources, such as IUU fishing activities, and this obligation is recognized by the international community and established by international treaties. A breach of such an obligation would constitute an internationally wrongful act, which would entail state responsibility. The question is, what are the implications for the obligations and potential responsibilities of coastal states in the event of a dispute in the maritime area? Some may suggest that there may be no legally established coastal state in the disputed area that can assume such obligations or clarify the implications for potential state responsibility of the lack of physical control by the respective state over part of the disputed area. Therefore, it is necessary to have a categorization of the discussion to address more complex situations in the disputed maritime area.

3.1.1. Disputed Maritime Areas Resulting from Disputes over Territorial Sovereignty

First, given the exclusivity of sovereignty, when we refer to a specific piece of land after World War II, whether it is a coastal part of the mainland or an island, we typically assume that it is occupied by a sovereign rather than being a piece of terra nullius [59]. For this reason, the regime of terra nullius is considered, at least on the land surface of the earth, almost extinct under contemporary international law regimes [60]. In fact, this conclusion supports a presumption that is often overlooked: the territory in dispute has its “true” sovereignty, although sometimes this fact may appear less clear for one reason or another. In other words, without taking into account the need for further delimitation with other states, there must be a party to the territorial sovereignty dispute that is the

proper “coastal state” for the disputed maritime area in question, which is generated from this disputed territory.

For example, suppose there is a territorial dispute between State A and State B, and State A is eventually legally considered to have sovereignty over this territory through an international adjudication or any other method. This also means that State A has been, since the beginning of the dispute, the coastal state in the potential maritime area from which this territory arises. In this context, the failure of State A to properly regulate IUU fisheries in the area during the dispute can then be divided into two categories based on the facts: The first case is that State A was capable of enforcing appropriate or certain regulation measures during the period in dispute but failed to do so. This “capability” should be judged not only by the exhaustion of feasible unilateral measures but also by whether it has exercised its best efforts to cooperate with the other party to the dispute; otherwise, the conduct of the state would still fall within the scope of “omission” under the draft articles on state responsibility [61]. The other case is that State A had exhausted all measures to regulate IUU fishing in the area in question during the dispute but had failed to do so due to a lack of physical control and lack of cooperation from the other party. In these contexts, this conduct of omission cannot be “attributable to the state under international law” when deciding whether it constitutes a wrongful act. Even taking into account the possible argument that such causation is considered to be *de facto* causation, State A is relieved of international responsibility for such an “internationally wrongful act” in accordance with the rule of *force majeure* [62].

The next question is, does the other party have the obligations and bear potential responsibilities under international law to regulate IUU fishing in the disputed maritime area? The answer to this question is not limited to the LOS Convention or other laws of the sea; the laws of war also provide some insights. Prior to anything else, the legal status of State B in the dispute should be considered: if State B is merely a claimant state and does not occupy the disputed territory and control the respective maritime area, it does not have any position as the “coastal state.” The situation is quite different if State B has control over the disputed islands and, through the military or administrative projection of power, truly has control over the maritime area to a distance of 12 nautical miles or even further. Under the laws of war or international humanitarian law as it is now more commonly called, State B becomes *de facto* the occupying power of the disputed islands. Furthermore, according to Geneva Protocol IV, this law may also apply to areas of the territorial sea that the occupying power already has control over or where there are no obstacles to its control. Because State B is the occupying power, it not only has the legal authority to enforce the law and maintain order in the occupied area, but it also has a responsibility to do so. In this context, the obligation to properly manage and conserve fishery resources within the territorial sea would be included, as it is widely accepted as a treaty obligation and is respected as a customary obligation [63].

The above conclusion may not raise too much dissent. However, can State B achieve a status similar to that of an occupying power in the EEZ based on its occupation of islands and physical control of respective maritime areas? The answer is yes. In disputes, such as those over Northern Cyprus, the South China Sea, and the Malaysian Island, the state in control of the territory often makes a request for the delimitation of the EEZ and the continental shelf (although, of course, the state without physical control does not hesitate to ask for such request) and legislates and enforces the law within the EEZ (presumed sometimes) in order to have the advantage of natural resources [64,65].

If State B is ultimately found to occupy these territories and territorial seas, the basic principle of “congruence of rights and obligations” states that even though it is unclear whether the law of war or the law of the sea is applicable, it is reasonable to assume that State B should assume its obligations as the *de facto* administrator or controller of the disputed maritime area, which includes the degree that it is physically competent to do so, to regulate IUU fishing activities. Otherwise, State B (occupier) would enjoy a more privileged position than State A (coastal state) in terms of managing and exploiting

natural resources (which they could argue for the vitality and well-being of the inhabitants of the occupied area) without the corresponding obligations. In other words, State B should assume the obligation to regulate IUU fishing in the areas in which it believes it has sovereign rights and jurisdiction, subject to its ability to exert effective control.

In summary, whether one of the parties to the dispute is ultimately regarded as a “coastal state” or an “occupying state,” their actual obligations and potential responsibilities regarding the regulation of IUU fishing are not suspended simply because a dispute exists but, instead, are consistent with their actual control. In other words, the obligation to regulate IUU fishing in a specific maritime area should not be assumed to have been suspended simply because a dispute exists.

3.1.2. Disputed Maritime Areas Not Resulting from a Territorial Sovereignty Dispute

In general, maritime areas beyond the territory and territorial sea cannot be occupied. In addition, the enforcement of the law of occupation outside the national domain alone is even more controversial when the territory and territorial sea are not occupied [63]. Therefore, the law of occupation is no longer the appropriate law in maritime delimitation disputes, as opposed to cases involving both territorial and maritime issues. However, this does not mean that the parties to a dispute in a disputed maritime area that is not the result of a territorial sovereignty dispute are completely free from all coastal state obligations to regulate IUU fishing activities. Until the maritime delimitation is complete, the LOS Convention requires the respective states to “in a spirit of understanding and cooperation ... make every effort to enter into provisional arrangements of a practical nature,” which imposes an international law obligation on the states to cooperate in achieving the governance of IUU fishing in the disputed area.

