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Reassessing Coastal State Rights and Jurisdiction under UNCLOS: Legal Implications of Unmanned Intelligence, Surveillance, and Reconnaissance (ISR) Operations

by

Hwon Lee

ORCID ID [0000-0002-8364-4930](https://orcid.org/0000-0002-8364-4930)

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Abstract

Faculty of Social Sciences

Southampton Law School

Doctor of Philosophy

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Hwon Lee

This thesis examines the legality of unmanned intelligence, surveillance, and reconnaissance (ISR) operations under the United Nations Convention on the Law of the Sea (UNCLOS). Although UNCLOS constitutes the fundamental legal framework of the law of the sea, it was negotiated without consideration of rapid technological advances, particularly the advent of unmanned systems. The increasing integration of unmanned maritime vehicles (UMVs) into ISR operations raises novel legal and practical questions. The absence of human operators on board, combined with enhanced capabilities of UMVs, has the potential to reshape both the conduct of ISR operations and State responses, thereby exacerbating existing interpretative ambiguities within UNCLOS. The research is guided by the overarching question: to what extent can the strategic use of UMVs influence the interpretation and application of UNCLOS provisions regulating ISR operations? This inquiry is examined across two spatial contexts. Chapters 2 and 3 address the territorial sea. Chapter 2 outlines the principles governing ISR operations, notably the regime of innocent passage, and highlights discrepancies between established principles and emerging practice involving UMVs. Chapter 3 examines frequently advanced arguments concerning unmanned ISR activities, assessing their plausibility and impact on the interpretations of UNCLOS. Chapters 4 and 5 turn to the exclusive economic zone (EEZ). Chapter 4 analyses unmanned ISR operations within the functional balance of Articles 56 and 58 of UNCLOS. Chapter 5 considers broader claims based on parallel navigational rights and the principle of peaceful use.

By combining doctrinal analysis with comparative insights from analogous regimes and jurisprudence, this study fills a scholarly gap in law of the sea literature, which has largely assumed manned operations. It further engages with pressing issues posed by unmanned ISR operations in light of technological realities. Ultimately, the thesis advances the progressive development of international law by providing an academic framework for interpreting UNCLOS in light of UMVs and offers doctrinal and practical guidance to anticipate and mitigate disputes.

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Research Thesis: Declaration of Authorship

Print name: Hwon Lee

Title of thesis: Reassessing Coastal State Rights and Jurisdiction under UNCLOS: Legal Implications of Unmanned Intelligence, Surveillance, and Reconnaissance (ISR) Operations

I declare that this thesis and the work presented in it are my own and has been generated by me as the result of my own original research.

I confirm that:

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2. Where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated;
3. Where I have consulted the published work of others, this is always clearly attributed;
4. Where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work;
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6. Where the thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself;
7. None of this work has been published before submission

Signature: Date:.....

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Definitions and Abbreviations

Chicago Convention Convention on International Civil Aviation

EEZ Exclusive Economic Zone

ICJ International Court of Justice

ILC..... International Law Commission

ISR..... Intelligence, Surveillance and Reconnaissance

ITLOS..... International Tribunal for the Law of the Sea

MSR..... Marine Scientific Research

PCA Permanent Court of Arbitration

UAV Unmanned Aerial Vehicles

UMV..... Unmanned Maritime Vehicle

UNCLOS United Nations Convention on the Law of the Sea

USV Unmanned Surface Vehicle

UUV Unmanned Underwater Vehicle

Chapter 1 Introduction

1.1 Background

The United Nations Convention on the Law of the Sea (UNCLOS) was adopted with the aim of establishing a comprehensive legal order for the seas and oceans which will facilitate international communication, and will promote the peaceful use of the sea and oceans, the equitable and efficient utilisation of their resources, the conservation of their living resources, and the study, protection and preservation of the marine environment.¹ The Convention, taking a zonal approach, delineates the respective rights and duties of coastal States and other States depending on maritime zones. It undoubtedly constitutes the fundamental legal framework of the law of the sea, governing virtually every aspect that could occur at sea. Nevertheless, UNCLOS is not without its limitations, as it exhibits interpretative ambiguities that have given rise to conflicts of interest among States.

One salient example lies in the controversy over Intelligence, surveillance, and reconnaissance (ISR) operations. The legality of such operations has long been contested, particularly in the exclusive economic zone (EEZ), where the legal regime neither explicitly prohibits nor permits them. Moreover, as ISR operations may be characterised both as military activities and as a form of data collection, competing claims have emerged: some seek to legitimise their conduct, while others attempt to justify their restriction within the EEZ.

The rapid advancement of unmanned technologies has accelerated a broader transition in maritime operations from manned to unmanned platforms. ISR operations have been especially affected by the introduction of unmanned vehicles due to the nature of the activities. They are generally described as a dull mission that involves “long-duration undertakings with mundane tasks that are ill-suited for manned systems.”² Given the inherent characteristics of ISR operations and the operational advantages that unmanned vehicles offer, their significant integration into ISR operations is hardly surprising. Consequently, the shift from traditional to unmanned ISR operations has the potential to reshape State behaviours, both in terms of conducting such activities and in responding to them. The absence of personnel on board, by relieving operating States of concerns over the loss of life, may encourage them to conduct ISR operations in a more intrusive or aggressive manner, while simultaneously making coastal

¹ United Nations Convention on the Law of the Sea 1982 (UNCLOS), Preamble.

² United States Department of Defence (DoD), *Unmanned Systems Integrated Roadmap* (FY 2013-2038, 2013) 20.

States more willing to employ forcible measures against such activities. Moreover, the proliferation of unmanned maritime vehicles (UMVs) has the potential to substantially expand both the scope and scale of operations in foreign waters.³ Ultimately, such development carries profound strategic security implications.

UNCLOS represents a landmark achievement in international law, reflecting the outcome of nearly a decade of negotiation. At the same time, however, it must be regarded as a “living treaty”,⁴ subject to continuous interpretation and adaptation. During the negotiations of UNCLOS, the use of unmanned technologies was inconceivable; yet the Convention is now confronted with new challenges that the drafters could not have foreseen at that time. This raises the necessity of re-examining relevant provisions to assess whether their current interpretation and application adequately capture contemporary technological and operational developments. In the absence of such clarification, the growing integration of unmanned vehicles into ISR operations risks producing divergent legal positions among States, thereby leading to the danger of misinterpretation, miscalculation, and ultimately, unnecessary conflict.

1.2 Problem statement

The legality of ISR operations has been widely discussed by other scholars; however, previous analyses tend to focus on the textual interpretation of the provisions and negotiating history, with limited engagement with the implications of emerging technologies. Such examinations are typically premised on the assumption of manned operations or are confined to normative assertions that the law ought to evolve to address new circumstances. To date, not enough studies have sought to address these issues in a comprehensive and integrated manner.

The increasing reliance on UMVs in ISR operations introduces novel circumstances that carry distinct legal and practical implications. A central challenge lies in the ambiguous legal status of UMVs under UNCLOS, which creates interpretative uncertainties.⁵ Such Ambiguity generates

³ Simon McKenzie, ‘Autonomous Technology and Dynamic Obligations: Uncrewed Maritime Vehicles and the Regulation of Maritime Military Surveillance in the Exclusive Economic Zone’ (2021) 11(1) *Asian Journal of International Law* 146, 147.

⁴ *Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970), Advisory Opinion, I.C.J. Reports 1971*, p. 16, para. 53; *Dispute Regarding Navigational and Related Rights (Costa Rica v. Nicaragua), Judgment, I.C.J. Reports 2009*, p. 213, paras. 63-66; See also Tullio Treves, ‘Law of the Sea: UNCLOS as a Living Treaty’ in Jill M Barrett and Richard Barnes (eds), *Law of the Sea: UNCLOS as a Living Treaty* (BIICL 2016); R R Churchill, A V Lowe and A Sander, *The Law of the Sea* (4th ed, Manchester University Press 2022).

⁵ Michael N Schmitt and David S Goddard, ‘International Law and the Military Use of Unmanned Maritime Systems’ (2016) 98(2) *International Review of the Red Cross* 567, 575-582; Natalie

potential loopholes that may be strategically exploited without formally contravening the existing legal framework. The persistent debate concerning the legality of ISR operations well illustrates the Convention's limited capacity to regulate such activities.⁶ Arguably, the integration of UMVs, which introduces an additional layer of legal ambiguity, further aggravates existing uncertainties surrounding ISR operations. The legal ambiguities surrounding the conduct of ISR operations inevitably extend to parallel uncertainties in assessing the legitimacy of measures adopted in response.

As the development of law typically lags behind technological advances, the distinctive features of UMVs may encourage States to employ them strategically up to, but not beyond, the establishment of violation under UNCLOS. Their growing use suggests that operating States perceive the operational advantages of UMVs as outweighing the potential consequences, such as the loss of vehicles or the risk of political frictions. This phenomenon necessitates a closer examination of whether the existing legal framework can properly accommodate such technological developments, and to what extent UNCLOS provides both flexibility and limitations in addressing unmanned maritime operations.

1.3 Relevance of analysis of ISR operations despite Article 298 of UNCLOS

Article 298(1) of UNCLOS allows States, when signing, ratifying or acceding to UNCLOS, to opt out of the compulsory procedures provided for in section 2 under Part XV with respect to disputes concerning military activities.⁷ The provision, while providing a military activity exemption, does not define the term "military activity". ISR operations are generally believed to constitute a part of military activities; consistent doctrinal and scholarly commentary treats ISR operations as a military activity in nature and clearly distinguishes them from the MSR regime.⁸

Klein, 'Maritime Autonomous Vehicles within the International Law Framework to Enhance Maritime Security' (2019) 95 *International Law Studies* 244, 251-253.

⁶ F David Froman, 'Uncharted Waters: Non-innocent Passage of Warships in the Territorial Sea' (1984) 21 *San Diego Law Review* 625, 628. "The violations highlight the inadequacy of the current state of international law to prevent, control, or remedy effectively non-innocent passage of foreign warships within the territorial sea during time of peace."

⁷ UNCLOS, art 298(1)(b).

⁸ United States Navy, *The Commander's Handbook on the Law of Naval Operations* (NWP 1-14M, March 2022), para 2.6.2.2; Raul Pedrozo, 'Preserving Navigational Rights and Freedoms: The Right to Conduct Military Activities in China's Exclusive Economic Zone' (2010) 9(1) *Chinese Journal of International Law* 9, 21-22; Sam Bateman, 'A Response to Pedrozo: The Wider Utility of Hydrographic Surveys' (2011) 10(1) *Chinese Journal of International Law* 177, 178-180; Haiwen Zhang, 'Is It Safeguarding the Freedom of Navigation or Maritime Hegemony of the United States? - Comments on Paul (Pete) Pedrozo's Article on Military Activities in the EEZ'

Since many States, including Russia, China, and France, have made Declarations under Article 298(1)(b),⁹ a question may arise as to whether an analysis of ISR operations, even with the increasing use of unmanned vehicles, retains meaningful legal implications given the military exemption under Article 298. Nevertheless, there remain several compelling legal and academic reasons to pursue such an analysis.

Firstly, although UNCLOS does not provide the definition of “military activities”, the Convention nevertheless refers to a variety of military-related activities, including the threat or use of force, weapon exercises, intelligence collection, and launching a military device.¹⁰ These references indicate that the term “military activities” is used in a broader sense to encompass a range of operations undertaken exclusively for military purposes. By contrast, the term “military activities” in Article 298(1)(b) must be distinguished, as it has been interpreted in a more qualified sense in the context of optional exceptions to compulsory dispute settlement. The meaning of the latter has been clarified through jurisprudence.¹¹ Most judicial attempts have focused on the *context*, whether military or law enforcement, in which the relevant acts, such as use of force, confrontation, arrest, or detention, are carried out. On this basis, “military activities” under Article 298(1)(b) are more appropriately understood as situations of a military character, rather than as a fixed category of military operations.

In the view of the International Tribunal for the Law of the Sea (ITLOS), the distinction between military and law enforcement activities cannot rest solely on the type of vessels employed, as the functions of naval and law enforcement vessels have become considerably blurred.¹² Nor

(2010) 9(1) *Chinese Journal of International Law* 31, 37-42; Simon McKenzie, ‘Autonomous Technology and Dynamic Obligations: Uncrewed Maritime Vehicles and the Regulation of Maritime Military Surveillance in the Exclusive Economic Zone’ (2021) 11(1) *Asian Journal of International Law* 146, 159-160.

⁹ United Nations Convention on the Law of the Sea, Declaration of the Russian Federation (12 March 1997), Declaration of the People’s Republic of China (25 August 2006), and Declaration of France (11 April 2008)

<https://treaties.un.org/Pages/ViewDetailsIII.aspx?src=TREATY&mtdsg_no=XXI-6&chapter=21&Temp=mtdsg3&clang=_en#EndDec> accessed 20 August 2025.

¹⁰ UNCLOS, art 19.

¹¹ Case concerning the Detention of Three Ukrainian Naval Vessels (Ukraine v. Russian Federation), Provisional Measures, Order of 25 May 2019; Dispute concerning Coastal State Rights in the Black Sea, Sea of Azov, and Kerch Strait (Ukraine v. Russian Federation), Preliminary Objections, Award of 21 February 202; Dispute Concerning the Detention of Ukrainian Naval Vessels and Servicemen (Ukraine v. Russian Federation), Preliminary Objection, Award of 27 November 2021, PCA Case No 2019-28; South China Sea Arbitration (The Republic of Philippines v. The People’s Republic of China), (Award), PCA Case No 2013-19, 12 July 2016.

¹² *Case concerning the Detention of Three Ukrainian Naval Vessels (Ukraine v. Russian Federation)*, Provisional Measures, Order of 25 May 2019, p. 283, para. 64; see also *Dispute*

can it depend solely on the characterisation of the activities advanced by the disputing Parties, since such characterisation may be subjective and at variance with the actual conduct.¹³

Instead, the Tribunal has emphasised that the distinction must be primarily based on an objective evaluation of the nature of the activities in question, taking into account the relevant circumstances in each case.¹⁴ Accordingly, in determining whether a dispute concerns “military activities” under article 298(1)(b), it is necessary to examine a series of events leading up to the contested actions, to clarify whether they took place within the context of a military or law enforcement operation.¹⁵

This suggests that the underlying dispute, which triggers an escalation, does not itself need to be military in nature for the military exemption under Article 298(1)(b) to be invoked. Whatever its initial character, such a dispute may or may not lead to military activities, depending on the relevant circumstances. As the Arbitral Tribunal in the *South China Sea Arbitration* noted, Article 298(1)(b) applies to “dispute concerning military activities” and not to “military activities”.¹⁶ This contextual approach was reaffirmed in the *Case Concerning the Detention of Three Naval Vessels*. At the provisional measures phase, the Tribunal noted that the underlying dispute concerned the passage of Ukrainian naval vessels through the Kerch Strait and considered it difficult to assert in general that the mere passage of a naval ship *per se* amounts to a military activity.¹⁷ In the Award on *Preliminary Objections*, however, the Arbitral Tribunal divided the sequence of events into three phases. The first phase involved alleged manoeuvring by vessels of both States, either to block or to secure passage, accompanied by Ukrainian warships ignoring orders from the Russian coast guard and a prolonged standoff in which vessels of one State were surrounded by those of the other.¹⁸ This resembles “a quintessentially military situation”, noted in the *South China Sea Arbitration*, “involving the military forces of one side and a combination of military and paramilitary forces on the other, arrayed in opposition to one another”.¹⁹ On this basis, the Tribunal held that this confrontation constituted military activities

concerning Coastal State Rights in the Black Sea, Sea of Azov, and Kerch Strait (Ukraine v. Russian Federation), Preliminary Objections, Award of 21 February 2020, para. 333.

¹³ *Case concerning the Detention of Three Ukrainian Naval Vessels (Ukraine v. Russian Federation)*, Provisional Measures, Order of 25 May 2019, p. 283, para. 65.

¹⁴ *Ibid.*, p. 283, para. 66.

¹⁵ *ibid.*, p. 283, para. 67.

¹⁶ *The South China Sea Arbitration (Republic of the Philippines v. People’s Republic of China)*, Award of 12 July 2016, PCA Case No 2013-19, para. 1158.

¹⁷ *Case concerning the Detention of Three Ukrainian Naval Vessels (Ukraine v. Russian Federation)*, Provisional Measures, Order of 25 May 2019, p. 283, para. 68.

¹⁸ *Dispute Concerning the Detention of Ukrainian Naval Vessels and Servicemen (Ukraine v. Russian Federation)*, Preliminary Objection, Award of 27 November 2021, PCA Case No 2019-28, para. 122.

¹⁹ *The South China Sea Arbitration*, para. 1161.

within the meaning of Article 298(1)(b) and, therefore, fell outside its jurisdiction. The subsequent phases were either reserved for consideration on merit (the second phase) or determined not to involve military activities (the third phase).²⁰

This indicates that a military situation may arise through escalation, irrespective of the nature of the underlying dispute. The first phase of the *Kerch Strait* dispute, read together with the Arbitral Tribunal's statement in the *South China Sea Arbitration*, suggests several objective or functional criteria to qualify "military" within the meaning of Article 298(1)(b). The mere presence of warships, or even the exercise of force, does not necessarily satisfy these criteria. By the same reasoning, ISR operations are not, in themselves, automatically characterised as "military activities" for the purpose of invoking the military exemption under Article 298(1)(b). Instead, ISR operations may form the underlying dispute when they are conducted unlawfully, when they are unlawfully restricted by another State, or when orders given to them are ignored or refused. In such circumstances, ISR operations may escalate into military confrontation depending on the circumstances. With the increasing reliance on unmanned vehicles for ISR operations, the potential for misinterpreting their status, intention or operational objectives is even greater, thereby raising the risks of miscalculation and escalation.

To sum up, ISR operations, even when conducted by warships and thus possessing a military character, are unlikely on their own to constitute "military activities" within the meaning of Article 298(1)(b). Only where a sequence of events cumulatively satisfies certain objective criteria, though such criteria are necessarily context-dependent rather than definitive, may ISR operations escalate into situations qualifying as military activities. Accordingly, Article 298(1)(b) does not undermine the legal value of analysing ISR operations under UNCLOS.

Secondly, Article 289 functions as a jurisdictional provision, rather than a substantive one. When invoked, it merely precludes recourse to the compulsory dispute settlement mechanism of Part XV, but does not remove or diminish the substantive obligations of States under UNCLOS or general international law. Relevant provisions of UNCLOS, such as Articles 56 and 58 in the EEZ, together with other rules of international law, including Article 2(4) of the UN Charter,²¹ continue to govern State conduct, irrespective of the availability of formal adjudication. The

²⁰ *Dispute Concerning the Detention of Ukrainian Naval Vessels and Servicemen (Ukraine v. Russian Federation)*, Preliminary Objection, Award of 27 November 2021, PCA Case No 2019-28, paras. 123-124. "The second phase starts from the time that the Ukrainian vessels began to leave the anchorage area and were ordered to stop. It continues until the Ukrainian vessels were boarded and the vessels and their crews arrested." "The third phase commences after the arrest of the Ukrainian vessels and involves the continued detention of the vessels and their crews and the prosecution of the Ukrainian serviceman."

²¹ Charter of the United Nations 1945 (UN Charter).

rapid technological evolution of unmanned systems is likely to complicate the current debates. Since the use of unmanned vehicles for maritime operations was not envisaged during the negotiation of UNCLOS, the Convention does not address the distinct operational and legal challenges they pose. Their increasing deployment risks expanding the legal grey zone surrounding ISR operations, thereby making doctrinal clarification increasingly urgent.

Analysing the legality of unmanned ISR operations is therefore of pressing relevance. Such analysis illuminates how future State practice might develop, clarifies the rights and obligations of States in order to prevent escalation and misinterpretation, and provides insight into how the advent of new technologies may affect the interpretation and classification of “military activities”. As such, Article 298 neither renders the analysis of unmanned ISR operations legally irrelevant nor diminishes the importance of ensuring legal clarity regarding such activities.

1.4 Terminology

The term “ISR operations” does not appear expressly in UNCLOS, although such activities may be regarded as falling within the broad category of “military activities”. For the purpose of this thesis, “ISR operations” refers to intelligence, surveillance, and reconnaissance activities at sea, whether in the territorial sea or the EEZ, and irrespective of whether they are undertaken by manned or unmanned platforms. While alternative expressions such as “intelligence gathering” or “military data collection” could be employed, the term “ISR operations” is adopted here because it captures the broader operational cycle of intelligence, surveillance, and reconnaissance. It encompasses not only the act of data acquisition, but also the wider operational context in which such activities are embedded, including routine, persistent, covert and strategic military missions.²² ISR operations exhibit a dual character. On the one hand, they are integral to routine naval practice and frequently characterised as military in nature. On the other hand, they involve systematic observation and information gathering that resemble marine scientific research (MSR), hydrographic survey, and other forms of data collection. This dual character lies at the heart of the legal ambiguity surrounding ISR operations, as States advance competing claims depending on how such activities are framed under UNCLOS. By employing the broader term “ISR operations”, this thesis engages with the full spectrum of arguments and provides a comprehensive analytical basis for assessing their legality under the law of the sea.

²² James Kraska, *Maritime Power and the Law of the Sea: Expeditionary Operations in World Politics* (Oxford University Press 2011) 235; Raul (Pete) Pedrozo, ‘Preserving Navigational Rights and Freedom: The Right to Conduct Military Activities in China’s Exclusive Economic Zone’ (2010) 9(1) *Chinese Journal of International Law* 9.

In addition, this thesis employs the expression “traditional ISR operations” to denote activities conducted through manned platforms in their conventional form, while “unmanned ISR operations” refers to those carried out by unmanned vehicles with distinct operational dynamics. This distinction enables a clearer analytical separation between established practices and the emerging forms of ISR operations shaped by technological developments.

Finally, the term “unmanned vehicles” is used as an umbrella concept encompassing both “unmanned aerial vehicles (UAVs)” and “unmanned maritime vehicles (UMVs)”. The latter further comprises “unmanned surface vehicles (USVs)” and “unmanned underwater vehicles (UUVs)”. Although these platforms differ in design and operation, their deployment raises broadly similar legal and practical challenges under UNCLOS. For this reason, the term “UMVs” is collectively used, unless a distinction between USVs and UUVs is analytically necessary. The thesis occasionally employs the term “drones”, but only when reflecting terminology used in specific incidents, particularly in reference to UAVs.

1.5 Aims and scope

The thesis seeks to examine areas of legal uncertainty arising from unmanned ISR operations in the territorial sea and the EEZ, and considers how relevant provisions of UNCLOS might be interpreted more appropriately in light of technological developments, within the boundaries of the current legal framework. The ultimate aim is to contribute to a more coherent harmonisation of the rights and interests of coastal and other States in responding to the legal challenges posed by unmanned ISR operations.

Unmanned ISR operations have been selected as the focus of this research for two principal reasons. First, owing to their inherent characteristics, typically long in duration, repetitive in nature, and operationally monotonous, ISR operations are particularly well-suited to replacement by unmanned platforms. UMVs not only substitute for manned counterparts but also surpass them in both performance and adaptability. Increasingly ubiquitous, multipurpose, and autonomous, UMVs significantly enhance ISR capabilities and have the potential to reshape operational concepts. It may therefore be hypothesised that their strategic deployment could have broader implications for the interpretation of coastal States’ rights under UNCLOS.

Second, while a majority of commentators tend to support the permissibility of ISR operations,²³ restrictive views continue to be advanced.²⁴ Such positions frequently rely on perceived interpretation gaps, and the advent of UUVs may provide additional grounds for these claims. Equally important is the observable tendency of some coastal States to employ forcible measures against unmanned vehicles engaged in ISR operations, which highlights the need to re-evaluate the relevant provisions and to assess justifications for such actions.

To ensure analytical clarity, this thesis confines its scope to peacetime operations. Unlike unmanned systems deployed on land, which typically invoke the law of armed conflict, unmanned platforms at sea are largely employed in routine peacetime military activities, such as freedom of navigation operations or maritime security patrols.²⁵ Accordingly, the analysis is situated within the framework of peacetime international law, with particular emphasis on UNCLOS, rather than the law of naval warfare.

Lastly, regarding the spatial scope, the research addresses ISR operations conducted in the territorial sea and EEZ, each of which raises distinct legal issues in relation to UUVs. In the territorial sea, unmanned ISR operations raise questions about activities that may fall within the notion of being “non-innocent but not unlawful”, as well as the measures that coastal States may lawfully adopt in response. In the EEZ, where the legality of traditional ISR operations has long been contested, it is necessary to reassess established justifications in light of UUVs, and to consider whether their deployment may generate additional grounds for restricting unmanned ISR operations.

1.6 Research questions

Building on the aims and scope outlined above, the thesis investigates specific legal questions arising at the intersection of unmanned ISR operations and the law of the sea. In particular, it

²³ See generally Mark J Valencia, ‘Introduction: Military and Intelligence Gathering Activities in the Exclusive Economic Zones: Consensus and Disagreement II’ (2005) 29 *Marine Policy* 97; Moritaka Hayashi, ‘Military and Intelligence Gathering Activities in the EEZ: Defining of Key Terms’ (2005) 20 *Marine Policy* 123; Stuart Kaye, ‘Freedom of Navigation, Surveillance and Security: Legal Issues Surrounding the Collection of Intelligence from beyond the Littoral’ (2005) 24 *Australian Yearbook of International Law* 93; Raul (Pete) Pedrozo, ‘Preserving Navigational rights and Freedoms: The Right to Conduct Military Activities in China’s Exclusive Economic Zone’ (2010) 9 *Chinese Journal of International Law* 9; Efthymios Papastavridis, ‘Intelligence Gathering in the Exclusive Economic Zone’ (2017) 93 *International Law Studies* 446.

²⁴ See generally Ren Xiaofeng and Cheng Xizhong, ‘A Chinese Perspective’ (2005) 29 *Marine Policy* 139; Li Guangyi, Wan Binhua and Zhu Hongjie, ‘On the Rights and Obligations of Military Activities in the Exclusive Economic Zone’ (2011) *China Oceans Law Review* 148.

²⁵ US Navy, NWP 1-14M (March 2022).

examines the extent to which UNCLOS can accommodate the challenges posed by unmanned technologies, and the degree to which coastal and other States may invoke its provisions to support their positions.

The research proceeds on the hypothesis that the growing strategic use of UMVs encourages more intrusive and aggressive ISR operations, thereby intensifying coastal States' security concerns and prompting a stronger inclination to restrict such activities. The alleged justifications advanced in relation to unmanned ISR operations must therefore be critically assessed within the existing legal framework, especially from the perspective of coastal States.

The core research question is as follows:

To what extent does the strategic use of UMVs affect the interpretation and application of UNCLOS provisions governing ISR operations in the foreign territorial sea and the EEZ?

This overarching question is divided into two sub-questions, corresponding to the spatial scope of the research – the territorial sea and the EEZ – each raising distinct legal issues for ISR operations, increasingly shaped by the use of UMVs.

Sub-question 1, explored throughout Chapters 2 and 3, is:

Whether, and to what extent, a coastal State may lawfully employ forcible measures against foreign unmanned ISR operations conducted in its territorial sea.

ISR operations fall under the regime of innocent passage; however, even when passage is deemed non-innocent, the use of force is generally prohibited under international law. The absence of human operators on board has led to increasingly intrusive ISR practices, and coastal States have been observed to respond with force against UMVs engaged in such operations. This raises the question of whether, under certain circumstances, forcible measures taken against unmanned ISR platforms might be tolerated despite apparent inconsistency with existing rules, including the prohibition of the use of force under Article 2(4) of the UN Charter, the principle of sovereign immunity, and the coastal State's limited enforcement powers over security matters in the territorial sea. The analysis, therefore, seeks to evaluate the validity of emerging arguments concerning the conduct of and response to unmanned ISR operations, and to narrow the interpretative gaps surrounding this issue.

Sub-question 2, explored throughout Chapters 3 and 4, concerns:

To what extent may the strategic use of UMVs affect prevailing interpretations of the legality of ISR operations in the EEZ, and could it itself constitute an additional legal basis for coastal States to restrict such operations?

Restrictive claims concerning ISR operations in the EEZ have historically developed in response to interpretative ambiguities in UNCLOS provisions, which have provided varying grounds for both coastal and other States to advance their respective positions.²⁶ Legal uncertainty has often encouraged States to exploit such ambiguities in pursuit of their strategic interests.²⁷ The introduction of UMs, with their ambiguous legal status and novel operational modalities, may provide an additional basis for restrictive arguments. Their deployment adds further complexity to existing disputes over ISR operations. It may bolster coastal States' claims, reinforce the navigational freedoms of other States, or produce no significant change. Whatever the outcome, a comprehensive re-examination of the legality of ISR operations in light of UMs is required. Such an analysis helps to clarify the scope of existing interpretations, anticipates emerging arguments, and mitigates the risks of dispute escalation.

1.7 Significance of this study

This thesis seeks to address the interpretative gaps in UNCLOS by examining the legality of unmanned ISR operations in both the territorial sea and the EEZ. The significance of this inquiry lies in three interrelated dimensions. First, it fills a scholarly gap by analysing ISR operations through the lens of unmanned technologies, a subject relatively overlooked in the existing literature. Second, it engages with an issue of immediate practical relevance. Unmanned ISR operations are not a theoretical abstraction but activities with direct implications for maritime security, potentially intensifying tension between States. The debate over their legality is therefore not confined to academic discourse but directly connected to the potential escalation of military conflicts. The advent of UMs has further transformed the strategic environment by enabling “provocative” operations without endangering human lives, thereby heightening the risk of disputes. Third, by treating UNCLOS as a “living treaty”, this thesis contributes to the progressive development of international law. It proposes a framework for interpreting and applying the UNCLOS provisions in light of rapid technological change. In this way, the research not only clarifies the current law but also suggests pathways for its adaptation, thereby offering both doctrinal and policy-relevant contributions to the law of the sea.

The thesis does not purport to provide a definitive practical solution. Rather, it seeks to offer theoretical insight into the applicability of the current legal framework to UMs, and into how

²⁶ Different grounds have been invoked, ranging from marine scientific research, and the protection of the marine environment to the principle of the peaceful use of the sea.

²⁷ Matt Bartlett, ‘Game of Drones: Unmanned Maritime Vehicles and the Law of the Sea’ (2018) 24 *Auckland University Law Review* 66, 81; Alexander Lott, *Hybrid Threats and the Law of the Sea: Use of Force and Discriminatory Navigational Restrictions in Straits* (Brill Nijhoff 2022) ch 15, 238.

relevant provisions of UNCLOS may be interpreted in light of their deployment. In doing so, the thesis seeks to bridge the gap between doctrine and practice, thereby contributing to greater clarity in ongoing debate over the legality of ISR operations. Emerging practices demonstrate a tendency to exploit legal ambiguities in the so-called “grey area”. Unless effectively addressed, such practices risk becoming entrenched, generating further uncertainty and potential disputes. Exclusive reliance on judicial or arbitral settlement, however, is unrealistic given the rapid pace of technological development and the continual emergence of new claims that challenge the normative rules designed to maintain peace and order at sea. This thesis is therefore positioned to contribute an academic framework through which the challenges posed by UUVs can be anticipated and critically assessed.

1.8 Methodology

Methodologically, the research has been carried out primarily through doctrinal analysis of primary sources, with UNCLOS serving as the principal point of departure for each Chapter of the thesis. Its provisions are examined alongside their negotiating history to uncover the rationale behind their formulation and the original concepts underpinning particular legal regimes. The doctrinal analysis is supplemented by a comparative examination of analogous regimes, most notably the Convention on International Civil Aviation (Chicago Convention).²⁸ This layered approach offers a valuable perspective for evaluating ISR operations under UNCLOS, demonstrating how cross-regime analogies can shed light on interpretative challenges in the maritime context.

Relevant international cases, principally from the International Court of Justice (ICJ), International Tribunal for the Law of the Sea (ITLOS), and Permanent Court of Arbitration (PCA), are analysed to derive useful jurisprudence and insight that may, to varying degrees, be applicable to ISR operations. Where appropriate, national laws are also examined in order to assess their interaction with, and conformity to, international law.

In addition, a comprehensive review of the relevant literature has been undertaken, encompassing both majority and minority views in order to capture the full spectrum of scholarly debate. This has been complemented by an examination of emerging State behaviours concerning unmanned technologies, which seem to contrast with the theoretical norms. Lastly, the analysis traces the technological trajectory from early unmanned vehicles to contemporary UUVs, with a view to anticipating future developments relevant to ISR operations. By relying on

²⁸ Convention on International Civil Aviation 1944 (Chicago Convention).

treaty interpretation, jurisprudence, State practice, and secondary literature, the thesis evaluates the research questions outlined above and aims to clarify aspects of an ongoing and unsettled debate.

It must be acknowledged, however, that this methodology has certain limitations. Doctrinal analysis, by its nature, cannot capture the full complexity of operational practice or provide empirical verification of States' conduct. The analysis of national law and emerging State behaviour is also constrained by the availability of reliable sources, and technological projections necessarily involve a degree of speculation. Moreover, given the rapid pace of technological development and the impossibility of predicting with certainty the future direction of such progress, certain parts of the analysis inevitably rest on informed assumptions about the likely trajectory of unmanned systems and their implications for ISR operations. These assumptions do not purport to predict future developments with certainty but rather to provide a reasoned basis for evaluating how the law of the sea might respond to plausible scenarios. Despite these limitations, the chosen methodology offers the most appropriate and rigorous framework for addressing the interpretative challenges posed by unmanned ISR operations within the law of the sea.

1.9 Overview of the thesis

This thesis mainly comprises four parts. The first two examine the legal implications of unmanned ISR operations in the territorial sea, while the latter two focus on the EEZ. Chapter 2 begins by analysing existing principles applicable to ISR operations in the territorial sea, including the regime of innocent passage, the extent of coastal States' prescriptive and enforcement powers, and the principle of sovereign immunity. Particular attention is given to the controversial notion of activities that may be regarded as "non-innocent but not unlawful", which complicates the scope of permissible response by coastal States. The chapter then turns to emerging situations in both the aviation and maritime contexts, highlighting how the use of unmanned vehicles appears to encourage more intrusive ISR operations and, in turn, more forceful responses by coastal States. Inconsistencies in understanding the legal status and capabilities of UUVs have led to divergent State behaviour, creating gaps between legal principles and operational realities. Chapter 2, therefore, identifies the risks posed by such inconsistencies and underscores the need to evaluate the validity of emerging arguments in law.

Chapter 3 builds on these observations by reviewing and assessing the plausibility of the arguments identified in Chapter 2. The analysis narrows to four categories of frequently advanced claims to justify forceful measures against unmanned ISR operations: (1) reliance on

Chapter 1

self-defence under Article 51 of the UN Charter; (2) classification of UUVs as warships and its implications for sovereign immunity; (3) the questionable navigational rights of deployed UUVs and their immunity status; (4) the distinctive characteristics of unmanned technologies. By evaluating these claims, Chapter 3 assesses whether any of those may plausibly lower the threshold of exercising forceful measures against unmanned ISR operations.

Chapter 4 shifts focus to the EEZ, examining the implications of unmanned ISR operations within the functional framework of Part V of UNCLOS. The chapter distinguishes between claims based on the balance of rights under Articles 56 and 58, namely the coastal States' exclusive economic rights and the others' freedom of navigation, and broader arguments advanced under the other relevant provisions or general provisions of UNCLOS. Since ISR operations may be characterised as data collection activities, the analysis particularly touches on the categorisation issue between MSR and other forms of data collection activities. In addition, although the prevailing view holds that ISR operations fall within the scope of Article 58(1), the distinct features of UUVs, such as enhanced operational modalities, limited communication, and a higher degree of autonomy, have the potential to affect the balance between coastal and other States' rights. In this regard, Chapter 4 undertakes a careful re-evaluation of the due regard obligation under Articles 56(2) and 58(3), and analyses its application to ISR operations.

Lastly, Chapter 5 addresses claims that extend beyond the specific rights and obligations of coastal and other States set out in Part V of UNCLOS. It examines two arguments advanced in the context of unmanned ISR operations: (1) the parallel navigational rights of coastal and other States in the EEZ and (2) the principle of peaceful use of the sea. The first inquiry considers situations where concurrent navigational rights under Article 58(1) collide, and examines compliance with the due regard obligation. The second evaluates the extent to which security-based restrictions asserted by some coastal States can be grounded in the principle of the peaceful use of the sea. Although residual claims of security jurisdiction in the EEZ have generally been dismissed, the distinctive operational potential of UUVs may intensify coastal State concerns and render such arguments more persuasive. This chapter, therefore, focuses on the strategic and versatile operational potential of UUVs. Such discussion inevitably involves some degree of informed hypothesis by envisaging contemporary ISR scenarios involving unmanned platforms. However, it does not seek to invent a new competence of the coastal State within the zone or to argue that coastal States possess security jurisdiction in the EEZ. Rather, it suggests that an appropriate assessment of such claims requires careful consideration of the technological characteristics and foreseeable uses of UUVs.

Chapter 2 ISR Operations in the Territorial Sea and Emerging Practices with the Use of Unmanned Vehicles

2.1 Introduction

The rapid development of unmanned technologies, including UAVs and UUVs, and their increasing integration into ISR operations, has complicated the interpretation and application of the relevant UNCLOS provisions. This is hardly surprising, as the Convention was negotiated at a time when maritime operations were conducted exclusively by manned vessels, and subsequent technological advances have outpaced the regulatory clarity under UNCLOS.

Even traditional ISR operations remain subject to ambiguity. While they clearly fall within the category of non-innocent passage under Article 19, they are not necessarily unlawful under international law. The concept of being “non-innocent but not unlawful” suggests that ISR operations generally remain below the threshold of unlawfulness, such as the prohibition of the threat or use of force under Article 2(4) of the UN Charter. This understanding is closely tied to debates over the permissible scope of coastal State responses. The use of UUVs in ISR operations arguably exacerbates these ambiguities, raising challenges for the application of key provisions, including the right of innocent passage (Articles 17 and 19), the definition of a warship (Article 29), sovereign immunity (Article 32), and the enforcement jurisdiction of coastal States (Articles 21 and 25). Unless clarified in light of emerging circumstances, such ambiguities risk undermining legal accountability.

The combined effect of existing legal uncertainties and the increasing use of UUVs gives rise to two tendencies. First, because the use of UUVs does not place human lives at direct risk, operating States may deliberately conduct ISR operations with greater persistence and intrusiveness, even while formally acknowledging the rules of innocent passage. Secondly, this dynamic encourages coastal States to employ forcible measures more readily against unmanned ISR operations than against manned ones.²⁹ In practice, State behaviour often diverges from the established interpretation of the relevant provisions. This underscores the need for doctrinal clarification and legal explanation that can accommodate changing

²⁹ See generally Joshua L Cornthwaite, ‘Can We Shoot Down That Drone? An Examination of International Law Issues Associated with the Use of Territorially Intrusive Aerial and Maritime Surveillance Drones in Peacetime’ (2019) 52 *Cornell International Law Journal* 475.

circumstances. Such efforts must carefully consider the unique characteristics and implications of unmanned vehicles, while assessing how emerging States' behaviours may be situated within the existing legal framework.

To address these issues, this chapter first examines the relevant provisions on ISR operations within the regime of innocent passage and other relevant provisions under UNCLOS. It then considers emerging practices and operational responses associated with unmanned technologies. In the absence of State practice, observable operational conduct may still serve as important indicators of the way in which the law is understood and applied in practice.

2.2 Analysis of existing principles regarding ISR operations in the territorial sea

2.2.1 Traditional ISR operations: *prima facie* “non-innocent”

UNCLOS, taking a zonal approach, provides different scopes of rights and duties to coastal and foreign States depending on the maritime zone. The closer to the landward, the higher degrees of authority coastal States are entitled to exercise. The territorial sea is a national water space established with a limit not exceeding 12 nautical miles from baselines.³⁰ According to Article 2(1) of UNCLOS, the sovereignty of a coastal State extends, beyond its land territory and internal waters and, in the case of an archipelagic State, its archipelagic waters, to an adjacent belt of sea, described as the territorial sea. While the provision places internal waters and archipelagic waters on the same footing as land territory, it provides that sovereignty “extends” to the territorial sea.³¹ In addition, Article 2(3) stipulates that the sovereignty over the territorial sea is exercised “subject to this Convention and to other rules of international law”.³² This indicates the sovereignty of the coastal State in the territorial sea is not absolute, in contrast to the more complete sovereignty exercised over land territory, internal water, and archipelagic waters.

One such exception is the right of innocent passage granted to ships of all States, whether coastal or landlocked, through the territorial sea.³³ Article 14(4) of the Convention on the Territorial Sea and the Contiguous Zone (1958 Geneva Convention), as a predecessor of Article 19 of UNCLOS, provides the single criterion that “Passage is innocent so long as it is not

³⁰ UNCLOS, art 3.

³¹ “*ARA Libertad*” (*Argentina v. Ghana*), Provisional Measures, Order of 15 December 2012, Joint Separate Opinion of Judges Wolfrum and Cot, para. 25.

³² UNCLOS, art 2(3).

³³ Convention on the Territorial Sea and Contiguous Zone 1958 (1958 Geneva Convention), art 14(1); UNCLOS, art 17.

prejudicial to the peace, good order or security of the coastal State. [...]”. However, as there was no attempt to clarify the terms “peace, good order, or security”,³⁴ this single formula was criticised at that time for having a higher degree of generality and abstraction. Burke argued that the definition of innocent passage should be formulated “with maximum precision and certainty of reference” to restrain the discretion of coastal States.³⁵ Recognising the need to clarify which acts are in fact considered prejudicial to the peace, good order and security of the coastal States, UNCLOS adopted and inserted the list of non-innocent activities under Article 19(2) as an objective test.³⁶ Article 19 comprises two paragraphs. While Article 19(1) offers a subjective meaning of innocent passage – “Passage is innocent so long as it is not prejudicial to the peace, good order or security of the coastal State. [...]” – Article 19(2) provides the objective list of non-innocent activities. Article 19(2) specifies the following activities as prejudicial to the peace, good order, or security of the coastal State:

- (a) any threat or use of force against the sovereignty, territorial integrity or political independence of the coastal State, or in any other manner in violation of the principles of international law embodied in the Charter of the United Nations;
- (b) any exercise or practice with weapons of any kind;
- (c) any act aimed at collecting information to the prejudice of the defence or security of the coastal State;
- (d) any act of propaganda aimed at affecting the defence or security of the coastal State;
- (e) the launching, landing or taking on board of any aircraft;
- (f) the launching, landing or taking on board of any military device;
- (g) the loading or unloading of any commodity, currency or person contrary to the customs, fiscal, immigration or sanitary laws and regulations of the coastal State;
- (h) any act of wilful and serious pollution contrary to this Convention;
- (i) any fishing activities;
- (j) the carrying out of research or survey activities;

³⁴ Myron H Nordquist (ed), *United Nations Convention on the Law of the Sea, 1982: A Commentary*, vol II (Martinus Nijhoff 1993) 167.

³⁵ William T Burke, ‘Contemporary Law of the Sea: Transportation, Communication and Flight’ (1976) 2 *Yale Studies in World Public Order* 183, 210.

³⁶ In the Sea-Bed Committee, Fiji in an explanatory not commented that: The innocence of passage is still to be determined by relation to the peace, good order and security of the coastal State, but an objective test is sought to be applied in determining what acts in fact considered to be prejudicial to the peace, good order and security of the coastal State. see UN Doc A/AC.138/SC.II/L.42 and Corr 1, art 3, paras 1-2, reprinted in (1973) vol III *Official Records of the Sea-Bed Committee* 91, 92 (Fiji).

- (k) any act aimed at interfering with any systems of communication or any other facilities or installations of the coastal State;
- (l) any other activity not having a direct bearing on passage.

ISR operations seem to fall well within the list of non-innocent activities: “any act aimed at collecting information to the prejudice of the defence or security of the coastal State”.³⁷ However, this paragraph involves a degree of assessment by the coastal State in determining the innocence of the passage, as it does not specify the amount of information that may be incidentally collected during normal passage before crossing the threshold into non-innocent passage.³⁸ In addition, information that is prejudicial to the defence or security of the coastal State contains subjective elements.

The passage of warships is closely linked to ISR operations. As modern warships are equipped with ISR capabilities, they may easily engage in ISR activities while navigating. The *Black Sea Bumping* incident may well demonstrate the practical difficulty of defining the precise contour of the innocent passage by warships. In 1988, the two US warships, USS *Yorktown* and USS *Caron*, while conducting the Freedom of Navigation programme, were bumped by two Soviet warships. Both US warships were reportedly heavily equipped with electronic sensors.³⁹ On that basis, Secretary of Defence Frank Carlucci observed that all ships equipped with intelligence capabilities could not avoid intelligence gathering.⁴⁰ Admiral William Crowe, Chairman of the Joint Chiefs of Staff, further emphasised that intelligence gathering does not render a passage non-innocent if it occurs in the process of the passage; however, a vessel cannot do “anything unusual” for the purpose of intelligence collection while engaging in innocent passage.⁴¹

Despite the absence of precise contours regarding the regime of innocent passage, the matter was clarified following the Jackson Hole Agreement between the US and the Soviet Union, which affirmed that “All ships, including warships, regardless of cargo, armament or means of propulsion, enjoy the right of innocent passage through the territorial sea in accordance with

³⁷ UNCLOS, art 19(2)(c).

³⁸ James Kraska, ‘Intelligence Collection and the International Law of the Sea’ (2022) 99 *International Law Studies* 602, 617.

³⁹ Richard Halloran, ‘2 U.S. Ships Enter Soviet Waters off Crimea to Gather Intelligence’ (*New York Times*, 19 March 1986) <<https://www.nytimes.com/1986/03/19/world/2-us-ships-enter-soviet-waters-off-crimea-to-gather-intelligence.html>> accessed 27 June 2025.

⁴⁰ John C Hitt Jr, ‘Oceans Law and Superpower Relations: The Bumping of the Yorktown and the Caron in the Black Sea’ (1989) 24 *Virginia Journal of International Law* 713, 738.