At the same time, the rule of “congruence of rights and obligations” can also be applied in this case because authorizing and managing fishing activities in the disputed area as a “coastal state” indicate an obligation on the part of the “coastal state” to protect ecological and maritime resources and conserve the obligation. In addition, if the party decides to take action to stop IUU fishing in the disputed area, they should do so without bias and not just against the other party. Otherwise, according to the LOS Convention Article 73, this could result in the use of unilateral measures to escalate the situation and, therefore, constitute a breach of the obligation to not “jeopardize or hamper the reaching of the final agreement.” If these unspecified obligations are considered too crude and vague, the flag state status of the respective state must provide a clearer perspective on the issue.

3.2. *Obligations and Responsibilities as a Flag State*

The flag state is the state whose flag a vessel flies when fishing at sea, and “vessel” refers to fishing vessels and vessels that assist in fishing activities, such as transport vessels, which receive the catch from fishing vessels, and supply vessels, which provide fuel and food to fishing vessels. Due to the depletion of offshore fishery resources, fisheries in the distant seas, EEZs, and high seas—where the jurisdiction of coastal states is limited to varying degrees and cannot effectively regulate IUU fishing—have become the primary source of catch. In this context, the flag state is assumed to have primary responsibility for the regulation of IUU fishing activities. National regulation of IUU fishing continues to rely primarily on flag states’ actions [66].

Article 94 of the LOS Convention states that “every state shall effectively exercise its jurisdiction and control in administrative, technical, and social matters over ships flying its flag.” This provision also sets out obligations regarding the proper registration, establishment, and enforcement of national law for ships and seafarers in relation to administrative, technical and social matters, safety matters, etc. According to the Fisheries Jurisdiction Advisory Case, the LOS Convention requires flag states to exercise diligence in preventing IUU fishing activities within and beyond areas of national jurisdiction [67]. Flag states shall adopt domestic fisheries laws and, as a result of their jurisdiction, enforce

regulatory measures against their fishing vessels wherever those vessels operate, even though these jurisdictions are subject to national sovereignty in the territorial sea and observe the jurisdiction of the coastal state in the exclusive economic zone.

Following the conclusion of the LOS Convention, although not legally binding, the Code of Conduct for Responsible Fisheries and the IPOA-IUU present a more concrete picture of the obligations of flag states to regulate IUU fishing activities by their vessels. IPOA-IUU states that “states should embrace measures building on the primary responsibility of the flag state and using all available jurisdiction in accordance with international law ... to ensure that nationals do not support or engage in IUU fishing ... use all these measures, where appropriate, and to cooperate...” In addition, it states that “[a] flag state should ensure, before it registers a fishing vessel, that it can exercise its responsibility to ensure that the vessel does not engage in IUU fishing” [68]. This has led to flag states being encouraged to review the history and status of registered vessels to determine their use and to keep records to track their careers by themselves and other states. In particular, in terms of domestic legislation and enforcement, flag states are encouraged to ensure that vessels flying their flag are legally engaged in fishing activities by tightening the issuance of fishing licenses and enforcing real-time monitoring measures, such as vessel monitoring systems, catch monitoring systems, and onboard observers.

The Code of Conduct for Responsible Fisheries is more detailed in terms of enforcement measures. It states that flag states should take enforcement measures against fishing vessels entitled to fly their flag that they find are not following the respective conservation and management measures, including, where necessary, treating breaches of such measures as breaches of national law. Sanctions for such violations should be sufficiently severe to ensure compliance, prevent any violations from reoccurring, and deny offenders the benefits of their illegal activities, which include provisions for refusal to issue, suspend, and withdraw fishing licenses [67].

Within the disputed maritime area, whether it is the territorial sea or the EEZ, no additional regulations that diminish this important power to regulate IUU fishing under international law exist and certainly do not deny them of the responsibilities that may arise. However, if fishing activity occurs in the disputed EEZ, it must be decided whose laws should be followed and which flag state should be asked for cooperation.

Assuming that the flag state is a party to the dispute, it may consider itself a coastal state in the EEZ and allow its vessels to violate the EEZ legislation enacted by the other party (competitor) or even encourage such violations because such legislation is probably not binding at all from their perspective. This situation is equally confusing, assuming that the flag state is not a party to any of the disputes. In this context, the flag state may well be faced with two different sets of legal rules. Its vessels’ activities may be identified as IUU fishing by one party while they comply with the rules of the other and may sometimes be at risk of duplication of enforcement and penalties. However, in any event, the flag states’ obligation to regulate IUU fishing by its vessels and to cooperate with the coastal state is not abrogated by the existence of a dispute in the respective sea area. Therefore, how this obligation can be truly and effectively enforced in good faith to avoid state responsibility requires proper coordination between the disputing parties and third states.

3.3. Obligations and Responsibilities as a Port State or Market State

In recent decades, Port state measures have been considered an important aspect of ocean governance, and a large number of international legal documents outline the obligations and responsibilities of flag states. As early as 1982, in Part XII of the Convention on the Protection and Preservation of the Marine Environment, regarding marine pollution, Article 218 outlines the conditions for port states to initiate judicial proceedings, cooperate with flag states, and enforce measures such as investigating records. Since then, the Agreement to Promote Compliance with International

Conservation and Management Measures by Fishing Vessels on the High Seas, the Code of Conduct for Responsible Fisheries, the United Nations Fish Stocks Agreement, and IPOA-IUU have all mentioned port state regulation of IUU fishing-related fisheries [69]. Building on this, the PSMA, which was enforced in 2016, marked the development of IUU fishing from a voluntary technical standard to a legally binding international legal term [70].