⁴¹ James Kraska, ‘Intelligence Collection and the International Law of the Sea’ (2022) 99 *International Law Studies* 602, 619 (citing Crowe’s view that you cannot do anything unusual in order to gather intelligence while you are engaged in innocent passage.)

international law, for which neither prior notification nor authorisation is required.⁴² This statement accords with the rule under UNCLOS in that the innocence of passage is determined by the *activities* actually conducted during passage.⁴³ The mere possession of capabilities, such as ISR equipment, does not constitute “activity” within the meaning of Article 19(2). As Froman rightly argued, the law can only be violated by an *identifiable* act.⁴⁴ Consequently, the passage of foreign warships should not be presumed non-innocent before the “activity” engaged is clearly identified. Although coastal States may face practical challenges in detecting foreign ISR operations, as such activities do not tend to leave any external indication, it is clear that ISR operations, in principle, are non-innocent once they amount to identifiable acts of intelligence collection under Article 19(2)(c) of UNCLOS.

2.2.2 Submerged ISR operations: non-innocent?

Considering that the non-innocence of the passage can only be determined by “activity” clearly identified, the submerged passage itself is unlikely to be considered non-innocent, as it is not elaborated under Article 19(2) as such. It can be argued that a submerged passage is considered “prejudicial to the peace, good order or security of the coastal State” under Article 19(1); however, considering that the list of activities under Article 19(2) was inserted for clarification to determine non-innocence, this argument is not very convincing. Instead, the rules for submarines are separately provided. Article 14(6) of the 1958 Geneva Convention provides that “Submarines are required to navigate on the surface and to show their flag”. This provision is further developed and incorporated under Article 20 of UNCLOS with additional phrases: “*In the territorial sea*, submarines and other underwater vehicles are required to navigate on the surface and to show their flag.” (emphasis added) The phrase “In the territorial sea” was specifically added in Article 20 although the provision is already situated under Section 3, Part II of UNCLOS – Innocent Passage in the Territorial Sea.⁴⁵ This specification may be understood as a clarification that submerged navigation in different maritime areas beyond the territorial sea, such as international straits, contiguous zones, and the EEZ, is legally permitted. At the same time, it underscores the importance of complying with the surface

⁴² Union of Soviet Socialist Republics-United States: Joint Statement with Attached Uniform Interpretation of Rules of International Law Governing Innocent Passage (1989) 28 *International Legal Materials* 1444, 1446.

⁴³ J Ashley Roach, *Excessive Maritime Claims* (4th edn, BRILL 2021) 243.

⁴⁴ F David Froman, ‘Uncharted Waters: Non-innocent Passage of Warships in the Territorial Sea’ (1984) 21 *San Diego Law Review* 625, 658.

⁴⁵ UN Doc A/AC.138/53, art 47, para 5, reprinted in *Official Record of the Sea-Bed Committee* (1971) 105, 135 (Malta). At the 1971 session of the Sea-Bed Committee, Malta intended to distinguish between passage and innocent passage by specifying that the surface requirement is only applied to submarines approaching within 12 nautical miles of the coast.

requirement within the foreign territorial sea. However, both provisions leave an open question as to whether submerged navigation constitutes a violation of innocent passage rules or merely a breach of a duty to remain on the surface while exercising the right of innocent passage.

Those who regard submerged passage as a mere breach of the duty to navigate on the surface argue that the determination of non-innocence requires a clear identification of an “activity” under Article 19(2). According to this view, a submerged passage, while a breach of a duty, may still be considered innocent insofar as the submarine does not engage in any of the activities under Article 19(2). Froman pointed out that submerged navigation could easily have been inserted into the list under Article 19(2), and its omission reflects the drafters’ intention not to make surface transit a requirement of innocent passage for submarines.⁴⁶ Similarly, Sadurska argued that treating submerged navigation as tantamount to non-innocent passage is *overinclusive*, since the activity itself may not be prejudicial to the security of the coastal State.⁴⁷

The list under Article 19(2) is generally regarded as exhaustive.⁴⁸ However, this understanding may be undermined by Article 19(2)(l), which refers to “any other activity not having a direct bearing on passage”. The International Chamber of Shipping previously suggested the deletion of this paragraph, on the grounds that, while serving as a catch-all, it restores the uncertainty and thus makes the insertion of the list pointless.⁴⁹ This paragraph was nonetheless incorporated into UNCLOS, and its survival arguably preserves a degree of discretion for coastal States by allowing them to characterise certain residual activities as non-innocent. However, it is doubtful whether submerged transit could fall within this category. Article 19(2)(l) is structurally designed to capture activities that are unrelated to passage itself, rather than the manner in which passage is conducted. Submerged transit concerns the mode of navigation and therefore bears directly on passage. As such, it is conceptually distinct from type of activities envisaged under Article 19(2)(l), and its legal assessment is more appropriately

⁴⁶ F David Froman, ‘Uncharted Waters: Non-innocent Passage of Warships in the Territorial Sea’ (1984) 21 *San Diego Law Review* 625, 663.

⁴⁷ Roma Sadurska, ‘Foreign Submarines in Swedish Waters: The Erosion of an International Norm’ (1984) 10 *Yale Journal of International Law* 34, 57.

⁴⁸ This view is shown in several documents. USSR-US: Joint Statement with Attached Uniform Interpretation of Rules of International Law Governing Innocent Passage (1989) 28 *International Legal Materials* 1444. “Article 19 of the Convention of 1982 sets out in paragraph 2 an exhaustive list of activities that would render passage not innocent.”; F David Froman, ‘Uncharted Waters: Non-innocent Passage of Warships in the Territorial Sea’ (1984) 21 *San Diego Law Review* 625, 659; J. Ashley Roach, *Excessive Maritime Claims* (4th edn, Leiden: BRILL 2021) 244.

⁴⁹ Myron H Nordquist (ed), *United Nations Convention on the Law of the Sea, 1982: A Commentary*, vol II (Martinus Nijhoff 1993) 173.

addressed through specific navigational obligation, such as Article 20, rather than through the residual clause of Article 19(2)(l).

Fitmaurice placed particular emphasis on compliance with Articles 14(4) and 17 of the 1958 Geneva Convention, while firmly maintaining that the surface requirement under Article 14(6) “is not subject to the same defect of making the innocence of the passage dependent on compliance with this particular requirement”.⁵⁰ Article 14(4) defines innocent passage as navigation not prejudicial to the peace, good order or security of the coastal State, and Article 17 obliges foreign ships exercising the right of innocent passage to comply with the coastal State’s laws and regulations, particularly with the ones relating to transport and navigation. His emphasis on these two particular provisions implies (a) that submerged navigation, in itself, may not necessarily be deemed non-innocent unless it is threatening or prejudicial to the security of the coastal State; and (b) that submerged navigation can only be restricted to the extent permitted by the prescriptive rights granted to coastal States.

Those Articles are later shown in similar wording under Articles 19(1) and 21(4) of UNCLOS, respectively. During the integration of the rules into UNCLOS, the subjective definition of the innocent passage under Article 14(4) of the 1958 Geneva Convention was further clarified with the list of activities under Article 19(2) of UNCLOS, and Article 21 specifies the limited extent of the prescriptive jurisdiction of the coastal State. As discussed in section 2.2.4.1, the prescriptive jurisdiction of the coastal States in the territorial sea, while encompassing matters such as the safety of navigation, excludes security-related concerns.

This limitation is significant when assessing the legal implications of submerged passage. Since navigational rules are universally framed upon surface navigation, a submarine entering the foreign territorial sea in peacetime may legitimately be required to navigate on the surface, in order to conform to the accepted standard of safety to navigation.⁵¹ However, because coastal States lack prescriptive authority to regulate innocent passage on the basis of security considerations, the mere existence of such concerns cannot, in itself, transform a submerged passage into a violation of the rules of innocent passage. Security concern may inform perceptions, but they do not constitute a legal basis for denying the right of innocent passage. In light of the development of the law, the rules on innocent passage appear to have been structured on the notion that submerged navigation is not inherently non-innocent *per se*. A

⁵⁰ Gerald Fitzmaurice, ‘Some Results of the Geneva Conference on the Law of the Sea: Part I - The Territorial Sea and Contiguous Zone and Related Topics’ (1959) 8(1) *International and Comparative Law Quarterly* 73, 98-99.

⁵¹ DP O’Connell and IA Shearer, *The international law of the sea*, vol 1 (Clarendon Press 2015) 294-295.

breach of the surface requirement does not, by itself, extinguish the right of innocent passage.⁵² Rather, it constitutes a breach of a specific duty without necessarily converting the passage into a non-innocent one.

Others argue otherwise, supporting the view that submerged navigation inherently constitutes a non-innocent passage regardless of the activities involved. In this regard, its non-innocence can be analysed from the perspective of the “manner” in which the passage is conducted. This approach was taken by the ICJ in the *Corfu Channel* when the Court relied on the criterion of “whether the manner in which the passage was carried out was consistent with the principle of innocent passage”.⁵³ The reasons advanced by Albania in support of its contention that the passage of British warships was inconsistent with innocent passage can be summarised as follows:

The passage was not an ordinary passage, but a political mission; the ships were manoeuvring and sailing in diamond combat formation with soldiers on board; the position of the guns was not consistent with innocent passage; the vessels passed with crews at action stations; the number of the ships and their armament surpassed what was necessary in order to attain their object and showed an intention to intimidate and not merely to pass; the ships had received orders to observe and report upon the coastal defences and this order was carried out.⁵⁴

Albania’s contention is not focused on describing a particular activity. Instead, it explains the circumstances surrounding the passage, which Albania contended was threatening enough for it to take action. Although the Court, having considered all the circumstances and evidence provided, eventually concluded that the passage of the warship, or the manner of its passage, was consistent with the innocent passage rules,⁵⁵ it left an important legal implication that a particular activity does not always determine the innocence of the passage.

If submerged navigation is not classified among the non-innocent activities under Article 19(2) of UNCLOS, it is likely to be treated as a question of the manner of passage. From the coastal State’s perspective, such passage may be perceived as threatening and thereby non-innocent.

⁵² Masahiro Miyoshi, ‘The Submerged Passage of a Submarine through the Territorial Sea – The Incident of A Chinese Atomic-Powered Submarine’ (2006) 10 *Singapore Year Book of International Law* 243, 247.

⁵³ *Corfu Channel Case (United Kingdom v. Albania)* (Merits) [1949] ICJ Rep 4, 30.

⁵⁴ *Ibid.*, 30.

⁵⁵ *Ibid.*, 30-32.

Professor Diena, supporting Belgium's proposal of surface transit,⁵⁶ argued that a coastal State could not verify the pacific character of the passage unless the submarine was on the surface.⁵⁷ If the insertion of the surface requirement is to verify the innocent character of submarines and their passage, a submerged passage may negate the innocence of a passage in terms of manner. In practice, non-compliance with a "show-up" order increases the risk that a submerged submarine is engaged in activities prejudicial to the coastal State's security, including ISR operations.

Importantly, as the underwater domain is often regarded as the core area for achieving maritime spatial dominance, the strategic significance of submarines and other underwater vehicles should not be underestimated. Submarines constitute particularly ideal platforms for concealed ISR operations against potential adversaries, as they can covertly enter the territorial sea with a comparatively low risk of being detected by coastal States. Advances in propulsion, acoustic equipment, and hull design have significantly enhanced the stealth and endurance of modern submarines.⁵⁸ Modern diesel-electric submarines are capable of operating in shallow waters with reduced acoustic signature,⁵⁹ while nuclear-powered submarines provide sustained endurance for extended operations with inexhaustible power.⁶⁰ Their mobility, flexibility, and ability to conduct multiple missions simultaneously render them uniquely versatile platforms of naval power.⁶¹ In addition, security concerns may arise from limitations in detection capabilities. Not all States possess the technological maturity or procurement capacity necessary to detect submarines operating within their coastal waters.⁶² States with limited

⁵⁶ Belgium, *Regulations Relating to the Admission of Foreign Warships into Belgium Ports and Harbors* (Brussels, 30 December 1923) reprinted in (1923) *British and Foreign State Papers* 43; *Laws and Regulations on the Regime of the Territorial Sea* (UN Legislative Series, ST/LEG/SER B/6, December 1956) 361-362 (Sweden), 377-378 (Germany).

⁵⁷ cited in DP O'Connell and IA Shearer, *The international law of the sea*, vol 1 (Clarendon Press 2015) 294-295.

⁵⁸ 'World-Wide Conventional Submarines' (*Global Security*, 2017)

<<https://www.globalsecurity.org/military/world/ss-intro.htm>> accessed 21 August 2025.

⁵⁹ *Ibid.*

⁶⁰ Mizuho Kajiwara, '12 Underwater Competition in the Indo-Pacific' in Alexander L Vuving (ed), *Hindsight, Insight, Foresight: Thinking about Security in the Indo-Pacific* (Daniel K Inouye Asia-Pacific Centre for Security Studies 2020) 191, 192.

⁶¹ James Kraska, *Maritime Power and the Law of the Sea: Expeditionary Operations in World Politics* (Oxford University Press 2011) 186-187.

⁶² James Kraska and Raul Pedrozo, *International Maritime Security Law* (BRILL 2013) 7; Mizuho Kajiwara, '12 Underwater Competition in the Indo-Pacific' in Alexander L Vuving (ed), *Hindsight, Insight, Foresight: Thinking about Security in the Indo-Pacific* (Daniel K Inouye Asia-Pacific Centre for Security Studies 2020) 191, 196; Mizuho Kajiwara, 'Maritime Security and Underwater Surveillance Technology: Lessons from the Cold War' (2024) 1(3) *Centre for Indo-Pacific Affairs* 1, 5.

capabilities may therefore find themselves at a structural disadvantage when advanced foreign submarines operate in their maritime zones.

These considerations help explain why coastal States increasingly perceive submerged submarines as a security threat; however, they do not, in themselves, alter the legal threshold for determining non-innocent passage under UNCLOS. Nevertheless, in practice, coastal States have often displayed a willingness to use force against submerged submarines.⁶³ It is observed that the tangible measures, including the use of force, have been used against submerged submarines. For instance, Sweden, due to the increased number of submarine intrusions, adopted new rules of engagement to permit the use of repeated depth charges to debilitate foreign submarines.⁶⁴ Since then, forces have been routinely used by Swedish forces to compel mysterious submerged submarines to show up on the surface.⁶⁵ The Swedish policy concerning the use of force against submerged submarines within the territorial sea appears to have gained approval or acquiescence from several States, such as Norway and Denmark.⁶⁶ This suggests a shared interest among these nations in enhancing national security within their respective territorial sea. It may also reflect a broader interest of the international community in bolstering measures to safeguard territorial integrity against potential threats posed by submerged navigation.

While UNCLOS remains silent regarding further measures in case of non-compliance with show-up orders, State behaviour suggests a degree of tolerance toward the use of force against submerged submarines that fail to comply with the surface requirement, albeit without clear confirmation of legality of such conduct under international law. The central question is therefore not whether international law expressly permits the use of force, but under what condition forceful measures might avoid being characterised as unlawful, consistent with the

⁶³ Ian Johnston and James Rush, 'Swedish Military Prepared to Use "Armed Force" as Search for "Russian Submarine" Continues' (*THE INDEPENDENT*, 22 October 2014) <<https://www.independent.co.uk/news/world/europe/swedish-military-prepared-to-use-armed-force-as-search-for-russian-submarine-continues-9810495.html>> accessed 20 March 2025; Juhana Rossi, 'Finland Chases Off Suspected Submarine: Country's Maritime Forces Detect Underwater Activity inside Finnish Waters' (*Wall Street Journal*, 28 April 2015) <<https://www.wsj.com/articles/finland-chases-off-suspected-submarine-1430212090>> accessed 20 March 2025; James Kraska, 'Putting Your Head in the Tiger's Mouth: Submarine Espionage in Territorial Waters' (2015) 54 *Columbia Journal of Transnational Law* 3, 68.

⁶⁴ James Kraska, 'Putting Your Head in the Tiger's Mouth: Submarine Espionage in Territorial Waters' (2015) 54 *Columbia Journal of Transnational Law* 3, 33.

⁶⁵ *Ibid.*, 32-33.

⁶⁶ Roma Sadurska, 'Foreign Submarines in Swedish Waters: The Erosion of an International Norm' (1984) 10 *Yale Journal of International Law* 34, 58.

principle of necessity, proportionality, and reasonableness.⁶⁷ For instance, Delupis suggested that the coastal State may be entitled to sink the submarine if it refuses to surface, or fails to justify its conduct.⁶⁸ Yet it would be an oversimplification to assume that coastal States are entitled to *attack* submerged submarines within their territorial sea.⁶⁹ Under the current international law, the mere presence of submerged submarines, even combined with a suspicion of espionage, does not constitute sufficient grounds to destroy the intruding submarines.⁷⁰ However, the increasingly intrusive, covert and unmanned character of underwater vehicles appears to influence State behaviours in practice, widening the gap between established legal standard and operational responses.

Importantly, any potential use of force against submerged submarines should be understood solely as a means of compelling compliance with the surface requirement under Article 20 of UNCLOS, not as a means of denying the right of passage itself. Submarines are often presumed to be engaged in ISR operations while submerged; however, once they surface, they are no longer in breach of Article 20 and are, in principle, entitled to the right of innocent passage. The coastal State may not lawfully prevent their passage, nor employ force or issue a leave order, unless identifiable non-innocent activity, as defined under Article 19(2), can be established. This confirms that submerged passage, in itself, does not extinguish the right of innocent passage.

2.2.3 Traditional ISR Operations at sea: “non-innocent but not unlawful”

The main controversy lies in the fact that, even if ISR operations are clearly identified within the territorial sea, they may be deemed non-innocent without necessarily being unlawful.⁷¹ UNCLOS characterises certain activities as ‘non-innocent’ for the purpose of the passage regime, but it does not itself provide a rule that every non-innocent passage constitutes an

⁶⁷ *M/V “SAIGA” (No.2) (Saint Vincent and the Grenadines v. Guinea)*, Judgement, ITLOS Reports 1999, p. 10, paras. 153-159.

⁶⁸ Ingrid Delupis, ‘Foreign Warships and Immunity for Espionage’ (1984) 78(1) *American Journal of International Law* 53, 73.

⁶⁹ DP O’Connell (ed IA Shearer), ‘Ch 7 Innocent Passage in the Territorial Sea’ in DP O’Connell, *The International Law of the Sea*, vol I (OUP 1982) 295; James Kraska, ‘Intelligence Collection and the International Law of the Sea’ (2022) 99 *International Law Studies* 602, 633.

⁷⁰ *Military and Paramilitary Activities in and against Nicaragua (Nicaragua v. United States of America)*, Merits, Judgment, ICJ Reports 1986, p. 14, para. 249.

⁷¹ James Kraska, ‘Intelligence Collection and the International Law of the Sea’ (2022) 99 *International Law Studies* 602, 624; William H Taft, ‘Written Statement of William H Taft, Legal Adviser, US Department of State Before the Senate Select Committee on Intelligence, 8 June 2004’ reprinted in *Senate Executive Report* 110-9, at 37 (19 December 2007); James Kraska, ‘Putting Your Head in the Tiger’s Mouth: Submarine Espionage in Territorial Waters’ (2015) 54 *Columbia Journal of Transnational Law* 3, 7.

internationally wrongful act triggering coercive remedies. The unlawfulness of the conduct, therefore, depends on additional rules and the specific circumstances.

By contrast, the legal regime governing airspace adopts a stricter approach. The Chicago Convention does not establish a regime equivalent to the right of innocent passage under UNCLOS. Instead, every State has complete and exclusive sovereignty over the airspace above its territory,⁷² and aircraft used in military, customs, and police services (i.e, State aircraft) are strictly prohibited from flying over the territory of another State without authorisation by special agreement.⁷³ Unauthorised ISR operations in the air thus directly amount to a violation of the territorial sovereignty under the Convention. This understanding was confirmed by the ICJ in the *Nicaragua case*, where the Court stated that territorial sovereignty is “directly infringed by the unauthorised overflight” of a State’s territory by foreign aircraft.⁷⁴ Similarly, Article 8 of the Convention requires *pilotless aircraft* to obtain prior special authorisation to fly over the territory of a contracting State.

This comparison highlights a structural divergence between the Chicago Convention and UNCLOS in their treatment of territorial incursion. Under Chicago Convention, which does not recognise a regime equivalent to innocent passage, any unauthorised entry of a foreign aircraft into a State’s airspace, including for ISR purposes, constitute, in itself, a direct violation of territorial sovereignty. By contrast, UNCLOS is built upon the concept of innocent passage, under which the mere entry of a foreign vessel into the territorial sea does not automatically amount to a violation of territorial sovereignty. Even where ISR operations are conducted, such conduct may be characterised as non-innocent under Article 19, but it is not, for that reason alone, classified as unlawful under the Convention. This distinction suggests that, in the maritime context, territorial incursion is not *per se* prohibited. Rather, illegality arises only where the conduct is accompanied by the breach of a specific legal obligation, such as the prohibition of the threat or use of force under Article 2(4) of the UN Charter.

The widespread practice of ISR operations in both airspace and maritime zones further complicates this picture. Repeated conduct may indicate tolerance at the operational level, but it does not establish *opinio juris* nor settle the question of legality. At the same time, the concept of “non-innocent but not unlawful” constrains the remedies available to coastal

⁷² *Chicago Convention*, art 1. See also *Chicago Convention*, art 2. “For the purpose of this Convention the territory of a State shall be deemed to be the land areas and territorial water adjacent thereto [...]”.

⁷³ *Chicago Convention*, art 3.

⁷⁴ *Military and Paramilitary Activities in and against Nicaragua (Nicaragua v. United States)*, Merits, Judgment, ICJ Reports 1986, p. 14, paras. 251-252.

States, confining to the limited measures expressly permitted under UNCLOS, such as requesting for compliance, issuing a leave order, or, in exceptional cases, declaring a temporary suspension of passage. where the conduct does not amount to an internationally wrongful act, more coercive responses, such as arrests, detention, or the use of force, are not legally available to the coastal State under the Convention. In this sense, the concept of ‘non-innocent but not unlawful’ permits operating States to persist in intrusive ISR operations, while simultaneously frustrating the enforcement of coastal States. This may indicate a structural restraint on coastal States responses embedded within the current legal framework.

Arguably, the increasing integration of unmanned platforms further exacerbates this structural imbalance by altering the factual conditions under which ISR operations are conducted. By reducing risks to human life and lowering political and operational costs, unmanned vehicles enable ISR operations to become more persistent, intrusive, and operationally aggressive, thereby intensifying the security concerns of coastal States. This observation does not challenge the normative structure of UNCLOS, but rather highlight that unmanned technologies may give rise to materially different factual considerations. In certain circumstances, unmanned ISR operations may no longer comfortably fit within the category of ‘non-innocent but not unlawful’. Instead, such operations may warrant closer scrutiny as to whether they approach, or in exceptional cases exceed, the threshold of prohibited force under Article 2(4) of the UN Charter.

Although the threshold for characterising an act as a “threat or use of force” remains high, the evolving practice of ISR operations, particularly when carried out through advanced unmanned technologies, necessitates careful examination of whether specific forms of conduct, in certain circumstances, constitute unlawful threats or uses of force under international law. The remaining section, therefore, examines the interpretation of ‘force’ under Article 2(4), with a focus on its relevance to ISR operations. The assessment of how this threshold interacts with the distinctive features of unmanned technologies is reserved for section 5.3.

The prohibition of the use of force is firmly established under international law. Article 2(4) states that:

All Members shall refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any state, or in any other manner inconsistent with the Purposes of the United Nations.

To understand the proper scope and meaning of “force” under Article 2(4), it is useful to examine relevant jurisprudence, particularly with respect to the types of conduct that have, or have not, been regarded as constituting the use of “force”. While there is no case law directly

addressing ISR operations in this regard, certain judicial statements provide solid analogies that may help clarify how such operations could be evaluated within the existing legal framework.

In the *Paramilitary* case, the ICJ distinguished between different categories of conduct, recognising only some as amounting to the use of force within the meaning of Article 2(4), while treating others as unlawful intervention or merely unfriendly acts falling below that threshold.⁷⁵ The Court confirmed that 1) the laying of mines in Nicaraguan internal or territorial waters in early 1984 and 2) certain attacks on ports, oil installations and a naval base constituted infringements of the principle of the prohibition of the use of force.⁷⁶ It seems well established that acts resulting in physical consequences, such as attacks causing loss of life, damage, or destruction, fall squarely within the scope of the use of force under Article 2(4). This reflects a narrow interpretation of the use of force.

The Court also sheds some light on this lower threshold of force, determining that the military manoeuvres conducted near another State's border do not necessarily constitute a use of force under Article 2(4).⁷⁷ Although the Court did not explicitly invoke Article 19 of UNCLOS, the Court's view not to regard military manoeuvres as a violation of Article 2(4) seems consistent with the regime of innocent passage. Under Article 19, innocence is assessed by reference to specific "activities". Mere passage of warships, or even the conduct of military manoeuvres, without engaging in any of the activities enumerated in Article 19(2) of UNCLOS, does not constitute a violation of innocent passage rules, nor does it amount to a breach of Article 2(4) of the UN Charter.

According to the Court's view, traditional ISR operations cannot readily be regarded as a violation of the prohibition of the use of force under Article 2(4). A range of contextual factors, including the means of the ISR operations, the gravity of the incursion (such as the number and types of vehicles involved, duration and location of the incursion), and the relevant political circumstances, could be considered.⁷⁸ However, only where ISR operations are accompanied by coercive elements producing tangible effect, rather than the mere possession of concurrent attack capabilities, might they plausibly be assessed through the prism of Article 2(4).⁷⁹ For

⁷⁵ *Paramilitary case*, p.118, para. 227.

⁷⁶ *Paramilitary case*, p.118, para. 227. See also paras. 80-86.

⁷⁷ *Paramilitary case*, p. 118, para. 227.

⁷⁸ Mohamed Helal, 'The Global Hawk Incident: Self-defence against Aerial Incursions – Reflections on the Applicable Law' (*Opinion Juris*, 4 June 2019) <<https://opiniojuris.org/2019/07/04/the-global-hawk-incident-self-defense-against-aerial-incursions-reflections-on-the-applicable-law/>> accessed 23 March 2024.

⁷⁹ Efthymios Papastavridis, 'Intelligence Gathering in the Exclusive Economic Zone' (2017) 93 *International Law Studies* 446, 473.

instance, repeated or persistent ISR operations that are demonstrably linked to facilitating attacks, such as through the collection and transmission of targeting information to armed groups, may cross the threshold of Article 2(4), particularly if such activities contribute to proxy violence. A clear distinction must be maintained between the mere possession of offensive capabilities and the actual use of force resulting in tangible physical effects. The former, on its own, is insufficient to constitute the “use of force” under the meaning of Article 2(4).

A further consideration concerns the perspective of the coastal States. It may be argued that, although the threshold of use of force appears high and unlikely to be met by traditional ISR operations, the way in which the alleged injured States perceive and characterise the conduct may nonetheless provide contextual insight.⁸⁰ Yet this perception is not dispositive, as subjective presumption should be objectively assessed for the claim to be legally sustainable. As discussed in section 5.3.3, the decisive criterion remains whether ISR operations result in tangible physical consequences amounting to the use of force. Absence of such consequences, ISR operations, even when conducted by unmanned platforms, generally remain outside the scope of the use of force under Article 2(4).

Force involving tangible physical consequences is the clearest manifestation of “force” and thus presents relatively few interpretative challenges. In the context of ISR operations, however, the examination of lower levels of “force” raises more relevant implications, as such operations do not generally entail direct attack. The central issue is then how to interpret the minimal threshold of force prohibited under Article 2(4). Scholarly views on this threshold diverge. Ruys, for instance, argues that Article 2(4) constitutes a comprehensive ban against all uses or threats of force; thus, it does not exclude force even if it is (1) small-scale, (2) not directed against a State’s territorial integrity or political independence, or (3) does not result in direct confrontation with the territorial State.⁸¹ Gill, in support of a lower threshold of force under Article 2(4), argues that the threshold for the use of force under the UN Charter is purposely set low so as to encompass any form or degree of armed coercion by one State against another.⁸² This view seems to focus on the phrase “in their international relations” under Article 2(4).

⁸⁰ *Paramilitary case*, p. 120, para. 232

⁸¹ See generally Tom Ruys, ‘The Meaning of “Force” and the Boundaries of the *Jus Ad Bellum*: Are “Minimal” Uses of Force Excluded from UN Charter Article 2(4)?’ (2014) 108 *American Journal of International Law* 159.

⁸² Terry D Gill, *The Use of Force and The International Legal System* (Cambridge University Press 2024) ch 4, 71.

Kraska, by contrast, rejects the view that ISR operations, even if they generate significant effects, amount to “force” within the meaning of Article 2(4) of the UN Charter.⁸³

In this regards, the Court’s interpretation of “indirect support” in the *Paramilitary* case may provide useful guidance. Nicaragua alleged that the US had violated Article 2(4) by engaging in “recruiting, training, arming, equipping, financing, supplying and otherwise encouraging, supporting, aiding, and directing military and paramilitary actions in and against Nicaragua”.⁸⁴ However, the Court recognised only certain forms of support – “arming and training of the *contras*” or “organising or encouraging the organisation of irregular forces or armed bands ... for incursion into the territory of another State” – as *prima facie* a violation of Article 2(4). Other forms of assistance provided by the US Government, such as financial aid or logistic support to the *contras* (non-State actors), were not necessarily found as such.⁸⁵ This differentiation underscores that not all activities with military significance cross the threshold of Article 2(4).

Lastly, some commentators have suggested that *hostile intent* may be relevant to assessing ‘threat’ in some account. Where ISR operations are conducted with such intent, particularly where they are used to organise, direct, or guide armed attack, they could fall within a broader interpretation of the use of force or, at least, the “threat” of force.⁸⁶ It is further argued that the deliberate refusal of an intruding aircraft to comply with a coastal State’s leave order could reasonably be regarded as an indicator of hostile intent. For instance, Gill argues that “non-consensual intentional presence”, not connected to distress or technical malfunctions, combined with a deliberate refusal to leave the territory, could be considered the use of armed force.⁸⁷ However, the challenge lies in the inherently subjective nature of assessing hostile intent, which makes it difficult to establish a clear and consistent standard for such assessment. Any such argument faces a high evidentiary burden and must be treated with caution to avoid collapsing political hostility into a legal threshold.

⁸³ James Kraska, ‘Intelligence Collection and the International Law of the Sea’ (2022) 99 *International Law Studies* 602.

⁸⁴ *Paramilitary case*, p. 118, para. 227.

⁸⁵ *Paramilitary case*, pp. 118-119, paras. 227-228.

⁸⁶ Tom Ruys, ‘The Meaning of “Force” and the Boundaries of the *Jus Ad Bellum*: Are “Minimal” Uses of Force Excluded from UN Charter Article 2(4)?’ (2014) 108 *American Journal of International Law* 159, 189; Mohamed Helal, ‘The Global Hawk Incident: Self-defence against Aerial Incursions – Reflections on the Applicable Law’ (*Opinion Juris*, 4 June 2019) <<https://opiniojuris.org/2019/07/04/the-global-hawk-incident-self-defense-against-aerial-incursions-reflections-on-the-applicable-law/>> accessed 23 March 2025.

⁸⁷ Terry D Gill, *The Use of Force and The International Legal System* (Cambridge University Press 2024) ch 4, 63-65; see also Oscar Schachter, *International Law in Theory and Practice* (Nijhoff 1991) 112-113.

In conclusion, traditional ISR operations within the territorial sea are generally unlikely to constitute a violation of the prohibition of the use of force under Article 2(4). Nonetheless, such operations may, in exceptional circumstances, cumulatively amount to a threat or use of force when closely linked to kinetic activities or demonstrable hostile intent. This concern becomes more pronounced with the advent of unmanned technologies, which enhance the persistence, versatility, and intrusiveness of ISR operations while leaving coastal States with limited enforcement options under the existing legal framework. This structural imbalance reinforces the disadvantage faced by coastal States under the current interpretation of UNCLOS and underscores the need for careful examination of how unmanned technologies interact with the established legal threshold. A more detailed examination of this issue in light of unmanned vehicles is provided in Section 5.3.2.

2.2.4 Coastal States' limited enforcement against foreign ISR operations

2.2.4.1 Article 21 of UNCLOS: limited prescriptive jurisdiction

Article 19 must be read in conjunction with Article 21, which prescribes the limited prescriptive jurisdiction of coastal States with respect to innocent passage. Such limited legislative power implies that the enforcement jurisdiction of the coastal State is correspondingly confined to those recognised restrictions. Article 21(1) allows coastal States to adopt laws and regulations in respect of all or any of the following:

- (a) the safety of navigation and the regulation of maritime traffic;
- (b) the protection of navigational aids and facilities and other facilities or installations;
- (c) the protection of cables and pipelines;
- (d) the conservation of the living resources of the sea;
- (e) the prevention of infringement of the fisheries laws and regulations of the coastal State;
- (f) the preservation of the environment of the coastal State and the prevention, reduction, and control of pollution thereof;
- (g) marine scientific research and hydrographic surveys;
- (h) the prevention of infringement of the custom, fiscal, immigration, or sanitary laws and regulations of the coastal State.

This list is understood as permissible restrictions on innocent passage contrary to the general principle under Article 24 that the coastal State shall not hamper the innocent passage of foreign ships through the territorial sea. Within the scope of Article 21, coastal States may adopt laws and regulations with more subjectivity in determining innocent passage, and those

subjective standards might “effectively reverse the presumption of innocence”.⁸⁸ Such restrictions must be reasonable and necessary, and not have the practical effect of denying or impairing the right of innocent passage.⁸⁹ However, the problem is that the list under Article 19(2) does not entirely overlap with that under Article 21. While the list of Article 19(2) includes military-related activities that might be considered prejudicial to the “security” of the coastal States, such as any threat or use of force, weapon exercise, military data collection or launching, landing or taking on board military devices, Article 21(1) does not seem to impose any security-related matters. This means that while a coastal State may, where necessary for the safety of navigation, subject the passage of foreign ships to specific conditions, for example, requiring the use of designated sea lanes, it cannot impose restrictions solely on the basis of security considerations.

Some may argue that “safety” under Article 21(1)(a) could be broadly interpreted to accommodate “security”. In fact, the distinction between maritime safety and maritime security has not been obvious, as the two sets of activities, sharing some common threads, have somehow become intertwined in terms of meaning. Strictly speaking, however, maritime safety generally means preventing or minimising the occurrence of accidents at sea, such as collisions, whereas maritime security usually refers to the protection of maritime territory, infrastructure, economy, and the environment against unlawful and deliberate acts occurring at sea.⁹⁰ It seems supported by Article 21(4), stating that “Foreign ships exercising the right of innocent passage through the territorial sea shall comply with [...] all generally accepted international regulations relating to the prevention of collision at sea”. Generally accepted international regulation refers to those adopted within the International Maritime Organisation (IMO) framework.⁹¹ In the current context, it specifically refers to the Convention on the International Regulations for Preventing Collisions at Sea (COLREGs). Considering that IMO addresses collision prevention as an issue related to the safety of navigation, categorising it under the broader maritime safety agenda, maritime “safety” may be intended to be interpreted within the scope of collision prevention.

⁸⁸ F David Froman, ‘Uncharted Waters: Non-innocent Passage of Warships in the Territorial Sea’ (1984) 21 *San Diego Law Review* 625, 662.

⁸⁹ J Ashley Roach, *Excessive Maritime Claims* (4th edn, BRILL 2021) 243.

⁹⁰ Natalie Klein, Joanna Mossop, and Donald R Rothwell, ‘Australia, New Zealand and Maritime Security’ in Natalie Klein, Joanna Mossop, and Donald R Rothwell (eds), *Maritime Security: International Law and Policy Perspectives from Australia and New Zealand* (Routledge, 2010) 28.

⁹¹ Myron H Nordquist (ed), *United Nations Convention on the Law of the Sea, 1982: A Commentary*, vol II (Martinus Nijhoff 1993) 202-203.

The term “security” is used in Article 25(3) of UNCLOS. It permits the coastal State to temporarily suspend the innocent passage of foreign ships in specified areas of its territorial sea “if such suspension is essential for the protection of its security, including weapon exercises”. This provision does not authorise the regulation of foreign ‘activity’ on security grounds. Rather, it allows for the temporary closure of specific maritime ‘areas’ – even where passage would otherwise be innocent – in order for the coastal State’s own security needs, such as military exercises. Accordingly, the reference to ‘security’ in Article 25(3) cannot be read as implicitly expanding the prescriptive jurisdiction of coastal States under Article 21. Thus, the terms ‘safety’ and ‘security’ under the innocent passage regime should be distinguished in this context.

The limited prescriptive jurisdiction of coastal States, excluding security matters, is closely related to the passage of foreign warships through the territorial sea. Any warship, by its very nature, may constitute a danger to States in its vicinity as it is designed to engage in, or assist other ships to engage in, armed conflict.⁹² Thus, some States are inclined to view the presence or passage of foreign warships within their territorial sea as a potential threat to their national security. The issue regarding the passage of foreign warships has been at the heart of debate since the UNCLOS negotiations. At the 1973 session of the Sea-Bed committee, China, when drafting Article 17 of UNCLOS – Ships of all States, whether coastal or landlocked, enjoy the right of innocent passage through the territorial sea, proposed to specify “foreign non-military ships”, but it was not accepted.⁹³ The identical proposal was again advanced informally at the seventh session in 1978 by a group of nine States, including Argentina, Bangladesh, China, Democratic Yemen, Ecuador, Madagascar, Pakistan, Peru, and the Philippines, as an effort to restrict the innocent passage by foreign warships within their territorial sea.⁹⁴ Although it was again rejected, the phrase “passage shall be continuous and expeditious” was newly introduced and incorporated under Article 18(2), different from Article 14 of the 1958 Geneva Convention. This might be seen as a feasible alternative to prevent foreign warships from lingering within the national jurisdiction of other States. Even after the final text of the draft was formed, the issue of the passage of warships remained debatable until a later stage of negotiation. The so-called 28-State proposal suggested adding a reference to “security” to the

⁹² Shicun Wu, Mark Valencia and Nong Hong, *UN Convention of the Law of the Sea and the South China Sea* (1st edn, Routledge 2016) 99.

⁹³ UN Doc A/AC.138/SC.II/L.34, item 1, para 8, reprinted in *Official Records of the Sea-Bed Committee*, vol III (1973) 71, 72 (China).

⁹⁴ C.2/Informal Meeting/30 (1978, mimeo), art 17 (Argentina, Bangladesh, China, Democratic Yemen, Ecuador, Madagascar, Pakistan, Peru and the Philippines).

provision of Article 21(1)(h).⁹⁵ However, such a proposal was strongly resisted by maritime powers due to concerns that permitting coastal States to regulate security matters would give them extremely broad regulatory powers in the territorial sea, not only confined to the restriction on the passage of warships.⁹⁶ Although this proposal was eventually withdrawn by the sponsoring States, the Conference President, Tommy Koh, affirmed that its withdrawal is “without prejudice to the rights of coastal States to adopt *measures to safeguard their security interests*, in accordance with articles 19 and 25 of the draft convention”.⁹⁷

If not handled through prescriptive jurisdiction under Article 21, security-related threats are handled through Article 19 (the definition of non-innocent passage) and Article 25 (enforcement powers to prevent such passage). However, it does not necessarily resolve the disagreement. The failure to reach a genuine consensus on this issue has continued to generate diplomatic debates and interstate disputes. Some States continue to insist on the right of coastal States to adopt measures to safeguard their security.⁹⁸ For instance, about 50 States, including Albania, China, Croatia, Indonesia, Malta, Oman, and Vietnam, require prior notification or authorisation for the innocent passage of foreign warships.⁹⁹ Among those States, China provides the most elaborate example. China made a declaration when ratifying UNCLOS, requiring “a foreign State to obtain advance approval from or give prior notification to the coastal State for the passage of its warships through the territorial sea of the coastal State”.¹⁰⁰ Legally speaking, Article 310 of UNCLOS allows a State, when signing, ratifying, or acceding to this Convention, to make declarations or statements, “with a view, *inter alia*, to the harmonisation of its laws and regulations with the provisions of this Convention, provided that declarations or statements do not purport to exclude or to modify the legal effect of the provisions of this Convention in their application to that State”. However, China’s declaration raises a question as to its compatibility with Article 310. Although China argues such restrictions are intended to safeguard the peace

⁹⁵ UN Doc A/CONF.62/L.117 (1982), art 21(1)(h), reprinted in *Third United Nations Conference on the Law of the Sea: Official Records*, vol XVI (1982) 225 (Algeria, Bahrain, Benin, Cape Verde, China, Congo, Democratic People’s Republic of Korea, Democratic Yemen, Djibouti, Egypt, Guinea-Bissau, Iran, Libyan Arab Jamahiriya, Malta, Morocco, Oman, Pakistan, Papua New Guinea, Philippines, Romania, Sao Tome and Principe, Sierra Leone, Somalia, Sudan, Suriname, Syria, Uruguay and Yemen).

⁹⁶ J Ashley Roach, *Excessive Maritime Claims* (4th edn, BRILL 2021) 260-261.

⁹⁷ UN Doc A/CONF.62/SR.176 (24 April 1982).

⁹⁸ States purported to require prior notice or permission on the passage of foreign warships are well summarised in J Ashley Roach, *Excessive Maritime Claims* (4th edn, BRILL 2021) 269-277.

⁹⁹ F David Froman, ‘Uncharted Waters: Non-innocent Passage of Warships in the Territorial Sea’ (1984) 21 *San Diego Law Review* 625, 642.

¹⁰⁰ United Nations Treaty Collection, ‘Declarations and Statements: United Nations Convention on the Law of the Sea (China, 7 June 1996)

<https://treaties.un.org/Pages/ViewDetailsIII.aspx?src=TREATY&mtdsg_no=XXI-6&chapter=21&Temp=mtdsg3&clang=_en#EndDec> accessed 12 September 2025.

and security of coastal States,¹⁰¹ they contradict Article 17 of UNCLOS, which grants the right of innocent passage to all ships without distinction between military and non-military vessels.

This position has been further reflected in its domestic legislation and consistently asserted in diplomatic practice. China has enacted domestic law requiring foreign warships to obtain “approval” – the strictest form of restriction – before entering its territorial sea. The terms of this legislation, however, do not fully correspond with those of its declaration.¹⁰² Such a discrepancy reveals an inconsistency in the application of these rules in practice. While Article 310 of UNCLOS does not specify whether other States must explicitly respond to declarations by accepting or rejecting them, the absence of a response cannot automatically be interpreted as acceptance or acquiescence.

On 10 October 2017, China condemned that the missile destroyer *USS Chafee* entered its territorial sea off Paracel Island to carry out the so-called FONOP without China’s approval. It criticised that the US’s behaviour seriously undermined China’s sovereignty and security interests.¹⁰³ China’s restrictions have been strongly protested by the US and other States, including France, Germany, Italy, and the Netherlands, on the grounds that neither Article 19 nor 25 permits the imposition of such restrictions on ships exercising the right of innocent passage.¹⁰⁴ As a matter of law, neither UNCLOS nor customary international law authorises a coastal State to condition the exercise of innocent passage by any ship, including warships, on prior notification or authorisation.¹⁰⁵

UNCLOS justifies the protection of the coastal State against non-innocent passage under Article 25. It provides that “The coastal State may take the necessary steps in its territorial sea to prevent passage which is not innocent.” For security-related activities, the exercise of necessary measures is likely based on direct action prejudicial to peace, good order and security of the coastal State, not on pre-emptive national legislation, as the coastal State lacks prescriptive jurisdiction on such matters per Article 21. Although Article 25 does not specify to what extent such measures can be considered “necessary”, there are some indications to infer the general understanding of the provision. The Tribunal in the *M/V Saiga (No. 2)* confirmed that

¹⁰¹ Isaac B Kardon, *China’s Law of the Sea: The New Rules of Maritime Order* (Yale University Press 2023) 177-178.

¹⁰² Law of the People’s Republic of China on the Territorial Sea and the Contiguous zone 1992, art 6.

¹⁰³ Tuan N Pham, ‘Time for the US to stop losing ground to China in the South China Sea’ (*The Diplomat*, 24 October 2017) <<https://thediplomat.com/2017/10/time-for-the-us-to-stop-losing-ground-to-china-in-the-south-china-sea/>> accessed 13 April 2025.

¹⁰⁴ J Ashley Roach, *Excessive Maritime Claims* (4th edn, BRILL 2021) 262-264.

¹⁰⁵ *Ibid.*, 262-269.

the use of force must be avoided as far as possible and, where force is unavoidable, it must not go beyond what is reasonable and necessary in the circumstances.¹⁰⁶ In addition, the US Navy in the *Commander's Handbook on the Law of Naval Operations* (NWP 1-14M) also states that:

UNCLOS does not prohibit passage that is noninnocent, such as overflight of or submerged transit in the territorial sea. However, a coastal State has a right to take the necessary steps in and over its territorial sea to prevent passage that is not innocent, including, where necessary, the use of force.¹⁰⁷

It appears that Article 25 does not authorise force as such, but it does not categorically exclude it either; any forcible measure must be exercised strictly in conformity with the principle of necessity and proportionality, and only as a last resort. ISR operations are generally regarded as passive or non-kinetic in character and do not, in ordinary circumstances, present an immediate threat comparable to activities involving weapons. Consequently, it is difficult in practice to justify forcible measures against such operations as “necessary” within the meaning of Article 25, thereby exposing the coastal State to the risk of being accused of acting unlawfully in its response.