In particular, port states are obliged to prevent vessels engaging in IUU fishing from entering and using the country's ports and develop measures to achieve this objective. Prior to entry, if a vessel is on the list of IUU vessels, port states shall refuse it using their ports unless other respective measures are taken. Upon entry, the port state has the right to inspect whether the incoming vessel is associated with IUU fishing activities, verify the information requested on the application for entry, and confirm whether the vessel applying for entry is engaged in IUU fishing activities in order to determine whether to permit or deny the vessel access to its designated port. After inspection, a port state shall deny entry to a vessel if it has solid evidence that the vessel has engaged in IUU fishing or related activities. The PSMA also requires port states to diligently cooperate with international organizations, which include flag states, regional fisheries organizations, and FAO, in the communication of information and regulatory measures for IUU fishing. Particular port states that those who violate the PSMA regulations will be not only morally accountable but also subject to immediate national liability.

In addition to the obligatory requirements for port states, supply chain governance has led international organizations and countries to consider the potential and role of market states in regulating IUU fishing. Although no legally binding treaty has been adopted, international legal documents, such as IPOA-IUU, have proposed some recommended standards and regulations for market-related measures. According to IPOA-IUU, "states should take all steps necessary, consistent with international law, to prevent fish caught by vessels identified by the respective regional fisheries management organization to have been engaged in IUU fishing being traded or imported into their territories".

However, these measures are subject to trade regulations, such as those established by the World Trade Organization, and require the necessary consultations with the respective countries to prevent overly aggressive and biased controls that undermine a fair trading order. According to IPOA-IUU, such controls would cover the entire flow of the catching trade, which includes imports, logistics, banking, and insurance, in addition to the fishing industry. However, currently, this is considered a relatively difficult task for some governments. In addition, port states and market states will face the dilemma regarding identifying IUU fishing, especially when parties to the dispute enforce different or contradicting standards; in this case, multilateral cooperation measures and international organizations should play their role.

4. Pathways for Strengthening IUU Fishing Governance in Disputed Maritime Areas

As the need to balance human productive life with natural ecology has become more widely recognized by the international community, nature-based solutions have started to be considered the basis for addressing challenges at sea [71]. The parties to the dispute, as well as extraterritorial states, should consider nature-based solutions to disputed waters a necessary guideline. Disputes among states should not be a driver for the proliferation and lack of regulation of IUU fishing; instead, states should collaborate to identify priority objectives and enforce solutions to the marine ecological crisis with nature truly at the core. In addition, this emphasis on the obligation of each party to regulate IUU fishing won't prevent disputes from being resolved or escalate regional situations. However, such obligations are likely to play a significant role in encouraging cooperation and consensus among the respective states, overcoming domestic resistance including pressure from caused by nationalism, and helping to ease the atmosphere in the disputed area, as well as promoting a peaceful and final settlement of the dispute.

4.1. Cooperation as a Necessary Means of Fulfilling Obligations

As has been discussed above, in most circumstances, the existence of a dispute in the maritime area does not alter the obligations of the states involved in the dispute of extraterritorial states to regulate IUU fishing in the area, whether based on the legal status of coastal states, flag states, or port and market states. Although there are special circumstances in the disputed area where a “coastal state” in international law may not be explicitly identified at some point, this does not derogate the obligations of the claimant or non-claimant state to take legislation and enforcement measures to regulate IUU fishing.

In other words, states claiming disputed maritime areas potentially have obligations to regulate those areas subject to the actual situation. The state to which the disputed area is ultimately attributed under international law will always have an obligation to regulate IUU fishing in that area for the duration of the dispute; however, a breach of this obligation may not result in either international responsibility or responsibility exemption, assuming that there is no possibility for the coastal state to fulfill its obligations. For states that control these maritime areas but are eventually found to lack qualified entitlement, their obligations are similar to those of the occupying state in terms of territory and territorial sea. Failure to regulate IUU fishing activities due to inaction would result in responsibilities relating to marine ecological protection based on the LOS Convention and general international law.

In addition, for the flag, port, and market state in the disputed area, the existence of a dispute over the area in question has little to do with the obligations placed on them. The absence of delimitation would not constitute a reason to exempt it from its obligations. The problem is that some states may improperly use such disputes to increase their national interests regarding the fishing industry or even promote IUU fishing through their own vessels and enterprises [49], which violates international law and contradicts their obligations.

Having established the rights and obligations of the respective parties regarding IUU fishing activities, the specific content of such obligations, or rather as a facet of the obligation of conduct, should be further considered. The obligation of the parties in the disputed area to prevent the escalation of the dispute under international law has been repeatedly addressed in international adjudications, including the recent *Ukraine v. Russia* order for preliminary measures [72].

However, what measures can be considered to “aggravate or extend the current dispute or render it more difficult to resolve” are often determined on a case-by-case basis. In such cases, legislation and actions by the disputing state to regulate IUU fishing may be seen as a breach of that obligation. Such regulatory measures are perceived by the counterpart state as a challenge to its claims; thus, such unilateral jurisdiction is criticized for endangering regional peace and order even though it would require drastic confrontational measures. This makes it extremely difficult, if not impossible, to fulfill the obligation to regulate IUU fishing through unilateral measures. Therefore, in order to balance the obligation to prevent the escalation of the dispute with the obligation regarding IUU fishing, the parties to the dispute have no choice but to cooperate in the respective region until IUU fishing is properly regulated. Therefore, cooperation in the regulation of IUU fishing in the disputed area has become part of the specific content of the marine ecological protection obligation; thus, states must act to facilitate cooperation to the extent possible, although this does not necessarily require them to make concessions on the dispute.

4.2. Setting Aside Dispute and Pursuing Cooperative Governance

First, IUU fishing in the disputed maritime area may not only complicate the dispute and worsen the regional status quo but also reduce tension among the parties and promote the peaceful settlement of the dispute. In particular, due to the parties' obligations regarding IUU fishing, all states are on the brink of failing to fulfill their obligations and, therefore, taking state responsibility. This shared legal risk creates some space for the parties to make compromises on the issue. States must cooperate to fulfill their international law obligations to regulate IUU fishing in the disputed area. At the same time, these obligations from international law can also be a lever for politicians to overcome domestic political resistance and populist challenges. Acting in accordance with international law is a good justification for controlling such irrational and peace-breaking actions. Therefore, it is necessary for governments to shift their understanding of each other's control over IUU fishing in disputed waters and promote the peaceful settlement of disputes with "functional cooperation," which has nothing to do with their territorial or maritime claims.

Second, the parties should set aside their disputes and shift their focus to the protection and conservation of marine ecology and fishery resources. When cooperation is considered a necessary means of meeting obligations to regulate IUU fishing activities, it is reasonable for states to set aside disputes and move toward full cooperation in disputed areas. One of the well-known advocates of setting aside disputes and pursuing joint development is China [73]. China has maintained a position on hydrocarbons in the South and East China Seas, where potentially interested states have jointly developed hydrocarbons without engaging in discussions about sovereignty and the ownership of maritime areas. This path blurs the contradictions among the acrimonious sovereigns and, instead, attempts to functionally realize the expectations of the respective parties regarding the interests of the regions involved [74]. On the issue of governance of IUU fishing, states have a common interest and shared international law obligations to regulate IUU fishing activities in order to avoid loss of natural resource benefits and potential responsibility. Therefore, the best course of action that serves the interests of all parties would be to set aside the dispute and cooperate on the governance of IUU fishing.

Last, allowing another state to legislate or take enforcement measures does not and should not be seen as a derogation from the sovereignty, sovereign rights, or jurisdictional claims of any party. From an ethical point of view, although marine ecology should be the main focus of the issue, it is important to note that for sovereigns, territory and maritime areas are often considered as their most important and inalienable interests. At most times, cooperation in the governance of IUU fishing activities is only likely to be acceptable if it does not compromise such a "core interest". Therefore, states should agree that allowing each other's regulation of IUU fishing in the disputed area can neither be seen legally as a reinforcement of effective regulations nor as any change to the status quo. In other words, the regulation of IUU fishing should only be considered a fact and not be given any legal or evidentiary effect by the parties, third parties, or international organizations; otherwise, it would significantly diminish the potential for states to cooperate in the governance of IUU fishing.

4.3. Facilitating the Coordination of Measures of the Parties

What standards and regulations governing IUU fishing activities should be applied in the disputed area is an important and potentially confusing matter for both the disputing states and other parties. On the one hand, the LOS Convention Article 56 states that the coastal state has sovereign rights over the conservation and regulation of natural resources within the EEZ and jurisdiction over the "protection and preservation of the marine environment". This means that coastal states have the right to establish regulations and standards to regulate IUU fishing; however, they "shall have due regard to the rights and duties of other states and shall act in a manner compatible with the provisions of this

Convention". These regulations and standards will be an important basis for flag, port, and market states in determining the legality of the fishing activity. However, in the disputed maritime area, there is a high risk of the absence of or, in contrast, duplicate legislation of the coastal state.

In the former case, in addition to encouraging the parties to the disputed area to cooperate in fulfilling their obligations to regulate IUU fishing, flag state legislation and enforcement will be an important and determining factor in regulating IUU fishing in the disputed area. Until coastal states fulfill their obligations, flag states should be encouraged to develop regulations and standards, which should be respected by the respective states.

The latter scenario case resulted in more confusion. Two different standards would make it difficult for the flag state to have due regard to the coastal state and comply with the laws and regulations adopted by the coastal state. International law or other international laws do not give a meaningful answer to this situation. For third-party states, a possible way of dealing with the situation would be to follow the legislation of the state that actually controls the maritime zone; however, compliance with either regulation should be considered to satisfy the requirements of international law for third-party states since it is impossible to require them to choose between these two different regulations and criteria as to which is the legislation of the legally eligible coastal state. Of course, the ultimate resolution of this issue still depends on the cooperation of all respective parties.

On the other hand, the regulation of third-party fishing activities by the parties to the dispute raises some concerns. In the undefined part of the Japan–Korea EEZ, the parties have not yet reached sufficient consensus on how to regulate IUU fishing activities by third-party vessels. In order to address this issue, additional bilateral and multi-party negotiations need to be considered as the next step to be taken. In this regard, the establishment of a joint fisheries committee through a binding agreement may be a helpful way forward. A good example is that China and South Korea have effectively achieved fisheries governance in maritime areas pending delimitation through continuous and timely cooperation under the joint fisheries commission. In addition, strengthening regulatory cooperation among the parties in the disputed area, including the joint establishment of provisional regulations and standards, institutionalized communication channels, and proper dispute settlement measures, is the only option to effectively regulate IUU fishing.