2.2.4.2 The principle of sovereign immunity under UNCLOS

Regarding coastal States' enforcement against ISR operations, the main legal hurdle is the principle of sovereign immunity, as ships engaging in such operations are likely subject to rules under Subsection C of Section 3, Part II of UNCLOS, applicable to warships and other government vessels operated for non-commercial purposes. The immunity of a warship “is clearly established in international law, and constitutes one of the most important pillars of the *ordre public* of the oceans.”¹⁰⁸ The leading statement made by the International Tribunal for the Law for the Sea (ITLOS) in the *ARA Libertad* case – “a warship is an expression of the sovereignty of the State whose flag it flies”,¹⁰⁹ indicates that any action affecting its immunity “is capable of causing serious harm to the dignity and sovereignty of a State and has the potential to undermine its national security.”¹¹⁰ Subsection C of Section 3 in Part II of UNCLOS provides

¹⁰⁶ *M/V “SAIGA” (No.2) (Saint Vincent and the Grenadines v. Guinea)*, Judgement, ITLOS Reports 1999, p. 10, para. 155.

¹⁰⁷ US Navy, *NWP 1-14M* (March 2022), para. 2.5.2.1.

¹⁰⁸ “*ARA Libertad*” (*Argentina v. Ghana*), Provisional Measures, Declaration of Judge Paik, Order of 15 December 2012, ITLOS Reports 2012, p. 352, para. 2.

¹⁰⁹ “*ARA Libertad*” (*Argentina v. Ghana*), Provisional Measures, Order of 15 December 2012, ITLOS Reports 2012, p. 332, para. 94.

¹¹⁰ *Case concerning the Detention of Three Ukrainian Naval Vessels (Ukraine v. Russian Federation)*, Provisional Measures, Order of 25 May 2019, ITLOS Reports 2019, p. 283, para. 110.

separate rules applicable to warships and other government ships operated for non-commercial purposes. Article 32 provides that:

With such exceptions as are contained in subsection A and in articles 30 and 31, nothing in this Convention affects the immunities of warships and other government ships operated for non-commercial purposes.

The Tribunal in the *ARA Libertad* considers that Article 32, while provided under Part II “Territorial Sea and Contiguous Zone”, may be applicable to all maritime areas.¹¹¹ This view was specifically contended by Judge Wolfrum and Cot in a Joint Opinion, asserting that Article 32 is meant to be applicable in the territorial sea only, and the immunity in internal water is derived from customary international law.¹¹² The immunity of warships within national waters under customary international law is confirmed by the Judgment of the US Supreme Court in the *Schooner Exchange v. McFaddon*. It states:

The Exchange, being a public armed ship, in the service of a foreign sovereign, with whom the government of the United States is at peace, and having entered an American port open for her reception, on the terms on which ships of war are generally permitted to enter the ports of a friendly power, must be considered as having come into the American territory, under an implied promise, that while necessarily within it, and demeaning herself in a friendly manner, she should be exempt from the jurisdiction of the country.¹¹³

The immunity of warships and other qualified government vessels is also clearly integrated into other parts of UNCLOS. Articles 95 and 96 in Part VII “High seas” provide such vessels with complete immunity, and these provisions also apply to the EEZ by virtue of Article 58(2). Moreover, those types of vessels are not only subject to specific immunities under UNCLOS but are entitled to enjoy the right of immunity as State property under general international law.¹¹⁴ The immunity of warships is therefore clearly established under UNCLOS, general international law, and customary international law. Thus, it seems not necessary to expand the application of Article 32 to all maritime areas; rather, it may be argued that Article 32 represents a

¹¹¹ “ARA Libertad” (*Argentina v. Ghana*), Provisional Measures, Order of 15 December 2012, ITLOS Reports 2012, p. 332, para. 64.

¹¹² “ARA Libertad” (*Argentina v. Ghana*), Provisional Measures, Joint Separate Opinion of Judges Wolfrum and Cot, ITLOS Reports 2012, p. 363, paras. 38-44.

¹¹³ *Schooner Exchange v. McFaddon*, 11 US 116 (US Supreme Court 1812) 147.

¹¹⁴ United Nations Convention on Jurisdictional Immunities of States and Their Property 2004 (adopted 2 December 2004, not yet in force).

compromise between the coastal State's territorial sovereignty over the territorial sea and the sovereign immunity of foreign warships.

Having sovereign immunity does not necessarily exempt warships and other qualified vessels from a duty to respect the territorial sovereignty of the coastal State by complying with the rules of innocent passage.¹¹⁵ Such vessels and the crews on board may be immune from jurisdiction; however, this does not mean that the coastal State has no remedies for a violation of innocent passage.¹¹⁶ Article 32 appears unique in that it subjects immunity in the territorial sea to specific exceptions: Articles 30 and 31. Firstly, Article 30 provides that:

If any warship does not comply with the laws and regulations of the coastal State concerning passage through the territorial sea and disregards any request for compliance therewith which is made to it, the coastal State may require it to leave the territorial sea immediately.

While Article 25 allows coastal States to take necessary measures, arguably including forcible measures, Article 30 specifically limits measures available in case of warships in violation of innocent passage. In case of a violation, the coastal State may request warships to correct their actions in conformity with its laws and regulations, and if such actions are not taken, the coastal State may then require them to leave the territorial sea immediately. Oxman describes such actions as the “classic remedy” for States that lack enforcement jurisdiction over sovereign immune objects.¹¹⁷

Article 30 does not specify whether, or what, further measures could be taken in case of disobedience to, or refusal of, the immediate leave order. However, given the statement in the *ARA Libertad* case - “any act which prevents *by force* a warship from discharging its mission and duties is a source of conflict that may endanger friendly relations among States”, the use of force against warships could directly constitute armed conflict.¹¹⁸

UNCLOS provides another recourse available in case of non-compliance by a warship and other government ships operated for non-commercial purposes. According to Article 31, the flag State shall bear international responsibility for any loss or damage to the coastal State resulting from

¹¹⁵ Bernard H Oxman, ‘The Regime of Warships under the United Nations Convention on the Law of the Sea’ (1984) 24 *Virginia Journal of International Law* 809, 818.

¹¹⁶ Ingrid Delupis, ‘Foreign Warships and Immunity for Espionage’ (1984) 78(1) *American Journal of International Law* 53, 72.

¹¹⁷ Bernard H Oxman, ‘The Regime of Warships under the United Nations Convention on the Law of the Sea’ (1984) 24 *Virginia Journal of International Law* 809, 817.

¹¹⁸ “*ARA Libertad*” (*Argentina v. Ghana*), Provisional Measures, Order of 15 December 2012, ITLOS Reports 2012, p, 332, para 97.

its non-compliance with the coastal State's laws and regulations concerning innocent passage, and other rules of international law. However, as this responsibility lies with the flag State, it does not grant the coastal State the right to directly respond to ships in violation. In addition, the meaning of "any loss or damage" may be limited to physical loss or damage, such as environmental harm or physical damage to any of the coastal States' installations. At the fourth session of UNCLOS III (1976), the main substantive change concerning Article 31 was the deletion of the wording that referred to damage to the coastal State "including its environment and any of its facilities, installations or other property, or to any ships flying its flag". This was omitted to reduce the wordiness of the earlier text, and it may reasonably be assumed that the shortened version, the current provision, continues to encompass such forms of physical loss or damage.¹¹⁹ This implies that security threats or apprehension posed by the passage of foreign warships may not be included in that meaning.

With respect to all these, it appears that Article 32 does not create sovereign immunity as such, but rather confirms its continued application in the territorial sea, subject to limited and expressly defined exceptions. In this regard, Article 30 better be understood as an additional legal compromise balancing between the coastal State's sovereignty to preserve its peace and security and the principle of sovereign immunity. However, a fair amount of uncertainty remains as to how coastal States pursue the limited available remedies, since the precise content of requiring the warships to leave the territorial sea is uncertain. In other words, Article 30 does not seem to effectively alleviate the security concerns of some coastal States, as it does not specify whether, or what, further measures could be exercised against foreign warships in the case of non-compliance with the order. Delupis argues that a leave order is designed for much milder cases of violation of local law, not for the violation of territorial integrity by illicit spy ships.¹²⁰

Whether ISR operations can be considered illicit spying activity needs another legal examination; however, his statement contains a meaningful implication that the nature of the conduct may influence how the limited remedies expressly recognised under UNCLOS are perceived and applied in practice. For instance, traditional ISR operations may not be necessarily considered unlawful, but merely "unfriendly". However, the operations could gradually become unlawful if they come to display a hostile intent,¹²¹ intentionally plan to violate

¹¹⁹ Myron H Nordquist (ed), *United Nations Convention on the Law of the Sea, 1982: A Commentary*, vol II (Martinus Nijhoff 1993) 258.

¹²⁰ Ingrid Delupis, 'Foreign Warships and Immunity for Espionage' (1984) 78(1) *American Journal of International Law* 53, 73.

¹²¹ Tom Ruys, 'The Meaning of "Force" and the Boundaries of the *Jus Ad Bellum*: Are "Minimal" Uses of Force Excluded from UN Charter Article 2(4)?' (2014) 108 *American Journal of International Law* 159, 173.

the sovereignty of the coastal State, or persist in deliberate disregard for a leave order. In such cases, any State would not “willingly cede its sovereign enforcement authority against it in deference to the sovereignty of the offending States”.¹²² For instance, traditional warships may be treated differently from submerged submarines penetrating deep into the territorial sea. The choice of remedies available to the coastal State may be affected by the manner of the passage, whether it is conducted openly and visibly or clandestinely. In practice, a certain level of force appears to be used against submerged submarines to ensure compliance, although it is not directed at them.

In conclusion, the occasional use of force against ISR operations does not indicate an erosion of the principle of sovereign immunity. The principle firmly exists under UNCLOS and customary international law. The applicability of sovereign immunity is a separate legal matter from the exercise of necessary enforcement measures against sovereign immune vehicles. Immunity limits jurisdiction and remedies; it does not exempt foreign warships from the obligation to comply with the rules governing passage through the territorial sea. Within the current legal framework, Article 30 reflects a deliberate legal compromise. While preserving sovereign immunity, it confines the coastal State’s response to limited measures, notably a leave order. A leave order, while respecting sovereign immunity, may not be effective in practice, particularly where an intruding State is far more powerful than a coastal State in terms of military capabilities or economic and political influence. This reveals a structural imbalance inherent in the existing regime. This imbalance is likely to be exacerbated by the increasing deployment of UUVs. Legal ambiguity surrounding their status and operational characteristics may further reduce the practical effectiveness of existing remedies and increase opportunities for strategic exploitation. Although these concerns do not undermine the legal applicability of sovereign immunity as such, they help to explain the emergence of competing legal arguments and responses, which are examined in the subsequent chapter.

2.3 Implications of the increasing use of unmanned technologies for ISR operations

The increasing integration of unmanned technologies further complicates the existing legal framework governing ISR operations in the territorial sea. UNCLOS was drafted on the premise of manned operations, and rights and duties under the Convention are expressly granted to

¹²² Joshua L Cornthwaite, ‘Can We Shoot Down That Drone? An Examination of International Law Issues Associated with the Use of Territorially Intrusive Aerial and Maritime Surveillance Drones in Peacetime’ (2019) 52 *Cornell International Law Journal* 475, 535.

“ships”. Uncertainty surrounding the legal status of UMVs – particularly whether non-ship-like or highly autonomous UMVs are entitled to navigational rights or sovereign immunity – creates additional ambiguity within the current regime. The operational advantages of UMVs and their strategic value significantly enhance the scale and frequency of ISR operations, altering their nature. Moreover, their susceptibility to technical malfunction, or their operation under ambiguous factual circumstances, may influence how coastal States perceive the range of responses available to them when confronted with such intrusions.

As a result, a growing inconsistency can be observed between established legal principles and emerging practice. Some coastal States, despite the general prohibition of the use of force under international law, have used or expressed a strong willingness to use force, such as seizure or destruction, against unmanned ISR platforms in situations where they would be more restrained in responding to manned aircraft or vessels.¹²³ The problem is that, while there appears to be a degree of convergence in practice that a State may shoot down an unmanned, unarmed vehicle intruding into its national jurisdiction, there is “no consensus on the legal basis for such an act”.¹²⁴

In practice, coastal States have relied on different legal justifications. Some have framed their actions under the right of self-defence,¹²⁵ others invoke their territorial sovereignty and law enforcement jurisdiction to justify their use of force.¹²⁶ This divergence highlights underlying disagreement concerning the application of core principles of international law in the context of unmanned maritime operations, particularly with respect to the scope of sovereign immunity, the threshold of “force” under Article 2(4) of the UN Charter, and the conceptual distinction between self-defence and law enforcement. For instance, while some argue that the prohibition

¹²³ Joshua L Cornthwaite, ‘Can We Shoot Down That Drone? An Examination of International Law Issues Associated with the Use of Territorially Intrusive Aerial and Maritime Surveillance Drones in Peacetime’ (2019) 52 *Cornell International Law Journal* 475, 485-503.

¹²⁴ Rebecca Ingber and Adil A Haque, ‘Iran’s Shifting Views on Self-Defence and “Intraterritorial” Force’ (*Just Security*, 3 July 2019) <<https://www.justsecurity.org/64800/irans-shifting-views-on-self-defense-and-intraterritorial-force/>> accessed 7 June 2025; Tom Ruys, ‘The Meaning of “Force” and the Boundaries of the *Jus Ad Bellum*: Are “Minimal” Uses of Force Excluded from UN Charter Article 2(4)?’ (2014) 108 *American Journal of International Law* 159, 177.

¹²⁵ *A US RQ-4 Global Hawk incident (2019), Letter dated 20 June 2019 from the Permanent Representative of the Islamic Republic of Iran to the United Nations addressed to the Secretary-General* UN Doc S/2019/512 (2019).

¹²⁶ Oscar Schachter, ‘The Right of States to Use Armed Force’ (1984) 82(5) *Michigan Law Review* 1620, 1626; Bruno Simma et al. (eds), *The Charter of the United Nations: A Commentary, vol 1* (3rd edn, Oxford University Press, 2012) 215; Joshua L Cornthwaite, ‘Can We Shoot Down That Drone? An Examination of International Law Issues Associated with the Use of Territorially Intrusive Aerial and Maritime Surveillance Drones in Peacetime’ (2019) 52 *Cornell International Law Journal* 475, 531. “... states have total authority to prescribed undesirable activities and to use police powers to enforce their laws within their territory ...”.

of the use of force under Article 2(4) “is subject to no exception other than self-defence”,¹²⁷ others argue, based on “an inherent aspect of sovereignty”, that the force exercised in response to a violation of territorial sovereignty, such as intrusive ISR operations within national territory, does not fall under Article 2(4) prohibition.¹²⁸

As the ICJ observed in the *Corfu Channel* case, “between independent States, respect for territorial sovereignty is an essential foundation of international relations”.¹²⁹ This principle is reflected in both UNCLOS and the Chicago Convention.¹³⁰ Nevertheless, foreign ISR operations have historically tested the boundaries of this principle, as certain incursions into national jurisdiction – although amounting to violations of territorial sovereignty – were often tolerated, particularly during the Cold War. With growing reliance on unmanned vehicles, including UAVs and UUVs, in ISR operations, however, the legal implications of such activities warrant closer scrutiny.

Such changes are already reflected in practice. Incidents related to unmanned ISR operations are increasingly reported within foreign national jurisdiction, often described as more intrusive, reckless, or provocative than traditional ISR operations. The absence of risk to human life and the relatively lower cost of unmanned platforms may encourage operating States to pursue such operations more aggressively, while simultaneously lowering the political sensitivity associated with their interception or destruction by coastal States.¹³¹ Consequently, unmanned

¹²⁷ Yoram Dinstein, *War, Aggression and Self-defence* (Cambridge University Press, 2011) 213; See also Tom Ruys, *‘Armed Attack’ and Article 51 of the UN Charter: Evolutions in Customary Law and Practice* (Cambridge University Press 2010) 145-146 and 185-186; Patricia Jimenez Kwast, ‘Maritime Law Enforcement and the Use of Force: Reflections on the Categorisation of Forcible Action at Sea in the Light of the Guyana/Suriname Award’ (2008) 13 *Journal of Conflict and Security Law* 49, 84-85; Jorg Kammerhofer, ‘The Armed Activities Case and Non-State Actors in Self-Defence Law’ (2007) 20 *Leiden Journal of International Law* 89, 105.

¹²⁸ Joshua L Cornthwaite, ‘Can We Shoot Down That Drone? An Examination of International Law Issues Associated with the Use of Territorially Intrusive Aerial and Maritime Surveillance Drones in Peacetime’ (2019) 52 *Cornell International Law Journal* 475, 531.

¹²⁹ *Corfu Channel case (merits) (United Kingdom v. Albania), Judgment, ICJ Reports 1949*, p. 4 at p 35.

¹³⁰ *Chicago Convention*, art 2. “Every States has complete and exclusive sovereignty over national airspace.”; *UNLOCS*, art 2.

¹³¹ Rob McLaughlin, ‘Unmanned Naval Vehicles at Sea: USVs, UUVs, and the Adequacy of the Law’ (2011) 21(2) *Journal of Law, Information & Science* 100, 112-114; Joshua L Cornthwaite, ‘Can We Shoot Down That Drone? An Examination of International Law Issues Associated with the Use of Territorially Intrusive Aerial and Maritime Surveillance Drones in Peacetime’ (2019) 52 *Cornell International Law Journal* 475; Simon Mckenzie, ‘Autonomous Technology and Dynamic Obligation: Uncrewed Maritime Vehicles and the Regulation of Maritime Military Surveillance in the Exclusive Economic Zone’ (2021) 11(1) *Asian Journal of International Law* 146, 174.

Chapter 2

technologies appear to both facilitate more persistent ISR operations by operating States and shape the manner in which coastal States respond to perceived intrusions.¹³²

Taken together, these developments reveal growing uncertainty regarding the application of existing legal frameworks to unmanned ISR operations. Without clearer guidance on the status of unmanned vehicles and the legal characterisation of permissible responses, divergent State practice and competing legal justification are likely to persist. These issues, therefore, raise the need for a closer examination of the legal arguments advanced by both operating States and coastal States in justifying their conduct – an inquiry undertaken in the following chapter.

¹³² Sarah Kreps and Micah Zenko, 'The Next Drone War: Preparing for Proliferation' (2014) 93(2) *Foreign Affairs* 68, 75.

Chapter 3 Examination of Coastal States' Claimed Justifications to Exercise Forcible Measures against Unmanned ISR Operations within Their Territorial Sea

3.1 Introduction

It is observed through the analysis of Chapter 2 that a structural tension emerges between the coastal States' interests in safeguarding territorial sovereignty and national security, and the legal characterisation of ISR operations as 'non-innocent but not unlawful'. This tension does not, in itself, render the existing legal framework deficient or obsolete. Rather, it helps to explain why coastal States have increasingly sought to articulate legal arguments in support of more assertive responses – occasionally including the use of force – despite the absence of clear authorisation under UNCLOS.

The growing integration of unmanned technologies into ISR operations has further intensified this tension by altering the factual and operational context in which these legal rules are applied. Although the current practices regarding unmanned vehicles are neither authoritative nor considered State practice due to a lack of *opinio juris*, they nevertheless indicate growing security concerns or even fears among coastal States arising from these new circumstances. Considering the current interpretation of the relevant provisions, combined with increasing security threats with regard to unmanned vehicles and legal uncertainties surrounding them, this chapter seeks to evaluate the evolving legal arguments for the adoption of graduated measures against unmanned ISR operations by coastal States. It is not concerned with endorsing or legitimising the use of force against unmanned ISR operations. Instead, its purpose is to examine why such arguments arise, how they are framed by coastal States, and whether they can withstand scrutiny under existing international law. If they accurately reflect the new operational and technological realities, they may gradually evolve into accepted State practice.¹³³ If left unchallenged, however, they risk undermining the existing legal order.

¹³³ James Kraska and Raul Pedrozo, *International Maritime Security Law* (BRILL 2013) 244.

Unmanned ISR operations in the air have been more frequently observed than those conducted on the surface or underwater.¹³⁴ This may be due to the effectiveness of aircraft in terms of their speed and accessibility, as well as the earlier technological development of unmanned aerial vehicles, compared to that of unmanned maritime vehicles. However, the limited number of incidents at sea does not necessarily imply a lack of significance. As States have increased their budget for the development of UUVs, unmanned ISR operations at sea are expected to expand significantly.¹³⁵ Although aerial and maritime ISR operations within national jurisdiction are regulated under different legal regimes, there are shared grounds that could be commonly invoked when assessing the legality of conducting and responding to ISR operations, such as the principle of sovereign immunity, self-defence, and legal uncertainties associated with the use of unmanned technologies. Thus, scrutinising aviation cases would make a valuable reference when addressing and dealing with new challenges under the UNCLOS regime in the future. The following analysis, therefore, refers to both aviation and maritime incidents for understanding emerging arguments and response patterns. How States seek to operationalise their preferred rules regarding unmanned ISR operations is only the first consideration. Equally important is the interactive practice of other States, including their perceptions, responses, and reactions, without which such rules cannot acquire wider normative effect. A holistic assessment is therefore required of the cumulative effect of individual changes and their contribution to the shaping of emerging order.

3.2 Higher threshold of self-defence under Article 51 of the UN Charter

It is often observed that some coastal States attempt to justify their use of force against unmanned vehicles on the grounds of self-defence. For instance, in 2019, a US RQ-4 *Global*

¹³⁴ Incidents involving manned aircraft were intentionally excluded, as they have been extensively discussed in other works. E.g., see Joshua L Cornthwaite, 'Can We Shoot Down That Drone? An Examination of International Law Issues Associated with the Use of Territorially Intrusive Aerial and Maritime Surveillance Drones in Peacetime' (2019) 52 *Cornell International Law Journal* 475.

¹³⁵ The Association for Uncrewed Vehicle System International (AUVSI), *2023 Defence Budget for Uncrewed Systems and Robotics* (executive summary, 2022). The Fiscal Year 2022 budget for the US Department of Defence (DOD) includes an estimated \$8.2 billion to support the research, development, test, and evaluation (RDT&E) and procurement of unmanned systems and robotics in the air, ground and maritime domains. This represents an increase of about \$700 million for unmanned vehicles relative to the budget from Fiscal Year 2021; see also 'Pentagon Plans for Cuts to Drone Budget' (*Military.com*, 2 January 2014) <<https://www.military.com/dodbuzz/2014/01/02/pentagon-plans-for-cuts-to-drone-budgets>> accessed 17 January 2024 for gradual increase of the budget on unmanned systems.

Hawk, the US's military unmanned aircraft designed to conduct intelligence gathering, was shot down by Iranian military forces while carrying out a spying mission, in the belief that it was within its national airspace.¹³⁶ To justify such use of force exercised against the *Global Hawk*, Iran sought to invoke the right of self-defence under Article 51 of the UN Charter.¹³⁷ Article 51 of the UN Charter provides the principle of self-defence as follows:

Nothing in the present Charter shall impair the inherent right of individual or collective self-defence if an armed attack occurs against a Member of the United Nations, until the Security Council has taken the measures necessary to maintain international peace and security. Measures taken by Members in the exercise of this right of self-defence shall be immediately reported to the Security Council and shall not in any way affect the authority and responsibility of the Security Council under the present Charters to take at any time such action as it deems necessary in order to maintain or restore international peace and security.

The question of immunity does not become relevant when self-defence is applied, as it is a legitimate exception to the prohibition of the use of force under Article 2(4) of the UN Charter. According to Article 51, self-defence can only be invoked against activities equivalent to an “armed attack”. In other words, States are not permitted to use force in response to any form of force falling below the level of “armed attack” under Article 51. As discussed in section 2.2.3, ISR operations may, in exceptional circumstances, *cumulatively* constitute the threat or use of “force” prohibited under Article 2(4) of the UN Charter; however, the term “armed attack” is distinguished from the term “force” under Article 2(4). This section examines whether ISR operations, particularly when conducted through unmanned vehicles, could be characterised as an “armed attack”.

In the *Paramilitary* case, the ICJ distinguished between *the most grave forms* of the use of force, which constitute an “armed attack”, and other less grave forms.¹³⁸ This distinction suggests that an “armed attack” falls within the broader concept of “force”, but denotes a specific category of force with a particular degree of intensity. The Court’s statement has been considered a general agreement on the nature of the acts which can be treated as constituting armed attacks:

¹³⁶ Tara Law, ‘Iran Shot Down at \$176 Million U.S. Drone. Here’s What to Know About the RQ-4 Global Hawk’ (*TIME*, 21 June 2019) <<https://time.com/5611222/rq-4-global-hawk-iran-shot-down/>> accessed 2 August 2024.

The US on the other hand alleged that the UAV was shot beyond Iranian national airspace.

¹³⁷ Letter dated 20 June 2019 from the Permanent Representative of the Islamic Republic of Iran to the United Nations addressed to the Secretary-General (20 June 2019) UN Doc S/2019/512.

¹³⁸ *Military and Paramilitary Activities in and against Nicaragua (Nicaragua v. United States of America)*, Merits, Judgment, ICJ Reports 1986, p. 14 at p. 101, para. 191. (Paramilitary case).

“... an armed attack must be understood as including not merely action by regular armed forces across an international border, but also “the sending by or on behalf of a State of armed bands, groups, irregulars or mercenaries, which carry out acts of armed force against another State of such *gravity* as to amount to” (inter alia) an actual armed attack conducted by regular forces, “or its substantial involvement therein. ...”¹³⁹

It appears that the Court adopted a slightly broader definition of “armed attack” by including “the sending by a State of armed bands to the territory of another State” within its scope, provided such actions are of sufficient “*scale and effect*”.¹⁴⁰ By contrast, “*assistance* to rebels in the form of the provision of weapons or logistical or other support” was not regarded as a threat or use of force or intervention.¹⁴¹ This indicates that such activities are generally not, by their nature, regarded as an attack, nor as being directly tantamount to one.

The view of the ICJ in the *Oil platform*, while observing the view of the Court in the *Paramilitary* case, appears to adopt a more stringent approach to defining “armed attack”. The Court considered the question of whether the alleged attack could be categorised as an “armed attack” attributed to Iran.¹⁴² This question indicates that even acts amounting to the actual use of force would not necessarily meet the threshold of an “armed attack”. In this context, the Court considered whether the attack was not specifically aimed at the vessel, but was instead simply programmed to strike the target. This view, taken together with the approach in the *Paramilitary* case, confirms that the notion of “armed attack” has traditionally been understood as a high threshold, requiring direct and physical use of force, involving a “considerable degree of coercion against the coastal State”.¹⁴³

ISR operations have traditionally been considered to perform an assistance role, clearly falling below the threshold of an armed attack. Although ISR operations may be integrated into broader military operations, this does not alter the legal character of ISR, which remains distinct from acts amounting to an armed attack. While technological developments may prompt speculative arguments to that effect, the existing jurisprudence leaves little room, as a matter of law, for characterising unmanned ISR as constituting an ‘armed attack’ in the absence of actual use of force producing destructive consequences.

¹³⁹ *Paramilitary case*, at p.103, para.195.

¹⁴⁰ *Paramilitary case*, at p. 103, para. 195.

¹⁴¹ *Paramilitary case*, at pp. 103-104, para. 195.

¹⁴² *Oil Platforms (Islamic Republic of Iran v. United States of America)*, Judgment, ICJ Reports 2003, p. 161 at p. 191, para. 64. (Oil Platforms)

¹⁴³ *Paramilitary case*, at 104, para. 195.

Secondly, the ICJ has also emphasised that it is for the victim State to form and declare the view that it has been subject to an armed attack.¹⁴⁴ There is no rule of customary international law permitting a State to invoke the right of self-defence “on the basis of its own assessment of the situations.”¹⁴⁵ This constitutes a procedural prerequisite for invoking the right of self-defence, although the final legal determination of whether the conduct amounts to an ‘armed attack’ remains subject to the objective assessment under international law. In *Oil platforms*, the Court observed that, despite the US having referred to attacks on vessels and aircraft of other nationalities, it did not claim to be exercising collective self-defence on behalf of the neutral States engaged in shipping in the Persian Gulf. The exercise of collective self-defence would have required a request from the State considering itself the victim of an armed attack, which was absent in this case.¹⁴⁶ This requirement also indicates that, in the case of intrusive ISR operations conducted by UMs, a coastal State could not rely on third-party claims to justify forcible measures. Instead, it must itself regard the operation as amounting to an “armed attack” and explicitly request assistance before self-defence may be lawfully invoked.

In the present case, where Iran invoked the regime of self-defence against the US *Global Hawk* carrying out espionage, perceiving the operation as an “armed attack”, two aspects thus require clarification: 1) whether Iran formally regarded itself as the victim of an armed attack and declared this position, and 2) whether the operation of the *Global Hawk* could, in substance, amount to an “armed attack” under international law. Although Iran submitted a formal communication asserting self-defence,¹⁴⁷ the activity of the US *Global Hawk* fell well below the threshold of an armed attack. The US alleged that the ISR operation of this vehicle could not be seen as an aggressive movement that meets the threshold of an armed attack. Allegedly, the *Global Hawk*’s operational features – being large, heavy, and slow – were not conducive to stealth operations, and the vehicle was not even carrying any weapons.¹⁴⁸ Thus, there is little basis to treat the deployment of the *Global Hawk* as constituting an armed attack.

ISR operations conducted by the *Global Hawk* or other advanced unmanned platforms may, in exceptional circumstances, cumulatively amount to a threat or use of force under Article 2(4) of the UN Charter, thereby rendering such operations “unlawful”, but may not rise to the level of

¹⁴⁴ *Paramilitary case*, at 104, para. 195.

¹⁴⁵ *Paramilitary case*, at 104, para. 195.

¹⁴⁶ *Oil Platforms*, at pp. 186-187, para. 51.

¹⁴⁷ Letter dated 20 June 2019 from the Permanent Representative of the Islamic Republic of Iran to the United Nations addressed to the Secretary-General (20 June 2019) UN Doc S/2019/512.

¹⁴⁸ Tara Law, ‘Iran Shot Down at \$176 Million U.S. Drone. Here’s What to Know About the RQ-4 Global Hawk’ (*TIME*, 21 June 2019) <<https://time.com/5611222/rq-4-global-hawk-iran-shot-down/>> accessed 2 August 2025.

an “armed attack”. While some scholars have suggested that espionage or the refusal of submarines to surface could amount to an “incipient armed attack” justifying self-defence,¹⁴⁹ jurisprudence has set the threshold of an armed attack particularly high. Even ISR operations, involving UUVs equipped with weapons and thus certainly capable of launching an attack upon command, are unlikely to be considered an “armed attack”, unless force is actually employed, results in destructive consequences, and the target State perceives and declares itself as the victim of an armed attack.

Judge Bruno Simma, while retaining the distinction between armed attacks and lower levels of force, argued that States may undertake proportionate forceful countermeasures in response to uses of force that fall short of an armed attack.¹⁵⁰ This view may be understood as an effort to broaden the scope of permissible responses to so-called “grey zone” activities – conduct that generates credible security concerns but does not cross the high threshold of an armed attack. In the context of unmanned ISR operations, which are generally not regarded as armed attacks but may nonetheless be perceived as threatening, Simma’s reasoning could provide coastal States with a legal rationale for employing limited forcible measures against foreign unmanned vehicles. However, this interpretation is not without risk. The classification of the context within which the force is exercised is important. The use of force in self-defence and the use of force as necessary measures to prevent non-innocent passage are grounded in fundamentally different legal principles. By blurring the line between law enforcement measures and self-defence, it may effectively lower the threshold for military engagement, and thereby increase the likelihood of miscalculation or escalation.

Lastly, modern geopolitical tensions appear to affect how States interpret the intensity of ISR operations conducted by unmanned vehicles. Coastal States tend to be particularly sensitive when such operations occur in dispute or high-tension areas, often characterising them as “hostile” or “provocative” acts. In certain cases, States have even invoked the right of self-defence under Article 51 of the UN Charter to justify forcible countermeasures. This reflects the legal difficulty of distinguishing between politically hostile conduct and operations that objectively qualify as an “armed attack” under international law. For instance, in 2012, Iranian fighter jets fired on a US *Predator*, the military surveillance drone, which Iran alleged had flown over Iranian national airspace near the Persian Gulf. Although the drone was not hit and

¹⁴⁹ Yoram Dinstein, *War, Aggression and Self-defence* (6th edn, Cambridge University Press 2017) 98-99; Elizabeth Wilmshurst, ‘The Chatham House Principles of International Law on the Use of Force by States in Self-Defence’ (2006) 55(4) *International & Comparative Law Quarterly* 963.

¹⁵⁰ *Oil Platforms*, Separate Opinion of Judge Simma, p. 332.

managed to move away from the Iranian coastline, Iran's attempt to shoot down the drone was widely criticised.

Martin Dempsey, the Chairman of the Joint Chiefs of Staff, described Iran's reaction as "clearly a hostile act against our asset".¹⁵¹ The choice of the term "hostile" illustrates how the existing political tension influenced perceptions of the event and raised the risk of unintended escalation, despite the incident falling far short of the threshold of an armed attack. As a matter of fact, the event happened at a time of international tensions between the US and Iran regarding the Iranian nuclear programme, and the US sought to justify its regular surveillance over the area on the grounds that the Persian Gulf and the Strait of Hormuz should be secured as they play a critical role in international shipping.¹⁵² Moreover, the US, in response to Iranian behaviour, sent the drone back on surveillance escorted by two manned aircraft (F-16), and the pilots on board were under command to shoot down any aircraft threatening the drone or its right to flight in international airspace.¹⁵³ Although the significant value of the property (i.e., the US *Predator*) and the intelligence collected should not be disregarded, it is ironic that humans were sent back to defend the drone, given that unmanned technologies were initially developed to remove humans from tasks that are dangerous, dull, and dirty.¹⁵⁴ This illustrates that the proliferation of unmanned vehicles, even if unarmed, could heighten the risk of escalation, even potentially drawing humans back into dangerous situations.

Similarly, in 2014, Iran shot down an unarmed Israeli stealth drone over the Natanz uranium enrichment complex. Iran contended that the drone incursion "constitutes a flagrant violation of the territorial integrity and national sovereignty of the Islamic Republic of Iran in contravention of the principles of international law and the provisions of the Charter of the United Nations".¹⁵⁵

¹⁵¹ Sarah Kreps and Micah Zenko, 'The Next Drone Wars: Preparing for Proliferation' (2012) 93(2) *Foreign Affairs* 68, 75.

¹⁵² Thom Shanker and Rick Gladstone, 'Iran Fired on Military Drone in First Such Attack, U.S. Says' (*The New York Times*, 8 November 2012) <<https://www.nytimes.com/2012/11/09/world/middleeast/pentagon-says-iran-fired-at-surveillance-drone-last-week.html>> accessed 21 January 2024.

¹⁵³ Thom Shanker and Rick Gladstone, 'Iran Fired on Military Drone in First Such Attack, U.S. Says' (*The New York Times*, 8 November 2012) <<https://www.nytimes.com/2012/11/09/world/middleeast/pentagon-says-iran-fired-at-surveillance-drone-last-week.html>> accessed 21 January 2025; Tom McCarthy, 'Iranian fighter jets fired on US drone, Pentagon confirms' (*The Guardian*, 8 November 2012) <<https://www.theguardian.com/world/2012/nov/08/iranian-jets-us-drone-pentagon>> accessed 21 January 2025.

¹⁵⁴ Leon Panetta & Jim Newton, *Worthy fights: A memoir of leadership in war and peace* (Penguin Press 2014) 435.

¹⁵⁵ Letter dated 28 August 2014 from the Chargé d'affaires a.i. of the Permanent Mission of the Islamic Republic of Iran to the United Nations addressed to the Secretary-General (28 August

Iran reiterated its position by requiring the international community to condemn such an “act of hostility strongly”, arguing that it “reserve[s] the right to undertake all legitimate necessary measures to defend its territory and [warn] against such provocation acts”.¹⁵⁶ This event again occurred at a time of higher tension between Iran and Israel regarding the Iranian nuclear programme.

Taken together, these cases demonstrate that unmanned ISR operations conducted during periods of heightened political tension are frequently characterised by States as “a hostile act”, “act of hostility”, and “provocation acts”, and may at times be linked to claims of self-defence. Such characterisation, however, reflect political assessment rather than legal qualifications. Consistent with the jurisprudence of the ICJ in the *Paramilitary* case and *Oil Platforms*, such incidents remain below the high threshold required for an “armed attack”.¹⁵⁷ Political hostilities do not, in themselves, convert unmanned ISR operations into armed attack.

In conclusion, the definitional ambiguity surrounding “armed attack” and the interpretation of its threshold in the context of unmanned technologies creates room for targeted States to strategically invoke the concept to their advantage. Nonetheless, the legal standard must remain clear and should not be overstretched. The US has long maintained that any amount of force by another State may justify the exercise of self-defence.¹⁵⁸ In support of this position, it argues that a lower threshold for triggering self-defence can serve as a deterrent, discouraging potential aggressors from acting in the first place. For instance, the *US Commander’s Handbook on the Law of Naval Warfare* notes that “An aircraft, whether military or civilian, that enters foreign airspace without prior authorisation becomes subject to orders ... It might become the subject of use of force by that State if the intrusion is viewed by that State as triggering the right of self-defence.”¹⁵⁹ However, applying such a lower threshold standard to unmanned vehicles is problematic. Unlike manned platforms, unmanned vehicles lack human presence, and their interception or destruction alters the normative assessment of force, particularly by weakening the restraint traditionally imposed by the presence of human life on board. Invoking the right of self-defence against unmanned objects not only risks unnecessary escalation but may also blur the line between legitimate defensive measures and

2014) UN Doc S/2014/641 <<https://digitallibrary.un.org/record/778550?ln=en&v=pdf#files>> accessed 5 April 2025.

¹⁵⁶ *ibid.*

¹⁵⁷ *Paramilitary case*, at 104, para. 195; *Oil Platforms*, at pp. 186-187, para. 51.

¹⁵⁸ Ryan Goodman, ‘Cyber Operations and the U.S. Definition of “Armed Attack”’ (*Just Security*, 8 March 2018) <<https://www.justsecurity.org/53495/cyber-operations-u-s-definition-armed-attack/>> accessed 22 July 2025.

¹⁵⁹ United States Navy, *The Commander’s Handbook on the Law of Naval Operations* (NWP 1-14M, March 2022), para. 4.4.3. (NWP 1-14M)

disproportionate use of force. In this sense, lowering the threshold of self-defence in response to unmanned operations may invite, rather than deter, conflicts.

3.3 Potential concerns with “UMVs as warships”

The question of whether UMVs may be classified as warships has emerged as a legally significant issue in the contemporary practice. This is because the legal consequences attached to warships status, notably sovereign immunity under Article 32 of UNCLOS, carry direct implications for the scope of coastal State enforcement powers in the territorial sea. Arguments characterising UMVs as warship have begun to surface, and such arguments typically seeks to extend the established immunity framework applicable to traditional warships to unmanned platforms, thereby shielding them from coercive measures by coastal States. By analysing the legal structure underpinning warship status and its potential application to UMVs, this section examines why the argument that UMVs qualify as warships arises in the first place, focusing on the interaction between sovereign immunity, and limited enforcement mechanism, and critically assess the concerns raised by extending the definition of warships to unmanned platforms, particularly in light of the historical, functional, and normative foundation of the warship regime.

As discussed in section 2.2.4.2, the applicability of Article 32 is often interpreted in a geographical context, as to whether Article 32 exclusively governs the immunity of warships within the territorial sea.¹⁶⁰ However, in the context of UMVs, it is more important to note that sovereign immunity under UNCLOS is specifically addressed to “ships”, referring to warships and other government vessels for non-commercial purposes.¹⁶¹ With the advent of UMVs, it has become necessary to analyse the applicability of Article 32 in relation to their legal status. There have been debates regarding what constitutes a ship, including the purpose of transportation, propulsion, or size.¹⁶² However, this section is not intended to delve into such discussions, as it believes that the registration of a ship hugely relies on the discretion of the flag State, and a lack of human presence on board is not necessarily a decisive factor in defining a ship as a “ship”.

¹⁶⁰ “*ARA Libertad*” (*Argentina v. Ghana*), Provisional Measures, Order of 15 December 2012, ITLOS Reports 2012, p. 332 at p. 344, para. 64. (“*ARA Libertad*”)

¹⁶¹ UNCLOS, art 32.

¹⁶² Robert Veal, Michael Tsimplis, Andrew Serdy, Alexandros Ntovas and Simon Quinn, *Liability for operations in Unmanned Maritime Vehicles with Differing Levels of Autonomy* (University of Southampton 2016); Rob McLaughlin, ‘Unmanned Naval Vehicles at Sea: USVs, UUVs, and the Adequacy of the Law’ (2011) 21(2) *Journal of Law, Information & Science* 100; Simon McKenzie, ‘When is a Ship a Ship? Use by State Armed Forces of Uncrewed Maritime Vehicles and the United Nations Convention on the Law of the Sea’ (2020) 21 *Melbourne Journal of International Law* 373.

According to Article 91 of UNCLOS, the registration for a ship seems to be exclusively within the discretion of the flag States.¹⁶³ Flag States can determine criteria and establish the procedures for granting nationality to ships in accordance with their national legislation if there exists “a genuine link” between the State and the ship.¹⁶⁴ Regarding the existence of a genuine link, international courts seem to support the significant discretion of the flag State for registration. In the *M/V Saiga (No.2)* case, the Tribunal recalled the initial proposal by the International Law Commission of the concept of “genuine link” as a criterion “not only for the attribution of nationality to a ship but also for the recognition by other States of such nationality.”¹⁶⁵ However, given such specification was neither adopted in the final texts of Article 5(1) of the 1958 Geneva Convention nor Article 91 of UNCLOS, the Tribunal concluded that the purpose of the provision on the need for a “genuine link” is “not to establish criteria by reference to which the validity of the registration of ships by a flag State may be challenged by other States.”¹⁶⁶ This indicates the broader discretion of the flag State on the registration of a ship, being able to flag something that is typically not a ship. For instance, power barges – floating structures designed to generate electrical power, which are seemingly assumed not to fit within the common understanding of a ship, are now commonly registered as ships under one flag State.¹⁶⁷ National rules of the flag State concerning ship registration – how each State perceives unmanned vessels – therefore play a critical role in shaping the definition of a ship. However, it is worth addressing the view of Judge Jessup in his Separate Opinion in a case before the International Court of Justice: “If a State purports to confer its nationality on ships by allowing them to fly its flag, without assuring that they meet such tests as management, ownership, jurisdiction and control, other States are not bound to recognise the asserted nationality of the ship.”¹⁶⁸ This view, although made in dictum, emphasises the crucial aspect that the duties of the flag State managing vessels flying its flag.

This seems to align with the view of ITLOS in the *M/V Saiga (No.2)* case that the need for a “genuine link” is “to secure more effective implementation of the duties of the flag State.”¹⁶⁹

This view is reflected by the Tribunal in the *M/V “Virginia G”*, stating that the meaning of “genuine

¹⁶³ see also *M/V “SAIGA” (No.2) (Saint Vincent and the Grenadines v. Guinea)*, Judgement, ITLOS Reports 1999, p. 10 at pp. 36-37, para. 63. (*M/V “SAIGA” (No. 2)*)

¹⁶⁴ UNCLOS, art 91(1); see also *M/V “SAIGA” (No.2)*, p. 37, para 65.

¹⁶⁵ *M/V “SAIGA” (No.2)*, p. 41, para 80.

¹⁶⁶ *M/V “SAIGA” (No.2)*, p. 42, para 83.

¹⁶⁷ Alexander Severance and Martin Sandgren, ‘Flagging the Floating Turbine Unit: Navigating towards a Registerable, First-Ranking Security Interest in Floating Wind Turbines’ (2014) 39 *Tulane Maritime Law Journal* 1, 76-77.

¹⁶⁸ *Case Concerning the Barcelona Traction, Light and Power Company, Limited (Belgium v. Spain) (Second Phase)* [1970] ICJ Rep 3, para, 46.

¹⁶⁹ *M/V “SAIGA” (No.2)*, p. 42, para 83.

link” is to “ensure that [the ship flying its flag] operates in accordance with generally accepted international regulations, procedures, and practices.”¹⁷⁰ This comment indicates that the right of the flag State concerning the registration of ships is followed by the duty of effective control over them. If the Flag State is not able to, or does not establish effective measures to, control UMVs, their rights could be at risk of being disregarded. Once registered as a ship, the flag State is required to exercise effective jurisdiction and control in administrative, technical, and social matters over the ship flying its flag. The principle of sovereign immunity does not lift such an obligation of the flag State to ensure that its platforms, including warships, act in a manner consistent with UNCLOS.¹⁷¹ However, the failure of the flag State to properly exercise its jurisdiction and control does not generally grant other States the authority to take direct action. Even when there are clear grounds to believe that proper jurisdiction and control with respect to ships (or, arguably, registered UMVs) have not been exercised by the flag State, other States may only report that fact to it.¹⁷² The flag State is then obliged to “investigate the matter and, if appropriate, take necessary actions to remedy the situation”.¹⁷³ Such rights of the flag State may be moderated by the territorial sovereignty of the coastal State within the territorial sea, allowing the latter to take appropriate measures in case of a violation. However, it does not necessarily result in the loss of status as a ship.¹⁷⁴

Flag State is required to take necessary measures with regard to the manning of the ship; however, Article 94 does not necessarily seem to prescribe the number of crew that must be on board.¹⁷⁵ This factor does not seem to be a decisive criterion for the registration of a ship. Article 21(2) of UNCLOS, providing that coastal States’ laws and regulations relating to innocent passage through the territorial sea “shall not apply to the design, construction, *manning* or equipment of foreign ships”, may support this view. However, the clause at the end – “unless they are giving effect to generally accepted international rules or standard” – may need further interpretation. According to the Comité Maritime International (CMI) report, 17 nations out of 19 answered, in response to the CMI questionnaire – Would a “cargo ship” in excess of 500 gross registered tonnage, without a master or crew on board which is either controlled remotely by

¹⁷⁰ UNCLOS, art 94(1); M/V “Virginia G” (Panama/Guinea-Bissau) (Judgment) ITLOS Reports 2014, p. 45, para. 113.