4.4. Enhancing Multilateral Governance Mechanisms

In disputed areas, in addition to the disputing parties, the non-party states are also an important part of the chain in addressing the increase of IUU fishing activities, as they serve as a flag state, port state, and market state, being responsible for regulating IUU fishing. Only if all parties involved take responsibility can the ecology of the disputed area be saved from the risk of depletion caused by over-exploitation. In response to the alarming issue regarding IUU fishing in the disputed area, in addition to the need for the parties to change their unilateral management model and actively seek institutionalized cooperation among the parties to strengthen regulatory legislation and enforcement, "extraterritorial states," although in some cases pose additional risk in settling the dispute, should also be considered [75]. In other words, it would be unreasonable and irresponsible to exclude states other than those parties to the dispute in terms of the governance of IUU fishing.

In terms of "setting aside dispute and pursuing cooperative governance", the respective states should establish a targeted regional fisheries cooperation measure with third-party countries by signing a multilateral agreement in accordance with the LOS Convention and other international laws already concluded, general legal principles, and a nature-centered philosophy. States should clarify the obligations and potential responsibilities of each party, cooperate in the development and regulation of fishery resources, conduct joint investigation and maintenance of fishery resources in disputed

waters, and promote effective regulation of IUU fishing practices. In particular, there are several instances where states can effectively work together.

First, states should jointly examine regional fishery resources and monitor their activities. The objective of such cooperation is to enhance transparency and the science of fishery management and provide a recognized and sound basis for the development of regulations and enforcement of measures. The exclusion of certain respective states, or closed information-sharing measures, should be carefully considered in this matter.

Second, states should work together to develop regulations to regulate IUU fishing in disputed maritime areas. However, this does not mean that the respective states must give up their claims to the territory and maritime zones, nor does it represent a readjustment of the balance of interests and jurisdictional regulations under the LOS Convention. The sole purpose of such cooperation should be to seek a realistic solution to the proliferation of IUU fishing in the disputed area by setting aside disputes and reaffirming the obligations of states based on their respective status.

Third, in order to enforce the regulations governing IUU fishing, the parties should consider the importance of the provisional arrangement of jurisdictional areas and respect each other's enforcement measures under the consensus already in place. Likewise, the flag state should fully understand that its obligations in relation to regulating vessels flying its flag in the disputed maritime area should be more carefully enforced. This may imply a lesser obligation of "due regard" to the coastal state, given the practical difficulties and more diligent enforcement of ecological protection, conservation, and preservation obligations [76,77].

Lastly, different and conflicting jurisdictions of the parties should be taken into consideration in advance. States are encouraged to make use of the wealth of dispute settlement measures in accordance with the LOS Convention or consensual procedures to peacefully resolve disputes and, to the extent possible, prevent the use of unilateral measures, in particular, radical actions that could escalate the situation in the region.

5. Conclusions

According to some authors, the governance of IUU fishing in disputed maritime areas has not received sufficient attention from states or researchers because (1) fisheries lawyers usually consider only the fisheries law and (2) delimitation specialists only focus more on the impacts of maritime characteristics and the developing delimitation methodologies [78]. In fact, increasing IUU fishing in the disputed waters has caused significant damage to marine ecology and fishery resources and harmed the livelihoods of honest fishermen. These activities also cause secondary damage, which includes increasing the risk of escalating the situation in the respective maritime areas and encouraging violations of human rights at sea. This study found that the lack of governance of IUU fishing in the disputed maritime area arises because unilateral measures face challenges from other disputants as well as extraterritorial states and the disputing parties are concerned that cooperative governance will weaken their control in the respective area or even constitute acquiescence to the jurisdiction of other states. The current international legal documents contain too much uncertainty as far as these issues are concerned.

However, a review of the current international legal documents shows that the LOS Convention, fisheries agreements, and customary international law have created a range of international legal obligations for states in various contexts and that the existence of a dispute in a specific area does not normally result in a derogation from these obligations or an exemption from potential responsibilities. First, the claimant states in the disputed maritime area, whether or not they are ultimately found to be legally competent coastal states, may bear the obligation as the coastal state to regulate IUU fishing, although the extent of that obligation and the potential state responsibility depends on a number of factors, such as the actual situation, capacity to control, and their conducts. Second, the obligations of flag states regarding IUU fishing are, for the most part, unaffected by

disputes, but this can result in some challenges when they are considering the relationship between the flag state and coastal state jurisdiction. Third, port and market states also have obligations, in particular, treaty-based obligations, to address IUU fishing in the disputed area, where they may face some issues due to a lack of legislation or duplication of legislation.

In order to strengthen the governance of IUU fishing in disputed waters, a number of functional methods should be adopted to address the obstacles that result from inter-state disputes and to promote ecological conservation. Regional and cross-regional cooperation should be considered as a necessary method for states to fulfill their obligations to regulate IUU fishing and to avoid the state responsibility resulting from “omission”. Parties to the dispute are encouraged to set aside their disputes and cooperate in the regulation of IUU fishing activities. In addition, it is necessary to include “extraterritorial states” in the cooperative measure to achieve proper coordination of legislative and enforcement measures and to promote the institutionalization of the governance of IUU fishing. In conclusion, the obligations of states under international law to regulate IUU fishing will, in most scenarios, not be derogated because of the existence of the dispute, and these obligations, while enhancing cooperation among states to address the governance deficit in IUU fishing, are likely to reduce the tensions in the disputed region and further promote a peaceful resolution of the dispute.

Author Contributions: Conceptualization, X.C.; formal analysis, X.C. and L.L.; writing—original draft preparation, X.C.; writing—review and editing, X.C. and Q.X.; funding acquisition, Q.X.; supervision, X.X. All authors have read and agreed to the published version of the manuscript.

Funding: This research was funded by National Social Science Foundation (Grant No. 218ZD226); National Social Science Foundation (Grant No. 19VHQ008); China Postdoctoral Science Foundation Special Funding Project (Grant No. 2022T150264); China Postdoctoral Science Foundation Project (Grant No. 2020M673048).