¹⁷¹ Satya N Nandan and Shabtai Rosenne (eds), *United Nations Convention on the Law of the Sea 1982: A Commentary*, vol. IV (Martinus Nijhoff 1991) 421, para. 236.6(b).

¹⁷² UNCLOS, art 94(6).

¹⁷³ UNCLOS, arts 31 and 94(6).

¹⁷⁴ For the opposite view, see Hitoshi Nasu and David Letts, ‘The Legal Characterisation of Lethal Autonomous Maritime Systems: Warship, Torpedo, or Naval Mine?’ (2020) 96(1) *International Law Studies* 79, 91-92. The authors argue that the inability to comply with these rules may result in the loss of status as a ship.

¹⁷⁵ UNCLOS, art 94.

radio communication; or controlled autonomously by, inter alia, a computerised collision avoidance system, without any human supervision, constitutes a “ship” under your national merchant shipping law? – that “an unmanned ship would or most likely would constitute a ship under their national law”.¹⁷⁶ With regard to all these, it appears that the absence of humans on board does not necessarily prevent unmanned platforms from being registered as ships under the flag State’s domestic law.

Despite a lack of definition of ships under UNCLOS, it clearly defines a warship under Article 29. Once registered as a ship, a UMV can be designated as a warship if it satisfies Article 29. It provides:

... a ship belonging to the armed forces of a State bearing the external marks distinguishing such ships of its nationality, under the command of an officer duly commissioned by the government of the State and whose name appears in the appropriate service list or its equivalent, and manned by a crew which is under regular armed forces discipline.

It proposes four main criteria to qualify a warship: 1) belonging to the armed forces, 2) having external marks, 3) being under command, and 4) being manned by armed forces. Among those, the fourth criterion has become a critical matter, raising the question of whether the manning requirement is strictly limited to physical human presence on board or extends to the availability of human intervention regardless of its actual location.

The flexible approach to the manning requirement does not simply mean a lack of humans on board. Physical humans on board should be replaced with suitable alternatives. The virtual presence can be subject to different levels of conscious human intervention. For example, an unmanned ship operated by a remote controller may allow for more immediate human intervention than a pre-programmed one. This may increase the likelihood of the former being classified as a “ship”, or even a warship if it fulfils other conditions outlined under Article 29. In this regard, it can be argued that the manning requirement under Article 29 requires the presence of “contemporaneous human sentience”.¹⁷⁷ If this is the case, unmanned ships

¹⁷⁶ Comité Maritime International, Regulatory Scoping Exercise for the Use of Maritime Autonomous Surface Ships (MASS) (MSC 99/INF.8) (13 February 2018) Page 1. Those 17 States include Argentina, Brazil, Britain, Canada, China, Denmark, Netherlands, Finland, France, Germany, Ireland, Italy, Jan, Malta, Singapore, Spain, and the US; IMO, Report of the Maritime Safety Committee on Its Ninety-Ninth Session Annex 1, IMO Doc. MSC 99/20 (13 February 2018).

¹⁷⁷ Robert Veal, Michael Tsimplis, Andrew Serdy, Alexandros Ntovas and Simon Quinn, *Liability for operations in Unmanned Maritime Vehicles with Differing Levels of Autonomy* (University of Southampton 2016) 16.

whose operation is carried out according to pre-programmed algorithms or systems, so that humans are technically out of the loop, are less likely to be regarded as ships.¹⁷⁸ Although the system can be designed, for example, to sound the alarm when human intervention is required, pre-programmed unmanned ships would hardly be seen as at the same level as remote-controlled ones in terms of human consciousness. The pre-programmed ones could not handle circumstances that happen to be omitted, intentionally or unintentionally, from the algorithm. As such, while it seems certainly arguable that remote-controlled ships qualify as warships, the views concerning pre-programmed ones seem to remain sceptical.

If UMVs are qualified as warships, they are subject to sovereign immunity per Article 32 of UNCLOS. Although the mere presence or passage of unmanned warships should not be regarded as a threat under the regime of innocent passage, this does not necessarily disregard the inherently threatening nature of unmanned warships. For instance, unmanned warships engaged in ISR operations, whether overtly or covertly, are likely to heighten the apprehension of coastal States, compared to traditional warships with people on board. Arguably, limited measures provided under Article 30 – a request for compliance with the rules of innocent passage and an immediate leave order – may only be effectively implemented if there are humans on board, who can communicate and correct their behaviour in a contemporaneous manner. It remains unclear whether UMVs with a lack of humans on board and limited communicative capabilities can effectively comply with orders issued by a coastal State. Thus, arguments have often advanced that the limited remedies under Article 30 may be operationally ineffective against certain UMVs.

In practice, it is observed that States are more inclined to use force against unmanned vehicles, which they might otherwise hesitate to undertake with manned counterparts. For instance, in 2019, the US UAV, the *Global Hawk*, was shot down by Iran, allegedly for conducting ISR operations within its national airspace. However, regarding the subsequent intrusion involving a manned surveillance plane (US Boeing P-8 Poseidon) with 35 people on board, Iran decided not to shoot it down to avoid any casualties. A similar position was illustrated when Iran fired on a US drone in 2012, while carefully avoiding attacking the US-manned aircraft.¹⁷⁹ It appears that unmanned vehicles, compared to manned counterparts in similar situations, have increasingly been exposed to forcible measures for various reasons, such as lower risk to human lives, heightened security concerns, or less political sensitivity.

¹⁷⁸ *Ibid.*, 15-16.

¹⁷⁹ Sarah Kreps and Micah Zenko, 'The Next Drone Wars: Preparing for Proliferation' (2012) 93(2) *Foreign Affairs* 68, 75.

If UMVs can easily qualify as warships under UNCLOS, rendering them legally subject to rules applicable to warships and other government ships operated for non-commercial purposes, forcible measures taken against unmanned vehicles in practice may effectively undermine the principle of sovereign immunity. In other words, lenient qualification of warships could eventually lead to the potential erosion of the principle of sovereign immunity under UNCLOS as well as the dignity of warships.¹⁸⁰ The rule on immunity of warships should not be reduced in light of new circumstances. The classification of unmanned vessels as “warships” thus may need more careful consideration.

Lastly, it is less clear whether UMVs, even if qualified warships, could genuinely parallel traditional warships in terms of representing the State's sovereignty. The immunity of warships has traditionally been less disputed due to their privileged status.¹⁸¹ The US Supreme Court in the *Schooner Exchange v. McFaddon & Others* recognises that a warship is not part of the ordinary property of a sovereign, but it is a part of “his” national property to which immunity should be granted due to the “nature of sovereignty”.¹⁸² Traditional warships are more than just sovereign immune vehicles as they symbolise the State's sovereignty. O'Connell described that, prior to the development of the modern principles of sovereign immunity, a warship was understood as “a piece of the peripatetic national territory” and “an ambulatory province”.¹⁸³ This implies that a warship, as an integral part of a State's territory, retains immunity from coastal States' enforcement jurisdiction on the premise that national territory possesses complete sovereignty. As the Tribunal in the *Kerch Strait* notes, any action affecting the immunity of warships is therefore “serious harm to the dignity and sovereignty of a State”.¹⁸⁴

In the view of the Tribunal in the *ARA Libertad* case, the subject matter (i.e., a warship) and the nature of the right at issue (i.e., the right of Argentina to enjoy the immunity of a warship in the ports of a foreign State) are found sufficient to meet the requirements of *urgency* and *irreparability* under Article 290(5) of UNCLOS.¹⁸⁵ In the Tribunal's view, “actions taken by the Ghanaian authorities that prevent the *ARA Libertad*, a warship belonging to the Argentinian navy,

¹⁸⁰ Simon Mckenzie, ‘Sovereign Immunity of Uncrewed Surveillance Vehicles and the Limits of Enforcement Jurisdiction’ [2023] *Nordic Journal of International Law* 573, 597.

¹⁸¹ Ingird Delupis, ‘Foreign Warships and Immunity for Espionage’ (1984) 78(1) *American Journal of International Law* 53, 57.

¹⁸² *The Schooner Exchange v. McFaddon*, 11 U.S. (7 Cranch) 116 (1812), 184

¹⁸³ DP O'Connell, *The International Law of the Sea, Vol.2* (1st edn, Oxford University Press 1988) 735.

¹⁸⁴ Detention of three Ukraine naval vessels (*Ukraine v. Russian Federation*), Provisional Measures, Order of 25 May 2019, ITLOS Reports 2018-2019, p. 309, para. 110.

¹⁸⁵ *The “ARA Libertad” Case (Argentina v. Ghana)*, Provisional Measures, Order and Declaration (PAIK) of 15 December 2012 p. 354 para 7; see also UNCLOS, art 290(5).

from discharging its mission and duties affect the immunity enjoyed by this warship under general international law”, and this sufficiently demonstrates the gravity of the situation.¹⁸⁶ Warships have traditionally been understood as vessels with military personnel on board, as explicitly stipulated under Article 29, and the existing legal authorities have been established with such understanding. It can be said that the nature of military and security personnel on board and *their* immunity cannot be overlooked when assessing the urgency of the claim concerning warships. The Tribunal in the *Three Ukraine Naval Vessels* considers that the actions taken by Russia could irreparably prejudice the rights claimed by Ukraine to the immunity of its naval vessels and their servicemen, and it also finds that such risk is real and ongoing under the circumstances of the case.¹⁸⁷ The continued deprivation of liberty and freedom of Ukraine’s servicemen raises humanitarian concerns.¹⁸⁸ The seizure of UMVs may be equivalent to detention in the case of warships or any other manned counterpart; however, the seizure of sovereign immune UMVs is less politically sensitive than the detention of a warship, which inevitably involves the detention of crews. This may cast doubts on whether sovereign immune UMVs, even if classified as a warship with flexible application of the existing law, could genuinely deserve the equivalent level of defence and respect as traditional ones.

Practically speaking, there is no need to stretch the definition of warship, as there is no issue with UMVs becoming government ships operated for non-commercial purposes, subject to Article 32 of UNCLOS.¹⁸⁹ Those vessels include naval auxiliary, other vessels or aircraft owned or operated by a State and used only for government non-commercial service.¹⁹⁰ Unlike warships, the requirements to qualify such vessels are not expressly defined. However, it can be presumed from the relevant provisions that they shall be “clearly marked and identifiable as being used for government service and authorised to that effect”.¹⁹¹ There is no direct mention of the manning, such as the physical presence of humans on board. UMVs, even if they are not necessarily qualified as warships, would not be deprived of their sovereign immunity under UNCLOS if clearly marked and identifiable as being used for government service. The separate definition of warships under Article 29 arguably reflects the view that traditional warships, by their nature, pose a greater threat than other vessels. Even when engaged in functionally similar

¹⁸⁶ “*ARA Libertad*”, para. 98-99.

¹⁸⁷ *Detention of three Ukraine naval vessels* (Ukraine v. Russian Federation), Provisional Measures, Order of 25 May 2019, ITLOS Reports 2018-2019, p. 309, para. 111.

¹⁸⁸ *Ibid.*, para. 112.

¹⁸⁹ Robert McLaughlin, ‘Unmanned Naval Vehicles at Sea: USVs, UUVs, and the Adequacy of the Law’ (2011) 21 *Journal of Law, Information & Science* 100, 110-111.

¹⁹⁰ James Kraska, *Maritime Power and the Law of the Sea: Expeditionary Operations in World Politics* (New York: Oxford University Press 2011) 252-253.

¹⁹¹ UNCLOS, arts 107, 110(5), 111(5) & 224.

operations, warships must be distinguished from other government vessels used for non-commercial purposes, as only warships are considered to embody the full sovereign authority of the State.

For such reasons, overly permissive classification of UMVs as warships should be avoided, both to preserve the symbolic integrity of traditional warships and to prevent the potential erosion of the fundamental principle of sovereign immunity accorded to warships under international law.

3.4 Questionable navigational rights of certain UMVs under the protection of immunity as State property

Non-ship-like UMVs may fall outside the definition of “ships” under UNCLOS, particularly in light of their limited size. This raises a fundamental question as to whether such UMVs can be entitled to navigational rights under UNCLOS, given that the Convention attributes such rights primarily to ships. While these unmanned platforms need not qualify as warships to benefit from sovereign immunity and may instead be characterised as State property, the absence of ship status renders their entitlement to navigation legally uncertain. This section examines the legal significance of these factual considerations, arguing that, although such considerations cannot modify the applicable legal standards under UNCLOS, they play a decisive role in shaping how those standards are interpreted and applied in practice. In particular, this section contends that the absence of communication links or other means of interaction may increase the likelihood that coastal States may disregard claims of navigational rights or sovereign immunity of non-ship-like UMVs.

3.4.1 Sovereign immunity of non-ship-like UMVs as State property

UMVs, if not classified as warships or other qualified vessels, may still be subject to the right of sovereign immunity if proven to be of military character. The sovereign immunity of military goods has been firmly established since the nineteenth century.¹⁹² The United Nations Convention on the Jurisdictional Immunities of States and Their Property (thereafter UNSCI), reflecting customary international law,¹⁹³ provides evidence that other forms of UMVs, if not

¹⁹² Matthew Happold, ‘Immunity from Execution of Military and Cultural Property’ in Luca Ferro, Nicolas Angelet and Tom Ruys (eds), *The Cambridge Handbook of Immunities and International Law* (Cambridge University Press 2019).

¹⁹³ Only 21 States have ratified the Convention and even between them it is not yet in force. The convention requires 30 ratification to come into force per Article 30 of the UNSCI.

ships, are entitled to the rights of sovereign immunity.¹⁹⁴ Article 18 of the Convention prevents any pre-judgment measures of constraint against the property of a State unless (a) it is expressly consented to by international agreement or any other equivalent documents, or (b) the State has allocated or earmarked property for the satisfaction of the claim which is the object of that proceeding.¹⁹⁵ In other words, the express waiver by the State of immunity may be the only practical measure. Similarly, Article 19 stipulates immunity from post-judgment measures of constraints against the property of a State. The exceptions to immunity are enumerated in paragraphs (a) to (c), and only the last one is distinct from those in Article 18. Article 19(c) provides that no post-judgment measures of constraint against State property may be taken in connection with a proceeding before a court of another State unless:

(c) it has been established that the property is specifically in use or intended for use by the State for other than government non-commercial purposes and is in the territory of the State of the forum, provided that post-judgment measures of constraint may only be taken against property that has a connection with the entity against which the proceeding was directed.¹⁹⁶

The immunity would be only effectively lost when such right is expressly waived by the State entitled to it, or if they engage in commercial activities. Article 21, closely linked to Article 19, provides specific categories of State property that are considered in use or intended for use by the State for government non-commercial purposes. Article 21(1)(b) refers to “property of a military character or used or intended for use in the performance of military functions”. The term “property” under Article 21 thus appears to encompass warships, other qualified vessels, and other non-ship forms of vehicles, provided that they are for military purposes. The criteria for qualifying as State property under international law are notably permissive. Presumably, this flexibility allows for the broad inclusion of unmanned vehicles, whether they are ships or not, within the category of State property, if they are proven for the purpose of ISR operations. Precisely speaking, Articles 18 and 19 use the term “property of a State” which may have been intended to have specific indications, for example, it must belong to the State, but it is believed that the words are to be construed as referring to any property that a State owns, possesses, or

¹⁹⁴ Gerhard Hafner, *United Nations Convention on Jurisdictional Immunities of States and Their Property (2004)* (Max Planck Encyclopaedia of Public International Law 2010).

¹⁹⁵ United Nations Convention on Jurisdictional Immunities of States and Their Property, art 18.

¹⁹⁶ United Nations Convention on Jurisdictional Immunities of States and Their Property, art 19(c).

controls.¹⁹⁷ The entitlement to sovereign immunity as State property depends primarily on ownership and the military use, neither of which is necessarily affected by the unmanned nature of the vehicle.

The sovereign immunity of military property is also seen in domestic legislation, and it appears that manning requirements are generally not identified under relevant provisions. For example, Paragraph 1611(b)(2) of the US Foreign Sovereign Immunities Act adopts a wider definition, granting state immunity “if the property is, or is intended to be, used in connection of a military activity and (A) is of a military character, or (B) is under the control of a military authority or defence agency”. The US definition of state property is broader, and it appears to include not only material military property but also any immaterial equipment intended for use by the armed forces.¹⁹⁸ Similarly, the Australian Foreign States Immunities Act creates a general immunity for military property. Section 3(1) defines military property as (...) (a)(i) property (not being a ship or vessel) that is ... (ii) being used in connection with a military activity, or (b) under the control of a military authority or defence agency for military or defence purposes.¹⁹⁹ Despite the slightly different scope of sovereign immune property between domestic laws and international law, neither seems to provide any basis for treating UMVs or UAVs differently from other military property.

McKenzie suggests that the failure of UMVs to qualify as ships may, in certain cases, preclude States from claiming the sovereign immunity of UMVs.²⁰⁰ However, the primary requirement to become State property is the *use* of the vehicles, whether manned or unmanned, not the classification of a ship. Given the nature of sovereignty that traditional warships may represent, the classification of “warships” may result in differences in terms of the level of protection and respect, compared to other sovereign immune vessels or vehicles. However, the classification of a “ship” does not seem to make substantial differences with regard to the applicability of sovereign immunity. Even non-ship-like vehicles can be subject to sovereign immunity if they

¹⁹⁷ Chester Brown and Roger O’Keefe, ‘Article 19’ in Roger O’Keefe and Christian J. Tams (eds.) *The United Nations Convention on Jurisdictional Immunities of States and Their Property* (Oxford University Press 2013) 316.

¹⁹⁸ *US Foreign Sovereign Immunity Act*, 28 USC § 1611(b)(2).

¹⁹⁹ *Foreign States Immunities Act 1985* (Cth) s. 3(1).

²⁰⁰ Simon McKenzie, ‘When is a Ship a Ship? Use by State Armed Forces of Uncrewed Maritime Vehicles and the United Nations Convention on the Law of the Sea’ (2020) 21 *Melbourne Journal of International Law* 1, 2; Regarding the status of warships, see also Hitoshi Nasu and David Letts, ‘The Legal Characterisation of Lethal Autonomous Maritime Systems: Warship, Torpedo, or Naval Mine’ (2020) 96 *International Law Studies* 79, 86. The authors suggest that if lethal autonomous maritime systems are merely treated as ships, not warships, they will lose much of their strategic and tactical value, as only warships are entitled to exercise belligerent rights during an international armed conflict.

are of military character. However, the difficulty may arise at the level of practical recognition. Difficulties in verifying the military character of certain UMVs may complicate the legal recognition of sovereign immunity in practice.

The seizure of the US UUV by China in the South China Sea exemplifies the ambiguities surrounding sovereign immunity and enforcement rights. In 2016, an oceanographic glider, launched by the *USNS Bowditch*, an unarmed US Navy research vessel, was seized by China while collecting information about the depth of the ocean, the current, the temperature, the type of bottom, and the salinity structure in the South China Sea (the exact location from which the vehicle was seized are disputed).²⁰¹ The incident was contentious in many regards, including the status of the water in which the UUV was seized and the purpose of the operations in which it was engaged. However, in the present context, it suffices to address one of the US's arguments that the seizure was unlawful because the UUV was a sovereign immune vehicle owned by the US.²⁰² While referring to the object as an *unidentified* device, China did not expressly provide its view on the validity of the sovereign immune status of the UUV at issue. However, the fact that the *USNS Bowditch* was located within visible distance and that China ignored the US Navy's attempt to communicate via radio may illustrate China's deliberate intention to disregard the sovereign immune status of the UUV.²⁰³ China's reaction indicates that, despite the general position that UMVs engaged in ISR operations enjoy immunity as State property, some States may not feel particularly compelled to acknowledge such immunity in practice, especially when they are autonomously operated.

Arguably, a more precise interpretation of the potentially limited sovereign immunity of non-ship-like UMVs is that they may be subject to additional verification measures to establish whether they satisfy the conditions for recognition as State property. In this sense, the application of sovereign immunity relates to how such a status can be recognised in practice. The operating States need to demonstrate the military character of unmanned vehicles in operation, or if capable, unmanned vehicles themselves need to be able to verify that they are

²⁰¹ David Malakoff, 'Q&A: China Just Seized a Research Robot from a U.S. Navy Ship. What Was It Doing?' (*Science*, 16 December 2016) <<https://www.science.org/content/article/qa-china-just-seized-research-robot-us-navy-ship-what-was-it-doing>> accessed 28 January 2022; Julian Borger, 'Chinese warship seizes US underwater drone in international waters' (*The Guardian*, 16 December 2016) <<https://www.theguardian.com/world/2016/dec/16/china-seizes-us-underwater-drone-south-china-sea>> accessed 28 January 2024.

²⁰² Christopher P. Cavas, 'China Grabs Underwater Drone Operated by US Navy in the South China Sea' (*Defence News*, 16 December 2016) <<https://www.defensenews.com/naval/2016/12/16/china-grabs-underwater-drone-operated-by-us-navy-in-south-china-sea/>> accessed 28 January 2024.

²⁰³ 'United States Confronts China over Seizure of Unmanned Drone in the South China Sea' (2017) 111(2) *American Journal of International Law* 513, 515.

under military control, to qualify as State property under international law, thereby enjoying immunity. Calls for additional verification measures do not render sovereign immunity conditional, but reflect the operational reality that immunity can only be respected once it is reasonably ascertainable. Without such verification, or failure to do so, the sovereign immune status of UMVs might be disregarded or limited.

3.4.2 Questionable navigational rights of non-ship-like UMVs

Many people may instinctively come across a common perception of a ship as “a larger manned vessel with a traditional single hull lying horizontally in the water that is capable of navigation under sail or its own power and is used to move goods or passengers between ports.”²⁰⁴ As an English judge once stated that he could not define a ship or vessel but knew the object in question was neither,²⁰⁵ people can generally tell, even without a firm definition, whether an object is (or is not) a ship when they see it. Although UNCLOS neither defines the term “ships” nor provides general criteria to become a ship, there are some shared features of a ship commonly addressed under relevant IMO instruments, such as navigability, transportation, size, design, and types.²⁰⁶ The classification of a ship holds much significance under UNCLOS because navigational rights, including innocent passage, are directly given to “ships”.²⁰⁷ Ships exercising the right of innocent passage through the territorial sea shall comply with the coastal State's laws and regulations concerning innocent passage as well as *all generally accepted international regulations* relating to the prevention of collision at sea.²⁰⁸ This section poses a question whether the coastal State, while acknowledging the sovereign immunity attached to

²⁰⁴ Alexander Severance and Martin Sandgren, ‘Flagging the Floating Turbine Unit: Navigating towards a Registerable, First-Ranking Security Interest in Floating Wind Turbines’ (2014) 39 *Tulane Maritime Law Journal* 1, 14.

²⁰⁵ *Merchants’ Marine Insurance Co v North of England Protecting & Indemnity Association* [1926] 26 Lloyd’s List L Rep 201, 203 (CA).

²⁰⁶ The International Regulation for Preventing Collision at Sea 1972, rule 3(a) “every description of watercraft [...] capable of being used as a means of transportation on water.”; The International Convention for the Prevention of Pollution from Ships 1973, art 2(4) “any types whatsoever operating in the marine environment and includes hydrofoil boats, air-cushion vehicles, submersibles, floating craft and fixed or floating platforms.”; The Convention for the Suppression of Unlawful Acts against the Safety of Marine Navigation 1988, art 1 excludes vessels of any type whatsoever that are permanently attached to the seabed from being recognised as ships; The International Convention for the Safety of Life at Sea 1974, chapter 1, regulation 3(a)(ii) The application is limited to vessels engaging in the international voyage and the rules do not apply to cargo ships of less than 500 gross tonnage; The SUA Convention, art 1 ‘a vessel of any type of whatsoever not permanently attached to the sea-bed, including dynamically supported craft, submersibles, or any other floating craft.’

²⁰⁷ UNCLOS, art 17.

²⁰⁸ UNCLOS, art 21(4).

non-ship-like UUVs as State property, is bound to respect the navigational rights of such vehicles if they significantly deviate from the conventional characteristics of a ship.

Without classification as “ships”, the presence of UUVs within a foreign territorial sea may be perceived as a violation of the coastal State’s territorial sovereignty, not because they violate rules of innocent passage, but because they are not clearly entitled to invoke the right of innocent passage.²⁰⁹ It is generally agreed that once the flag State determines the status of an object as a ship, it has access to the navigational rights.²¹⁰ However, a more targeted discussion is required, shifting the focus from the traditional question of “what constitutes a ship?”, whether unmanned features preclude a vehicle from qualifying as a ship, to legal consequences resulting from unmanned features: “how an absence of humans on board can transform the form, operation, and legal perception of maritime vehicles”. It is therefore necessary to reconsider new categories of such vehicles and clarify the scope of their associated legal rights.

It is worth addressing a legal ambiguity associated with the phrase “other underwater vehicles” under Article 20 of UNCLOS. Article 20 provides that “In the territorial sea, submarines and other underwater vehicles are required to navigate on the surface and to show their flag”. UUVs seem to qualify as “other underwater vehicles”, as it appears that Article 20 inserts the phrase to require all types of vehicles, which do not technically qualify as submarines but are capable of submersible operation, to show up on the surface and verify themselves by showing their flag in the foreign territorial sea. As concluded in Chapter 2, a submerged passage itself does not constitute a non-innocent passage. Although it might be subject to proportional measures for verification, if not comply with a show-up order, it does not necessarily affect, or deprive submarines of, the right of innocent passage once they show up on the surface. Submarines generally refer to “ships” that can travel underwater, so they are conventionally considered crewed by a number of personnel. On the other hand, underwater vehicles can refer to any type of vehicle capable of being submerged. Since they do not necessarily require crews on board, they can operate with varying levels of autonomy and are likely to appear in unconventional

²⁰⁹ UNCLOS, art 17. The right of innocent passage are specifically granted to “ships” under UNCLOS, although the precise definition of ships is not provided.

²¹⁰ See for example, Andrew Norris, *Legal Issues Relating to Unmanned Maritime Systems Monograph* (Monograph, US Naval War College, Newport 2013); Eric Van Hooydonk, ‘The Law of Unmanned Merchant Shipping – An Exploration’ (2014) 20 *Journal of International Maritime Law* 403, 409; Michael N Schmitt and David S Goddard, ‘International Law and the Military Use of Unmanned Maritime Systems’ (2016) 98 *International Review of the Red Cross* 567; Robert Veal and Henrik M. Ringbom, ‘Unmanned Ships and the International Regulatory Framework’ (2017) 23 *Journal of International Maritime Law* 100, Robert Veal, Michael Tsimplis and Andrew Serdy, ‘The Legal Status and Operation of Unmanned Maritime Vehicles’ (2019) 50 *Ocean Development and International Law* 23.

forms in terms of size and design. Thus, as Norris correctly pointed out, one crucial question is whether certain types of UUV further qualify as ships once they show up on the surface so that they would be entitled to exercise the right of innocent passage.²¹¹

As of today, the US “*Sea Hunter*” may best represent the unmanned (autonomous) surface naval vessel, albeit larger UMVs are currently under development.²¹² The 2019 prototype of *Sea Hunter* is 40m long, has a top speed of up to 27 knots, and is designed to operate autonomously for approximately 60 to 90 days.²¹³ They are also equipped with the ability to detect and track submarines until US warships or aircraft take over to intercept or destroy them.²¹⁴ Their primary functions also include long-endurance missions, such as ISR operations. Reportedly, the *Sea Hunter* is capable of autonomously complying with “maritime laws and conventions for safe navigation”.²¹⁵ Thus, despite the absence of a universally agreed-upon definition of ships, the *Sea Hunter* seems to satisfy the practical standards in terms of size, design, and functions. That *Sea Hunter* meets the general qualification of a ship does not seem to be disputed by others in terms of their status, although it is not clear as to additional restrictions that might be imposed on unmanned warships during their passage. As such, the *Sea Hunter*, the most “ship-like” UMV, is generally seen as an independent entity subject to their own navigational rights and sovereign immunity.

However, a lack of humans on board does not merely mean replacing the physical presence of humans on board with suitable alternatives. Unmanned features allow UMVs to be specifically tailored in terms of size or design to optimise their performance; as a result, they may significantly deviate from the traditional image of a ship. Considering the covert nature of ISR operations, they do not need to resemble traditional ships. UMVs used primarily for ISR

²¹¹ Andrew Norris, ‘Legal Issue Relating to Unmanned Maritime Systems Monographs’ [2013] *US Naval War College* 34-35.

²¹² *Newport Manual on the Law of Naval Warfare* (US Naval War College 2017) 41. According to the majority view, if a UMV can be a ship, then it can also be designated a “warship” by the flag State if it belongs to the armed forces of the State, bears external markings regarding its nationality, and is manned by a crew subject to armed forces discipline and under the command of a commissioned officer, neither of whom are physically present on board.

²¹³ Franz-Stefan Gady, ‘US Navy’s Anti-Submarine Drone Ship Sailed Autonomously from San Diego to Hawaii and Back’, (*The Diplomat*, 6 February 2019) <<https://thediplomat.com/2019/02/us-navys-anti-submarine-drone-ship-sailed-autonomously-from-san-diego-to-hawaii-and-back/>> accessed 3 June 2025.

²¹⁴ Franz-Stefan Gady, ‘US Navy’s Anti-Submarine Drone Ship Sailed Autonomously from San Diego to Hawaii and Back’, (*The Diplomat*, 6 February 2019) <<https://thediplomat.com/2019/02/us-navys-anti-submarine-drone-ship-sailed-autonomously-from-san-diego-to-hawaii-and-back/>> accessed 3 June 2025.

²¹⁵ DARPA, “ACTUV: Anti-Submarine Warfare (ASW) Continuous Trail Unmanned Vessel” <<https://www.darpa.mil/program/anti-submarine-warfare-continuous-trail-unmanned-vessel>> accessed 8 June 2024.

operations are likely to be smaller to serve their operational objectives more effectively. The smaller the UMVs are, the more cost and energy-efficient they become. According to the US Navigational Plan 2022, investments in smaller, lethal, and less costly systems, including manned, unmanned, and optionally manned, are considered one of the US's imperative priorities.²¹⁶ The US has, in line with a rapidly evolving strategic environment, envisioned forming a hybrid fleet by around 2045, consisting of ballistic missile submarines, nuclear-powered aircraft carriers, nuclear-powered fast-attack and large payload submarines, large and small surface combatants, amphibious ships, unmanned surfaces and subsurface platforms, combat logistics ships and auxiliary vessels, aircraft, and information warfare capabilities.²¹⁷ According to the Plan, unmanned surface and subsurface platforms are particularly intended to contribute to increasing distribution and expanding ISR advantages, which promotes the transition of such platforms toward "smaller, less-expensive, yet lethal ones".²¹⁸ This ensures that the ISR platforms are expected to emerge as unmanned and smaller in size, likely to fall out of the general understanding of ships. While a new customary passage rule for UMVs might emerge as their use continues to increase, it is too early to say.²¹⁹ UMVs that enjoy sovereign immunity but possess questionable navigational rights may place coastal States in a position of legal uncertainty when formulating responses, raising concerns that such ambiguity could be strategically exploited by operating States.

So-called non-ship-like objects, such as missiles or other military devices, are nothing new. They have been carried on board and deployed to undertake tasks for which they are designed to operate. However, they have been typically described as passive or expendable, which might be distinguished from UMVs nowadays, which are more capable and independent in navigation and operation. As Davis suggests, the role of unmanned systems should be regarded not just as a niche capability akin to a small recoverable torpedo, but as an entirely new class of primary military capability.²²⁰ For instance, the increased level of autonomy in navigation and operations enables UMVs to discharge their own missions at a greater distance from their deploying platform. Non-ship-like UMVs, due to their relatively smaller size, a particular purpose designed to operate, or potential navigational restrictions, are likely to be carried on and deployed from (war)ships or other launching platforms. In such cases, the legal status of the deployed UMVs

²¹⁶ Chief of Naval Operations, *Navigational Plan* (26 July 2022) 8.

²¹⁷ *ibid.* 10-11.

²¹⁸ *ibid.* 10.

²¹⁹ Simon McKenzie, 'Sovereign Immunity of Uncrewed Surveillance vehicles and the Limits of Enforcement Jurisdiction' (2023) 92 *Nordic Journal of International Law* 573, 597.

²²⁰ Malcolm Davis, 'Autonomous military and naval logic gains life of its own' (*The Australian* 8 October 2019) <<https://www.aspi.org.au/opinion/autonomous-military-and-naval-logic-gains-life-its-own>> accessed 24 November 2024.

and their associated rights, including sovereign immunity and navigational rights, are crucial matters to discuss.

Scholars' views on the status of the *deployed* UMVs and their navigational rights seem varied and primarily divided into two. One group, mainly aligned with the US doctrine, considers a deployed UMV as an independent entity, subject to its own navigational and immunity rights, while the other regards it as a component (e.g., system) of a launching platform.²²¹ Each view requires careful analysis through the lens of the coastal State's security interests, to prevent some States from testing the limit of the existing international law by exploiting legal ambiguities associated with UMVs.

3.4.2.1 The deployed UMV as an independent entity

The US has a particularly strong view on the status of UMVs, arguing that a variety of treaties define "vessel" sufficiently broadly enough to include "autonomous and even expendable marine instruments and devices".²²² Such a view was also demonstrated in the *USNS Bowditch* in 2016, where Kraska and Pedrozo, the US scholars, stressed that the UUV, launched by the *USNS Bowditch* an unarmed US Navy research vessel, which the US alleged was unlawfully seized by China, is a US "vessel".²²³ This view reflects that once UUVs are deployed, they are separate from their deploying platform and are entitled to retain independent navigational rights and sovereign immunity.²²⁴ The general US perspective on this matter can be seen through the development of the *US Commander's Handbook on the Law of Naval Operations (NWP 1-14 M)* in 2017 and 2022 in light of the definitions of "Unmanned System Status" and "Small Craft

²²¹ Rob McLaughlin, 'Unmanned Naval Vehicles at Sea: USVs, UUVs, and the Adequacy of the Law' (2011) 21 *Journal of Law, Information & Science* 100, 109-110.

²²² James Kraska and Raul (Pete) Pedrozo, 'China's Capture of U.S. Underwater Drone Violates Law of the Sea' (*Lawfare*, 16 December 2016) <<https://www.lawfaremedia.org/article/chinas-capture-us-underwater-drone-violates-law-sea>> accessed 29 January 2025; James Kraska, 'The Law of Unmanned Naval Systems in War and Peace' (2010) 5(3) *Journal of Ocean Technology* 44, 50 and 54-56; Robert McLaughlin, 'Unmanned Naval Vehicles and the Law of Naval Warfare' in Hitoshi Nasu and Robert McLaughlin (eds), *New Technologies and the Law of Armed Conflict* (TMC Asser Press 2014) 231.

²²³ James Kraska and Raul (Pete) Pedrozo, 'China's Capture of U.S. Underwater Drone Violates Law of the Sea' (*Lawfare*, 16 December 2016) <<https://www.lawfaremedia.org/article/chinas-capture-us-underwater-drone-violates-law-sea>> accessed 29 January 2025; Christopher P. Cavas, 'China Grabs Underwater Drone Operated by US Navy in the South China Sea' (*Defence News*, 16 December 2016) <<https://www.defensenews.com/naval/2016/12/16/china-grabs-underwater-drone-operated-by-us-navy-in-south-china-sea/>> accessed 28 January 2025.

²²⁴ James Kraska and Raul (Pete) Pedrozo, 'China's Capture of U.S. Underwater Drone Violates Law of the Sea' (*Lawfare*, 16 December 2016) <<https://www.lawfaremedia.org/article/chinas-capture-us-underwater-drone-violates-law-sea>> accessed 29 January 2025; Andrew Norris, *Legal Issues Relating to Unmanned Maritime System* (US Naval War College, Newport 2013) 24.

Status”.²²⁵ Although the US is not a party to UNCLOS nor does *NWP 1-14M* necessarily amount to a comprehensive treatment of the law, the US view indeed constitutes a significant legal position.²²⁶ It is also observed that the US has accepted navigational provisions of UNCLOS, such as innocent passage, as customary international law.²²⁷

The *2022 NWP 1-14 M* defines the status of unmanned systems as follows:

“In all cases, U.S. Navy [Unmanned Systems (UMSs)] are the sovereign property of the United States and immune from foreign jurisdiction. When flagged as a ship, a UMS may exercise the navigational rights and freedoms and other internationally lawful uses of the seas related to those freedoms. Unmanned systems may be designated as [United States Ships (USS)] if they are under the command of a commissioned officer and manned by a crew under regular armed forces discipline, by remote or other means.”²²⁸

Firstly, the inclusion of the phrase “when flagged as a ship” indicates the existence of various UMVs in size and type, and that some of them can be classified as a ship (and some may not). It reconfirms that a lack of physical human presence on board does not necessarily prevent unmanned systems from being classified as a ship. The phrase “by remote or other means” suggests that the US takes a flexible approach to the manning requirement of a warship. It is noticed from the first sentence that unmanned systems, whether classified as ships or not, are sovereign property. However, navigational rights seem specifically granted to them when flagged as a ship.

Secondly, the rather simple definition of small craft status in *2017 NWP 1-14 M* – “vehicles deployed from larger vessels are sovereign immune craft whose status is not dependent upon the status of the launching platform” – has been noticeably specified in the 2022 edition.²²⁹ The *2022 NWP 1-14 M* provides that:

²²⁵ US Navy, *NWP 1-14 M* (August 2017), paras. 2.3.3 & 2.3.6; *NWP 1-14 M* (March 2022), paras. 2.3.3 and 2.3.5.

²²⁶ Cynthia J Parmley and Raul (Pete) Pedrozo, ‘New Edition of the Commander’s Handbook on the Law of Naval Operation’ (*LIEBER INSTITUTE WEST POINT* 20 April 2022) <<https://lieber.westpoint.edu/new-edition-commanders-handbook-law-of-naval-operations/>> accessed 22 January 2025.

²²⁷ Michael Schmitt, ‘The Russian Intercept of the U.S. Reaper and International Law’ (*Just Security* 15 March 2023) <<https://www.justsecurity.org/85494/the-russian-intercept-of-the-u-s-reaper-and-international-law/>> accessed 6 February 2025.

²²⁸ US Navy, *NWP 1-14 M* (March 2022), para. 2.3.5.

²²⁹ US Navy, *NWP 1-14 M* (August 2017), para. 2.3.3.

“[small] vehicles deployed from larger vessels or from land, are sovereign immune U.S. property. The status of these watercraft is not dependent upon the status of the launching platform. The United States may exercise any internationally lawful use of the seas – including navigational rights and freedoms – with such watercraft.”²³⁰

Smaller vehicles, even without the specification of the term “small”, can be understood from the definition as those deployed from larger vessels, and they have an independent status separated from a launching platform. The US explicitly refers to smaller vehicles as sovereign *property*, emphasising its sovereign immune status. However, considering that it does not specify whether such vehicles must be engaged in non-commercial service at the time to be regarded as such, the US perspective on smaller vehicles can be seen as a broader view. As far as the last sentence is concerned, it appears that the US emphasises the State’s (i.e., the US) right to exercise freedom of navigation with smaller vehicles without specifying whether they can be classified as ships, thereby being entitled to navigational rights themselves. This is distinguished from the definition of “unmanned system status”, granting navigational rights and freedoms directly to unmanned systems if flagged as a ship. There is a difference between granting navigational rights directly to the vehicles (e.g., ships) and allowing the flag State to exercise navigational rights using vehicles that are not flagged as a ship. UNCLOS does not explicitly regulate the rights of non-ship-like vehicles in the same manner as ships. However, given the established legal framework that grants navigational rights directly to “ships”,²³¹ it can be said that UMs, if not qualified as a “ship”, might not be entitled to navigational rights, including innocent passage, at least not the equivalent level to those given to traditional ships.

Moreover, a lack of phrases, such as “as flagged a ship”, implies that the status of smaller vehicles as ships might not be fulfilled due to their size. Article 94 of UNCLOS requires the flag State to effectively exercise its jurisdiction in maintaining a register of ships “except those which are excluded from generally accepted international regulations on account of their small size”.²³² Although this provision does not give any further specification on the term “small”²³³, it reveals the possibility that smaller UMs might not be registered as ships. Even if they are registered by a flag State regardless of their small size, their status, compared to other ship-like

²³⁰ US Navy, *NWP 1-14 M* (March 2022), para. 2.3.3.

²³¹ UNCLOS, arts 17-32 (innocent passage), arts 37-44 (transit passage), and art 53 (archipelagic sea lanes passage).

²³² UNCLOS, art 94(2)(a).

²³³ However, it may be assumed that it may refer to a ship with less than 500 gross tonnages in accordance with SOLAS regulation.

UMVs, would be more vulnerable to criticisms or disregard by other States.²³⁴ More importantly, the exclusion of smaller vehicles from generally accepted international regulations is often based on the assumption that they pose minimal risks to navigational safety or the marine environment. However, such a smaller size does not necessarily reduce potential security concerns. In fact, it may heighten them, as such vehicles are less detectable while being more intrusive. Moreover, in the case of UMVs not flagged as a ship, it is unclear how coastal States could regulate and handle them under UNCLOS, as law enforcement mechanisms under the Convention, such as boarding, arrest, and detention, are also established based upon “ships”.

The *NWP 1-14M (2022)* provides that “unmanned systems not classified as ships may be deployed by larger vessels engaged in innocent passage, ... as long as their employment complies with the navigational regime of innocent passage ...”.²³⁵ Norris adds that such employment complies with the applicable navigational regimes “at the time of deployment”.²³⁶ As deploying the military device is a clear violation of innocent passage under Article 19(2)(f), the deploying ship would violate innocent passage rules if deploying a UMV within the foreign territorial sea. In such a case, the deployed UMV may not be considered a legal entity warranting the coastal State’s obligation to respect its presence and navigational rights. However, if the UMV is deployed outside the territorial sea and subsequently enters the territorial sea on its own, the deploying (war)ship would not violate the rules of innocent passage, while indirectly benefiting from the UMV conducting its intended activities within the foreign territorial sea. With advancements in technology, real-time data exchange now enables ships to operate UMVs without technically violating existing regulations. Moreover, some UMVs are equipped with self-destruction capabilities purported to conceal their ownership or collected data, which may effectively undermine the coastal State’s ability to take appropriate measures against them.

With respect to all these, expansive interpretation advanced in practice regarding the navigational rights of non-ship-like UMVs could heighten enforcement uncertainty for the coastal States. Some States may be unwilling to recognise certain UMVs as ships, and consequently, fail to respect their navigational entitlement.²³⁷ The status of a UMV as a ship

²³⁴ Robert Veal, Michael Tsimplis and Andrew Serdy, ‘The Legal Status and Operation of Unmanned Maritime Vehicles’ (2019) 50(1) *Ocean Development & International Law* 23, 28. It was argued in this paper that the status of a craft as a ship determined by a flag State and their associated entitlement must be accepted by other States, although it is unsure whether such acceptance should be positively recognised or could be considered as such implicitly from silent.

²³⁵ US Navy, *NWP 1-14M* (March 2022), para. 2.5.2.5.

²³⁶ Andrew Norris, ‘Legal Issue Relating to Unmanned Maritime Systems Monographs’ (2013) 23.

²³⁷ Wolff Heintschel von Heinegg, ‘Unmanned Maritime Systems: Does the Increasing Use of Naval Weapon Systems Present a Challenge for IHL?’ in Wolff Heintschel von Heinegg, Robert

entails compliance with obligations under UNCLOS as well as the flag State's responsibilities. In addition, the characterisation of a deployed UMV as an 'independent entity' remains problematic. It does not necessarily classify the object as a ship, yet it is invoked to suggest the existence of autonomous navigational rights detached from ships status. In this sense, the term functions as a strategically ambiguous label rather than a legal category, potentially undermining the predictability of the innocent passage regime and heightening coastal State's security concerns. In practice, the recognition of navigational entitlement for non-ship-like UMVs would require clear and verifiable indicia, such as the ability to communicate and interact with coastal State or demonstrate effective control, as practical considerations aimed at reducing miscalculation and conflict.

3.4.2.2 The deployed UMV as a component of the deploying ship

Where the flag State does not classify the device as a "ship", or where it cannot be regarded as a part of another ship whose status it shares,²³⁸ the vehicle will not have access to the same navigational rights within the foreign territorial sea as a traditional ship would have.²³⁹ This view appears to diverge from the general US view that the status of UMVs, once deployed, is not dependent on that of their launching platform.²⁴⁰ However, as addressed in the previous section, this view is not without problems, as the legal implication of being an "independent entity" – not necessarily equivalent to being a "ship" – seems doubtful.

A more nuanced view is that the status of a deployed UMV should depend on the extent of its operational connection to the deploying platform, rather than on its mere physical independence at sea. In other words, autonomy in navigation should be distinguished from autonomy in operation. Arguably, UMVs that can carry out their missions independently, without being operationally tied to the deploying platform, should be considered independent entities, rather than mere extensions of the mother ship. McLaughlin gives an example of a warship's organic helicopter, while certainly having an independent identity for certain purposes, being simply a sensor system of the warship if utilised for the expeditious passage of the Archipelagic Sea Lane. According to him, the organic helicopter is not the "unit" exercising such passage –

Frau and Tassilo Singer (eds.) *Dehumanisation of Warfare: Legal Implications of New Weapon Technologies* (Springer 2018) 121; Andrew Norris, 'Legal Issue Relating to Unmanned Maritime Systems Monographs' (2013) 46.

²³⁸ Andrew Norris, *Legal issue relating to unmanned Maritime Systems* (US Naval War College, Newport, 2013) 23; Robert McLaughlin, 'Unmanned Naval Vehicles and the Law of Naval Warfare' in Hitoshi Nasu and Robert McLaughlin, eds., *New Technologies and the Law of Armed Conflict* (Asser Press 2014) 229, 238.

²³⁹ Hitoshi Nasu and David Letts, 'The Legal Characterisation of Lethal Autonomous Maritime Systems: Warship, Torpedo, or Naval Mine?' (2020) 96 *International Law Studies* 79, 93.

²⁴⁰ US Navy, *NWP 1-14M* (August 2017), para.2.3.6.

that is, the warship – but a sensor system attached to the warship designed to help promote safe, continuous and expeditious navigation. In this case, however, the deployed object can be seen as a component/extension of *that* ship,²⁴¹ and therefore, holds a partially reflected status, rather than an entirely independent status.²⁴² Provided that the ship complies with the relevant rules, such as rules of innocent passage, the deployed UMV may enjoy shared navigational rights.

Considering that the primary aim of ISR operations is to expand the distribution of ISR devices on a large scale, and to a greater extent, UUVs with higher levels of autonomy are more likely to be utilised for such purposes. Thus, once deployed, UUVs are likely to independently carry out ISR operations. UUVs deployed from a ship tend to be more tactical and intrusive than those deployed from land; however, the operational connection between the UUV and a ship may remain limited, only serving as a deploying platform.

The growing recognition of the operational value of unmanned vehicles seems to encourage the emergence of a new type of vessel. For instance, in April 2023, Turkey commissioned what it declared to be the world's first "UAV carrier", the *TCG Anadolu*, to expand the distribution of maritime air power in a way not seen for decades.²⁴³ It is not only Turkey but many other States, including the UK, Portugal and Australia, seeking such development. Where a vessel functions primarily as a strategic platform for carrying, deploying, and retrieving unmanned vehicles, it becomes increasingly difficult to sustain the argument that deployed UUVs remain operationally integrated components of that vessel, particularly when ISR missions are conducted independently and at a distance. This is especially true if the vessel solely functions as a deploying platform without, for instance, real-time data exchange between the ship and the vehicle. In such circumstances, assessing who exercises control and to what degree becomes essential in determining whether deployed UUVs can share the navigational rights of the deploying ships.

²⁴¹ Robert McLaughlin, 'Unmanned Naval Vehicles at Sea: USVs, UUVs, and the Adequacy of the Law' (2011) 21 *Journal of Law, Information & Science* 100, 108-109; See also Jane G Dalton, 'Future Navies – Present Issues' (2006) 59(1) *Naval War College Review* 1, 23.

²⁴² Robert McLaughlin, 'Unmanned Naval Vehicles at Sea: USVs, UUVs, and the Adequacy of the Law' (2011) 21 *Journal of Law, Information & Science* 100, 108-110. He further argues that UUV controlled from ashore (as opposed to from a warship) is not itself capable of strict characterisation as a warship. They can be instead a government ship operated for non-commercial purposes under article 31 of UNCLOS as there is no essential requirement (as for warships) that it be 'manned' or 'commanded by'.

²⁴³ Nick Childs, 'A New Era Beckons for UAVs at Sea' (*IJSS*, 15 January 2024) <<https://www.ijss.org/online-analysis/military-balance/2024/01/a-new-era-beckons-for-uavs-at-sea/>> accessed 23 March 2025.

3.5 Unique characteristics of unmanned technologies

The preceding sections have demonstrated that existing doctrines – self-defence, sovereign immunity and navigational rights – provide limited and often fragile legal justifications for the use of force against foreign unmanned ISR operations. This does not mean, however, that such arguments arise in a vacuum. Rather, they are frequently shaped by the changing factual and operational circumstances brought by the increasing integration of unmanned technologies. By examining the distinctive technological characteristics of unmanned systems, this section illustrates how the assumptions underlying the application of principles such as necessity, proportionality, and reasonable warning are increasingly strained.

3.5.1 Emerging security threats caused by technological advances or technological gaps between States

The US *Global Hawk*, the US's military unmanned aircraft, is designed to conduct intelligence-gathering and is equipped with sensors and cameras that are capable of collecting information, including real-time and high-resolution images, and even intercepting telephone and radio communications.²⁴⁴ UAVs are not entirely new technology. Since 1998, when the *Global Hawk* was first operated, they have been conducting military operations in Iraq, Afghanistan, North Africa and the Asia-Pacific Region.²⁴⁵ They have been employed by the military for decades, and the seizures of, or attacks on, smaller drones are not uncommon. The question, however, is what differentiates the recent cases from previous incidents of a similar nature. The *Global Hawk* is a large and highly sophisticated piece of unmanned technology. It is designed to fly at high altitudes of up to 60,000 feet (18km), which is almost twice as high as civilian aircraft and is able to fly for up to 32 hours.²⁴⁶ The drones being able to fly at higher altitudes means that they can fly at defensible altitudes. In other words, they can only be taken down by a missile whose range is also as high as the altitude, which not every State manages to afford. Thus, some States, especially smaller States that are not capable of exercising any effective action due to technological immaturity, would certainly not welcome or even be frightened by the existence of those drones within their national airspace. Technological advances have also allowed the drone to cover a wide range of surveillance. The *Global Hawk* has a range of up to 12,300

²⁴⁴ Iran Shot Down at \$176 Million U.S. Drone. Here's What to Know About the RQ-4 Global Hawk (21 June 2019) <<https://time.com/5611222/rq-4-global-hawk-iran-shot-down/>> accessed 2 August 2025.

²⁴⁵ 'Factbox: The Global Hawk drone shot down by Iran' (*Reuters*, 2019) <<https://www.reuters.com/article/us-mideast-iran-usa-factbox/factbox-the-global-hawk-drone-shot-down-by-iran-idUSKCN1TL29K>> accessed 2 August 2025.

²⁴⁶ *Ibid.*

nautical miles (22,780 km), and this range of sensors would allow the drone to “peer into” the areas of interest while it is still in international airspace.²⁴⁷ Considering the higher operational capabilities of the UAV, it can be argued that the substantial technological development of unmanned ISR capabilities has significantly altered how such operations are perceived by coastal States, intensifying their assessment of national security threats to a degree not previously observed.

Another interesting point observed in the *Global Hawk* incident is that shooting down the UAV is not only to secure national security. It may be the most effective measure to show Iran’s military capabilities without involving any risk to human lives. It was said that the shooting down of the UAV was, in some ways, a “signalling mechanism” to the US to show that Iran is more capable than may have been assumed.²⁴⁸ Similarly, as Valencia noted, UUVs can increasingly serve as “tools in coercive diplomacy, enabling rivals to send a strong signal without targeting one’s human opponents.”²⁴⁹ This indicates that force has, at times, been used against unmanned vehicles not solely for immediate defensive purposes, but also as a means of signalling or demonstrating military capability without risking human lives. However, this reflects strategic behaviour rather than a recognised legal justification for the use of force under international law.

Another operational benefit of unmanned vehicles is that they can self-destruct when needed. Naturally, States are concerned about the possibility of their sensitive military intelligence and technologies passing into the possession of other countries. Thus, operating States may seek to voluntarily destroy unmanned vehicles for security reasons. In 2011, Iran claimed that it had downed a US drone (the RQ-170 Sentinel). The US, after its surveillance UAV had gone down in Iran, considered sending aircraft to destroy it. Such an attempt to self-destruct the UAV may be to prevent the State in possession of the UAV (i.e., Iran) from stealing advanced unmanned technology and discovering the US’s military strategy through the intelligence collected by the UAV. This initial plan was eventually dismissed due to the concern that the US “could be accused of an act of war”.²⁵⁰ However, it is more than possible to occur as it did in 2011 when

²⁴⁷ *Ibid.*

²⁴⁸ Iran Shot Down at \$176 Million U.S. Drone. Here’s What to Know About the RQ-4 Global Hawk (21 June 2019) <<https://time.com/5611222/rq-4-global-hawk-iran-shot-down/>> accessed 23 September 2025.

²⁴⁹ Mark J. Valencia, ‘US-China Underwater Drone Incident: Legal Grey Areas’ (*THE DIPLOMAT*, 11 January 2017) <<https://thediplomat.com/2017/01/us-china-underwater-drone-incident-legal-grey-areas/>> accessed 23 September 2024.

²⁵⁰ Brad Knickerbocker, ‘US considered missions to destroy RQ-170 Sentinel drone lost in Iran’ (*The Christian Science Monitor*, 7 December 2011)

US special forces destroyed their helicopter that was damaged during the raid to kill Osama Bin Laden in Pakistan, to prevent others from investigating the wreckage of the helicopter.²⁵¹

Alternatively, as unmanned technologies have become more advanced, unmanned vehicles designed for ISR operations are likely to incorporate self-destruction capabilities, which could be activated if the technologies fall into the hands of other States. In either case, it is likely to provoke a different form of force, potentially leading to misunderstandings. More importantly, from the coastal States' perspective, unmanned vehicles with such capabilities can pose a security threat, as they can easily hide their intention or ownership. This significantly undermines the factual basis upon which a coastal State can ascertain the intent, ownership, and control of such platforms, thereby exacerbating existing tensions between rival States.

Although less frequently observed compared to incidents in the air, unmanned technologies in the maritime environment may pose additional security threats when employed. UUVs are particularly suited for information collection as they are more capable of operating at long standoff distances, in shallow water areas, autonomously, and provide a sufficient level of secrecy. Thus, they could be used closer to the adversary to monitor submarine departures and potentially track them. However, as communication is much more restricted through the water than on the surface or in the air,²⁵² the coastal State may feel more threatened by its existence. Lastly, UUVs are not an entirely new phenomenon; however, it is only in the twenty-first century that UUVs became the subject of aggressive technological progress.²⁵³ Such devices are increasingly being designed to assist with combat rather than pure surveillance.²⁵⁴ Taken together, these technological developments do not alter the legal classification of ISR operations, but they substantially reshape the factual context in which such operations are assessed, making the deployment of unmanned vehicles appear more threatening to coastal States than comparable activities conducted by traditional manned platforms.

<<https://www.csmonitor.com/USA/Military/2011/1207/US-considered-missions-to-destroy-RQ-170-Sentinel-drone-lost-in-Iran>> accessed 20 January 2024.

²⁵¹ Chris McGreal and Saeed Shah, 'Pakistan let China examine helicopter used in Bin Laden raid, says US' (*The Guardian*, 15 August 2011)

<<https://www.theguardian.com/world/2011/aug/15/us-helicopter-pakistan-china-wreckage>> accessed 20 January 2024.

²⁵² Andrew Norris, *Legal Issue Relating to Unmanned Maritime Systems* (US Naval War College, Newport, 2013) 10.

²⁵³ Michael N. Schmitt and David S. Goddard, 'International Law and the Military Use of Unmanned Maritime Systems' (2016) 98(2) *International Review of the Red Cross* 567, 570.

²⁵⁴ Simon McKenzie, 'Autonomous Technology and Dynamic Obligations: Uncrewed Maritime Vehicles and Military Surveillance in the Exclusive Economic Zone' (2021) 11 *Asian Journal of International Law* 146, 151.

3.5.2 Vulnerable to technical malfunctions or external factors

Unmanned technologies without a direct human controller are essentially more vulnerable to technical malfunctions. This characteristic can often be used by operating States as a defence against accusations of a violation of territorial sovereignty, claiming that the entry was accidental and beyond their control. For instance, in 2017, China accused India of breaching its territorial sovereignty by flying a drone at the border separating India's Sikkim State and China's Tibet region. India, in response to such an accusation, argued that the drone lost communication with ground control due to a technical failure.²⁵⁵ In addition, as seen in China's Spy Balloon incident, certain types of unmanned vehicles - that is, balloons in this case, but potentially including float and gliders at sea - are not only subject to technical malfunctions but also highly susceptible to external factors, such as bad weather, beyond the physical control of operating States. The balloons drifting with wind patterns make it difficult for intelligence agencies to predict their exact location, so they can easily escape from radar detection. In case of accidental incursions, including those resulting from technical malfunction or adverse weather conditions, international law does not provide a legal basis for the coastal State to resort to forcible measures. Thus, such characteristics – being vulnerable to technical failure and easily affected by *force majeure* – do not alter the applicable legal standards, but they complicate their practical application, particularly from the perspective of the coastal State's sovereignty. Arguably, China's surveillance technology, expected to be on a balloon, is not to conduct a meteorological mission, but to look for “vulnerabilities” and establish more sustained means of access for ISR operations or other strategic objectives.²⁵⁶ Due to the acceleration of technological development over the last few decades, the balloon is equipped with higher operational functions, having solar panels to power propulsion and cameras and surveillance technology installed on board.²⁵⁷ Cameras and surveillance equipment allow balloons to linger longer over the areas of interest and carry out multiple forms of intelligence. Reportedly, the images collected and produced by balloons are clearer than those from on-orbit satellites, and balloons are also capable of picking up signals that do not reach the altitudes of satellites.²⁵⁸

²⁵⁵ Zheping Huang, 'China and India are now arguing over a crashed drone near their disputed border' (*QUARTZ*, 7 December 2017) <<https://qz.com/india/1150951/china-and-india-are-now-arguing-over-a-crashed-drone-near-their-disputed-border>> accessed 17 January 2024.

²⁵⁶ John Hudson, Ellen Nakashima and Dan Lamothe, 'U.S. declassifies balloon intelligence, calls out China for spying' (*The Washington Post*, 9 February 2023) <<https://www.washingtonpost.com/national-security/2023/02/09/chinese-balloon-surveillance-program/>> accessed 12 June 2024.

²⁵⁷ *ibid.*

²⁵⁸ *ibid.*

The US shot down a Chinese spy balloon, called a High-Altitude Balloon (HAB), while arguably carrying out surveillance over the US territory and territorial sea.²⁵⁹ The US, after shooting down a Chinese spy balloon, sought to justify its action on the basis that the entry of the balloon was “the extent of Chinese aerial espionage effort” or “an irresponsible act”, violating the territorial sovereignty of other countries.²⁶⁰ However, China maintained that the balloon was a civilian aircraft that had accidentally entered US national airspace due to technical malfunctions, and strongly protested that the US’s excessive reaction was inconsistent with international law.²⁶¹ Reportedly, the balloon was remotely manoeuvrable to some degree by the operating State but still dependent on the jet stream for travel. This means that the object is not only unmanned but also its movement can be affected by an unexpected external factor. Thus, it is theoretically possible that the balloon may have drifted by the wind into the US national airspace by accident. The analysis of balloons holds significance because it may leave some legal implications, which can be extended to maritime contexts, such as floats and gliders, whose propulsion is also to some extent dependent on the current.

The balloon, operating through wind patterns and automated systems, may easily give rise to claims of *force majeure*, which are well established under international law. Article 23(1) of the Responsibility of States for Internationally Wrongful Acts stipulates that:

The wrongfulness of an act of a State not in conformity with an international obligation of that State is precluded if the act is due to *force majeure*, that is the occurrence of an *irresistible force* or of an *unforeseen event*, beyond the control of the State, making it *materially impossible* in the circumstances to perform the obligation.

Presumably, this includes the occurrence of extreme weather events or a loss of control due to technical malfunctions. However, the application of Article 23 is not without limitation.

²⁵⁹ Julian E. Barnes, Edward Wong, Helene Cooper and Chris Buckley, ‘China Sends Spy Balloons Over Military Sites Worldwide, U.S. Official Say’ (*The New York Times*, 13 February 2023) <<https://www.nytimes.com/2023/02/08/us/politics/china-spy-balloons.html>> accessed 20 January 2024.

²⁶⁰ Helene Cooper and Edward Wong, ‘Downing of Chinese Spy Balloon Ends Chapter in a Diplomatic Crisis’ (*The New York Times*, 4 February 2023) <<https://www.nytimes.com/2023/02/04/us/politics/chinese-spy-balloon-shot-down.html>> accessed 20 January 2024; John Hudson, Ellen Nakashima and Dan Lamothe, ‘U.S. declassifies balloon intelligence, calls out China for spying’ (*The Washington Post*, 9 February 2023) <<https://www.washingtonpost.com/national-security/2023/02/09/chinese-balloon-surveillance-program/>> accessed 12 June 2024.

²⁶¹ Helene Cooper and Edward Wong, ‘Downing of Chinese Spy Balloon Ends Chapter in a Diplomatic Crisis’ (*The New York Times*, 4 February 2023) <<https://www.nytimes.com/2023/02/04/us/politics/chinese-spy-balloon-shot-down.html>> accessed 20 January 2024.

According to the Commentary of the Convention, the principle does not apply (a) if the situation of *force majeure* is invoked by the conduct of the State or (b) if the risk has been assumed by the State.²⁶² In the present event, the analysis of paragraph 2(b) – where the risk of the occurrence of *force majeure* could have been assumed – might contribute to developing a sound argument in favour of the US. The report of the International Law Commission (ILC) insisted on the strict meaning of the term *force majeure*, emphasising that the wordings, such as “irresistible force” or “unforeseen event”, must be of close link to the situation of “material impossibility”.²⁶³ This means that it would not suffice for the “irresistible force” or the “unforeseen external event” to have made it *very difficult* for the State to act in conformity with the obligation”. In other words, there must not be any other option for the State.²⁶⁴

Moreover, *force majeure* does not cover situations caused by neglect.²⁶⁵ Given the nature of balloons, being readily susceptible to wind patterns and substantially relying on system connection, the operating State (i.e., China) could have acknowledged the possible risk of a situation of *force majeure* – the balloons might be present where they should not be. It does not seem completely “impossible” to avoid such conflicting situations because the result could have been conceivable if the State were more responsible for its conduct (e.g., launching a balloon near the national airspace of another State) or did not neglect reasonable consequences that may ensue. It is difficult to establish conclusively that a violating State must have assumed the risk of *force majeure*. However, repeated reliance on justification such as “accident” or “distress”, particularly where they cannot be independently verified, may strain the credibility of such claims,²⁶⁶ thereby increasing pressure on coastal States to respond. In this respect, invocations of technical malfunction or *force majeure* often appear less as a genuine explanation than as a strategic effort to avoid the legal consequences under international law, particularly to constrain the coastal State from exercising enforcement jurisdiction.

²⁶² *International Law Commission, Draft Articles on Responsibility of States for Internationally Wrongful Acts, with Commentary* (2001) II (2) Yearbook of the International Law Commission 76-78.

²⁶³ *Case concerning Rainbow Warrior Affair* (New Zealand v. France), Reports of International Arbitral Awards, 1990, p, 253, para. 77.

²⁶⁴ *Ibid.*, para. 77.

²⁶⁵ *International Law Commission, Draft Articles on Responsibility of States for Internationally Wrongful Acts, with Commentary* (2001) II (2) Yearbook of the International Law Commission 76-77.

²⁶⁶ Ingird Delupis, ‘Foreign Warships and Immunity for Espionage’ (1984) 78(1) *American Journal of International Law* 53, 56.

3.5.3 Inadequacy of the reasonable warning process

The warning process is to prevent a situation in which the use of force is mistakenly exercised against foreign vehicles in error or distress. Even if a clear violation of territorial sovereignty is established, the use of force as the first resort is generally considered beyond the ambit of a measured response. Although the use of force is not categorically excluded from the notion of “necessary” measures under international law, it remains a measure of last resort, contingent upon the prior exhaustion of all reasonably available alternatives. However, State behaviour appears to suggest a different approach, whereby force may be employed against unmanned vehicles, whereas manned vehicles are generally expected to receive prior warning before the resort to force.²⁶⁷ It would be incorrect to interpret this view as permitting the destruction of unmanned vehicles without prior warning. Rather, it may indicate that unmanned vehicles are generally not expected to possess adequate communication methods to receive warnings, or it may simply suggest that the situation becomes more politically and ethically sensitive when a risk to human lives is involved. With reference to the *Global Hawk* incident in 2019, Deeks and Anderson support Iran’s use of force on one condition, stating that “If the U.S. drone really had been in Iranian airspace, it seems permissible under international law for Iran to shoot it down, at least if Iran had first attempted to warn the drone or its operator.”²⁶⁸

Arguably, there may be limited response options in certain situations. For instance, referring back to the Chinese spy balloon incident in 2023, balloons appear to offer considerable advantages to the operating States. Such objects, significantly relying on irregular wind patterns and unmanned systems, easily provide the operating States an escape route from an accusation of violating the coastal State’s territorial sovereignty. Rothwell reveals that shooting down the balloon was the only viable option under the circumstances, where the balloon could not be safely escorted to land, and when China did not demonstrate its willingness to remove the balloon from the US airspace.²⁶⁹ Recently, it has been observed that some States, such as Japan, Israel and India, have explicitly expressed that they will not warn military drones before shooting them down by establishing policies reflecting such views.²⁷⁰ For instance, Japanese

²⁶⁷ Ashley Deeks and Scott R. Anderson, ‘Iran Shoots down a U.S. Drone: Domestic and International Legal Implications’ (*Lawfare*, 20 June 2019) <<https://www.lawfaremedia.org/article/iran-shoots-down-us-drone-domestic-and-international-legal-implications>> accessed 29 January 2025.

²⁶⁸ *Ibid.*

²⁶⁹ Donald Rothwell, ‘Too much hot air? A balloon which tested the limits of International law’ (*Australian National University*, 16 February 2023) <<https://law.anu.edu.au/too-much-hot-air-balloon-which-tested-limits-international-law>> accessed 5 May 2024.

²⁷⁰ Ashley Deeks and Scott R. Anderson, ‘Iran Shoots down a U.S. Drone: Domestic and International Legal Implications’ (*Lawfare*, 20 June 2019)

national security policy, due to the increasing frequency of unmanned reconnaissance balloons in the air, has undergone significant changes recently.²⁷¹ Japan has increased its defence budget and promoted technology cooperation with other countries, especially with the US, as its closest ally. It also intends to reinforce unmanned defence capabilities as the core strategic value of drones becomes materialised.²⁷² In the meantime, the US has been sharing information with other countries about the Chinese extended surveillance programme utilising spy balloons, and Japanese officials confirmed that they were among those countries with whom the US had been sharing data.²⁷³ With constant occurrences of similar incidents, while exchanging data with the US as well as taking the operational benefits of balloons into account, it is likely for Japan, or any other like-minded countries, to reconsider their position on the use of force in line with the general US position. The recent simulation practice by the Indian Air Force of shooting down targets resembling Chinese spy balloons at high altitudes may be one example of such a change.²⁷⁴

Lastly, it is also less clear whether coastal States are able to warn unmanned vehicles, as some UMVs may not be capable of receiving warnings and correcting their behaviour accordingly. Forcible measures may be exercised as necessary measures, but should not be employed without any clarification, warning, or pre-emptive steps. The use of force may be taken, as a last resort, which means that it could be exercised only after the appropriate actions (e.g., giving an auditory or visual signal to stop) fail.²⁷⁵ Even then, an appropriate warning must be issued to the

<<https://www.lawfaremedia.org/article/iran-shoots-down-us-drone-domestic-and-international-legal-implications>> accessed 29 January 2025.

²⁷¹ Ryo Sahashi, 'Japan's strategy amid US-China confrontation' (2020) 2 *China International Strategy Review* 232, 233; see also Helen Davison, 'Chinese spy balloon may have been blown off intended course – report' (*The Guardian*, 15 February 2023)

<<https://www.theguardian.com/world/2023/feb/15/japan-says-aerial-objects-spotted-in-recent-years-were-likely-chinese-spy-balloons>> accessed 5 May 2025.

²⁷² Dan Gettinger, 'Japan's Growing Drone Budget' (*THE DIPLOMATE*, 22 July 2023)

<<https://thedi diplomat.com/2023/07/japans-growing-drone-budget/>> accessed 3 October 2024.

²⁷³ Helen Davison, 'Chinese spy balloon may have been blown off intended course – report' (*The Guardian*, 15 February 2023) <<https://www.theguardian.com/world/2023/feb/15/japan-says-aerial-objects-spotted-in-recent-years-were-likely-chinese-spy-balloons>> accessed 5 May 2025.

²⁷⁴ Christine Casimiro, 'Indian Air Force Practices Shooting Down Chinese Spy Balloons' (*The Defense Post*, 8 October 2024) <<https://thedefensepost.com/2024/10/08/india-chinese-spy-balloons/>> accessed 18 December 2024.

²⁷⁵ *M/V "SAIGA" (No.2)*, para. 156.

ship.²⁷⁶ A similar position was shown in a Uniform Interpretation of Rules of International Law Governing Innocent Passage in that the US and USSR agreed that:

A coastal State which questions whether the particular passage of a ship through its territorial sea is innocent shall inform the ship of the reason why it questions the innocence of the passage, and provide the ship an opportunity to clarify its intentions or correct its conduct in a reasonably short period of time.”²⁷⁷

Although it is an agreement that was made even before UNCLOS entered into force, and one of the States – the US – has still not ratified the Convention, such an interpretation formally made by two powerful maritime States certainly has some influence on interpreting the regime of innocent passage. Similar wordings are adopted in the NWP 1-14M that in case of non-innocent passage, the appropriate remedy “is first to inform the ship or aircraft of the reasons the coastal nation questions the innocence of the passage [and] to provide the vessel a reasonable opportunity to clarify its intentions or to correct its conduct in a reasonably short period of time”.²⁷⁸

Essentially, communicative competence should be a crucial requirement for UUVs to be able to receive orders and correct their behaviour as requested.²⁷⁹ For instance, it appears that submerged submarines tend to be subjected to more graduated measures, such as depth charges or warning shots. It is often said that this is because submerged submarines are generally considered inherently threatening; however, such a nature may be originally derived from limited communication as they proceed underwater. The use of force, while not prohibited in the context of law enforcement, must be exercised in conformity with the general principles of necessity, reasonableness, and proportionality.²⁸⁰ It should be employed only as a last resort

²⁷⁶ S.S. “*I’m Alone*” (*Canada v. United States*) (1935) UNRIIA vol, III, 1609; *The Red Crusader* (*Commission of Enquiry, Denmark v. United Kingdom*) (1962) 35 ILR 485.

²⁷⁷ ‘Joint Statement by the United States of America and the Union of Soviet Socialist Republics on the Uniform Interpretation of the Rules of International Law Governing Innocent Passage’ (Jackson Hole, Wyoming, 23 September 1989) 28 ILM 1444.

²⁷⁸ US Navy, *NWP 1-14M* (March 2022), para. 2.5.2.1.

²⁷⁹ Simon McKenzie, ‘Autonomous Technology and Dynamic Obligations: Uncrewed Maritime Vehicles and the Regulation of Maritime Military Surveillance in the Exclusive Economic Zone’ (2021) 11(1) *Asian Journal of International Law* 146.

²⁸⁰ *M/V “SAIGA” (No.2)*, p. 61-62.

after all appropriate measures have been exhausted.²⁸¹ Such measures might include initial attempts to communicate with the UMV, or signalling.

In the context of UVMs, the potential challenges in verifying their status or purpose could make the choice of appropriate remedies more complex, particularly where communication capabilities are limited or, in some cases, intentionally withheld to avoid compliance with the relevant rules. While this does not, in itself, justify the direct interception, seizure, or destruction of UVMs, it underscores the need for any such measures to remain sensitive to the factual conditions under which States operate. In cases where unmanned systems lack communication or identification capabilities, the fulfilment of procedural safeguard cannot be assessed solely by reference to traditional forms of warning. Where alternatives, functionally equivalent efforts are demonstrably undertaken, such measures may be relevant to the assessment of necessity and proportionality.

²⁸¹ *M/V "SAIGA" (No.2)*, p. 62.

Chapter 4 Exclusive Economic Rights v. Freedom of Navigation in the EEZ in the light of Unmanned ISR Operations

4.1 Introduction

The concept of the EEZ was first claimed when some coastal States sought to extend jurisdiction and control over living and non-living marine resources beyond the territorial sea.²⁸² The EEZ regime was intensely debated at the Third United Nations Conference on the Law of the Sea (UNCLOS III). Accordingly, it was officially codified in Part V of UNCLOS as a *sui generis* functional zone designed to balance between the rights and duties of coastal and other States.²⁸³ Since its adoption, however, the EEZ has acquired a notorious reputation as the most controversial maritime zone where competing interests of coastal and other States frequently collide. One persistent controversy concerns the legality of foreign military activities, including ISR operations, in the EEZ. In the absence of authoritative judicial rulings specifically addressing ISR operations, debate continues. The prevailing view, however, seems to align with that ISR operations, as an internationally lawful use of the sea related to navigation, generally fall within the ambit of the freedoms under Article 58, and therefore they cannot, in ordinary circumstances, be prohibited or subjected to additional restrictions by coastal States.²⁸⁴

Nevertheless, some States, including China, have advanced claims in the EEZ that extend beyond the competences enumerated in Part V. This phenomenon is described as “creeping jurisdiction”, whereby coastal States seek to assert unprecedented authority in pursuit of their

²⁸² Myron H Nordquist (ed), *United Nations Convention on the Law of the Sea 1982: A Commentary*, Vol II (Martinus Nijhoff 1993) 493.

²⁸³ Gemma Andreone, ‘The Exclusive Economic Zone’ in Donald Rothwell, Alex Oude Elferink, Karen Scott, and Tim Stephens (eds), *The Oxford Handbook of the Law of the Sea* (Oxford University Press 2015) 161; UNCLOS, art 55.

²⁸⁴ See generally Mark J Valencia, ‘Introduction: Military and Intelligence Gathering Activities in the Exclusive Economic Zones: Consensus and Disagreement II’ (2005) 29 *Marine Policy* 97; Moritaka Hayashi, ‘Military and Intelligence Gathering Activities in the EEZ: Defining of Key Terms’ (2005) 20 *Marine Policy* 123; Stuart Kaye, ‘Freedom of Navigation, Surveillance and Security: Legal Issues Surrounding the Collection of Intelligence from beyond the Littoral’ (2005) 24 *Australian Yearbook of International Law* 93; Raul (Pete) Pedrozo, ‘Preserving Navigational rights and Freedoms: The Right to Conduct Military Activities in China’s Exclusive Economic Zone’ (2010) 9 *Chinese Journal of International Law* 9; Efthymios Papastavridis, ‘Intelligence Gathering in the Exclusive Economic Zone’ (2017) 93 *International Law Studies* 446.

interests, so long as such assertions are not entirely against the law of the sea.²⁸⁵ Such claims are also referred to as “excessive claims” as they lack valid legal grounds or consistent State practice.²⁸⁶ The problem is that the justifications for such claims seem to have evolved. Persistent attempts for such claims have been observed through evolving legal arguments, ranging from national security concerns to the expansive interpretation of the MSR regime and, more recently, to environmental protection.

This indicates that States may be seeking to rely on legal ambiguities in order to bolster their claims, thereby making them appear more defensible while avoiding the risk of violating international law. Arguably, the use of UUVs in ISR operations may introduce an additional layer of legal ambiguity. Given that the international community has not yet reached a universal agreement on how to address or regulate them, it may be assumed that the wider adoption of unmanned technologies not only affects the current interpretation of relevant provisions but also may expose interpretative gaps that are not fully addressed within the existing framework. At the same time, the distinct features of UUVs – such as no crews on board, lower cost, and higher levels of autonomy – have altered ISR modalities and reshaped operational risk profiles. The EEZ regime is often described as a “revolutionary compromise” balancing the interests of coastal States and those of other States.²⁸⁷ However, this compromise appears increasingly vulnerable to the pressure of emerging technologies and their evolving operational realities.

This chapter provides a structured analysis of the legality of foreign ISR operations in another State’s EEZ, with particular attention to unmanned ISR operations. It identifies areas of uncertainty and clarifies how the relevant provisions of UNCLOS should be construed in this context. Following an examination of the functional nature of the EEZ (section 4.2), the Chapter addresses the classification issue, distinguishing traditional ISR operations from MSR, and further examines whether the increasing integration of UUVs into ISR operations alters this distinction in any way (section 4.3). It then examines the relationship between Articles 56 and 58, with the focus on the reciprocal obligation of due regard (section 4.4). It can be argued that, while ISR operations, as an international lawful use of the sea, constitute a “permissive” activity under Article 58, their “lawfulness” should be further determined through the compliance of the due regard obligation under Article 58(3). Section 4.4 analyses the components of the due regard obligation as reflected in relevant judicial rulings and, building on this analysis, advances

²⁸⁵ RR Churchill and AV Lowe, *The Law of the Sea* (3rd edn, Manchester University Press 1999); Natalie Klein, *Maritime security and the Law of the Sea* (Oxford University Press 2011).

²⁸⁶ J Ashley Roach, *Excessive Maritime Claims* (4th edn, BRILL 2021).

²⁸⁷ Gemma Andreone, ‘The Exclusive Economic Zone’ in Donald R Rothwell, Alex G Oude Elferink, Karen N Scott, and Tim Stephens (eds), *The Oxford Handbook of the Law of the Sea* (Oxford University Press 2016) 161.

an alternative interpretation of the due regard obligation informed by technological evolution and State practice. It further argues that, in the context of UMs, risk assessment turns less on the nature of the activity itself and increasingly on the capabilities of the platform employed. This approach may help to clarify what is required by coastal and operating States when utilising and responding to UMs in ISR operations in the EEZ, thereby reducing interpretative gaps within the current legal framework.

Other relevant issues, beyond the relationship between Articles 56 and 58, such as security-related matters, are addressed separately from discussion. Those are evaluated in **Error! Reference source not found.**

4.2 The functional nature of the EEZ and ISR operations

4.2.1 The definition of “navigation” in the EEZ

The EEZ, subject to the specific legal regime established under Part V of UNCLOS, is the area where the rights and jurisdiction of the coastal States are specifically confined to economic and environmental interests.²⁸⁸ They are only entitled to limited sovereignty in the EEZ (i.e., sovereign rights) under Article 56 of UNCLOS. According to the provision, the coastal State in the EEZ has:

sovereign rights for the purpose of exploring and exploiting, conserving, and managing the natural resources, whether living or non-living, of the waters superjacent to the seabed and of the seabed and its subsoil, and with regard to other activities for the economic exploitation and exploration of the zone, such as the production of energy from the water, currents and winds.²⁸⁹

The term “sovereign rights” in the view of the Tribunal in the *M/V Virginia G* case encompasses all rights necessary for and connected with the exploration, exploitation, conservation and management of natural resources, including the right to take the necessary enforcement measures.²⁹⁰ On the other hand, all States, according to Article 87(1), exercise freedom of the high seas, comprising (though it is not an exhaustive list):

- (a) freedom of navigation;
- (b) freedom of overflight;
- (c) freedom to lay submarine cables and pipelines, subject to Part VI;

²⁸⁸ UNCLOS, arts 55 and 56.

²⁸⁹ UNCLOS, art 56(1)(a).

²⁹⁰ *M/V “Virginia G” (Panama/Guinea-Bissau)*, Judgment, ITLOS Reports 2014, p.4 at p. 67, para. 211.

- (d) freedom to construct artificial islands and other installations permitted under international law, subject to Part VI;
- (e) freedom of fishing, subject to the conditions laid down in section 2 [of Part VII];
- (f) freedom of scientific research, subject to Parts VI and XIII.

However, only the first three are specifically recognised as freedoms in the EEZ under Article 58(1). It provides that “In the [EEZ], all States, whether coastal or land-locked, enjoy, subject to the relevant provisions of this Convention, the freedoms referred to in article 87 of navigation and overflight and of the laying of submarine cables and pipelines, and other internationally lawful uses of the sea related to these freedoms, such as those associated with the operation of ships, aircraft and submarine cables and pipelines, and compatible with the other provisions of this Convention”.

While Article 19(2) specifically illustrates non-innocent activities, such as any threat or use of force, weapon exercise, intelligence gathering, or launching military devices, Article 58(1) is rather generally worded with phrases such as “freedom of navigation” or “other internationally lawful uses of the sea related to [freedom of navigation]”. Such phrases open up controversy when determining the legitimate scope of such freedoms, particularly concerning the legality of military activities in the foreign EEZ, which are neither expressly prohibited nor permitted under UNCLOS. In the absence of explicit prohibition, some States have implicitly relied on the *Lotus* principle – holding that whatever is not prohibited is permitted.²⁹¹ Consequently, the majority view generally holds that military activities, including ISR operations, fall within the freedoms outlined under Article 58(1). However, there remain constant controversies surrounding this “implied” permission.

A core phrase often cited in support of the majority view is “other internationally lawful uses of the sea related to [freedom of navigation]” under Article 58. Some doubt had been expressed at the negotiation process about whether the expression “other internationally lawful uses” includes all military activities, especially those involving the use of weapons for practice purposes.²⁹² A few States have taken the position that certain military activities are not protected within the EEZ. For instance, on ratifying the Convention, the Declarations made by Brazil, Cape Verde and Uruguay purported to require coastal State consent to conduct military exercises and manoeuvres in the EEZ. The Declaration made by Brazil is as follows:

²⁹¹ *S.S. Lotus (France v. Turkey)* (Judgment) PCIJ Rep Series A No. 10 18 (7 September 1927) 18.

²⁹² Myron H Nordquist (ed), *United Nations Convention on the Law of the Sea, 1982: A Commentary*, vol II (Martinus Nijhoff 1993) 546.

“... the Convention do not authorise States to carry out in the exclusive economic zone military exercises or manoeuvres, in particular those that imply *the use of weapons or explosives*, without the consent of the coastal State.”

However, it remains unclear whether such declarations have any practical effect, particularly given that opposing declarations have also been made. For instance, Italy has expressly declared that the Convention does not give a coastal State “the rights to obtain notification of military exercise or manoeuvres or to authorise them.”²⁹³ Thus, it may be preferable to focus on the precise wording adopted in Article 58(1) itself, which refers to “In the [EEZ], all States, whether coastal or land-locked, enjoy ... other internationally lawful uses of the sea related to [the freedoms referred to in article 87 of navigation and overflight and of the laying submarine cables and pipelines ...]”.

However, in relation to ISR operations, disagreement persists concerning both the meaning of “navigation” and the extent to which ISR operations can properly be regarded as such. Although UNCLOS does not provide a precise definition of “navigation”, some indications of its meaning may be found under the Convention. For instance, Article 18 of the Convention defines passage as navigation for the purpose of *traversing* the sea and shall be *continuous* and *expeditious*. The word “traverse” is defined as the act of travelling from one side to the other.²⁹⁴ Judge Zhao in a Separate Opinion in the *M/V Saiga (No.2)* case stated that the word “navigation” means nothing but “the act of navigating” or “the making of voyages at sea”, referring to Article 90 (Right of navigation) that provides “[e]very State, whether coastal or land-locked, has the right to *sail* ships flying its flag on the high seas”.²⁹⁵ Some scholars, by adopting this narrow interpretation, point out a lack of “relatedness” of ISR operations to the freedom of navigation.²⁹⁶

According to this view, a fleet of small wave gliders, maintaining their perpetual presence and constant movement on the water, may be qualitatively distinct from the conventional

²⁹³ United Nations, *Multilateral Treaties Deposited with the Secretary-General* (UN ST/LEG/SER.E) ch XXI.6.

²⁹⁴ Cambridge Dictionary, “Traverse” (verb)
<https://dictionary.cambridge.org/dictionary/english/traverse#google_vignette> accessed 3 June 2024.

²⁹⁵ *M/V “SAIGA” (No.2) (Saint Vincent and the Grenadines v. Guinea)*, Separate Opinion of Judge Zhao, Judgment, ITLOS Reports 1999, p. 10 at p. 113-114.

²⁹⁶ Kaiyan Homi Kaikobad, ‘Non-Consensual Aerial Surveillance in the Airspace over the Exclusive Economic Zone for Military and Defence Purposes’ in KH Kaikobad and M Bohlander (eds), *International Law and Power: Perspectives on Legal Order and Justice* (Martinus Nijhoff 2009) 513, 540.

understanding of navigation.²⁹⁷ This is a valid point to consider; however, such a view can be easily defeated by the fact that the EEZ is principally a more open area than the territorial sea. The Tribunal, in the *M/V Norstar* case, affirms that navigational rights enjoyed by foreign ships differ in the various maritime zones.²⁹⁸ For example, foreign ships enjoy no right of navigation in the internal waters of the coastal States unless conferred by UNCLOS or other rules of international law, and they are subject to the regime of innocent passage and transit passage in the foreign territorial sea and straits used for international navigation, respectively. In the EEZ, States enjoy the freedom of the high seas with regard to navigation, provided it is exercised in conformity with the rules set forth in Part V of UNCLOS. The freedom of navigation in this zone is therefore subject to certain limitations; however, it does not mean that the definition of navigation itself becomes narrower. Rather, it signifies that the exercise of navigation in the EEZ, unlike on the high seas, must be balanced with the coastal States' rights and interests under Article 56 or any other relevant provisions under Part V of UNCLOS. International rulings concerning the interpretation of Article 87 – Freedom of the high seas – certainly indicate that this regime is by no means limited to the mere passage but refers to a range of different “types” of navigation.²⁹⁹ Moreover, according to the Virginia Commentary, “the ‘other internationally lawful uses’ include, *inter alia*, ‘those associated with the operations of ships, aircraft and submarine cables and pipelines’”.³⁰⁰ Therefore, one plausible interpretation is to approach the concept of navigation with greater flexibility, under which ISR operations may be regarded as falling within the scope of Article 58.

4.2.2 Permissible ISR operations: “Relevance” of the activities to Article 56

Although the rights of the coastal and other States in the EEZ were carefully balanced throughout the lengthy negotiation process, the relationship between Articles 56 and 58 is, to some extent, not entirely clear-cut. Article 58 should be carefully read together with Article 56,

²⁹⁷ Simon McKenzie, ‘Autonomous Technology and Dynamic Obligations: Uncrewed Maritime Vehicles and the Regulation of Maritime Military Surveillance in the Exclusive Economic Zone’ (2021) 11(1) *Asian Journal of International Law* 146, 164.

²⁹⁸ *M/V Norstar (Panama v. Italy)*, Judgment of 10 April 2019. ITLOS Report 2019, p. 10 at p. 74, paras. 220-221.

²⁹⁹ *M/V “Virginia G” (Panama/Guinea-Bissau)*, Judgment, ITLOS Reports 2014, p. 4, at p. 70, para. 223; *M/V Norstar*, pp.73-74, para. 219. The Tribunal finds that the bunkering of leisure boats carried out by the *M/V Norstar* on the high seas falls within the freedom of navigation under Article 87 of UNCLOS.

³⁰⁰ Myron H Nordquist (ed), *United Nations Convention on the Law of the Sea, 1982: A Commentary*, vol II (Martinus Nijhoff 1993) 546. This does not include fishing, which is governed by articles 61 to 73. All “other ... uses” are to be “compatible with the other provisions of this Convention.”

as its scope seems to hinge on the “relevance” of an activity to Article 56.³⁰¹ Other States are only entitled to enjoy freedom of navigation in the EEZ of another State to the extent that their activity is not inconsistent with Article 56. The *Virginia G* and the *Norstar* cases are excellent examples to demonstrate this. Despite the same issue in question – the legality of bunkering activity in the EEZ, the Tribunal in the *Virginia G* case concluded that the coastal State has authority over bunkering activity, while the decision in the *Norstar* Case showed the contrary.³⁰² Bunkering activity, which is not particularly prohibited in any part of UNCLOS, is itself likely to fall within the freedoms of navigation under Article 58. However, its general permissibility must be carefully examined through the lens of the competence of the coastal State within the EEZ under Article 56. The Tribunal, in determining the competence of the coastal State to regulate the bunkering activity in its EEZ, examines the existence of “a direct connection” to fishing.³⁰³ In a broader context, it may refer to a direct connection or particular relevance to coastal States’ exclusive economic rights set forth under Article 56. As affirmed by the Tribunal, the coastal State does not have such competence “with regard to other bunkering activities otherwise determined in accordance with the Convention”.³⁰⁴

It is clear in law that coastal States’ rights in the EEZ are specifically limited to their economic and environmental interests, which arguably exclude ISR operations which have a military nature. For instance, during the seventh session of UNCLOS III in 1978, Peru sought to require foreign warships to obtain coastal State consent to manoeuvre or use weapons in the EEZ; however, the proposal failed to be incorporated into the final text of Article 58.³⁰⁵ This outcome reiterates that the EEZ was created with the primary objective of providing coastal States with greater control over their natural resources. Nevertheless, certain coastal States, including Bangladesh, Brazil, Cape Verde, China, India, Malaysia, Pakistan and Uruguay, made declarations that require the coastal State’s consent or authorisation to conduct military exercises and manoeuvres in the EEZ.³⁰⁶ In addition, States such as China, Iran, North Korea, and Syria claim the right to restrict or prohibit foreign military activities in their EEZ.³⁰⁷

³⁰¹ *M/V “Virginia G”*, p.70, para 222.

³⁰² *M/V Norstar*, pp.73-74, para. 219.

³⁰³ *M/V “Virginia G”*, p. 68, para. 215.

³⁰⁴ *M/V “Virginia G”*, p. 70, para. 223.

³⁰⁵ Myron H Nordquist (ed), *United Nations Convention on the Law of the Sea, 1982: A Commentary*, vol II (Martinus Nijhoff 1993) 540.

³⁰⁶ Keyuan Zou, ‘Peaceful Use of the Sea and Military Intelligence Gathering in the EEZ’ (2016) 22 *Asian Yearbook of International Law* 162, 165.

³⁰⁷ Wolff Heintschel von Heinegg, ‘Military Activities in the Exclusive Economic Zone’ (2014) 47 *Revue Belge de Droit International* 45, 49-52.

In addition, the functional regime of the EEZ seems to be supported in practice. Military activities, including ISR operations, have been routinely conducted in the EEZ without prior notice or consent of a coastal State.³⁰⁸ One well-known example is the US Freedom of Navigation Programme (FONOP). The US has been conducting the US FONOP since around 1979, intending to preserve navigational rights and freedoms in the world.³⁰⁹ According to the US view, FONOP is purported to challenge unilateral restrictions by upholding the intended meaning of international law, not to compete with sovereignty claims.³¹⁰ The US asserts that FONOP is designed in accordance with international law, and the US will fly, sail and operate wherever international law allows.³¹¹ Contentions associated with the US FONOP are specifically well observed in the South China Sea between the US and China.³¹² For example, in 2009, *USNS Impeccable* (T-AGOS-23), while believed to be conducting routine surveillance operations in China's EEZ, was surrounded and harassed by five Chinese vessels, comprising of a PLA intelligence ship, a Fisheries Law Enforcement Command patrol vessel, a State Oceanic Administration patrol vessel and two small PRC cargo ships. China urged the US to respect its security concerns and sought to justify the harassment as normal law enforcement activities. However, the incident was vehemently condemned by the US as "aggressive and unprofessional" behaviour,³¹³ which shows the US's determination that it will not tolerate or acquiesce in "excessive" maritime claims.³¹⁴ Similar encounters have been constantly observed in the South China Sea, both in the air and at sea.³¹⁵ Several other States have likewise

³⁰⁸ Raul Pedrozo, 'Close Encounter at Sea: The USNS *Impeccable* Incident' (2009) 62 *Naval War College Review* 101; Moritaka Hayashi, 'Military and intelligence gathering activities in the EEZ: Definition of Key Terms' (2005) 29(2) *Marine Policy* 123, 130.