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: Not applicable.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Ritchie, H.; Roser, M. Fish and Overfishing Report. Available online: <https://ourworldindata.org/fish-and-overfishing> (accessed on 10 November 2022).
2. FAO. Global Per Capita Fish Consumption Rises Above 20 Kilograms a Year. Available online: <https://www.fao.org/news/story/en/item/421871/icode/> (accessed on 10 November 2022).
3. UN. Sustainable Fishing Staying Afloat in Developed World, Sinking in Poorer Regions. Available online: <https://news.un.org/en/story/2019/11/1051641#:~:text=Worldwide%2C%20one%20billion%20people%20rely%20on%20fish%20as,people%20meet%20their%20protein%20needs%20exclusively%20from%20seafood> (accessed on 10 November 2022).
4. The Arctic Institute. A Sea of Conflict? The Growing Obsession with Maritime Space. Available online: <https://www.thearcticinstitute.org/sea-conflict-growing-obsession-maritime-space/> (accessed on 10 November 2022).
5. Oral, N. Reflections on the Past, Present, and Future of IUU Fishing under International Law. *Int. Community Law Rev.* **2020**, *22*, 368–376.
6. Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas. Available online: <https://www.fao.org/3/X3130M/x3130m.pdf> (accessed on 10 November 2022).
7. International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing. Available online: <https://www.fao.org/3/Y1224E/y1224e.pdf#:~:text=The%20IPOAIUU%20is%20a%20voluntary%20instrument%20that%20applies,measures%20to%20prevent%2C%20deter%20and%20%2020eliminate%20IUU%20fishing> (accessed on 10 November 2022).
8. Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing. Available online: <https://www.fao.org/3/i5469t/i5469t.pdf> (accessed on 10 November 2022).
9. NOAA. Report on IUU Fishing, Bycatch and Shark Catch. Available online: <https://www.fisheries.noaa.gov/international/international-affairs/report-iuu-fishing-bycatch-and-shark-catch> (accessed on 10 November 2022).

10. Temple, A.J.; Skerritt, D.J.; Howarth, P.E.; Pearce, J.; Mangi, S.C. Illegal, unregulated and unreported fishing impacts: A systematic review of evidence and proposed future agenda. *Mar. Policy* **2022**, *139*, 105033.
11. Stewart, D.P. International Decisions. *Am. J. Int. Law* **1991**, *109*, 845–851.
12. Edeson, W. Closing the Gap: The Role of 'Soft' International Instruments to Control Fishing. *Aust. YBIL* **1999**, *20*, 83.
13. Drammeh, O.K. *Illegal, Unreported and Unregulated Fishing in Small-Scale Marine and Inland Capture Fisheries*; FAO: Rome, Italy, 2000.
14. Sumaila, U.R.; Alder, J.; Keith, H. Global scope and economics of illegal fishing. *Mar. Policy* **2006**, *30*, 696–703.
15. Haward, M. IUU fishing: Contemporary practice. In *Oceans Management in the 21st Century: Institutional Frameworks and Responses*; Elferink, A.G.O., Rothwell, D., Eds.; Martinus Nijhoff Publishers: Leiden, Netherlands, 2004; pp. 87–105.
16. Erceg, D. Deterring IUU fishing through state control over nationals. *Mar. Policy* **2006**, *30*, 173–179.
17. Agnew, D.J. The illegal and unregulated fishery for toothfish in the Southern Ocean, and the CCAMLR catch documentation scheme. *Mar. Policy* **2000**, *24*, 361–374.
18. Kuemlangan, B.; Press, M. Preventing, deterring and eliminating IUU fishing. *Envtl. Pol'y L.* **2010**, *40*, 262.
19. Telesetsky, A. Scuttling IUU fishing and rewarding sustainable fishing: enhancing the effectiveness of the port state measures agreement with trade-related measures. *Seattle UL Rev.* **2014**, *38*, 1269–1270.
20. Miller, A.M.; Bush, S.R.; Mol, A.P. Power Europe: EU and the illegal, unreported and unregulated tuna fisheries regulation in the West and Central Pacific Ocean. *Mar. Policy* **2014**, *45*, 138–145.
21. Liddick, D. The dimensions of a transnational crime problem: The case of IUU fishing. *Trends Organ. Crime* **2014**, *17*, 290–312.
22. Petrossian, G.A. Preventing illegal, unreported and unregulated (IUU) fishing: A situational approach. *Biol. Conserv.* **2015**, *189*, 39–48.
23. Leroy, A.; Galletti, F.; Chaboud, C. The EU restrictive trade measures against IUU fishing. *Mar. Policy* **2016**, *64*, 82–90.
24. Soyer, B.; Leloudas, G.; Miller, D. Tackling IUU fishing: Developing a holistic legal response. *Transnatl. Environ. Law* **2018**, *7*, 139–163.
25. Sahuja, V. Six Steps to Combatting IUU Fishing. *NMF Comment.* **2016**, *29*, 1–3.
26. Li, J.; Amer, R. Closing the net Against IUU fishing in the South China Sea: China's practice and way forward. *J. Int. Wildl. Law Policy* **2015**, *18*, 139–164.
27. Anggraini, S.D.; Kusumawardhana, I.; Ramadhan, I. The Implication of Indonesia's IUU Fishing Policy in Natuna Territorial Waters towards South China Sea Geopolitics. *J. Hub. Int.* **2019**, *7*, 118–132.
28. Husein, Y.; Aziz, M.F. The Necessity to Reform Indonesian Legal Framework on Provisional Arrangement to Combat IUU Fishing. *Indones. J. Int'l L.* **2020**, *18*, 125.
29. Van Logchem, Y. Disputed maritime areas: Setting the scene. In *The Rights and Obligations of States in Disputed Maritime Areas*; Cambridge University Press: Cambridge, UK, 2021; pp. 13–57.
30. Mackay, M.; Hardesty, B.D.; Wilcox, C. The intersection between illegal fishing, crimes at sea, and social well-being. *Front. Mar. Sci.* **2020**, *7*, 589000.
31. ICCF Group. Addressing IUU Fishing as a National Security Imperative. Available online: <https://internationalconservation.org/issues/landscapes-conservation/addressing-iuu-fishing-as-a-national-securityimperative> (accessed on 10 November 2022).
32. Assessing Seafood Supply Chains: New Public-Private Partnership Will Support Companies in Assessing IUU Fishing Risks Using Vessel Data. Available online: https://www3.weforum.org/docs/WEF_SCRT_IUU_Report_2022.pdf (accessed on 10 November 2022).
33. Wang, M.L.; Chen, Y. The construction of a Chinese solution to IUU fishing governance in the South China Sea. *Pac. J.* **2022**, *30*, 77–89. (In Chinese)
34. Sumaila, U.R.; Cheung, W.W.L. Boom or Bust: The Future of Fishing in the South China Sea. Available online: <https://www.admcf.org/research-reports/boom-or-bust-the-future-of-fish-in-the-south-china-sea/> (accessed on 10 November 2022).
35. Teh, L.S.L.; Witter, A.; Cheung, W.W.L.; Sumaila, U.R.; Yin, X. What is at Stake? Status and Threats to South China Sea Marine Fisheries. *AMBIO* **2017**, *46*, 57–72.
36. Bat, N.K.; Song, Q.Y. Status of Marine Fishery Resource in the Central Tonkin Gulf between Vietnam and China. *RIMF Rep.* **2017**, *1*, 3.
37. Muir, M.A. Illegal, unreported and unregulated fishing in the circumpolar arctic. *Arctic* **2010**, *63*, 373–378.
38. FAO. Illegal, Unreported and Unregulated (IUU) Fishing. Available online: <https://www.fao.org/iuu-fishing/en/> (accessed on 10 November 2022).
39. National Intelligence Council. Global Implications of Illegal, Unreported, and Unregulated (IUU) Fishing. Available online: https://www.dni.gov/files/documents/Newsroom/Reports%20and%20Pubs/NIC_White_Paper_on_IUU_Fishing.pdf (accessed on 10 November 2022).
40. VOA. Countries Defy China's Extra-Strict Fishing Moratorium in the South China Sea. Available online: <https://www.voanews.com/a/countries-defy-chinas-extra-strict-fishing-moratorium-in-south-china-sea/3893413.html#:~:text=Taiwan%2C%20Vietnam%20and%20the%20Philippines%20claim%20waters%20inside,quiet%2C%20analysts%20believe%2C%20to%20avoid%20legitimizing%20the%20ban> (accessed on 10 November 2022).