³⁰⁹ J Ashley Roach, *Excessive Maritime Claims* (4th edn, BRILL 2021) 9.

³¹⁰ Tuan N. Pham, 'Time for the US to stop losing ground to China in the South China Sea' (*The Diplomat*, 24 October 2017) <<https://thediplomat.com/2017/10/time-for-the-us-to-stop-losing-ground-to-china-in-the-south-china-sea/>> accessed 13 October 2024.

³¹¹ Sridhar Kumaraswami, 'US Navy challenges India's excessive maritime claims at Lakshadweep islands' (*The Asian Age*, 10 April 2021) <<https://asianage.com/world/americas/100421/us-navy-challenges-indias-excessive-maritime-claims-at-lakshadweep-islands.html>> accessed 13 October 2024.

³¹² US Navy EP-3 (2001); *USNS Bowditch* (March 2001); *USNS Victorious* (May 2009); *USNS McCain* (June 2009); *USNS Bowditch* (2016); See generally Raul Pedrozo, 'Close Encounter at Sea: The USNS *Impeccable* Incident' (2009) 62 *Naval War College Review* 101; James Kraska, 'Putting Your Head in the Tiger's Mouth: Submarine Espionage in Territorial Waters' (2015) 54 *Columbia Journal of Transnational Law* 164; James Kraska, *Maritime Power and the Law of the Sea: Expeditionary Operations in World Politics* (Oxford University Press 2011).

³¹³ Michael Green, Kathleen Hicks, Zack Cooper, John Schaus, and Jake Doublas, 'Counter-Coercion Series: Harassment of the USNS *Impeccable*' (*Asia Maritime Transparency Initiative*, 9 May 2017) <<https://amti.csis.org/counter-co-harassment-usns-impeccable/>> accessed 1 December 2024.

³¹⁴ J Ashley Roach, *Excessive Maritime Claims* (4th edn, BRILL 2021) 9.

³¹⁵ *USNS Victorious* (2009), *USS George Washington* (US-South Korea military exercises, 2010), *USNS Impeccable* (2013), *USS Cowpens* (2013)

undertaken such operations, and there has been a growing number of joint FONOPs in this region as a collaborative effort to secure the freedom of navigation in the EEZ.³¹⁶

More recently, in 2021, the *USS John Paul Jones (DDG 53)* carried out a US FONOP in the EEZ of India without prior consent. Although India generally takes a strong position that any foreign military activities in its EEZ require India's permission, it only managed to warn through diplomatic channels that the US warship's movements had been continuously monitored.³¹⁷

India's passive reaction, contrary to China's assertive reaction, suggests that the level of protest may be influenced by a State's international influence. Similarly, some States, especially those with less political power, tend not to take any side on this matter. For example, Indonesia is one of those States that have not taken a formal position concerning foreign military activities in the EEZ and has not enacted domestic law regulating this issue. However, as there are growing concerns that the absence of legislation could give rise to incidents posing national security threats, Indonesia has recently initiated the discourse on the matter of foreign military activities in the EEZ.³¹⁸ However, it seems unlikely that enacting laws and regulations on national security would have practical significance in preventing or responding to US FONOP operations, given Indonesia's relatively limited international influence and, more importantly, the likelihood that such measures would be considered inconsistent with international law.

Thus, the prevailing view remains that ISR operations in the EEZ are permissible activities within the ambit of Article 58, unless they can be directly linked to the coastal State's rights under Article 56. The following sections examine two possible linkages: first, the categorisation of ISR operations in relation to MSR, over which the coastal State exercises jurisdiction; and second, the interpretation and application of the due regard obligation to ISR operations. UNCLOS imposes mutual due regard obligations on both coastal and other States under Article 56(2) and 58(3), qualifying the manner in which their respective rights are exercised in the EEZ.

³¹⁶ Aaron-Matthew Lariosa, 'Warships from the Philippines, Australia, New Zealand, U.S. and Japan Sail in Joint South China Sea Patrol' (USNI News 29 September 2024) <<https://news.usni.org/2024/09/29/warships-from-the-philippines-australia-new-zealand-u-s-and-japan-sail-in-joint-south-china-sea-patrol>> accessed 7 October 2024. Six warships and four aircraft from Australia, Japan, the Philippines and the US conducted a joint patrol in the South China Sea in response to Chinese harassment of the Philippines' resupply mission in the region.

³¹⁷ Sridhar Kumaraswami, 'US Navy challenges India's excessive maritime claims at Lakshadweep islands' (*The Asian Age*, 10 April 2021) <<https://asianage.com/world/americas/100421/us-navy-challenges-indias-excessive-maritime-claims-at-lakshadweep-islands.html>> accessed 13 October 2024.

³¹⁸ Arie Afriansyah, Leonardo Bernard and Christou Immanuel, 'Should Indonesia Regulate Foreign Military Activities in its EEZ?' (2024) 159 *Marine Policy* 1.

Accordingly, while ISR operations in the EEZ are generally permissible in principle, the lawfulness of their exercise remains subject to compliance with the due regard obligation.³¹⁹

4.3 Classification between MSR and ISR in relation to unmanned technologies

4.3.1 The existing interpretations of MSR and unmanned ISR operations

This section adopts the term “military data collection” as an analytical category encompassing certain ISR operations, without seeking to draw rigid distinction between related expressions such as “military survey” or other forms of “intelligence gathering” commonly discussed in other literature. The term “intelligence” is not expressly referenced in UNCLOS. Instead, activities commonly understood as intelligence gathering are often discussed implicitly under the broader notion of “military activities”, although the latter term is also undefined under UNCLOS.³²⁰ While UNCLOS does not provide a definition of military activities, it is generally believed that such activities include not only material military activities, such as the use of force or weapons exercises, but also some intellectual or indirect military activities, including military survey, surveillance, or other forms of information acquisition conducted for national security purposes.

This section thus uses the term “military data collection” to refer to data-gathering activities conducted exclusively for military or national security objectives. The term is not introduced as a doctrinal category under UNCLOS, but rather as a functional tool to distinguish such activities from MSR, which is subject to a specific regime under Part XIII of the Convention.

According to Article 56 of UNCLOS, coastal States have jurisdiction over the MSR in the EEZ.³²¹ In the exercise of their jurisdiction, they have the right to regulate, authorise, and conduct MSR in their EEZ.³²² However, the Convention does not provide the exact meaning of MSR. A lack of definition for MSR has, in practice, generated persistent conflict of interpretations. Coastal States have tended to adopt the term MSR loosely to have broader jurisdiction over different

³¹⁹ Raul (Pete) Pedrozo, ‘Military Activities In and Over The Exclusive Economic Zone’ in Myron H Nordquist, Tommy TB Koh and John Norton Moore (eds), *Freedom of Seas, Passage Rights and the 1982 Law of the Sea Convention* (Brill Nijhoff 2009) 235, 239; see also James Kraska, ‘Military Activities on the Continental shelf’ (*LAWFARE*, 22 August 2016)

<<https://www.lawfaremedia.org/article/military-activities-continental-shelf>> accessed 3 February 2025.

³²⁰ The term “military” is used in *UNCLOS*, arts 19(2)(f), 107, 110, 111(5), 224, 298(1)(b).

³²¹ *UNCLOS*, art 56(1)(b)(ii).

³²² *UNCLOS*, art 246(1).

types of data collection activities at sea,³²³ whereas other States, which wish to separate certain data collection activities from the ambit of MSR, wish to exercise their legitimate freedoms. ISR operations are no exception to this classification issue.

For instance, the *USNS Bowditch* (T-AGS 62), the hydrographic survey ship, was “aggressively confronted by a Chinese vessel and ordered to leave the EEZ” while conducting a routine military survey in the Chinese EEZ.³²⁴ Similarly, China undertook actions that the US described as aggressive, unsafe, and unprofessional against the *USNS Impeccable* while it was engaged in ocean surveillance activity in the Chinese-claimed EEZ.³²⁵ Comparable incidents have been reported in other contexts.³²⁶ In response to Chinese actions, such as harassment or seizure, the US consistently maintained that China interfered with its internationally lawful use of the sea in the EEZ. From the US perspective, military data collection activities fall within the category of “other internationally lawful uses of the seas” related to the freedom of navigation under Article 58(1). This position is reflected in the US Navy’s *Commander’s Handbook on the Law of Military Operations*, stating that “Although coastal State consent must be obtained to conduct MSR in its EEZ, the coastal States may not regulate hydrographic surveys or military surveys conducted beyond its territorial sea, nor may it require notification of such activities”.³²⁷

The initial step is to clarify the meaning of MSR. It is generally believed that there are two types of MSR: “fundamental” and “applied” MSR. Soons made a distinction between these two as follows:

The former refers to scientific research intended to add to the sum of human knowledge about the world, regardless of its application, whereas the latter refers to research undertaken primarily for specific practical purposes.³²⁸

³²³ Sam Bateman, ‘Hydrographic Surveying in the EEZ: Differences and Overlaps with Marine Scientific Research’ (2005) 29(2) *Marine Policy* 163, 164.

³²⁴ Raul Pedrozo, ‘Close Encounter at Sea: The *USNS Impeccable* Incident’ (2009) 62 *Naval War College Review* 101.

³²⁵ Ann Scott Tyson, ‘China Draws U.S. Protest over Shadowing of Ships’ (*Washington Post*, 10 March 2009) <<https://www.washingtonpost.com/archive/national/2009/03/10/china-draws-us-protest-over-shadowing-of-ships/1a3824a7-6b52-4058-91f8-3e72363cd4d9/>> accessed 20 November 2024.

³²⁶ E.g., *Kegostrov* (Brazil), *USS Liberty* (Israel), *USS Pueblo* (North Korea), *HMS Scott* (India, 2001), *USNS Impeccable* (China), *USNS Bowditch* (India and China).

³²⁷ US Navy, *NWP 1-14M* (March 2022), para. 2.6.2.2.

³²⁸ Alfred HA Soons, *Marine Scientific Research and the Law of the Sea* (Kluwer Law and Taxation Publisher 1982) 6.

Regarding “fundamental” MSR, guidance can be drawn from Article 5(1) of the 1958 Geneva Convention on the Continental Shelf.³²⁹ It provides that “The exploration of the continental shelf and the exploitation of its natural resources must not result in [...] any interference with *fundamental* oceanographic or other scientific research carried out with the intention of open publication.” This provision reflects an earlier attempt to balance between the sovereign rights of the coastal State and the shared interest of international society in fundamental scientific research. While Article 5(1) prohibits interference with ‘fundamental oceanographic or other scientific research carried out with the intention of open publication’, Article 5(8) indicates that MSR is generally subject to coastal States consent. The provision further stipulates that such consent should not normally be withheld where research is ‘purely scientific’ and its results are intended to be published.

Article 5 of the 1958 Geneva Convention on the Continental Shelf was later developed into Part XIII (Marine Scientific Research) under UNCLOS. While Article 246(2) of the Convention provides the “overriding rules”³³⁰ that MSR shall be conducted with the consent of the coastal States, Article 246(3) obliges coastal States, *in normal circumstances*, to grant their consent for MSR carried out ‘in order to increase scientific knowledge of the marine environment for the benefit of all mankind.’ Read together, these provisions indicate that fundamental MSR is characterised not only by its purely scientific purpose, but also by openness and contribution to the common interests of humanity.

Secondly, even if “applied” MSR is understood, as suggested by Soons, as research undertaken primarily for specific practical purposes, this does not mean that all types of research activities fall within the scope of MSR under Part XIII of UNCLOS. While such an understanding could, at first glance, encompass activities, such as hydrographic research, seabed surveys, or even military data collection, this approach risks collapsing the distinction between MSR and other categories of data collection activities. The decisive question is therefore not whether the research has a practical application, but whether it satisfies the normative structure of MSR as envisaged under Part XIII.

Scholars have made great efforts to distinguish between MSR and other types of data collection activities by examining the nature of data, the purpose of data collection, the equipment or the

³²⁹ Convention on the Continental Shelf 1958.

³³⁰ Tim Stephens and Donald R. Rothwell, ‘Marine Scientific Research’, in Donald Rothwell, Alex Oude Elferink, Karen Scott, Tim Stephens (eds), *The Oxford Handbook of the Law of the Sea* (Oxford University Press 2015) 567.

publicity of data.³³¹ Among those, one of the most persuasive views, advanced by Bateman, emphasises the “application of the data” – how the data will be used once collected – as a key criterion for categorical distinction.³³² This criterion is reflected through Part XIII, which presupposes a degree of transparency and openness. Article 244 requires States to make their proposal of, and knowledge resulting from, the MSR available, to promote the flow of scientific data and information. Article 249 specifically subjects States, when undertaking MSR in the EEZ of a coastal State, to a duty to ensure that “the research results are made internationally available through appropriate national or international channels, as soon as practicable”, unless otherwise prescribed by the coastal State pursuant to Article 246(5). These provisions indicate that the MSR data, whether fundamental or applied, is generally premised on the expectation of disclosure, even where the research is undertaken for specific practical purposes.

In addition, it is clear under Part XIII that the consent regime of MSR is structured for coastal States to receive all information regarding MSR projects conducted within their EEZ to evaluate the nature of the projects. Article 248 requires States to furnish a full description of the project, including the nature and objective of the project, the methods and means used, the precise geographical area, and the expected data, to the coastal State.³³³ Such communications required by this provision are closely related to the application for consent of the coastal State, as inaccurate information regarding the nature and objective of the project would justify withholding the consent.³³⁴ This provision, combined with the understanding of Article 246(3), implies that the application of the consent, whether it is obligatory or, to some extent, subject to

³³¹ Raul Pedrozo, ‘Preserving Navigational Rights and Freedoms: The Right to Conduct Military Activities in China’s Exclusive Economic Zone’ (2010) 9(1) *Chinese Journal of International Law* 9, 21-22; Sam Bateman, ‘A Response to Pedrozo: The Wider Utility of Hydrographic Surveys’ (2011) 10(1) *Chinese Journal of International Law* 177, 178-180; Haiwen Zhang, ‘Is It Safeguarding the Freedom of Navigation or Maritime Hegemony of the United States? - Comments on Paul (Pete) Pedrozo’s Article on Military Activities in the EEZ’ (2010) 9(1) *Chinese Journal of International Law* 31, 37-42; Simon McKenzie, ‘Autonomous Technology and Dynamic Obligations: Uncrewed Maritime Vehicles and the Regulation of Maritime Military Surveillance in the Exclusive Economic Zone’ (2021) 11(1) *Asian Journal of International Law* 146, 159-160.

³³² Sam Bateman, ‘Hydrographic Surveying in the EEZ: Differences and Overlaps with Marine Scientific Research’ (2005) 29 *Marine Policy* 163, 170.

³³³ For instance, the Nord Stream consortium in fact disclosed the research activities. However, data collected for military purposes is hardly likely to be published or released to the public or scientific communities.

³³⁴ *UNCLOS*, art 246(5)(d) “Coastal State may however in their discretion withhold their consent to the conduct of a marine scientific research ... if that project (d) contains information communicated pursuant to article 248 regarding the nature of objectives of the projected which is inaccurate ...”.

the coastal State's discretion, may serve as a crucial factor in distinguishing applied MSR from other data collection activities.

By contrast, ISR operations, a part of data collection activities conducted exclusively for military or national security purposes, are generally subject to strict non-disclosure. As reflected in practice, including the position articulated in the NWP 1-14M, data collected exclusively for military purposes is not intended for publicity.³³⁵ Such data is typically used to facilitate the accomplishment of strategic and tactical objectives; for instance, to enhance undersea warfare technologies, track underwater threats, promote navigational safety of underwater platforms, or evaluate the strength, intentions, and vulnerabilities of potential adversaries, which lie, in principle, beyond the coastal State's control in the EEZ.³³⁶ States normally do not intend to, nor wish to, share or disclose any information or their plans related to their national security or military strategy, neither to the coastal State nor the international community. Accordingly, even where ISR operations may generate data of practical value, their systematic exclusion from regimes of transparency, consent, and publication places them outside the genuine scope of MSR – whether fundamental or applied – under UNCLOS.

At this point, it is worth examining the seabed surveys in order to identify the distinct legal issues they present, which differ from those associated with military data collection. In the Nord Stream project in the Baltic Sea, the Finnish authorities sought permission from the Estonian authorities for the Nord Stream consortium to conduct a seabed survey within the Estonian EEZ.³³⁷ The central question here does not concern the requirement of coastal State consent, which typically arises in the context of military data collection. Rather, it focuses on the compliance of coastal States with Article 246(3) of UNCLOS, requiring them, in normal circumstances, to grant their consent for the MSR project without unreasonable denial or delay. Withholding consent, except in situations addressed in Article 246(5), could be perceived as interference with the rights of the research States, especially when the research is considered a

³³⁵ US Navy, *NWP 1-14M* (March 2022), para. 2.6.2.2.

³³⁶ Raul Pedrozo, 'Military Activities in the Exclusive Economic Zone: East Asia Focus' (2014) 90 *International Law Studies* 514, 529; Raul (Pete) Pedrozo, 'The Legal Framework Applicable to Intrusive Intelligence, Surveillance, and Reconnaissance Operations in the Air and Maritime Domain' (2022) 99 *International Law Studies* 847 860-861; James Kraska, 'Intelligence Collection and the International Law of the Sea' (2022) 99 *International Law Studies* 602, 605.

³³⁷ Timo Koivurova and Ismo Polonen, 'Transboundary Environmental Impact Assessment in the Case of the Baltic Sea Gas Pipeline' (2010) 25 *International Journal of Marine and Coastal Law*, 151, 170-171; Sergei Vinogradov, 'Challenges of Nord Stream: Streamlining International Legal Frameworks and Regimes for Submarine Pipelines' (2009) 52 *German Yearbook of International Law* 241, 263-264. Estonia rejected the application of Finland to conduct the seabed survey in 2007 and 2012 because, according to Estonia, "the result of drilling work on the continental shelf will give information about Estonia's natural resources and their possible use [...]".

prerequisite for exercising freedom under Article 58.³³⁸ This may provide practical support that the seabed survey, unlike military data collection, is generally considered the “applied” MSR, subject to a consent regime.³³⁹

Furthermore, while military data collection generally refers to the process of acquiring information essential for military operations, it may also be understood more broadly as the conduct *by* military objects, including vessels, submarines, or other military vehicles. Some international regulations seem to distinguish between scientific and military research by specifying a different legal status between scientific research vessels and commissioned survey vessels. For instance, Article 4 of the Convention relative to certain Restrictions with regard to the Exercise of the Right of Capture in Naval War (Hague XI) stated that vessels charged with scientific missions are exempted from capture in wartime.³⁴⁰ Similarly, the San Remo Manual on International Law Applicable to Armed Conflict at Sea provides that vessels charged with *non-military scientific missions* are exempted from attack.³⁴¹ The latter provision more specifically implies that vessels collecting scientific data for military applications are not likely to be protected during armed conflict. It may be inferred from these provisions that identifying the legal status of the vessels in operations – the distinction between military and non-military (research) vessels - may help acknowledge the purpose of the operations and thus the potential application of the data collected. It further suggests that emerging marine technologies, such as remotely operated or autonomous unmanned systems, must, in some manner, be capable of verifying their military status and the military nature of operations, to support the claim that their activities do not fall within the scope of MSR as defined under Part XIII of UNCLOS.

However, the conduct of data collection activities outside the regime of MSR does not necessarily amount to a violation of Article 56. In the territorial sea, Article 19(2) explicitly recognises that “any act aimed at collecting information to the prejudice of the defence or security of the coastal States”, which may arguably include military data collection, as well as

³³⁸ Alexander Lott, *Hybrid Threats and the Law of the Sea: Use of Force and Discriminatory Navigational Restrictions in Straits* (Brill Nijhoff 2022) 210-213.

³³⁹ However, it would be premature to conclude, based on a limited number of incidents, that seabed surveys, unlike military data collection, fall within the category of ‘applied’ MSR. The categorisation of seabed surveys remains subject to different scholarly interpretation. See Sergei Vinogradov, ‘Challenges of Nord Stream: Streamlining International Legal Frameworks and Regimes for Submarine Pipelines’ (2009) 52 *German Yearbook of International Law* 241, 284.

³⁴⁰ Convention relative to Certain Restriction with regard to the Exercise of the Right of Capture in Naval Ware (adopted 18 October 1907, entered into force 26 January 1910) 205 CTS 381, art 4.

³⁴¹ Louise Doswald-Beck (ed), *San Remo Manual on International Law Applicable to Armed Conflict at Sea* (Cambridge University Press 1995) section III, para 47(f) (emphasis added).

“research or survey activities”, clearly constitute non-innocent passage. Accordingly, the coastal States are entitled to take necessary measures to prevent such activities.³⁴² By contrast, in the EEZ, the coastal States’ jurisdiction over research activities is specifically limited to “marine scientific research”, although the precise meaning and scope of MSR remain debatable. This indicates that coastal States are not entitled to regulate or restrict other types of data collection activities, which fall outside the MSR regime, unless they are reasonably found to interfere with coastal States’ rights in the EEZ. In light of this, an alternative analytical approach may be suggested, focusing more on the functional nature of the EEZ where the coastal State holds exclusive rights primarily for *economic* purposes. The focus should be shifted to the interpretation of “interference” with the coastal States’ economic rights as a crucial factor in such analysis. While determining the sufficient level of “interference” remains complex, section 4.4 proposes that the mutual due regard obligation under Articles 56 and 58 serves as a key mechanism to balance the rights and obligations of both coastal and operating States, thereby narrowing the gap of relevant legal uncertainty.

In conclusion, for all the reasons discussed, military data collection, as a component of ISR operations, falls within neither a “fundamental” nor “applied” MSR. They are generally perceived as military in nature and, as such, do not fall within the consent-based regime of MSR under Part XIII. The regime of MSR should be clearly distinguished from the concept of resource exploitation under Article 56. While ISR operations may, in certain circumstances, be related to the coastal State’s economic interests, they do not constitute MSR as such. Accordingly, the legal issues surrounding ISR operations are more appropriately framed in terms of the relationship between the sovereign rights of the coastal States under Article 56 and the freedoms of other States under Article 58. In this context, the mutual due regard obligation under Articles 56 and 58 contributes to narrowing the scope of relevant legal uncertainty.

4.3.2 The economic implications of unmanned ISR operations under Article 56

The general economic value of intellectual resources has been widely recognised in the modern era. There are no limits to the types and sources of information which may be useful.³⁴³ The general proliferation and utilisation of any type of information could have commercial value; any information collected in offshore areas of a coastal State could make valuable contributions to

³⁴² *UNCLOS*, arts 25 and 30.

³⁴³ Jonathan E Colby, ‘The Developing International Law on Gathering and Sharing Security Intelligence’ (1974) 1 *Yale Studies in World Public Order* 49, 53.

coastal States when establishing economic development plans or environmental policies.³⁴⁴ In addition, the use of unmanned technologies in data collection activities has greatly enhanced the scale and efficiency of data acquisition, as they are increasingly capable of facilitating large-scale data collection, processing, and establishing advanced data communication networks. Arguably, a growing economic value of data, combined with the significant integration of UUVs into ISR operations, may have economic implications for data collection in the EEZ. Thus, it may be increasingly important to consider the evolving nature of “resources” in the modern era.

There is a rebuttable presumption in favour of the coastal State in respect of all uses that *have an economic value*.³⁴⁵ This view suggests that the traditional approach, which confines coastal States’ rights to resource-related interests, may need adjustment with some flexibility. The unjustifiable infringement of economic value primarily concerns tangible interference with the marine environment, such as physical harm to fish stocks or mineral deposits. In other words, the meaning of “resources” under Article 56 focuses on living and non-living *natural* resources. While Article 56(1)(a) grants coastal States sovereign rights over other activities for the economic exploitation and exploration of the zone, it arguably refers only to physical use of the zone, such as energy production. Intellectual resources, such as data and information, are not explicitly recognised as a “resource” under Part V.

The MSR regime may be understood as reflecting the coastal States’ interests over intellectual resources. However, a closer reading of the relevant provisions suggests that the MSR regime is narrowly confined to information related to natural resources. MSR is subject to the coastal State’s consent regime because the data obtained is often closely linked to the abundance or scarcity of living and non-living resources in the research area, which may directly affect the coastal State’s economy.³⁴⁶ In addition, MSR activities may also be closely linked to the protection and preservation of natural resources, arising from the devices employed, the sensitivity of the area, or the extended duration of the research. This view also finds support in Article 246, which permits the coastal States to withhold consent if a proposed MSR project is of “a direct significance for the exploration and exploitation of natural resources”.³⁴⁷ Thus, the MSR regime, too, is fundamentally rooted in resource-related rights.

³⁴⁴ Alfred HA Soons, *Marine Scientific Research and the Law of the Sea* (Kluwer Law and Taxation Publisher 1982) 31.

³⁴⁵ Efthymios Papastavridis, ‘Intelligence Gathering in the Exclusive Economic Zone’ (2017) 93 *International Law Studies* 446, 458. (emphasis added)

³⁴⁶ Alfred HA Soons, *Marine Scientific Research and the Law of the Sea* (Kluwer Law and Taxation Publisher 1982) 31 and 171.

³⁴⁷ *UNCLOS*, art 246(5)(a); see also arts 56, 58 (3), 77 and 246(7).

This view may be supported by the consistent argument regarding hydrographic surveys. A hydrographic survey is another type of data collection activity addressed under UNCLOS. The US Navy clarifies its view on a hydrographic survey by stating that “the coastal State may not regulate hydrographic surveys [...], nor may it require notification of such activities”.³⁴⁸ This view clearly distinguishes hydrographic surveys from the MSR regime, regarding the former as an internationally lawful use of the sea in the EEZ. Those in favour of this view base their claims on the specifications of MSR in the EEZ under Article 56, in contrast to Article 19(2)(j), which uses a more general term “research and survey activities”, as well as on the limited (or specific) application of hydrographic data. A hydrographic survey may consist of the following classes of data: depth of water, configuration and nature of the bottom, direction and force of currents, heights and times of tides and water stages, and location of topographic features and fixed objects.³⁴⁹ Those are usually used for navigational purposes or the creation of navigational charts.

Conversely, it is often argued that coastal States may exercise authority over hydrographic surveys given the much wider application of hydrographic data.³⁵⁰ This suggests either that hydrographic data, even when the activity is conducted for the purpose of navigational safety or military aims, may nonetheless encompass resource-related information capable of affecting a coastal State’s economic rights, thereby bringing such activities within the scope of the MSR regime, or that any type of data, regardless of the initial purpose of its collection, may carry potential commercial value. Arguably, neither of the cases requires the reclassification of different types of data collection activities, as the MSR regime is not triggered by the potential commercial utility of data collected.

Alternatively, other data collection activities, not classified as MSR, have occasionally been characterised as economic exploitation under Article 56 where they are functionally directed at identifying or facilitating the extraction of natural resources. In this view, the data collected through such activities would be considered an interference with Article 56 if it produces results

³⁴⁸ US Navy, *NWP 1-14M* (March 2022) para. 2.6.2.2.

³⁴⁹ International Hydrographic Organisation (IHO), *Hydrographic Dictionary* (Special Publication No 32, 5th edn, 1994).

³⁵⁰ Sam Bateman, ‘Hydrographic Surveying in the EEZ: Differences and Overlaps with Marine Scientific Research’ (2005) 29(2) *Marine Policy* 163, 168-170; Sam Bateman, ‘Hydrographic Surveying in Exclusive Economic Zones: Jurisdictional Issue’ (2004) 5(1) *International Hydrographic Review* 76, 79; Moritaka Hayashi, ‘Military and Intelligence Gathering Activities in the EEZ: Definition of Key Terms’ (2005) 29(2) *Marine Policy* 123, 131; Simon McKenzie, ‘Autonomous Technology and Dynamic Obligations: Uncrewed Maritime Vehicles and the Regulation of Maritime Military Surveillance in the Exclusive Economic Zone’ (2021) 11(1) *Asian Journal of International Law* 146, 173.

that assist in locating resources, such as oil and gas, assessing them, or monitoring their status and availability for commercial exploitation.³⁵¹ However, under Part V, the coastal State's economic rights concern the exploitation of *natural* resources. Thus, the concept of "economic exploitation" does not extend to all types of data collection activities which might have general commercial value. For instance, data collected for military purposes may well acquire commercial value if sold by private actors, but this does not amount to "economic exploitation" for the purpose of Article 56. Such data only implicates Article 56 where the data collection activity is functionally resource-oriented, or where it triggers the due regard obligation under Article 58(3), by interfering with the coastal State's rights, or by creating a risk of significant environmental harm.³⁵²

The shift from manned platforms to UUVs is unlikely to alter the nature and purpose of the data collection activities, nor the character of the data collected. Accordingly, unmanned ISR operations generally remain outside the category of resource-oriented "economic exploitation". It is often argued that the UUVs may facilitate the creation of large datasets, which may carry genuine economic value.³⁵³ Yet the construction of robust data communication networks does not, in itself, reclassify the activity. Rather, the transition to UUVs and the operational potential arising from their distinctive features, such as persistence, scale, installation, seabed interaction and level of autonomy, reflect a change in the *modes* of operations. Regarding this, unmanned ISR operations may implicate the second approach: the interpretation and application of the due regard obligation.

To sum up, a new phenomenon – a growing economic value, combined with the increasing use of unmanned platforms facilitating the scale and efficiency of data acquisition – does not render "data" a "resource" within the meaning of Article 56, nor does it reclassify the MSR regime or the concept of economic exploitation. It is over-interpretation to redefine or stretch the term "resource" to accommodate "data", given the functional nature of EEZ. Rather, it is the modes of operation arising from the use of UUVs that may generate heightened economic sensitivities. These concerns do not alter the scope of Article 56, but are more appropriately addressed through the interpretation and application of the due regard obligations under Part V of UNCLOS.

³⁵¹ Alfred HA Soons, *Marine Scientific Research and the Law of the Sea* (Deventer: Kluwer Law and Taxation Publisher 1982) 171; Efthymios Papastavridis, 'Intelligence Gathering in the Exclusive Economic Zone' (2017) 93 *International Law Studies* 446-472.

³⁵² UNCLOS, arts 58(3), 87(2), 192, 194, 206, and 236.

³⁵³ Simon McKenzie, 'Autonomous Technology and Dynamic Obligations: Uncrewed Maritime Vehicles and the Regulation of Maritime Military Surveillance in the Exclusive Economic Zone' (2021) 11(1) *Asian Journal of International Law* 146, 153.

4.4 The due regard obligation as a balancing mechanism

4.4.1 The mutual due regard obligation under UNCLOS

UNCLOS introduces the “due regard” obligation as a key mechanism to harmonise the respective rights attributed to coastal and other States in the EEZ. The coastal State, in exercising its rights under UNCLOS in the EEZ, shall have due regard to the rights and duties of other States under Article 56(2). It provides:

In exercising its rights and performing its duties under this Convention in the exclusive economic zone, the coastal State 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.

The significance of this provision is that it “balances” the rights, jurisdiction and duties of the coastal States with the rights and duties of other States in the EEZ.³⁵⁴ Article 56(2) seeks to strike such a balance by requiring that coastal States’ law and regulations be “compatible” with UNCLOS, thereby ensuring that they do not unreasonably interfere with the exercise of the freedoms enjoyed by other States. Coastal States, subject to the obligation of due regard under Article 56(2), must adopt and implement their national laws and regulations strictly within the limits of their “competence” as defined in Part V of UNCLOS.³⁵⁵ Measures that go beyond this competence, such as restrictions aimed at controlling ISR operations, fall outside the rights of the coastal State and may be legitimately challenged. For instance, in the *Arctic Sunrise Arbitration*, the Tribunal concluded that Russia had breached Article 56(2) by boarding, seizing, and detaining the Greenpeace vessel engaged in protest at sea (i.e., freedom of high seas), which makes the whole law enforcement measures unlawful.³⁵⁶ Other States are therefore not automatically bound to comply with, and are free to challenge, coastal States’ laws and regulations if those are established beyond their competence under Article 56(1).

Correspondingly, Article 58(3) provides the due regard obligation in respect of other States. The logical reading of UNCLOS and State practice adequately demonstrates that ISR operations, under normal circumstances, are likely to fall within freedoms under Article 58; the coastal States are not entitled to take measures to prohibit or restrict such operations. However, this does not mean that the conduct of such activities cannot be limited. Article 58(3) provides:

³⁵⁴ Myron H Nordquist (ed), *United Nations Convention on the Law of the Sea, 1982: A Commentary*, vol II (Martinus Nijhoff 1993) 543.

³⁵⁵ Sir Robert Jennings and Sir Arthur Watts (eds), *Oppenheim’s International Law: Volume 1 Peace* (9th edition, Oxford University Press 2008) 803.

³⁵⁶ *Arctic Sunrise Arbitration (Netherlands v. Russia)* (Award), PCA Case No 2014-02, 14 August 2015, para. 333.

In exercising their rights and performing their duties under this Convention in the exclusive economic zone, States shall have due regard to the rights and duties of the coastal State and shall comply with the laws and regulations adopted by the coastal State in accordance with the provisions of this Convention and other rules of international law in so far as they are not incompatible with this Part.

This paragraph introduces a reservation on the generality of Article 58(1) by requiring that in the exercise of their rights and the performance of their duties, States “shall have due regard to the rights and duties of the coastal State and shall comply with the laws and regulations adopted by the coastal State.”³⁵⁷ The paragraph imposes a duty of compliance; however, when read in conjunction with Article 56(2), it only applies insofar as the laws and regulations are adopted “in accordance with the provisions of [UNCLOS]” and other rules of international law “are not incompatible with [Part V].” The latter indicates that the coastal State cannot justify the adoption of laws and regulations that exceed its powers under Part V by invoking “other rules of international law.” The fact that Article 58(1) entitles all States not only to the freedoms of navigation but also to “other internationally lawful uses of the sea” related to navigation makes clear that the standard for permissible uses of the EEZ by other States is international law, precluding any contention that the legitimacy of such uses is to be determined solely by the coastal State.³⁵⁸ Taking both Articles 56(2) and 58(3) into account, neither the sovereign rights of the coastal State nor the freedom of navigation of other States could be exercised with “absoluteness”, and due regard should always be exercised with responsibility and reasonableness.³⁵⁹

The due regard obligation is often described as “elusive”, “open-textured”, or “relatively indeterminate”.³⁶⁰ It is thus not surprising that many scholars, while acknowledging the existence of due regard, are hesitant to explain its operational effect. Conversely, the due regard

³⁵⁷ Myron H Nordquist (ed), *United Nations Convention on the Law of the Sea 1982: A Commentary*, Vol II (Martinus Nijhoff 1993) 565, para. 58.10(e).

³⁵⁸ Myron H Nordquist (ed), *United Nations Convention on the Law of the Sea 1982: A Commentary*, Vol II (Martinus Nijhoff 1993) 559, para. 58.4.

³⁵⁹ Shicun Wu, Mark J Valencia and Nong Hong, *UN Convention on the Law of the Sea and the South China Sea* (Ashgate 2015) 67.

³⁶⁰ Julia Gaunce, ‘On the Interpretation of the General Duty of “Due Regard”’ (2018) 32 *Ocean Yearbook* 27; Mathias Forteau, ‘The Legal Nature and Content of ‘Due Regard’ Obligations in Recent International Case Law’ (2019) 34 *International Journal of Marine and Coastal Law* 25, 27.

obligation also appears to be described as “lubricant”,³⁶¹ “harmonious”³⁶² or “equal”.³⁶³ Judge Laing observed in a Separate Opinion that, “If properly handled, the notion of concurrent authority can contribute to the avoidance of potential disputes ... These goals are also facilitated by the Conventions’ unique feature of a significant variety of norms and formulas ...”³⁶⁴ In his view, one such formula in Parts V and VII is the due regard obligations, employed in a carefully balanced and institutionalised manner in Articles 56(2), 56(3), and 87(2), which evidently must interact with each other.³⁶⁵

Due regard obligations under Articles 56(2) and 58(3) are differently worded. Article 58(3) seems to constitute a more “direct obligation”,³⁶⁶ ensuring other States’ compliance with coastal State laws and regulations, and other rules of international law. Whereas Article 56(2) requires the coastal State to “act in a manner compatible with the provision of [UNCLOS].” At the fifth session (1976) of the third United Nations Conference on the Law of the Sea (UNCLOS III), the US proposed shortening paragraph 3 of Article 58 by replacing every text following the phrase “rights and duties of the coastal State” with the requirement that States “shall act in a manner compatible with the provisions of this Convention,” a formulation identical to that in Article 56(2) of UNCLOS.³⁶⁷ However, the final text of UNCLOS retained the original language of paragraph 3; the eventual decision not to adopt the US proposal may reflect the drafters’ deliberate intention to underscore the element of compliance embedded in Article 58(3).

In this regard, Chinese scholars often argue that when the rights of the coastal State and the freedoms of other States come into conflict in the EEZ, the coastal State holds superiority.³⁶⁸ Similarly, India argues the term “due regard” in Article 58(3) implies that “if another State’s activity clashes with the coastal State’s competence in respect of economic utilisation of the

³⁶¹ Zhang Guobin, ‘A Discussion on Due Regard in the United Nations Convention on the Law of the Sea’ (2014) 2 *China Oceans Law Review* 70, 71.

³⁶² Efthymios Papastavridis, ‘Intelligence Gathering in the Exclusive Economic Zone’ (2017) 93 *International Law Studies* 446, 454.

³⁶³ Julia Gaunce, ‘On the Interpretation of the General Duty of “Due Regard”’ (2018) 32 *Ocean Yearbook Online* 27, 43.

³⁶⁴ *M/V “Saiga” (No. 2) (Saint Vincent and the Grenadines v. Guinea)*, Judgment, Separate Opinion of Judge Laing, ITLOS Reports 1999, p. 10 at p. 190, para. 55.

³⁶⁵ *Ibid.*

³⁶⁶ *Responsibilities and obligations of States with respect to activities in the Area, Advisory Opinion*, 1 February 2011, ITLOS Reports 2011, p. 10 at p.44, para. 121.

³⁶⁷ Myron H Nordquist (ed), *United Nations Convention on the Law of the Sea 1982: A Commentary*, Vol II (Martinus Nijhoff 1993) 560-561, para. 58.6.

³⁶⁸ Ren Xiaofeng and Cheng Xizhong, ‘A Chinese Perspective’ (2005) 29 *Marine Policy* 139, 145; Li Guangyi, Wan Binhua and Zhu Hongjie, ‘On the Rights and Obligations of Military Activities in the Exclusive Economic Zone’ (2011) *China Oceans Law Review* 148, 162.

zone, the determination must be in favour of the coastal State.³⁶⁹ It is generally agreed upon, albeit “rebuttable”,³⁷⁰ that “with respect to activities related to the development of the zone’s resources, the assumption is that the coastal State has the competence ‘equivalent to that it enjoys in the territorial sea’.³⁷¹ However, the fact that a coastal State may exercise primacy over certain matters in the EEZ does not derive from any hierarchical interpretation of the due regard obligation that selectively favours coastal States over other States. Rather, it arises from the functional nature of the EEZ, where economic interests are the principal concerns that would normally favour the coastal State.³⁷² For other uses of the sea not involving the exploration for and exploitation of resources, there is equally a rebuttable presumption in favour of other States.³⁷³

The absence of hierarchy between Articles 56(2) and 58(3) is reflected in the Virginia Commentary, providing that “there is a *mutuality* in the relationship of the coastal State and other States, and articles 56 and 58 taken together constitute the essence of the regime of the [EEZ].”³⁷⁴ The nature of “mutuality” does not contemplate priority for one activity over another. The sovereign rights of the coastal State over the natural resources in the EEZ *coexist* with the freedoms enjoyed by other States in that zone. Thus, the object and purpose of the due regard obligation is to ensure a balance between concurrent rights belonging to coastal and other States.³⁷⁵ As further supported by some commentators, the *reciprocal* due regard obligation does not grant priority to the right of the coastal State or the freedom of other States.³⁷⁶ Rather, it

³⁶⁹ *The “Enrica Lexie” Incident (Italy v. India) (Award)*, PCA Case No 2015-28, 21 May 2020, para. 971.

³⁷⁰ Efthymios Papastavridis, ‘Intelligence Gathering in the Exclusive Economic Zone’ (2017) 93 *International Law Studies* 446, 458-459.

³⁷¹ David Joseph Attard, *The Exclusive Economic Zone in International Law* (Clarendon Press 1987) 75.

³⁷² Myron H Nordquist (ed), *United Nations Convention on the Law of the Sea 1982: A Commentary*, Vol II (Martinus Nijhoff 1993) 569, para. 59.6(b).

³⁷³ Myron H Nordquist (ed), *United Nations Convention on the Law of the Sea 1982: A Commentary*, Vol II (Martinus Nijhoff 1993) 569, para. 59.6(b). “Where conflicts arise on issues not involving the exploration for and exploitation of resources, the formula would tend to favour the interest of other States or of the international community as a whole.”; James Kraska, *Maritime Power and the Law of the Sea: Expeditionary Operations in World Politics* (Oxford University Press 2011) 266; James Kraska, ‘Resources Rights and Environmental Protection in the Exclusive Economic Zone: The Functional Approach to Naval Operations’ in Peter A Dutton (ed), *Military Activities in the EEZ: A U.S-China Dialogue on Security and International Law in the Maritime Commons* (CMSI Red Books, Study No. 7, 2010) 85.

³⁷⁴ Myron H Nordquist (ed), *United Nations Convention on the Law of the Sea 1982: A Commentary*, Vol II (Martinus Nijhoff 1993) 556, para. 58.1.

³⁷⁵ *The “Enrica Lexie” Incident (Italy v. India) (Award)*, PCA Case No 2015-28, 21 May 2020, para. 975.

³⁷⁶ Tullio Treves, ‘Coastal States’ rights in the Maritime Areas under UNCLOS’ (2015) 12(1) *Revista de Direito Internacional* 39, 42; Albert J Hoffman, ‘Freedom of Navigation’ in Rudiger

requires that all States exercise their rights with mutual respect, refraining from unreasonable interference with others, and acting in good faith to find accommodation permitting the exercise of the concurrent rights of both.³⁷⁷ Given that due regard obligations aim to ensure “conciliation” between concurrent rights in conflict, such obligations introducing any hierarchy between them simply does not make sense.³⁷⁸

However, as Articles 56(2) and 58(3) provide limited substantive guidance for determining the standard by which the due regard obligation should be implemented, it may be argued that this obligation can serve as a strategic legal tool for coastal States seeking to restrict foreign activities. Conversely, it may also serve as a legal basis for other States to justify the conduct of such activities, particularly when they do not, by their nature, appear to infringe upon the coastal State’s rights, such as ISR operations. This is particularly significant in the EEZ, where UNCLOS does not provide a list of specific activities that are permitted or prohibited. The due regard obligation was initially conceived as a means of harmonising the concurrent rights of coastal and other States in the EEZ. However, without careful examination, particularly in the context of ISR operations, the legality of which has long been contested, this legal device may add another layer of legal complexity. Accordingly, it is necessary to examine relevant jurisprudence to discern the general approach to interpreting the due regard obligation, including its constituent elements and the criteria by which compliance is assessed.

Before delving into such examination, it is also important to note that due regard is only applied in the context where the rights of States are clearly established. Presaz highlights the importance of a clear distinction between rules governing the rights and jurisdiction of States and those governing the exercise of such rights.³⁷⁹ The due regard obligation belongs to the latter. It is not a mechanism to determine the existence or absence of rights and jurisdiction, which is already explicitly stipulated under UNCLOS. Rather, it functions more as a condition to ensure that already given rights and jurisdiction are exercised in a reasonable manner consistent with UNCLOS. This suggests that the due regard test serves as the subsequent step in assessing the lawfulness or reasonableness of a permissible activity. In other words, the permissibility of an activity in the EEZ is primarily shaped by the nature of the EEZ, and the due

Wolfrum (ed), *Max Planck Encyclopedia of Public International Law* (OUP online edn, 2011) para. 15.

³⁷⁷ *Ibid.*

³⁷⁸ Mathias Forteau, ‘The Legal Nature and Content of ‘Due Regard’ Obligations in Recent International Case Law’ (2019) 34 *International Journal of Marine and Coastal Law* 25, 29.

³⁷⁹ Ioannis Prezas, ‘Foreign Military Activities in the Exclusive Economic Zone: Remarks on the Applicability and Scope of the Reciprocal ‘Due Regard’ Duties of Coastal and Third States’ (2019) 34 *International Journal of Marine and Coastal Law* 97.

regard test comes after such clarification to assess the lawfulness of the permitted activity. It is thus the two-step process.