41. Manila Times. PH Refuses to Recognize China Fishing Ban in Disputed Sea. Available online: <https://www.manilatimes.net/2021/05/18/news/ph-refuses-to-recognize-china-fishing-ban-in-disputed-sea/873937/> (accessed on 10 November 2022).
42. Thayer, C. A Closer Look at the ASEAN-China Single Draft South China Sea Code of Conduct. Available online: <https://thediplomat.com/2018/08/a-closer-look-at-the-asean-china-single-draft-south-china-sea-code-of-conduct/> (accessed on 10 November 2022).
43. Huffman, J. Graves Introduce Bipartisan Bill to Combat Iuu Fishing, Human Rights Abuses. Available online: <https://huffman.house.gov/media-center/press-releases/huffman-graves-introduce-bipartisan-bill-to-combat-iiu-fishing-human-rights-abuses> (accessed on 10 November 2022).
44. Daoust, Q. Human Rights Abuses & Organized Crime on IUU Fishing Vessels. Available online: <https://www.americansecurityproject.org/iuufishingcrimes/> (accessed on 10 November 2022).
45. Valencia, M.J.; Lee, Y.H. The South Korea-Russia-Japan fisheries imbroglio. *Mar. Policy* **2002**, *26*, 337–343.
46. Fauzan, F.; Abdullah, K.; Ahmad, M.Z. Border security problems in the waters of the Natuna Islands: Between national boundaries and illegal fishing. *AEGIS J. Int. Relat.* **2019**, *3*, 110–111.
47. Song, A.M. Pawns, pirates or peacemakers: Fishing boats in the inter-Korean maritime boundary dispute and ambivalent governmentality. *Political Geogr.* **2015**, *48*, 60–71.
48. Kim, H.J. Third party fishing in an undelimited area under the Republic of Korea-Japan Fisheries Agreement. *Mar. Policy* **2021**, *125*, 104402.
49. Chang, Y.C.; Zhang, X.D.; Liu, S. Is there a need for a regional fishery agreement in the south china sea? *Hong Kong Law Rev.* **2021**, *51*, 595–596.
50. Zhang, H. Fisheries cooperation in the South China Sea: Evaluating the options. *Mar. Policy* **2018**, *89*, 67–76.
51. Buszynski, L.; Sazlan, I. Maritime claims and energy cooperation in the South China Sea. *Contemp. Southeast Asia* **2007**, *29*, 143–171.
52. Kleinstieber, M. Nationalism and domestic politics as drivers of maritime conflict. *SAIS Rev. Int. Aff.* **2013**, *33*, 15–19.
53. Cotillon, H. Territorial disputes and nationalism: A comparative case study of China and Vietnam. *J. Curr. Southeast Asian Aff.* **2017**, *36*, 51–88.
54. Du, L.; Cao, Q. Discussion on the institutionalization of cooperation in the South China Sea. *Int. Stud.* **2018**, *2*, 90. (In Chinese)
55. Koh, T. Remarks by Tommy T.B. Koh, of Singapore President of the Third United Nations Conference on the Law of the Sea. Available online: https://www.un.org/depts/los/convention_agreements/texts/koh_english.pdf (accessed on 10 November 2022).
56. Yee, A. Maritime territorial disputes in East Asia: A comparative analysis of the South China Sea and the East China Sea. *J. Curr. Chin. Aff.* **2011**, *40*, 165–193.
57. Statement of China's Foreign Ministry on Award of South China Sea Arbitration Initiated by Philippines. Available online: https://www.fmprc.gov.cn/nanhai/chn/snhwtlwcwj/201607/t20160712_8521047.htm (accessed on 10 November 2022).
58. International Law Commission. Draft Articles on Responsibility of States for Internationally Wrongful Acts, Art. 2. *Yearb. Int. Law Comm.* **2001**, *2*, 49.
59. Huh, S. Title to territory in the post-colonial era: Original title and terra nullius in the ICJ judgments on cases concerning Ligitan/Sipadan (2002) and Pedra Branca (2008). *Eur. J. Int. Law* **2015**, *26*, 709–725.
60. Fitzmaurice, A. The genealogy of Terra Nullius. *Aust. Hist. Stud.* **2007**, *38*, 1–15.
61. Christenson, G.A. Attributing acts of omission to the state. *Mich. J. Int'l L.* **1990**, *12*, 312.
62. Hentrei, S.; Soley, X. Force Majeure in Max Planck Encyclopedias of International Law. Available online: <https://opil.ouplaw.com/display/10.1093/law:epil/9780199231690/law-9780199231690-e1042?rsk=3t9Vfn&result=1&prd=MPIL> (accessed on 10 November 2022).
63. Longobardo, M. The Occupation of Maritime Territory under International Humanitarian Law. *Int. Law Stud.* **2019**, *95*, 322–361.
64. Song, Y.H. The British 150-mile fishery conservation and management zone around the Falkland (Malvinas) Islands. *Political Geogr. Q.* **1988**, *7*, 183–197.
65. Kontos, M. Power Games in the Exclusive Economic Zone of the Republic of Cyprus: The Trouble with Turkey's Coercive Diplomacy. *Cyprus Rev.* **2018**, *30*, 51–70.
66. Kao, S.M. International actions against IUU fishing and the adoption of national plans of action. *Ocean. Dev. Int. Law* **2015**, *46*, 2–16.
67. Becker, M.A. Request for an Advisory Opinion Submitted by the Sub-Regional Fisheries Commission (SRFC). *Am. J. Int. Law* **2015**, *109*, 851–858.
68. Code of Conduct for Responsible Fisheries. Available online: <https://www.fao.org/3/v9878e/V9878E.pdf> (accessed on 10 November 2022).
69. Bethel, L.; Jessen, H.; Hollander, J. Implementing the Port State Measures Agreement to combat illegal, unreported and unregulated fishing in the Caribbean. *Mar. Policy* **2021**, *132*, 104643.
70. Long, T.; Widjaja, S.; Wirajuda, H.; Juwana, S. Approaches to combatting illegal, unreported and unregulated fishing. *Nat. Food* **2020**, *1*, 389–391.
71. GCCA+. Nature-Based Solutions for Coasts and Oceans. Available online: <https://www.gcca.eu/stories/nature-based-solutions-coasts-and-oceans#:~:text=Nature->

- based%20solutions%20are%20implemented%20through%20activities%20aiming%20at,%EF%AC%82ood%20and%20erosion%20control%2C%20storm%20protection%2C%20shoreline%20stabilisation%3B (accessed on 10 November 2022).
72. ICJ. Allegations of Genocide under the Convention on the Prevention and Punishment of the Crime of Genocide (Ukraine v. Russian Federation). Available online: <https://www.icj-cij.org/en/case/182> (accessed on 10 November 2022).
 73. Foreign Ministry of the PRC. China Insists on Resolving Disputes between China and the Philippines in the South China Sea Through Negotiations. Available online: https://www.fmprc.gov.cn/nanhai/chn/snhwtlcwj/201607/t20160713_8521053.htm (accessed on 10 November 2022).
 74. Xinjun, Z. “Setting aside disputes and pursuing joint development” at crossroads in South China sea. In *Territorial Disputes in the South China Sea: Navigating Rough Waters*; Huang, J., Billo, A., Eds.; Palgrave Macmillan: London, UK, 2014; pp. 39–53.
 75. Foreign Ministry of the PRC. China is Committed to Maintaining Peace, Stability and Order in the South China Sea. Available online: https://www.mfa.gov.cn/web/wjb_673085/zzjg_673183/bjhysws_674671/bhzcylc/202203/t20220323_10654451.shtml (accessed on 10 November 2022).
 76. Gaunce, J. On the Interpretation of the General Duty of ‘Due Regard’. *Ocean. Yearb.* **2017**, *32*, 27–59.
 77. Oxman, B.H. The principle of due regard. In *The Contribution of the International Tribunal for the Law of the Sea to the Rule of Law: 1996–2016*; International Tribunal for the Law of the Sea, Ed.; Brill Nijhoff: Leiden, Netherland, 2018; pp. 108–117.
 78. Honniball, A.N. Maritime Delineation & Delimitation Transparency Through the IUU Fishing Lens: Low-Hanging Fruit in the Fight Against IUU Fishing. Available online: <https://kims.or.kr/issubrief/kims-periscope/peri293/> (accessed on 10 November 2022).

Disclaimer/Publisher’s Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.