During UNCLOS III, as the discussion concerning the concept of the EEZ developed, there were two approaches to balancing the interests and rights of coastal and other States in the zone. Early proposals describing the new rights of coastal States beyond the territorial sea first established the new rights of coastal States and then attempted to protect the rights and freedoms of other States.³⁸⁰ Conversely, the second approach first established the rights and freedoms of other States in the EEZ and then added that such rights could be restricted by the coastal State in exercising its rights within the zone.³⁸¹ At the second session of the Conference (1974), a group of nine States advanced a proposal taking the second approach; similar language had also been proposed by the Evensen Group and was further refined in subsequent sessions.³⁸² Although the scope of other States' rights was specifically outlined to those relating to communicative freedoms, the second approach – first providing the rights and then allowing for the restriction of those rights based on the rights of the coastal States – appears to have been one eventually adopted. Such development of law may give support to viewing the due regard obligation as a two-step process. Once the existence of the right becomes clear, due regard subsequently plays a pivotal role in determining its lawfulness. This may offer an additional legal basis for coastal States to restrict foreign ISR operations, although considered permissible in general, where such operations are found to fail to comply with the due regard obligation. Accordingly, the following sections aim to examine the content of the due regard obligation by analysing relevant legal authorities, and to assess how its fulfilment can be assessed in practice, especially in the context of unmanned ISR operations. Although the

³⁸⁰ A/AC.138/SC.II/L.10, art III, reproduced in *SBC Report 1972*, 180 (Kenya); A/AC.138/SC.II/L.28, art 80(1), reproduced in III *SBC Report 1973*, 35, 61 (Malta); Cited in Myron H Nordquist (ed), *United Nations Convention on the Law of the Sea 1982: A Commentary*, Vol II (Martinus Nijhoff 1993) 556.

³⁸¹ A/AC.138/80, reproduced in *SBC Report 1972*, 70, 72 (Specialised Conference of the Caribbean Countries on Problems of the Sea). Later proposals followed this approach: A/AC.138/SC.II/L.21, arts 9-10, reproduced in III *SBC Report 1973*, 19, 20 (Columbia, Mexico and Venezuela); A/AC.138/SC.II/L.37, para 13, reproduced in III *SBC Report 1973*, 78, 80 (Argentina); A/AC.138/SC.II/L.40 and Corr 1-3, art IV, reproduced in III *SBC Report 1973*, 87, 88 (Algeria, Cameroon, Chana, Ivory Coast, Kenya, Liberia, Madagascar, Mauritius, Senegal, Sierra Leone, Somalia, Sudan, Tunisia and United Republic of Tanzania); Cited in Myron H Nordquist (ed), *United Nations Convention on the Law of the Sea 1982: A Commentary*, Vol II (Martinus Nijhoff 1993) 556-557.

³⁸² A/CONF.62/L.4 (1974), arts 14-15 and 17, reproduced in III *Official Records* 81, 82 (Canada, Chile, Iceland, India, Indonesia, Mauritius, Mexico, New Zealand and Norway); Cited in Myron H Nordquist (ed), *United Nations Convention on the Law of the Sea 1982: A Commentary*, Vol II (Martinus Nijhoff 1993) 557.

existing legal authorities do not specifically address ISR operations or military activities, the outcomes of relevant rulings may still offer valuable guidance.

4.4.1.1 The components of the due regard obligations

The *Chagos Marine Protected Area Arbitration (Chagos MPA)* is perhaps the most well-known case concerning the meaning of due regard. The Tribunal, in reaching its conclusion, provided by far the best definition of due regard as follows:

The ordinary meaning of “due regard” calls for the United Kingdom to have such regard for the rights of Mauritius as is called for by the circumstances and by the nature of those rights. The Tribunal declines to find in this formulation any universal rule of conduct. The Convention does not impose a uniform obligation to avoid any impairment of Mauritius’ rights; nor does it uniformly permit the United Kingdom to proceed as it wishes, merely noting such rights. Rather, the extent of the regard required by the Convention will depend upon the nature of the rights held by Mauritius, their importance, the extent of the anticipated impairment, the nature and importance of the activities contemplated by the United Kingdom, and the availability of alternative approaches. In the majority of cases, this assessment will necessarily involve at least some consultation with the rights-holding State.³⁸³

Although this statement was made in the context of Article 56(2), it was considered in the *South China Sea Arbitration* when interpreting Article 58(3).³⁸⁴ The two key points emerge from the statement above. First, the meaning of due regard is not uniform but may be interpreted differently depending on the *circumstances* in which it is invoked and the nature of the rights involved; therefore, consultation, in the majority of cases, may be necessary. In the view of the Tribunal, the UK’s obligation to have due regard to the rights of Mauritius entails consultation; however, the basic purpose of consulting was not found to have occurred properly, given the lack of information actually provided to Mauritius and the absence of a reasoned exchange between the Parties.³⁸⁵ Consequently, the Tribunal concluded that the UK, in declaring the MPA, had breached its obligation under Article 56(2). On the contrary, the Tribunal viewed that the consultation with the US (another interested party) could be seen as fulfilling the due regard obligation. The US, unlike Mauritius, was consulted in a timely manner and provided with

³⁸³ *Chagos Marine Protected Area Arbitration (Mauritius v. United Kingdom)* (Award), PCA Case No 2011-03, 18 March 2015, para 519. (Chagos MPA Arbitration)

³⁸⁴ *South China Sea Arbitration (The Republic of Philippines v. The People’s Republic of China)*, (Award), PCA Case No 2013-19, 12 July 2016, paras. 741-742.

³⁸⁵ *Chago MPA Arbitration*, paras. 534-535.

sufficient information in balancing its rights and interests.³⁸⁶ The Tribunal described the consultation with the US as a practical example of due regard and a “yardstick” against which the communications with Mauritius can be measured.³⁸⁷

The alleged principle that consultation may be required to fulfil the due regard obligation finds support in other cases. In the *Fisheries Jurisdiction* cases, it was held that Iceland and the UK are under mutual obligations to undertake negotiations in good faith for the equitable solution of their differences concerning their respective fisheries rights.³⁸⁸ In the Court’s view, “[t]he most appropriate method for the solution of the dispute is clearly that of negotiation” when delimiting the extent of rights and interests of the Parties.³⁸⁹ The obligation to negotiate flows from the very nature of the respective rights of the Parties.³⁹⁰ Although the characterisation of the coastal State’s rights as “preferential” may imply a certain priority, it does not entail the extinction of the concurrent rights of other States.³⁹¹ The preferential rights of a coastal State are limited by its obligation to take account of the rights of other States; the established rights of other fishing States are, in turn, limited by its own obligation to take account of the rights of the coastal State.³⁹² Neither right is an absolute one, and they must be exercised with due regard to the rights of other States.

Technically speaking, “reasonable regard” is a feature of the 1958 Geneva Convention on the High Seas, while “due regard” is the standard term used in UNCLOS. In the present case, various phrases appear to be used – including “reasonable regard”, “due consideration”,³⁹³ “take account of the rights of other States”,³⁹⁴ and “due regard”³⁹⁵ – but they may all be understood as conveying practically the same meaning. It may find support in the present case when the Court found that the principle of reasonable regard under Article 2 of the 1958 Geneva Convention on the High Seas requires Iceland and the United Kingdom to have “due regard” to

³⁸⁶ *Chago MPA Arbitration*, para. 528.

³⁸⁷ *Chago MPA Arbitration*, para. 528.

³⁸⁸ *Fisheries Jurisdiction (United Kingdom v. Iceland)* (Merit), Judgement of 25 July 1974, [1974] ICJ Rep 3, para. 79.

³⁸⁹ *Ibid.*, para. 73.

³⁹⁰ *Ibid.*, para. 75.

³⁹¹ *Fisheries Jurisdiction (United Kingdom v. Iceland)* (Merit), Judgement of 25 July 1974, [1974] ICJ Rep 3, para. 62; *Fisheries Jurisdiction (Federal Republic of Germany v. Iceland)* (Merit), Judgment of 25 July 1974, [1974] ICJ Rep 175, para. 54.

³⁹² *Fisheries Jurisdiction (United Kingdom v. Iceland)* (Merit), Judgement of 25 July 1974, [1974] ICJ Rep 3, paras. 71-72.

³⁹³ *Ibid.*, para. 71.

³⁹⁴ *Fisheries Jurisdiction (United Kingdom v. Iceland)* (Merit), Judgement of 25 July 1974, [1974] ICJ Rep 3, para. 71.

³⁹⁵ *Fisheries Jurisdiction (United Kingdom v. Iceland)* (Merit), Judgement of 25 July 1974, [1974] ICJ Rep 3, para. 72.

each other's interests.³⁹⁶ The Virginia Commentary on Article 56(2), too, appears to suggest that these terms may be used interchangeably, by presenting the term "due regard" alongside "reasonable regard" and "due consideration" in brackets.³⁹⁷

ITLOS in the *Bay of Bengal* case, the dispute over the delimitation of the continental shelf between Bangladesh and Myanmar, later revealed a similar view that the due regard obligation may necessarily contain a negotiation process. The Tribunal recognises that the legal regime of the continental shelf has *always coexisted* with another legal regime, in this particular context, with high sea freedoms or concurrent EEZ rights.³⁹⁸ In such a situation, "each coastal State must exercise its rights and perform its duties with due regard to the rights and duties of the other."³⁹⁹ The Tribunal suggests that "the conclusion of specific agreements or the establishment of appropriate cooperative arrangements" constitutes one way in which the Parties may ensure the discharge of the due regard obligation.⁴⁰⁰ Such measures inherently necessitate a negotiation process between the Parties. Overall, the due regard obligation appears to include a procedural dimension, which may require States, in the majority of cases, to engage in appropriate negotiation or consultation processes, in order to help promote the equitable exercise of concurrent rights within the EEZ.

Secondly, according to the statement provided in the *Chagos MPA* case, the due regard obligation appears to encompass not only procedural elements but also substantive ones. It is stated that the extent of the regard required by the UNCLOS will depend upon the nature of the rights, their importance, and "the extent of the anticipated impairment". Similarly, the Tribunal in the final observation stated:

In concluding that the declaration of the MPA was not in accordance with the provisions of the Convention, the Tribunal has taken no view on the substantive quality or nature of the MPA or on the importance of environmental protection. The Tribunal's concern has been with the manner in which the MPA was established, rather than its substance.⁴⁰¹

³⁹⁶ *Fisheries Jurisdiction (United Kingdom v. Iceland)* (Merit), Judgement of 25 July 1974, [1974] ICJ Rep 3, para. 68.

³⁹⁷ Myron H Nordquist (ed), *United Nations Convention on the Law of the Sea 1982: A Commentary*, Vol II (Martinus Nijhoff 1993) 525, para. 56.2.

³⁹⁸ *Dispute Concerning Delimitation of the Maritime Boundary Between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar)*, Judgment, ITLOS Reports 2012, p. 4, para. 475. (Bay of Bengal)

³⁹⁹ *Bay of Bengal*, para. 475.

⁴⁰⁰ *Bay of Bengal*, paras. 475-476.

⁴⁰¹ *Chagos MPA Arbitration*, para. 544.

This statement provides another indication that the due regard obligation consists of a procedural and substantive requirement, but this can be interpreted in two ways. First, the substantive quality of the activity is assumed to be one of the crucial aspects that must be discussed during consultation. In this regard, it may be worth addressing the view of the Court in the *Fisheries Jurisdiction* case. It was held that the Parties are under mutual obligation to undertake negotiations in good faith. In these negotiations, they are to take into account the obligation to pay due regard to the interests of other States.⁴⁰² This implies that the due regard obligation requires more than just engaging in dialogue. It requires every effort – a duty to negotiate in good faith - to balance competing rights and interests,⁴⁰³ and the outcome of negotiations should ideally reflect a fair and balanced accommodation of them. States cannot unilaterally decide the anticipated impairment to others' rights without a “proper” negotiation process. In this view, a breach of whatever negotiated terms may be considered a violation of due regard in terms of substantial requirements.

Second, it can be said that procedural and substantive components do not necessarily have to be cumulatively satisfied. As the UK was found to fail to meet the procedural component (i.e., failure to consult with Mauritius), it was concluded that the UK violated due regard without a need for delving into the latter aspect. This view implies that, if properly consulted or at least notified, the actual infringement of others' rights that may later occur would not alter the compliance with due regard, although international responsibility in response to such damage could be incurred.⁴⁰⁴ Whichever interpretation is taken, both interpretations share the assumption that a negotiation process has, in practice, functioned as the primarily initial step in assessing compliance with due regard. However, it may be inappropriate to regard it as an inherent feature of, or requirement for, that obligation. As the notion of “due regard” is not defined under UNCLOS,⁴⁰⁵ its meaning and content have been progressively shaped through case law. In this regard, the procedural dimension of the due regard obligation is better understood as one facet of the interpretative construct found in case law. In other words, negotiation is not legally mandatory in every case; it is also context-dependent.

Virginia Commentary on Article 87(2) may offer an interpretive guide to the meaning of “due regard”, although the comment is made in the context of due regard in high seas freedoms. It states:

⁴⁰² *Fisheries Jurisdiction (United Kingdom v. Iceland)* (Merit), Judgement of 25 July 1974, [1974] ICJ Rep 3, para. 79

⁴⁰³ *Arbitration between Guyana and Suriname* (Award), PCA Case No 2004-04, 17 September 2007, para. 461

⁴⁰⁴ UNCLOS, art 94(6).

⁴⁰⁵ *The “Enrica Lexie” Incident*, para. 973.

In paragraph 2, the requirement of ‘due regard’ is a qualification of the rights of States in exercising the freedom of the high seas. The standard of “due regard” requires all States, in exercising their high seas freedoms, to be aware of and consider the interests of other States in using the high seas, and to refrain from activities that interfere with the exercise by other States of the freedom of the high seas. As the ILC stated in its Commentary in 1956, “States are bound to refrain from any acts that might adversely affect the use of the high seas by nationals of other States.” The construction in paragraph 2 recognises that all States have the right to exercise high seas freedoms, and balances consideration for the rights and interests of all States in this regard.⁴⁰⁶

According to this, the due regard obligation can be understood as comprising both a cognitive element – “to be aware of and consider the interests of other States” and a substantive element – “to refrain from activities that interfere with [the interests of other States]”. While the cognitive element does not imply that the obligation must achieve the intended result in order to be fulfilled, the substantive element raises interpretative ambiguity, particularly as to the understanding of “interference”. In the *Arctic Sunrise* case, the Tribunal observed that “the coastal State should tolerate some level of nuisance through [a foreign activity] as long as it does not amount to an ‘interference with the exercise of its sovereign rights.’”⁴⁰⁷ The Tribunal examined what could reasonably be regarded as constituting such interference, identifying situations in which a coastal State may act:

(i) violations of its laws adopted in conformity with the [UNCLOS]; (ii) dangerous situations that can result in injuries to persons and damage to equipment and installations; (iii) negative environmental consequences; and (iv) delay or interruption in essential operations.⁴⁰⁸

This appears to provide structured criteria for determining what constitutes “interference” with the exercise of the coastal State’s sovereign rights. However, their application remains evaluative, as views may differ both on the intensity of interference and on the extent of preventive measures that can reasonably and practicably be considered sufficient to avoid such interference.

⁴⁰⁶ Myron H Nordquist (ed), *United Nations Convention on the Law of the Sea 1982: A Commentary*, Vol III (Martinus Nijhoff 1995) 86, para. 87.9(1).

⁴⁰⁷ *Arctic Sunrise Arbitration (Netherlands v. Russia)* (Award), Merit, PCA Case No 2014-02, 14 August 2015, para. 328.

⁴⁰⁸ *Arctic Sunrise Arbitration*, para. 327.

The UK in the *Chagos MPA* case emphasised the cognitive element of the obligation. In its view, due regard under Article 56(2) does not mean to “give effect to” the rights of other States,⁴⁰⁹ but it extends only to “taking account” of or “giving consideration” to such rights.⁴¹⁰ This view stands in clear contrast to Mauritius’ position, which, relying on the Virginia Commentary, argued that the due regard obligation requires the UK “to *refrain* from acts that interfere with [Mauritius’ right]”.⁴¹¹ Such divergent interpretations of the due regard obligation stem from the absence of a clear standard of its implementation. Although claimed by each Party, this broader interpretative question was not resolved in the *Chagos MPA* case, as the Court held that the UK had violated the due regard obligation by failing to engage in an adequate consultation with Mauritius, without fully examining the “interference” caused by the establishment of the MPA.

Overall, the due regard obligation, for an analytical purpose, can be understood as encompassing procedural, cognitive, and substantive elements, each applied in light of the specific circumstances. The procedural element requires States to engage in appropriate processes, such as consultation and negotiation, to ensure transparency and facilitate the peaceful resolution of competing interests. Although it may appear, in the majority of cases, to be the preferred approach by the Courts and Tribunals, it is not mandatory and remains contingent on the circumstances. The cognitive element involves the recognition and consideration of the rights and interests of other States, which obliges States to be aware of and account for these rights in their conduct. Finally, the substantive element needs further discussion on how “interference” should be interpreted in assessing a violation of the due regard obligation. The latter two elements are further examined in the following section.

4.4.1.2 The relationships between “due regard” and “due diligence”

The due regard obligation also lies within the primary responsibility attributed to States. Although illegal, unreported, and unregulated (IUU) fishing in the foreign EEZ is not comparable to ISR operation in the sense that the former does not constitute one of the communicational freedoms under Article 58(1), the *Advisory Opinion submitted by the Sub-regional Fisheries Commission (SRFC Advisory Opinion)* is worth addressing for a different aspect of due regard obligation. The Tribunal in this case examines the obligations of the flag State in the EEZ of another State with regard to the protection and preservation of the marine environment.⁴¹²

⁴⁰⁹ *Chagos MPA Arbitration*, para. 458.

⁴¹⁰ *Chago MPA Arbitration*, paras. 475-476.

⁴¹¹ *Chago MPA Arbitration*. para. 471.

⁴¹² Precisely speaking, the Tribunal uses the term “flag State” in this case to refer to a State which is not a member of the SRFC. See *Request for an Advisory Opinion submitted by the Sub-regional Fisheries Commission, Advisory Opinion*, 2 April 2016, ITLOS Reports 2015, p. 4, para. 88. (SRFC Advisory Opinion)

Coastal States are granted sovereign rights over living resources under Article 56(1), so they are entitled to establish the terms and conditions over those matters in their laws and regulations, insofar as they are not inconsistent with other provisions of UNCLOS. In addition, they also bear responsibility for the conservation of the living resources in their EEZ, thereby being required to establish proper conservation and management measures for the living resources.⁴¹³ Such measures may include enforcement measures “necessary to ensure compliance with the laws and regulations adopted by [the coastal State] in conformity with this Convention.”⁴¹⁴

The primary responsibility of coastal States over living resources within their EEZ does not release other States from their general obligation in that regard.⁴¹⁵ States, in exercising their rights and performing duties in the EEZ, are not only subject to coastal States’ laws and regulations but also other rules of international law insofar as they are not incompatible with Part V.⁴¹⁶ For instance, Article 192 of UNCLOS grants States a general obligation to protect and preserve the marine environment, and they are required to take all necessary measures to prevent, reduce and control pollution of the marine environment.⁴¹⁷ As the Tribunal in the *Southern Bluefin Tuna* case confirmed, “the conservation of the living resources of the sea is an element in the protection and preservation of the marine environment”.⁴¹⁸ Such measures include those for ensuring the conservation and management of living resources in all maritime areas. In addition, Article 94 obliges every State to “effectively exercise its jurisdiction and control in administrative, technical and social matters over ships flying its flag”, and this provision applies to the EEZ by virtue of Article 58(2). In the view of the Tribunal, the flag State, in the IUU context, would be considered to fulfil its obligation if it adopts the necessary administrative measures to ensure its nationals and vessels do not engage in IUU fishing in the EEZ of another State.⁴¹⁹ If such activities nevertheless occur and are reported by other States pursuant to Article 94(6), the flag State is obliged to investigate and, if appropriate, take necessary action to remedy the situation.⁴²⁰ The flag State is not only required to comply with the coastal State’s laws and regulations and conservation measures for living resources, but

⁴¹³ UNCLOS, arts 61 & 62.

⁴¹⁴ UNCLOS, art 73(1).

⁴¹⁵ *SRFC Advisory Opinion*, para. 124.

⁴¹⁶ UNCLOS, arts 58(3), 62(4) & 192; *SRFC Advisory Opinion*, para. 120. “... the flag State is under an obligation to ensure compliance by vessels flying its flag with the relevant conservation measures concerning living resources enacted by the coastal State for its exclusive economic zone because, as concluded by the Tribunal, they constitute an integral element in the protection and preservation of the marine environment.”

⁴¹⁷ UNCLOS, arts 192, 193 and 194(1).

⁴¹⁸ *Southern Bluefin Tuna* (New Zealand v. Japan; Australia v. Japan) (Provisional Measures), Order of 27 August 1999, ITLOS Reports 1999, 280, para. 70.

⁴¹⁹ UNCLOS, art 94(1); *SRFC Advisory Opinion*, para. 119.

⁴²⁰ *SRFC Advisory Opinion*, para. 119.

also independently bear its own responsibility to adopt necessary measures for the protection and preservation of the marine environment.

It is interesting to note that the Tribunal touches on Article 58(3) from the perspective of the “responsibility” of flag States *to ensure* compliance with the laws and regulations enacted by the coastal States concerning conservation measures, and *to ensure* the establishment of their own necessary measures in that regard. The Tribunal adopted the view of the Seabed Disputes Chamber as to the meaning of “to ensure”:

The sponsoring State’s obligation “to ensure” is not an obligation to achieve, in each and every case, the result that the sponsored contractor complies with the aforementioned obligations. Rather, it is an obligation to deploy adequate means, to exercise best possible efforts, to do the utmost, to obtain this result. To utilise the terminology current in international law, this obligation may be characterised as an obligation “of conduct” and not “of result”, and as an obligation of “due diligence”.⁴²¹

This means that in the present case (i.e., the IUU fishing), the liability of the flag State does not arise from the *result* – a mere occurrence of IUU fishing by vessels flying its flag.⁴²² Rather, the liability of the flag State arises from its failure to exercise its “due diligence” obligation in relation to IUU fishing. A failure to achieve the intended outcome, e.g., not harming marine resources, does not necessarily negate compliance with due regard if the flag State takes appropriate precautionary measures to discharge its due diligence obligation, to ensure its vessels do not engage in IUU fishing within foreign EEZs. The ICJ in *Pulp Mills on the River Uruguay* further noted, as to the meaning of “due diligence”, that “an obligation to adopt regulatory or administrative measures [...] and to enforce them is an obligation of conduct.”⁴²³

The Court further clarified that an obligation to act with due diligence refers to:

an obligation which entails not only the adoption of appropriate rules and measures but also a certain level of vigilance in their enforcement and the exercise of administrative control applicable to public and private operators, such as the monitoring of activities undertaken by such operators, to safeguard the rights of the other party. The responsibility of a party to the 1975 Statute would therefore be engaged if it was shown that it had failed to act diligently and thus take all appropriate

⁴²¹ *Responsibilities and obligations of States with respect to activities in the Area, Advisory Opinion*, 1 February 2011, ITLOS Reports 2011, p. 10 at p. 41, para. 110.

⁴²² *SRFC Advisory Opinion*, paras. 146 and 148. The term liability is used by the Tribunal to refer to the consequences of a breach of the primary obligation.

⁴²³ *Pulp Mills on the River Uruguay (Argentina v. Uruguay)* (Judgment) [2010] ICJ Rep 2010 14, para. 187.

measures to enforce its relevant regulations on a public or private operator under its jurisdiction.⁴²⁴

This interpretation was later adopted by the Arbitral Tribunal in the *South China Sea Arbitration*. It stated:

Given the importance of fisheries to the entire concept of the exclusive economic zone, the degree to which the Convention subordinates fishing within the exclusive economic zone to the control of the coastal State, and the obligations expressly placed on the nationals of other States by Article 62(4) of the Convention, the Tribunal considers that anything less than due diligence by a State in preventing its nationals from unlawfully fishing in the exclusive economic zone of another would fall short of the regard due pursuant to Article 58(3) of the Convention.⁴²⁵

Having established that Chinese vessels were engaged in fishing in the Philippines' EEZ, the Tribunal considered that China had failed to show the due regard called for by Article 58(3) to the Philippines' sovereign rights.⁴²⁶ This demonstrates that, in environmental context, the assessment of due regard may incorporate a due diligence dimension. Overall, these cases illustrate that the assessment of due regard may be informed not only by Article 58, but also by general obligations under UNCLOS with regard to the protection and preservation of the major environment. However, these cases have limitations in that they do not consider that the manner in which due diligence is implemented may vary according to States' capabilities, available resources, and the nature of activities involved. In other words, the standard of due diligence cannot be applied uniformly, but must instead be assessed in light of the specific context.

Recently, regarding the due diligence under Article 194(1), ITLOS, in the *Request for an Advisory Opinion submitted by the Commission on Small Islands States on Climate Change and International Law*, stated that "the standard of due diligence States must exercise in relation to marine pollution from anthropogenic GHG emissions needs to be *stringent*".⁴²⁷ The stringent standard of due diligence requires a State, even if it possesses limited capabilities or insufficient resources, to "do whatever it can in accordance with its capabilities and available

⁴²⁴ *Pulp Mills on the River Uruguay (Argentina v. Uruguay)* (Judgment) [2010] ICJ Rep 2010 14, para. 197.

⁴²⁵ *The South China Sea Arbitration*, para. 744.

⁴²⁶ *The South China Sea Arbitration*, para. 753.

⁴²⁷ *Request for an Advisory Opinion submitted by the Commission of Small Island States on Climate Change and International Law (Advisory Opinion)* ITLOS Case No 31, 21 May 2023, para. 241. (emphasis added) (COSIS Advisory Opinion)

resources” to prevent, reduce and control marine pollution from anthropogenic GHG emissions.⁴²⁸ It is important to note that the Tribunal apply the “precautionary approach” in the exercise of due diligence, considering it “an integral part of the general obligation of due diligence”.⁴²⁹ States would not fulfil their obligation of due diligence under Article 194(1) of UNCLOS “if they disregarded and did not adequately account for the risks involved in the activities under their jurisdiction or control.”⁴³⁰ This holds true even where scientific evidence regarding the probability and severity of harm to the marine environment is insufficient.⁴³¹ The present issues, such as IUU fishing and reduction of GHG emissions, are widely recognised as a matter of shared interests (e.g., climate change or ocean acidification), which clearly requires international cooperation.⁴³² In this context, it can be argued that these shared concerns demand a more stringent standard of due diligence than issues arising from individual States’ concerns, such as national security. Overall, this observation highlights that the due regard obligation includes a due diligence dimension. Importantly, due diligence constitutes an obligation of conduct, not of result, which raises an important question about how this standard is to be applied in the specific context of ISR operations.

4.4.2 The interpretation and application of the due regard obligation to ISR operations

When dealing with a certain issue that is far from being straightforward, courts and tribunals appear to confine their answer to a particular question, based on the particular circumstances of a case, and leave aside the other possible questions.⁴³³ However, it does not necessarily imply that the decision lacks significance when considered in different contexts. In the context of ISR operations, various scenarios may be envisaged in interpreting the due regard obligation. As observed by the analysis of existing cases, the due regard obligation encompasses procedural, cognitive, and substantive elements, the relevance of which depends on the specific circumstances of each case. This section examines whether, and to what extent, such legal outcomes regarding the due regard obligation can be meaningfully applied to ISR operations.

⁴²⁸ *COSIS Advisory Opinion*, para. 241.

⁴²⁹ *COSIS Advisory Opinion*, para. 131.

⁴³⁰ *COSIS Advisory Opinion*, para. 242.

⁴³¹ *COSIS Advisory Opinion*, para. 242.

⁴³² *COSIS Advisory Opinion*, para. 400.

⁴³³ *M/V “Saiga” (No. 2) (Saint Vincent and the Grenadines v. Guinea)*, Judgment, Separate Opinion of Judge Laing, ITLOS Reports 1999, p. 10. The Tribunal confined its decision to the application of custom and fiscal legislation to bunkering in the EEZ, not making any general findings on the question of bunkering in the EEZ.

Firstly, the analysis of the *Chagos MPA* case, together with the *Fisheries Jurisdiction* and *the Bay of Bengal* case, all give the impression that where respective legitimate rights come into conflict, consultation or negotiation may offer a practical means of resolution. Courts and tribunals thus often consider it a proper exercise of the judicial functions to direct the Parties to engage in negotiations to resolve the dispute.⁴³⁴ However, a procedural requirement of the due regard obligation may be ill-suited for ISR operations. Arguably, the expectation of negotiation in the aforementioned cases seems reasonable, as they dealt with rights and interests, which are legitimately claimable, and cooperative issues between States, such as resource management, environmental protection or maritime delimitation. For instance, the dispute in the *Chagos MPA* centres on a conflict between two distinct claimable rights over the Chagos Archipelago, each grounded in different legal rules: Mauritius' rights pursuant to the Lancaster House Undertakings and a sovereignty claim by the UK in respect of establishing the MPA under UNCLOS. The other two cases dealt with the delimitation of claims that overlap: preferential fishing rights and historical fishing rights (*The Fisheries Jurisdiction* case) and the delimitation of the continental shelf in an overlapping area (*The Bay of Bengal* case). Situations where the dispute turned on a fundamental incompatibility between two distinct rights may naturally prompt procedural mechanisms, such as negotiation and consultation, to reconcile them.

By contrast, a dispute arising from ISR operations in the EEZ may not readily be characterised as such. Articles 56 and 58 are the result of careful balancing activities during the drafting of UNCLOS. The competences of States identified under the Convention do not generally lend themselves easily to confusion.⁴³⁵ As Oxman noted, Articles 56 and 58 are mutually exclusive.⁴³⁶ The legal regime of exclusive economic rights coexists with the regime of freedom of navigation, but they do not necessarily overlap. It is "activities" that often give rise to confusion, particularly in relation to their legality under UNCLOS. The mutual exclusivity of Articles 56 and 58 does not imply that if it does not fall within the ambit of Article 58; it would automatically fall within Article 56 or vice versa.⁴³⁷ Rather, it underscores that the competence of States in the EEZ, as defined

⁴³⁴ *Fisheries Jurisdiction (United Kingdom v. Iceland)*, para. 75; *Bay of Bengal (Bangladesh/Myanmar)*, paras. 475-476 and 507-508.

⁴³⁵ Rolf Einar Fife, 'Obligations of 'Due Regard' in the Exclusive Economic Zone: Their Context, Purpose and State Practice' (2019) 34 *International Journal of Marine and Coastal Law* 43, 45.

⁴³⁶ Bernard H Oxman, 'The Regime of Warships under the United Nations Convention on the Law of the Sea' (1984) 24 *Virginia Journal of International Law* 809, 841.

⁴³⁷ There might be a few activities that do not fall within either case. See Ioannis Prezas, 'Foreign Military Activities in the Exclusive Economic Zone: Remarks on the Applicability and Scope of the Reciprocal 'Due Regard' Duties of Coastal and Third States' (2019) 34 *International Journal of Marine and Coastal Law* 97, 103; If it is determined that an activity neither falls within Article 56 nor 58, Article 59 may be applicable. See *M/V "Virginia G"*, paras. 222-223.

under UNCLOS, is not affected by the mere ignorance of other States or by excessive claims that exceed the limits established by law.

As noted earlier, there is a clear distinction between rules conferring rights and jurisdiction, such as Articles 56(1) and 58(1), and those governing the exercise of rights, such as the due regard obligation.⁴³⁸ Such a distinction indicates that “the rule governing the exercise of rights cannot be invoked to establish the existence (or the absence) of a right, but may only limit the exercise of an existing right in a specific case”.⁴³⁹ This view could have a meaningful contribution to understanding the application of due regard to ISR operations. The rights and responsibilities of the coastal State should not exceed the ambit of Article 56(1). If the right to conduct ISR operations in a foreign EEZ is attributed to other States as supported by majority views, coastal States cannot rely on the due regard of other States to claim the absence of such rights or assert their expanded authority to control such activities. The due regard obligation is purported to protect coastal States’ exclusive economic rights under Article 56, not to give them more discretion to prevent or restrict others’ freedoms in the EEZ.⁴⁴⁰ For instance, if a coastal State were to adopt security laws aimed at restricting foreign ISR operations beyond the scope of Article 56, it would contravene the due regard obligation under Article 56(2).⁴⁴¹ Such laws are not automatically binding upon other States, and are therefore free to be challenged if found unreasonable.⁴⁴²

On the procedural dimension of due regard, the most relevant concern lies in the reality that ISR operations are typically carried out on the strong assumption that they fall within the freedoms preserved in the EEZ by Article 58. If required, notification or consultation would give the coastal State an opportunity to challenge the proposed ISR operations and constrain the operating State to adjust the plan to better accommodate the coastal State’s rights.⁴⁴³ States conducting routine ISR operations are therefore unlikely to initiate consultation that could impose even

⁴³⁸ Ioannis Prezas, ‘Foreign Military Activities in the Exclusive Economic Zone: Remarks on the Applicability and Scope of the Reciprocal ‘Due Regard’ Duties of Coastal and Third States’ (2019) 34 *International Journal of Marine and Coastal Law* 97, 99.

⁴³⁹ *Ibid.*, 100.

⁴⁴⁰ Andrew S Williams, ‘Aerial Reconnaissance by Military Aircraft in the Exclusive Economic Zone’ in Peter A Dutton (ed), *Military Activities in the EEZ: A US-China Dialogue on Security and International Law in the Maritime Commons* (Naval War College Press 2010) 49, 51; Brian Wilson, ‘An Avoidable Maritime Conflict: Disputes Regarding Military Activities in the Exclusive Economic Zone’ (2010) 41 *Journal of Maritime Law and Commerce* 421, 423.

⁴⁴¹ For more examples of domestic legislation, see Ashley J Roach, *Excessive Maritime Claims* (4th edn, BRILL 2021) 170-173.

⁴⁴² Ioannis Prezas, ‘Foreign Military Activities in the Exclusive Economic Zone: Remarks on the Applicability and Scope of the Reciprocal ‘Due Regard’ Duties of Coastal and Third States’ (2019) 34 *International Journal of Marine and Coastal Law* 97, 112.

⁴⁴³ *Ibid.*, 106.

minimal constraints on those perceived freedoms. Treating negotiation as a prerequisite to lawful ISR operations is thus neither realistic nor conducive to a “harmonised” or “balanced” accommodation of interests. In addition, if compliance with the due regard obligation necessarily entails a negotiation process in the ISR operations, then all non-consensual ISR operations conducted in a foreign EEZ could be regarded as a violation of the due regard obligation and, consequently, deemed unlawful under UNCLOS. This is neither consistent with UNCLOS, which does not give coastal States authority to control foreign ISR operations, nor is it supported by State practice. Overall, consultation or negotiation is structurally ill-suited in the context of ISR operations, given the absence of competing legal entitlement. This does not suggest that procedural elements are irrelevant in all circumstances, but rather that they are not a constitutive requirement for assessing due regard in the ISR context.

Secondly, compliance with due regard can be evaluated by the potential “interference” that foreign ISR operations may pose to a coastal State’s rights under Article 56. Some argue that a State complies with the due regard obligation so long as its ISR operations do not result in an actual infringement of the coastal States’ rights under UNCLOS.⁴⁴⁴ Such a view implies that the due regard obligation is cognitive, requiring States to be aware of and give consideration to the rights of the coastal State when exercising their freedoms (i.e., the conduct of ISR operations). If such activities cause harm to the coastal State’s natural resources, the operating State may incur international responsibility to provide a remedy; however, this does not necessarily constitute a violation of the due regard obligation. This view may be supported by the fact that Articles 56 and 58 are mutually exclusive; they coexist but do not necessarily overlap. Nevertheless, it may be overly narrow if it overlooks the distinctive operational characteristics of unmanned vehicles and the potential environmental consequences of their use.

As Article 56(2) and 58(3) do not define the substantive content of due regard, courts and tribunals often invoke the concept of due diligence when interpreting the due regard obligation.⁴⁴⁵ Due diligence, as an obligation of “conduct”, is incumbent on both coastal and flag States in relation to the protection and preservation of the marine environment, including the conservation of living resources, under Part XII of UNCLOS. It requires States to adopt all necessary measures to ensure that their vessels and nationals do not engage in activities which may harm the marine environment. As noted in the *South China Sea Arbitration*, this approach is

⁴⁴⁴ James Kraska, ‘Intelligence Collection and the International Law of the Sea’ (2022) 99 *International Law Studies* 602, 607. “Due regard is not a substantive right, but simply means that operations at sea must consider the operations of other States.”

⁴⁴⁵ *Pulp Mills on the River Uruguay (Argentina v. Uruguay)* (Judgment) [2010] ICJ Rep 14, para. 204.

essentially based on the nature of the EEZ, in which fisheries rights constitute a core interest of the coastal State.⁴⁴⁶ Particularly with marine pollution, ITLOS has applied a “precautionary approach” in the exercise of due diligence, requiring States to adequately account for the risk involved in the activities under their control.⁴⁴⁷

Some activities, although not typically categorised as resource-related rights, such as fishing or exploitation, may still be reasonably expected to infringe upon the coastal State’s resource-related rights, or broadly speaking, the marine environment. For instance, certain military activities, such as weapon exercises in close proximity to an active offshore oil platform⁴⁴⁸ or the construction of significant military-related installations, are likely to have substantial impacts on coastal States’ economic and environmental rights. In this regard, although ISR operations are not, in nature, related to the exploitation or exploration of the natural resources, the operating States may nonetheless be required to take measures to ensure non-interference where there is a reasonable likelihood of impact on the marine environment.

However, there is a legal barrier to applying this notion in the context of ISR operations. Generally speaking, ISR operations are not conducted by private parties, but by States. Article 236 of UNCLOS provides that the provisions of this Convention regarding the protection and preservation of the marine environment do not apply to any warship, naval auxiliary, other vessels or aircraft owned or operated by a State and used, for the time being, only on government non-commercial service. Thus, vessels engaging in ISR operations may be exempted from the direct application of the rules in Part XII. However, the last phrase of Article 236 should be highlighted. It states:

However, each State shall ensure, by the adoption of appropriate measures not impairing operations or operational capabilities of such vessels or aircraft owned or operated by it, that such vessels or aircraft act in a manner consistent, so far as is reasonable and practicable, with this Convention.⁴⁴⁹

States must ensure sovereign immune vessels act “so far as is reasonable and practicable” consistent with Part XII, without impairing operations. Although the Convention provides no clear standard for the scope of this phrase, this provision may implicitly require States operating sovereign immune vessels to conduct an environmental impact assessment prior to military

⁴⁴⁶ *The South China Sea Arbitration*, para. 744.

⁴⁴⁷ *COSIS Advisory Opinion*, paras 241-242.

⁴⁴⁸ Raul Pedrozo, ‘Close Encounter at Sea: The USNS *Impeccable* Incident’ (2009) 62 *Naval War College Review* 101, 104; Raul Pedrozo, ‘Military Activities in the Exclusive Economic Zone: East Asia Focus’ (2014) 90 *International Law Studies* 514, 517.

⁴⁴⁹ *UNCLOS*, art 236.

activities.⁴⁵⁰ According to Article 206, “[w]hen States have reasonable grounds for believing that planned activities under their jurisdiction or control may cause substantial pollution of or significant and harmful changes to the marine environment, they shall, as far as practicable, assess the potential effects of such activities on the marine environment”. This provision constitutes not only a direct obligation under UNCLOS but also a general obligation under customary international law.⁴⁵¹ Accordingly, sovereign immune vessels may still be subject to the obligation to conduct an environmental impact assessment, insofar as it is reasonable and practicable, where their activities are expected to meet the threshold of significant environmental risks.

In addition, in the view of the ICJ, a State planning an activity that carries a significant environmental risk, based upon the environmental impact assessment, is required to notify, and consult with, the potentially affected State in good faith, in order to fulfil its due diligence obligation.⁴⁵² The Court’s view aligned with Article 206, which requires States not only to conduct the assessments but also to “communicate” reports of the results in the manner provided in Article 205.⁴⁵³ The Tribunal in the *South China Sea Arbitration* found that China, regarding its island-building activities, had not fulfilled its duties under Article 206 as it had delivered no assessment in writing to any other international body.⁴⁵⁴ This implies that due diligence obligations may also encompass procedural requirements. In sum, activities by sovereign immune vessels may still fall within the scope of a due diligence obligation in relation to protection and preservation of the marine environment if their activities are reasonably expected to present a significant environmental risk. However, as such vessels are exempted from the direct application of relevant rules, and Article 236 only requires flag States to ensure, “so far as is reasonable and practicable”, that their vessels act in conformity with Part XII, it may soften the application of Article 206 (environmental impact assessment) to a best-efforts standard.

⁴⁵⁰ Ioannis Prezas, ‘Foreign Military Activities in the Exclusive Economic Zone: Remarks on the Applicability and Scope of the Reciprocal ‘Due Regard’ Duties of Coastal and Third States’ (2019) 34 *International Journal of Marine and Coastal Law* 97, 108.

⁴⁵¹ *Responsibilities and obligations of States with respect to activities in the Area*, Advisory Opinion, 1 February 2011, ITLOS Reports 2011, p. 10 at p. 50, para. 145.

⁴⁵² *Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v. Nicaragua) and Construction of a Road in Costa Rica along the San Juan River (Nicaragua v. Costa Rica)*, Judgment, ICJ Reports 2015, p. 665 at pp. 706-707, para. 104 and p. 724, para. 168.

⁴⁵³ UNCLOS, art 205. States shall publish reports of the result obtained pursuant to article 204 or provide such reports at appropriate intervals to the competent international organisations, which should make them available to all States.

⁴⁵⁴ *The South China Sea Arbitration*, para. 991.

In the context of ISR operations, however, the practical challenge is that their potential environmental impact is generally expected to be minimal; accordingly, it remains questionable whether this would suffice to trigger due diligence requirements, such as conducting an EIA, sharing the result, or continuous monitoring.⁴⁵⁵ This issue is controversial, particularly due to the absence of an established threshold of what constitutes a “significant” risk to the marine environment and the lack of clarity over who determines such a standard. Practically speaking, the fact that ISR operations are often invisible to external observers and may serve a clandestine purpose could render the determination of “significant” or “minimal” risk of the activities even irrelevant.

The ICJ's view in the *Aegean Sea Continental Shelf Case* seems to suggest that information gathering activities may infringe upon a coastal State's exclusive rights of exploration,⁴⁵⁶ but do not necessarily cause *irreparable* harm to those rights.⁴⁵⁷ The Court was unable to find that the circumstances of the case disclosed the risk of an irreparable prejudice to the coastal State's right, and therefore, declined to indicate provisional measures.⁴⁵⁸ In reaching this conclusion, the Court considered that:

Whereas, according to the information before the Court, the seismic exploration undertaken by Turkey, of which Greece complains, is carried out by a vessel traversing the surface of the high seas and causing small explosions to occur at intervals under water; whereas the purpose of these explosions is to send sound waves through the seabed so as to obtain information regarding the geophysical structure of the earth beneath it; whereas no complaint has been made that this form of seismic exploration involves any risk of physical damage to the seabed or subsoil or to their natural resources; whereas the continue seismic exploration activities undertaken by Turkey are all of the transitory character just described, and do not involve the establishment of installations on or above the seabed of the continental shelf; and whereas no suggestion has been made that Turkey has embarked upon any operations involving the actual appropriation or other use of the natural resources of the areas of the continental shelf which are in dispute⁴⁵⁹

⁴⁵⁵ *Certain Activities and Construction of a Road (Costa Rica v. Nicaragua; Nicaragua v. Costa Rica)*, paras. 161-162.

⁴⁵⁶ *Aegean Sea Continental Shelf (Greece v. Turkey)*, Interim Protection, Order of 11 September 1976, ICJ Reports 1976, p. 3, para. 31.

⁴⁵⁷ *Aegean Sea Continental Shelf*, para. 33.

⁴⁵⁸ *Aegean Sea Continental Shelf*, para. 32.

⁴⁵⁹ *Aegean Sea Continental Shelf*, para. 30.

Although this assessment was rendered in the context of a request for provisional measures rather than a decision on the merits, this paragraph nonetheless offers guidance as to the potential circumstances in which the threshold of significant or irreparable environmental harm would have been considered met in relation to information gathering activities. In the view of the Court, seismic exploration at issue was transitory, involved no installation, caused no physical damage, and entailed no appropriation of resources; accordingly, it did not meet the threshold of irreparable harm necessary for the indication of provisional measures. This guidance may be analogously extended to ISR operations.

According to this view, ISR operations, unless accompanied by physical harm, installation or appropriation of natural resources, are unlikely to meet the threshold of significant risk to the marine environment. Conversely, where an ISR operation involves the deployment of an installation or creates credible risks of physical harm, the operating States may be subject to the obligation to conduct EIA under Article 206 or to engage in procedural measures. However, the mere existence of such risk is not sufficient; the magnitude of that risk, such as the size and scale of the installation, must be a core consideration.⁴⁶⁰ Even for sovereign immune vessels, Article 236 does not entirely exclude such obligations, but subjects their application to the standard of practicability, which requires States to exercise due diligence through measures such as mitigation or adjusted routing. For instance, it is often argued that the use of active sonar poses a threat to marine animals.⁴⁶¹ The US Navy vessels operate with due regard for the marine environment, by voluntarily applying marine-mammal mitigation measures when employing low- and mid-frequency sonar systems.⁴⁶² Such measures nonetheless fall short of the requirements of an environmental impact assessment and consultation.

Overall, there is no one-size-fits-all definition of due regard; its application depends on the specific circumstances in which compliance is assessed. Operating States are not only bound by a direct obligation to comply with the coastal State's law and regulations, but also subject to a general obligation to protect and preserve the marine environment. In the context of ISR operations, the view that due regard necessarily entails a negotiation process appears ill-suited, as it may unduly tilt the balance of rights between coastal and other States. Given that Articles 56 and 58 are mutually exclusive – each right coexists but not necessarily overlaps – it is

⁴⁶⁰ *The South China Sea Arbitration*, paras. 976-993.

⁴⁶¹ James Kraska, 'Resources Rights and Environmental Protection in the Exclusive Economic Zone: The Functional Approach to Naval Operations' in Peter A Dutton (ed), *Military Activities in the EEZ: A U.S-China Dialogue on Security and International Law in the Maritime Commons* (CMSI Red Books, Study No. 7, 2010) 81, 82.

⁴⁶² Raul Pedrozo, 'Close Encounter at Sea: The USNS *Impeccable* Incident' (2009) 62 *Naval War College Review* 101, 104.

reasonable to consider the due regard obligation in this context as primarily cognitive, requiring States to give consideration to the coastal State's rights. Nevertheless, all flag States remain subject to general responsibilities under Part XII, including the adoption of measures, such as EIA and procedural engagement, where the impacts of ISR operations are reasonably expected to be significant. Even where such activities are conducted by sovereign immune platforms, these obligations continue to apply, albeit only to the extent that they are reasonable and practicable. While no clear standard exists for defining what constitutes a "significant" risk to the marine environment, general ISR operations will rarely meet this threshold unless accompanied by additional factors, such as physical damage to the marine environment or establishment of permanent installations. Yet, recent technological developments, particularly the increasing integration of unmanned technologies, may alter this assessment, as their distinctive operational characteristics could heighten the potential interference with the marine environment. The following section, therefore, turns to examine how *unmanned* ISR operations reshape the evaluation of potential interference under the due regard obligation.

4.4.3 Due regard and unmanned ISR operations: Potential violations and an alternative interpretative approach

The Seabed Disputes Chamber, in its Advisory Opinion, has observed that:

The content of "due diligence" obligations may not easily be described in precise terms. Among the factors that make such a description difficult is the fact that "due diligence" is a variable concept. It may change over time as measures considered sufficiently diligent at a certain moment may become not diligent enough in light, for instance, of new scientific or technological knowledge. It may also change in relation to the risks involved in the activity [...].⁴⁶³

Although stated in a different context, this observation illuminates that due diligence – and arguably due regard – is a variable concept which may evolve over time in light of emerging changes and potential risks involved. The rapid advancement of unmanned technologies has transformed the modalities of ISR operations, enabling persistence, long endurance, and multi-vehicle coordination. As unmanned platforms become increasingly integrated, their distinctive operational features, such as varying levels of autonomy, interaction with the seabed, and persistent sensing, may reshape the risk profile of ISR operations and, in some circumstances, generate new forms of interference with coastal State rights or heightened environmental risk.

⁴⁶³ *Responsibilities and obligations of States with respect to activities in the Area, Advisory Opinion*, 1 February 2011, ITLOS Reports 2011, p. 10 at p. 43, para. 117.

Accordingly, the interpretation and application of the due regard obligation will need to adapt to these developments.

The practical difficulty lies in drawing a clear line between significant and insignificant effects on the coastal State's EEZ rights or on the marine environment. There have been some efforts to identify potential forms of interference arising from the use of UMVs. For instance, it is often argued that underwater ISR operations within the EEZ could breach the due regard obligation where such activities, whether intentionally or accidentally, injure marine animals.⁴⁶⁴ Given the operational characteristics of UMVs, various hypothetical scenarios could be envisaged, such as drone swarms, the deployment of fixed sensors or arrays, seabed-interacting UUVs, or the use of active sonar in sensitive habitats, all of which may, with credible evidence of significant risk, leave room for restrictions. In addition, given that certain UMVs operate without immediate human intervention, it may be argued that they pose significant risks to the marine environment, for instance, by inadvertently entering marine protected areas designated by coastal States under Article 194(5), critical fishing grounds, or ice-covered areas of the EEZ, which are generally regarded as particularly sensitive marine environments.⁴⁶⁵

Arguably, attempting to draw a list of *potentially* restricted ISR operations, based on speculative risks, may not be helpful. Mere possibilities of a mishap do not justify a coastal State's restriction of others' freedoms under Article 58.⁴⁶⁶ Kraska suggests a useful analytical framework, a test of reasonableness for determining "actual interference". This approach emphasises that speculative effects should be discounted, and that factors, such as foreseeability, materiality, and proximate causation, should guide the assessment of the

⁴⁶⁴ Sam Bateman, 'The Regime of the Exclusive Economic Zone: Military Activities and the Need for Compromise' in Tafsir Malick Ndiaye and Rudiger Wolfrum (eds), *Law of the Sea, Environmental Law and Settlement of Disputes* (Martinus Nijhoff 2007) 573-574; James Kraska, 'Resources Rights and Environmental Protection in the Exclusive Economic Zone: The Functional Approach to Naval Operations' in Peter A Dutton (ed), *Military Activities in the EEZ: A U.S-China Dialogue on Security and International Law in the Maritime Commons* (CMSI Red Books, Study No. 7, 2010) 81, 82.

⁴⁶⁵ UNCLOS, art 234; see generally, Jan Jakub Solski, 'The "Due Regard" of Article 234 of UNCLOS: Lessons From Regulating Innocent Passage in the Territorial Sea' (2021) 52(4) *Ocean Development & International Law* 398. It is argued that UMVs are more likely to be deployed for ISR operations or general data collection activities, due to their harsh weather conditions. Article 234 in Section 8 under Part XII of UNCLOS permits a heightened level of coastal State environmental control in ice-covered EEZ.

⁴⁶⁶ James Kraska, *Maritime Power and the Law of the Sea: Expeditionary Operations in World Politics* (Oxford University Press 2011) 267; James Kraska, 'Resources Rights and Environmental Protection in the Exclusive Economic Zone: The Functional Approach to Naval Operations' in Peter A Dutton (ed), *Military Activities in the EEZ: A U.S-China Dialogue on Security and International Law in the Maritime Commons* (CMSI Red Books, Study No. 7, 2010) 81, 85-86.

reasonable scope of “actual interference”.⁴⁶⁷ Taking into account those factors, together with the earlier observation that physical harm or the establishment of installations may suffice to meet the threshold of significant risk to the marine environment, the most plausible scenario in the context of unmanned ISR operations would be the extensive emplacement of unmanned platforms for ISR purposes. With the rapid advancement of unmanned technology, it has become technically feasible for unmanned platforms to stay in water for extended periods, or even to be implanted on the seabed or reef. Such capabilities expand the scope of ISR operations by linking the seabed, submerged, surface, and even the aerial domains, constituting an integrated data collection network.

UNCLOS is clear with respect to the law governing installation and structures. Under Article 56(1), the coastal State has jurisdiction over the establishment and use of installations and structures within its EEZ.⁴⁶⁸ In particular, Article 60(1) addresses that the coastal State enjoys the exclusive right to authorise and regulate the construction, operation and use of (b) installations and structures for the purposes provided for in Article 56 and other economic purposes, and (c) those which may interfere with the exercise of the rights of the coastal State in the EEZ. This notion extends to artificial islands, installations, and structures on the continental shelf by virtue of Article 80. In combination, it is clear that in the EEZ and on the continental shelf, only the coastal States or other authorised States may construct or operate such installations or structures. Subparagraph (c) implies that the construction of a *military* installation may also be subject to the coastal State’s regulatory power, if it interferes with the exercise of the rights of the coastal State in the EEZ, including resource-related rights and safety of navigation. The tribunal in the *South China Sea Arbitration* finds that China has, through its construction of installations and artificial islands at Mischief Reef without the authorisation of the Philippines, breached Articles 60 and 80 of UNCLOS with respect to the Philippines’ sovereign rights in its EEZ zone and continental shelf. Moreover, the Tribunal considered that, given the scale and impact of such activities, China was required, “as far as practicable”, to prepare an environmental impact assessment and to communicate its results.⁴⁶⁹ As China failed to do so, the Tribunal found that it had breached Articles 192, 194(1), 194(5), 197, 123, and 206.

⁴⁶⁷ James Kraska, ‘Naval Force in the Exclusive Economic Zone’, *Maritime Power and the Law of the Sea: Expeditionary Operations in World Politics* (Oxford University Press 2011) 267; James Kraska, ‘Resources Rights and Environmental Protection in the Exclusive Economic Zone: The Functional Approach to Naval Operations’ in Peter A Dutton (ed), *Military Activities in the EEZ: A U.S-China Dialogue on Security and International Law in the Maritime Commons* (CMSI Red Books, Study No. 7, 2010) 81, 85-86.

⁴⁶⁸ UNCLOS, art 56(1)(b)(i).

⁴⁶⁹ *The South China Sea Arbitration*, para. 988.

Notably, the Tribunal did not make a finding of a violation of due regard under Article 58(3). This confirms that the construction of the installations in the foreign EEZ, regardless of their purpose, does not primarily fall within the scope of freedoms under Article 58. As such activities directly undermine the coastal State's sovereign rights, the due regard obligation may be considered inherently breached. From the environmental perspective, it appears that the threshold of "significant risk" necessary to trigger Article 206 is set at a high level.⁴⁷⁰

Accordingly, the emplacement of an ISR device, even if characterised as the "establishment" under Article 56(1)(b)(i) and thereby automatically amounting to a violation of due regard, may not necessarily give rise to the requirement under Article 206.

Regarding the emplacement of an unmanned platform for ISR operations, clarification may be required regarding the use of terms. UNCLOS does not expressly define "device", nor does it formally classify it as distinct from "installation" or "structure". However, its different use of terminology suggests a functional distinction. The term "device" appears in other provisions of UNCLOS, for instance, Article 19(2)(f) lists the launching, landing or taking on board of any military device as constituting non-innocent passage. It may be said that, unlike installation and structure, devices are not necessarily intended to be permanently fixed to the seabed; rather, they are typically carried on board, deployed when needed, and retrieved upon completion of their operations. This suggests that devices are generally smaller and more temporary in nature than installations or structures. If devices are to be clearly distinguished from installation and structures, the legal implications of this distinction become crucial. While the establishment of installations and structures falls within the coastal State's exclusive jurisdiction pursuant to Article 56, the emplacement and deployment of devices, owing to their small, temporary, mobile character, may be more appropriately associated with the high seas freedoms under Article 58.

The concept of navigation in the EEZ is not necessarily confined to "passage", but it may encompass various forms of navigation. Nonetheless, caution must be taken to avoid overextending this concept. As McKenzie noted, once it is accepted that the right to navigation encompasses more than just transiting through an area, it becomes harder to determine what forms of navigation are permitted.⁴⁷¹ Once unmanned ISR devices are implanted on the seabed, they are unlikely to qualify as navigation. However, in cases where such devices are only temporarily implanted and subsequently transit once activated to conduct missions, their

⁴⁷⁰ *The South China Sea Arbitration*, paras. 976-983.

⁴⁷¹ Simon McKenzie, 'Autonomous Technology and Dynamic Obligations: Uncrewed Maritime Vehicles and the Regulation of Maritime Military Surveillance in the Exclusive Economic Zone' (2021) 11(1) *Asian Journal of International Law* 146, 165.

operations may, at least in part, be characterised as a form of navigation. Upward-falling payloads – the pre-positioned containers that lie on the ocean floor and wait until activated, at which time they fall upward into the water column to perform undersea missions – may provide a useful illustration of the unique features of UMVs.⁴⁷² This distinction carries significant legal implications: classifying such activities as “navigation” would bring them within the high seas freedoms under Article 58, whereas categorising them as installation would place them under the coastal State’s jurisdiction pursuant to Article 56.

The reasonable test – foreseeability, materiality, and proximate causation – helps to operationalise the context-dependent nature of due regard, but it remains activity-based, asking whether a particular ISR operation is lawful on its facts and circumstances. This approach, however, does not itself differentiate between manned and unmanned operations. Rather, UMVs may change the risk assessment by what they can or cannot do. Accordingly, analysis should shift from listing potentially restricted ISR operations to identifying the capabilities necessary for compliance with the due regard obligation. Two core capabilities may be “identification” and “operational communication”. These capabilities provide the means by which UMVs can comply with due regard, keeping foreseeable effects below the threshold of actual interference while preserving the freedoms of Article 58(1).

Some coastal States have shown an inclination to establish identification zones by requesting information on the vessels. For instance, Australia, which has a massive maritime jurisdiction, including an EEZ of over 10 million square kilometres, has increasingly relied on UMVs to enhance maritime domain awareness.⁴⁷³ UNCLOS does not expressly refer to such zones, except Article 220(3). It provides that: “Where there are clear grounds for believing that a vessel navigating in the [EEZ] has, in the [EEZ], committed a violation of applicable international rules and standards for the prevention, reduction and control of pollution from vessels or laws and regulations of that State conforming and giving effect to such rules and standards, that State may require the vessel to give information regarding its identity ... and other relevant information required to established whether a violation has occurred.” Article 220(4) subsequently obliges flag States to “adopt laws and regulations and take other measures so that vessels flying their flag comply with requests for information pursuant to [Article 220(3)].” Furthermore, if the vessel with the belief of a clear violation of Article 220(3) “causing or threatening significant pollution of the marine environment”, the State may undertake physical inspection of the vessel

⁴⁷² DARPA, ‘Upward Falling Payloads (UFP)’ (Archived)

<<https://www.darpa.mil/program/upward-falling-payloads>> accessed 28 July 2025.

⁴⁷³ James Mugg, Zoe Hawkins and John Coyne, ‘Australian Border Security and Unmanned Maritime Vehicles’ (Australian Strategic Policy Institute, 13 July 2016).

for matters relating to the violation “if the vessel has refused to give information or if the information supplied by the vessel is manifestly at variance with the evident factual situation and if the circumstances of the case justify such inspection.”⁴⁷⁴

These provisions illustrate a sequence of request, duty and subsequent measures in case of non-compliance, but they are strictly confined to protection and preservation of the marine environment. They cannot, therefore, be invoked to justify information requests directed at UMVs conducting ISR operations in the EEZ, unless there are reasonable grounds to believe that such operations pose a significant threat of marine pollution. Even in such cases, however, if UMVs are technically incapable of responding to requests, it would render compliance practically impossible and further create difficulties for the coastal State in pursuing subsequent measures, such as physical inspection. In practice, the measures available to coastal States against unmanned UMVs are therefore highly constrained, and are further curtailed by the principle of sovereign immunity under Article 236

Arguably, the deployment of UMVs without adequate communication capabilities, whether to verify their status or to adjust their operations in response to coastal State request, may be regarded as inconsistent with the due regard obligation under Article 58(3) and, in the environmental context, with the flag State’s duty of due diligence. Given the common operational characteristics of UMVs, it may be argued that the same approach extends beyond the environmental regime to areas such as navigational safety or security, where inadequate communication capabilities risk undermining the balance of rights and duties in the EEZ.

When a UMV is detected in the EEZ, a coastal State should, in fulfilment of its own due regard obligation, avoid making unilateral assumptions about the risks posed by the UMVs, but employ all reasonable and practical means, such as radio communication, to ascertain the status and nature of the operations. Conversely, the operating State must also exercise due regard by ensuring, prior to deployment, that UMVs are equipped with effective identification and communication mechanisms, enabling them to respond to legitimate requests and adjust their conduct accordingly. It is natural for coastal States to express concern when UMVs are detected within their EEZ, particularly if such platforms lack situational awareness and have insufficient capacity to modify their behaviour in response to the request. Thus, it can be argued that the absence of identification or communication capabilities does not *per se* render an unmanned ISR operation unlawful; however, where such absence foreseeably prevents the coastal State from responding to legitimate concerns or mitigating material interference, it may indicate a failure to exercise due regard.

⁴⁷⁴ UNCLOS, art 220(5).

The *USNS Bowditch* (2016) incident may illustrate this dynamic. A US UUV conducting a military survey was seized by China, which justifies its action on the grounds that the object was “unidentifiable”. The US strongly condemned the seizure as an interference with the freedom of navigation. Reportedly, the UUV was not fully autonomous but remotely operated from the *Bowditch*, the deploying platform, with radio communication available between the *Bowditch* and China’s naval vessel. Unless China can demonstrate that the seizure was justified, its conduct may amount to a failure to exercise due regard and a violation of Article 58(1), since it could have issued a warning or demanded cessation of the operation before seizing the object. A coastal State’s request for information aimed at identifying foreign UMVs operating in its EEZ would not be inconsistent with UNCLOS. However, enforcement measures based solely on non-compliance with such a request are doubtful, unless there are reasonable grounds to believe that the UMV poses a significant threat to the coastal State’s rights, particularly in relation to environmental protection.⁴⁷⁵ The involvement of UMVs does not alter the scope of coastal State competences under UNCLOS; the regulation of foreign activities in the EEZ nonetheless remains strictly confined to the purposes explicitly recognised in the Convention.⁴⁷⁶ Accordingly, information requests should be understood as limited to identification, and mere non-compliance cannot, in itself, justify further enforcement action. Nevertheless, given the distinctive operational characteristics of UMVs, it may be appropriate to assess compliance with the due regard obligation by reference to their specific capabilities, such as communication functions.

In conclusion, where reasonable suspicion arises in relation to unmanned ISR operations, a coastal State should first employ practical means of identification and communication to assess the situation and determine an appropriate response. Seizing a vehicle without attempting such clarification may fail to meet the due regard obligation and, where the vehicle qualifies as sovereign immune, may further risk contravening the principle of sovereign immunity. Conversely, operating States may themselves breach Article 58(3) if they deploy UMVs into a foreign EEZ without adequate identification and communication capabilities enabling real-time adjustment to avoid material interference with the coastal State’s rights under Article 56. Compliance with due regard in the context of unmanned operations, therefore, centres on administrative and technical capabilities. Deployed UMVs must be capable of responding to lawful concerns and maintaining effective communication, either directly or

⁴⁷⁵ Efthymios Papastavridis, ‘Intelligence Gathering in the Exclusive Economic Zone’ (2017) 93 *International Law Studies* 446, 465. “What would be clearly in dissonance is any interdiction operations based solely on the denial of the requested vessels to provide the relevant information.”; *M/V “SAIGA” (No. 2)*, paras. 155-156.

⁴⁷⁶ *M/V “Virginia G”*, para. 209.

through their deploying platform. The absence of such capabilities does not categorically preclude deployment of UUVs, but due regard is likely to manifest, insofar as reasonable and practicable, as an obligation to ensure that UUVs are technically equipped to comply with applicable laws and regulations. By shifting the analytical focus from the nature of the activity to the prevention of material interference and the operational capabilities of unmanned systems, this section clarifies how the balance between coastal State rights and others' navigational freedoms can be preserved without recalibrating jurisdictional boundaries.

Chapter 5 Residual Rights of the Coastal States in the Light of Unmanned ISR Operations in the EEZ

5.1 Introduction

Evans and Galani describe maritime security as a blend of “ever-changing” threats and activities, suggesting that UNCLOS, as a living instrument, can be interpreted in a way that accommodates new challenges.⁴⁷⁷ Since the adoption of UNCLOS, technological developments have dramatically enhanced the operational, tactical, and strategic capabilities of ISR operations, thereby generating new circumstances that test the existing legal framework.

While Chapter 4 examined whether unmanned ISR operations could be accommodated within the existing allocation of rights and competence under Part V of UNCLOS, it did not, and could not, resolve all situations in which lawful uses of the EEZ come into operational friction. The rights of States in the EEZ are not only subject to specific provisions under Part V but are also further qualified by other provisions of the Convention or general rules of international law.⁴⁷⁸ Chapter 5, therefore, addresses situations where Part V does not exhaustively regulate the legal consequences of ISR operations.

First, it examines situations in which the freedom of navigation, granted equally to coastal and other States, operates in parallel and gives rise to friction when the exercise of one State’s navigational freedom is perceived to interfere with that of another. In this context, the analysis considers how the due regard obligation operates where lawful navigational rights collide, and assesses the legal consequences of different responses adopted by coastal States.

Secondly, the chapter examines the role of general principles, in particular the peaceful use of the sea or the prohibition of the threat or use of force. As McLaughlin observed, such principles “offer sufficient governance during the inevitable hiatus that ensues while the impacts of technological development are sorted through.”⁴⁷⁹ In light of rapid technological developments, it is often argued that greater legal protection should be afforded to coastal States. Such

⁴⁷⁷ Malcolm D Evans and Sofia Galani, *Maritime Security and the Law of the Sea: Help or Hindrance?* (Edward Elgar Publishing 2020), 22-24.

⁴⁷⁸ UNCLOS, arts 300 and 301.

⁴⁷⁹ Rob McLaughlin, ‘Unmanned Naval Vehicles at Sea: USVs, UUVs, and the Adequacy of the Law’ (2011) 21 *Journal of the Law, Information & Science* 114.

arguments are often grounded in the view that the exercise of freedoms in the EEZ must not jeopardise the national security of the coastal State.⁴⁸⁰ As Klein observed, the existing legal ambiguities surrounding ISR operations in the EEZ have become increasingly problematic as technological advances have not only extended the range and accuracy of weaponry and intelligence collection, but have also enhanced States' capacity for electronic warfare and intelligence gathering.⁴⁸¹ While such developments do not create a security jurisdiction in the EEZ, they may nonetheless call for a reconsideration of how the relevant provisions of UNCLOS, as well as other applicable rules of international law, are to be interpreted and applied in light of emerging circumstances.

Accordingly, this chapter concludes by examining the principle of the peaceful use of the sea under Articles 88 and 301 of UNCLOS, with a view to assessing the degree of flexibility inherent in its application to unmanned ISR operations. In doing so, particular attention is given to the evolving technological characteristics of UUVs and their operational feasibility in the contemporary ISR context.

5.2 Parallel freedoms of navigation in the EEZ: Balancing coastal and other States' concurrent navigational rights

5.2.1 Parallel navigational rights in the EEZ and the due regard obligation

In the EEZ, the coastal State and other States share parallel freedom of navigation. Article 58(1) of UNCLOS acknowledges *all* States, including coastal States, as the qualified subjects entitled to enjoy the freedoms of navigation and overflight, of the laying of submarine cables and pipelines, and other international lawful uses of the sea related to these freedoms. Although some scholars often use the term "non-coastal State" when addressing qualified subjects to freedoms under Article 58(1),⁴⁸² it would be odd to exclude coastal States from enjoying

⁴⁸⁰ Ren Xiaofeng and Cheng Xizhong, 'A Chinese Perspective' (2005) 29 *Marine Policy* 139, 145; Li Guangyi, Wan Binhua and Zhu Hongjie, 'On the Rights and Obligations of Military Activities in the Exclusive Economic Zone' (2011) *China Oceans Law Review* 148, 162-163.

⁴⁸¹ Natalie Klein, *Maritime Security and the Law of the Sea* (Oxford University Press 2011) 215; see also Mark J Valencia, 'Introduction: Military and Intelligence Gathering Activities in the Exclusive Economic Zones: Consensus and Disagreement II' (2005) 29(2) *Marine Policy* 97, 98; Natalie Klein, *Maritime security and the Law of the Sea* (Oxford University Press 2011), 221; Simon McKenzie, 'Autonomous Technology and Dynamic Obligations: Uncrewed Maritime Vehicles and the Regulation of Maritime Military Surveillance in the Exclusive Economic Zone' (2021) 11(1) *Asian Journal of International Law* 146, 147.

⁴⁸² Li Guangyi, Wan Binhua and Zhu Hongjie, 'On the Rights and Obligations of Military Activities in the Exclusive Economic Zone' (2011) *China Oceans Law Review* 148; Shotaro Hamamoto,

freedoms in their EEZ, given that those freedoms are originally based on high seas freedoms under Article 87.

There is no hierarchy between them in exercising rights under Article 58(1). The concurrent freedoms under Article 58(1) are subject to due regard obligations under Articles 56(2) and 58(3). Article 56(2) provides “In exercising its rights and performing its duties *under this Convention* in the [EEZ], the coastal State shall have due regard to the rights and duties of other States ...”. The coastal State’s rights under the Convention in the EEZ are not confined to sovereign rights of the coastal State under Article 56(1), but accommodate the rights of freedoms under Article 58(1). Thus, the coastal States, in the exercise of freedom of navigation, must have due regard to others’ parallel rights under Article 56(2). Equally, other States must exercise their rights of freedoms under Article 58(1) with due regard to the coastal State’s exercise of freedom of navigation. When the activities under Article 58(1) clash in the EEZ, the issue thus lies in the manner in which each party exercises its freedom, subject to the requirement of mutual due regard.

Article 58(2) provides that Articles 88 to 115 and other pertinent rules of international law apply to the EEZ insofar as they are not incompatible with Part V. While Article 87, which stipulates the freedoms of the high seas, does not apply *mutatis mutandis* to the EEZ by virtue of Article 58(2), it may nonetheless serve as an interpretative guide, particularly given that parallel rights to the freedoms under Article 58(1) is originally derived from Article 87. This supports the view that the due regard obligation set out in Article 87(2) can appropriately inform the interpretation and application of Articles 56(2) and 58(3) in the context of parallel navigational rights in the EEZ. Article 87(2) imposes the obligation of due regard, stating that freedoms of the high seas “shall be exercised by all States with due regard for the interests of other States in their exercise of the freedom of the high seas ...”. While the US is not a Party to UNCLOS, the customary character of Article 87(2) seems acknowledged in the *US Commander’s Handbook*, stating that “the aircraft of all States are free to operate in international airspace with due regard for the safety of other aircraft and without interference by other States”.⁴⁸³

The Virginia Commentary explains that the requirement of “due regard” under Article 87(2) is “a qualification of the rights of States in exercising the freedoms of the high seas.”⁴⁸⁴ The standard of “due regard” requires “all States, in exercising their high seas freedoms, to be aware of and

‘The Genesis of the ‘Due Regard’ Obligations in the United Nations Convention on the Law of the Sea’ (2019) 34 *International Journal of Marine and Coastal Law* 7.

⁴⁸³ US Navy, *NWP 1-14M* (March 2022), para. 1.9.

⁴⁸⁴ Myron H Nordquist (ed), *United Nations Convention on the Law of the Sea, 1982: A Commentary*, vol III (Martinus Nijhoff 1995) 86.

consider the interests of other States in using the high seas, and to refrain from activities that interfere with the exercise by other States of the freedom of the high seas.”⁴⁸⁵ As the ILC stated in its Commentary in 1956, “States are bound to refrain from any acts that might adversely affect the use of the high seas by nationals of other States.”⁴⁸⁶ This idea was incorporated in Article 2 of the 1958 Convention on the High Seas, referred to having “reasonable regard”, which was later changed to “due regard” under UNCLOS. Given the wordings such as “aware” or “consider”, due regard under Article 87(2) seems to require States to be “cognisant” of the interests of others in using the high seas. Then, they may be required to take practical case-by-case measures to refrain from any acts that might negatively affect the use of the high seas by others.

Importantly, the invocation of a breach of due regard is not abstract. As illustrated in the *M/V Norstar* case – albeit in the context of Article 87(2) – the obligation of due regard under this provision only binds the State that is itself exercising the freedom of navigation under Article 87(1). In other words, a State may only invoke a violation of due regard to its navigational rights only where it is engaged in the exercise of that freedom. The Tribunal accordingly found that the obligation of due regard under Article 87(2) did not apply to Italy in the absence of a dispute relating to Italy’s own exercising of the freedom of navigation.⁴⁸⁷

5.2.2 Effects v. Enforcement: Distinguishing breaches of freedom of navigation and due regard from the coastal State’s competence in the EEZ

In the context of parallel navigational rights, it is particularly important to note that a breach of the due regard obligation to the right of freedom of navigation, while closely related, is an analytically distinct concept from a violation of freedom of navigation. Freedom of navigation “provides ships of any State with the *right* to traverse the high seas with no or minimal interference from any other State.”⁴⁸⁸ The legal test for a violation of freedom of navigation has been examined in several international cases. It is generally agreed that “any act of interference with navigation of foreign ships or any exercise of jurisdiction over such ship on the high seas

⁴⁸⁵ *Ibid.*

⁴⁸⁶ International Law Commission, ‘Articles concerning the law of the high seas with commentaries’ (1956) II Yearbook of the International Law Commission 278, Commentary to art 27.

⁴⁸⁷ *M/V “Norstar”* (Panama v. Italy), Judgement, ITLOS Report 2018-2019, p. 10 at p. 77, para. 231.

⁴⁸⁸ The “*Enrica Lexie*” Incident (*Italy v. India*) (Award), PCA Case No 2015-28, 21 May 2020, para. 468. (emphasis added) (The “*Enrica Lexie*” Incident)

constitutes a breach of the freedom of navigation unless justified by the Convention or other international treaties”.⁴⁸⁹

Exclusive flag State jurisdiction on the high seas is inherent in the legal status of the high seas.⁴⁹⁰ Thus, a violation of freedom of navigation primarily occurs when a State purports to unlawfully exercise its jurisdiction over foreign vessels exercising freedom of navigation on the high seas. Articles 88 to 115 of UNCLOS apply *mutatis mutandis* to the EEZ by virtue of Article 58(2). Accordingly, Article 92, which establishes the flag State’s exclusive jurisdiction over its ships on the high seas, and Article 94, which sets out the duties of the flag State, are equally applicable in the EEZ. This reinforces the principle that vessels conducting ISR operations in the EEZ remain subject to the jurisdiction and responsibility of their flag State, rather than the coastal State’s control. However, the flag State’s exclusive jurisdiction in the EEZ is not absolute; it is qualified by the limited competence expressly granted to the coastal State under Article 56(1). If a coastal State seeks to exercise authority beyond those competences, such acts would amount to a violation of the freedom of navigation.

Regarding “any act of interference with navigation of foreign ships”, the Arbitral Tribunal noted that such interference primarily refers to physical or material interference with navigation of foreign ships, including “boarding, arrest, detention, or diversion of a vessel”.⁴⁹¹ However, “even acts which do not involve physical interference or enforcement on the high seas may constitute a breach of the freedom of navigation”.⁴⁹² For instance, the arbitral tribunal in *Guyana v. Suriname* considered that a demand by a navy vessel to “leave the area in 12 hours” or “the consequences will be yours”⁴⁹³ constituted “a threat of the use of force in contravention of the Convention, the UN Charter and general international law”.⁴⁹⁴ Moreover, Judge Laing in his separate opinion in *M/V “SAIGA” (No. 2)* stated that the enjoyment of “freedom of the sea” is dependent on freedom from “fear”.⁴⁹⁵ Accordingly, the broader view was later taken by the Arbitral Tribunal in the *Enrica Lexie* case, stating that:

⁴⁸⁹ *M/V “Norstar”*, para. 222.

⁴⁹⁰ *M/V “Norstar”*, para. 225. “... the principle of exclusive flag states jurisdiction is an inherent component of freedom of navigation under 87 of the Convention.”

⁴⁹¹ *Arbitration Between the Republic of Croatia and the Republic of Slovenia* (Final Award), PCA Case No 2012-04, 29 June 2017, para. 1129.

⁴⁹² *M/V “Norstar”*, para. 223.

⁴⁹³ *Arbitration between Guyana and Suriname* (Award), PCA Case No 2004-04, 17 September 2007, para. 433.

⁴⁹⁴ *Arbitration between Guyana and Suriname* (Award), PCA Case No 2004-04, 17 September 2007, para. 445.

⁴⁹⁵ *M/V “SAIGA” (No. 2)*, para. 29.

a breach of freedom of navigation may result from acts including physical or material interference with the navigation of a foreign vessel, the threat or use of force against a foreign vessel, or non-physical forms of interference whose effect is that of instilling fear in or causing hindrance to, the exercise of the freedom of navigation.⁴⁹⁶

On the other hand, due regard operates as a standard of conduct governing the manner in which States exercise their own navigational freedoms. In light of the Tribunal's broader interpretation of a violation of freedom of navigation, however, it appears that a violation of the freedom of navigation will, in most cases, entail a failure to observe due regard. Conversely, not every failure of due regard will amount to a breach of the freedom of navigation; however, where conduct crosses into a *de facto* denial of navigation, it may escalate into such a violation. To sum up, it is not the degree of interference that distinguishes a breach of freedom of navigation from a breach of due regard. The important factor lies in the effect, namely, whether the conduct in fact defeats the exercise of another State's freedom of navigation.

Moreover, it is important to note that a violation of freedom of navigation under Article 58(1), or a failure of due regard under Articles 56(2) and 58(3), may be internationally unlawful but does not itself create coastal State enforcement jurisdiction in the EEZ. Article 56(1) grants coastal States: (a) sovereign rights over natural resources; (b) jurisdiction with respect to (i) artificial islands, installations and structures, (ii) MSR, and (iii) the protection and preservation of the marine environment; and (c) other rights and duties provided for in UNCLOS. The coastal State's prescriptive and enforcement authorities arise only through implementing regimes deriving from Article 56(1), notably, Article 60 (installations and structures), Article 73 (living resources), Part XII (protection and preservation of the marine environment, including Articles 192, 194, 206, and 220), and Part XIII (MSR consent regime). In the absence of such legal bases, an alleged failure of due regard, or even a *de facto* interference with navigation amounting to a violation of Article 58(1), is a matter of State responsibility, not a source of coastal State enforcement jurisdiction. Relevant issues should therefore be addressed through measures such as diplomatic protest, cessation, assurance, or reparation.

5.2.3 Legal consequences when the coastal and foreign ISR operations clash at sea

As Klein noted, "a critical element to protecting maritime security is ensuring that States have the necessary information at their disposal to take preventative or responsive action."⁴⁹⁷ ISR operations are often motivated by the desire to gain a deeper understanding of the maritime

⁴⁹⁶ The "*Enrica Lexie*" Incident, para. 472.

⁴⁹⁷ Natalie Klein, *Maritime Security and the Law of the Sea* (Oxford University Press 2011) 211.

domain, which is a goal that is not limited to foreign States alone, but is equally of significant interest to coastal States. This section, therefore, seeks to envisage scenarios in the context of ISR operations in order to identify the legal consequences that may arise when a foreign ISR operation comes into conflict with the coastal State's ISR operations.

As analysed in relevant sections, there is no general jurisdiction of the coastal State in the EEZ to regulate freedom of navigation. The prescriptive and enforcement power of the coastal State arises only from implementing regimes stipulated under UNCLOS. In the context of ISR operations in the EEZ, which generally fall within Article 58(1), relevant implementing regimes may typically include Article 60 (installations and structures), significant environmental risk (Part XII), or, where properly categorised, the MSR consent regime (Part XIII). These are already discussed in Chapter 4, and it draws a conclusion that ISR operations do not generally fall within such competences of the coastal State, unless the operations, failing to give due regard, may significantly affect the coastal State's such competence. Thus, conflicts arising from concurrent navigational rights, particularly in the context of ISR operations, are to be managed through mutual due regard and resolved through measures such as diplomatic protest, non-coercive warning, or reparation. In addition, given that ISR operations are normally conducted for military purposes, Articles 95 and 96, which set out sovereign immunity of warships and government vessels, also *mutatis mutandis* apply to the EEZ via Article 58(2). Thus, unlawful law enforcement action against such operations may also violate the principle of sovereign immunity.

When a coastal State, while conducting an ISR operation within its EEZ, interferes with a foreign State's ISR operations, this breaches the due regard obligation of Article 56(2). Such interference does not have to be material or physical, but non-physical interference or intimidation could be considered as such. Where the activities of the coastal State, or measures taken, amount to categorical restraint of such freedoms, such as prohibition or a permission scheme on foreign ISR operations in the EEZ, it would further constitute a breach of Article 58(1), and this would, in most cases, entail a failure of due regard under Article 56(2).

When a foreign ISR operation in the EEZ interferes with the exercise of a coastal State's equivalent activity, it constitutes a violation of due regard under Article 58(3). There may be many situations which can possibly argue that an ISR operation can fail to give due regard for others' navigational rights. Such situations may include ISR operations conducted in breach of applicable safety rules, such as collision-avoidance regulations, or in the form of dense swarms of UUVs threatening or obstructing fairways. One recent event in the air may demonstrate a situation of a violation of due regard for other freedoms of overflight; as this is another right of freedoms stipulated under Article 58(1), it is worth addressing to identify the manner in which it

is likely to be alleged as a failure of due regard. Russian fighters, while enjoying the right of overflight in international airspace, repeatedly flew in front of, and dumped fuel on, the US *Reaper*, which was also enjoying the same right of overflight. Such acts were allegedly undertaken to create turbulent air that endangers it, and to interfere with its sensors.⁴⁹⁸ They almost certainly violate the obligation of due regard.

The legal significance of such encounters lies not in expanding coastal State jurisdiction, but in clarifying the behavioural limits imposed by due regard on all States exercising parallel navigational freedoms. Accordingly, while it is possible to construct a wide range of hypothetical scenarios in which ISR operations may be alleged to interfere with parallel navigational freedoms, such an exercise is of limited analytical value once the legal consequences of such interference are clearly identified. It is therefore neither efficient nor necessary to elaborate on speculative factual situations. Instead, the following section shifts the focus from hypothetical situations to the interpretative legal implications of UUVs, examining whether and how their distinctive capabilities may affect the application of existing legal standards in this context.

5.2.4 Interpretive legal implications of UUVs

The increasing use of UUVs does not alter the categories of rights and obligations in the EEZ. The rules set out in UNCLOS continue to apply. Under Article 58(1), both the coastal and other States enjoy freedom of navigation on an equal basis, with no inherent hierarchy between them. What changes with the deployment of UUVs is the risk profile and the means of compliance. In addition, given their distinctive features, such as persistence, autonomy, and potential for coordinated operations among multiple vehicles, UUVs may pose challenges to the traditional understanding of navigation. Accordingly, the assessment of due regard may require a more operationalised standard, including requirements that UUVs be equipped with specific operational capabilities prior to deployment in order to ensure compliance with the obligation. In this regard, this section adopts the analytical approach as section 4.4.3, namely that compliance with due regard in the unmanned context is better assessed through capabilities rather than speculative scenarios of interference.

This view suggests that UUVs may be regarded as complying with the due regard obligation if they are equipped with core communicative and operational capabilities, such as persistent

⁴⁹⁸ Michael Schmitt, 'The Russian Intercept of the US Reaper and International Law' (*Just Security*, 15 March 2023) <<https://www.justsecurity.org/85494/the-russian-intercept-of-the-u-s-reaper-and-international-law/>> accessed 30 October 2024.

identification, two-way communication, real-time controllability, and environmental mitigation, whether directly or via a deploying platform. In the context of concurrent navigational rights, due regard may also require compliance with internationally accepted safety rules, such as the Convention on the International Regulations for Preventing Collisions at Sea, and the ability to re-route in response to changing conditions. These capabilities give practical effect to due regard, thereby reducing legal ambiguity surrounding the use of UUVs. From this perspective, a request for information does not in itself constitute a violation of due regard; rather, the failure of a UUV to verify its identity or operational purposes, whether by non-response or false information, would be more likely to breach this obligation. However, such requests must remain limited to the purpose of identification. If a State demands information exceeding this limited purpose, whether for authorisation or prohibition, it would amount to a *de facto* denial of navigation, thereby constituting a violation of Article 58(1).

5.3 The “peaceful use of the sea” in light of unmanned ISR operations

5.3.1 The appropriate interpretation of Articles 88 and 301: no complete demilitarisation

UNCLOS is rooted in a vision of the peaceful use of the sea.⁴⁹⁹ In its preamble, UNCLOS declares itself “an important contribution to the maintenance of peace, justice, and progress for all people in the world”, and State Parties recognise it as a comprehensive international legal order for the sea and oceans which will promote the peaceful uses of the seas and oceans.⁵⁰⁰ The phrase “peaceful use” or “peaceful purposes” appears in many parts of UNCLOS, including the prohibition of the use of force, safety of navigation, MSR and dispute settlement.⁵⁰¹ Similar wording is also frequently observed in other international or regional treaties, such as the Outer Space Treaty,⁵⁰² the Non-Proliferation Treaty,⁵⁰³ and the Antarctic Treaty.⁵⁰⁴ However, there is neither a universal definition of “peaceful use” nor “peaceful purposes”, nor a sharp indication

⁴⁹⁹ Shicun Wu, Mark J Valencia and Nong Hong, *UN Convention on the Law of the Sea and the South China Sea* (Ashgate 2015), 73.

⁵⁰⁰ UNCLOS, preamble.

⁵⁰¹ UNCLOS, arts 19, 39, 240, 279 and 301.

⁵⁰² Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (adopted 27 January 1967, entered into force 10 October 1967) 610 UNTS 205.

⁵⁰³ Treaty on the Non-proliferation of Nuclear Weapons (adopted 1 July 1968, entered into force 5 March 1970) 729 UNTS 161.

⁵⁰⁴ Antarctic Treaty (adopted 1 December 1959, entered into force 23 June 1961) 402 UNTS 71.

of which States need to understand the meaning of those phrases. This leads to a divergence of opinions among States on the meaning of these phrases.

Article 58 is adopted in a manner that does not expressly exclude military activities from its scope. It is generally accepted that ISR operations in the EEZ, as an internationally lawful use of the sea related to freedoms of navigation and overflight, fall within Article 58(1), subject to due regard under Article 58(3). Thus, a coastal State is not entitled to exercise its authorities over foreign ISR operations, unless the activities, under certain circumstances, fall within its specific competences granted under UNCLOS in the EEZ. Otherwise, the coastal State will violate Article 58(1). Nevertheless, persistent claims for the purpose of restricting foreign ISR operations in the EEZ have been raised by a few States on the basis of various potential legal basis, such as the MSR regime regarding categorisation issues (section 4.3), the potential violation of due regard to the rights of coastal State under Article 56 (section 4.4, and the potential violation of due regard in the context of parallel navigational rights (section 5.2). Last but not least, some States often rely on the principle of peaceful use of the seas, or more commonly, under the name of “security interests”, as a broader constraint of foreign military activities in the EEZ, including ISR operations.

Those in favour of this restrictive view often base their claim on Articles 88 and 301 of UNCLOS. According to Article 88, the high seas shall be reserved for peaceful purposes, and this provision equally applies to the EEZ by virtue of Article 58(2). Article 301, as a general provision under Part XVI, provides peaceful uses of the seas, stating that:

In exercising their rights and performing their duties under this convention, States Parties shall refrain from any threat or use of force against the territorial integrity or political independence of any State, or in any other manner inconsistent with the principles of international law embodied in the Charter of the United Nations.

The prohibition of the use of force also reflects a norm of customary international law.⁵⁰⁵ Although Article 301 uses the term “States Parties”, the principle of peaceful use of the sea applies to non-party States because the provision can be understood as a result of the incorporation of Article 2(4) of the UN Charter into the law of the sea context. Article 2(4) provides that:

⁵⁰⁵ *Military and Paramilitary Activities in and against Nicaragua (Nicaragua v. United States of America)*, Merits, Judgment, ICJ Reports 1986, p. 14 at p. 89, para. 188. (Nicaragua paramilitary case)

All Members shall refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any state, or in any other manner inconsistent with the Purposes of the United Nations.

A few States contend that relevant provisions should be interpreted as requiring complete demilitarisation in the EEZ. Within this perspective, Chinese scholars frequently maintain that military activities, including ISR operations, are inherently inconsistent with the principle of peaceful use of the sea and may amount to a threat of force against the coastal State.⁵⁰⁶ Relying on the preamble of UNCLOS, which emphasises “due regard for the sovereignty of all States, a legal order for the seas and oceans which will facilitate international communication and *will promote the peaceful uses of the seas and oceans* [...]”, it is argued that interpreting the freedom of navigation in the EEZ as encompassing the freedom of military activities is an abuse of freedom of navigation, contradicting the initial objective of UNCLOS.⁵⁰⁷

However, such a view is unsustainable as it conflicts with the principle of freedom of navigation. The complete demilitarisation in the EEZ is neither supported by a plain reading of Article 301 of UNCLOS and Article 2(4) of the UN Charter, nor reflected by State practice, in which ISR operations have been routinely conducted in the EEZ.⁵⁰⁸ In addition, both provisions prohibit “threat or use of force” against the territorial integrity or political independence of any State, not necessarily accommodating all general military activities within their meaning. UNCLOS appears to distinguish between ‘threat or use of force’ and other general military activities at sea. For instance, Article 19, while listing non-innocent activities in the territorial sea, separately addresses “threat of use of force’ from other types of military activities, such as any exercise or practice with weapons, any act aimed at collecting information to the prejudice of the defence or security of the coastal State, or the launching, landing or taking on board of any military

⁵⁰⁶ Li Guangyi, Wan Binhua and Zhu Hongjie, ‘On the Rights and Obligations of Military Activities in the Exclusive Economic Zone’ (2011) *China Oceans Law Review* 148, 160-162. Haiwen Zhang, ‘Is It Safeguarding the Freedom of Navigation or Maritime Hegemony of the United States? - Comments on Paul (Pete) Pedrozo’s Article on Military Activities in the EEZ’ (2010) 9(1) *Chinese Journal of International Law* 31, 44-45; Keyuan Zou, ‘Peaceful Use of the Sea and Military Intelligence Gathering in the EEZ’ (2019) 22 *Asian Yearbook of International Law* 162, 167.

⁵⁰⁷ Ren Xiaofeng and Cheng Xizhong, ‘A Chinese Perspective’ (2005) 29 *Marine Policy* 139; Haiwen Zhang, ‘Is It Safeguarding the Freedom of Navigation or Maritime Hegemony of the United States? - Comments on Paul (Pete) Pedrozo’s Article on Military Activities in the EEZ’ (2010) 9(1) *Chinese Journal of International Law* 31.

⁵⁰⁸ Raul (Pete) Pedrozo, ‘Preserving Navigational Rights and Freedom: The Right to Conduct Military Activities in China’s Exclusive Economic Zone’ (2010) 9(1) *Chinese Journal of International Law* 9, 12-13.

device.⁵⁰⁹ This demonstrates that UNCLOS does not automatically equate the use of force with other general military activities.⁵¹⁰

It appears that a few States, such as Brazil, Cape Verde and Uruguay, have taken a restrictive view, and on ratifying the UNCLOS, Declarations were made purporting to require coastal States' consent over military exercises and manoeuvres in the EEZ. The declaration made by Uruguay reflects its view that military exercises constitute a “non-peaceful” use of the sea. It states that:

“... (D) In the exclusive economic zone, enjoyment of the freedom of international communication ... excludes *any non-peaceful use* without the consent of the coastal State – for instance, *military exercises or other activities which may affect the rights or interests of that State ...*”⁵¹¹

Similar language was used by Cape Verde on ratification, declaring that “in the EEZ, the enjoyment of the freedoms of international communication, ... excludes any non-peaceful use without the consent of the coastal States, such as exercise with weapons or other activities which may affect the right or interests of the said states ...”⁵¹² It appears that both declarations specifically perceived military activities involving weapons as “non-peaceful”. This may be another indication that not all military activities are perceived as having a non-peaceful nature.

The opposite of complete demilitarisation does not refer to uncontrollable militarisation. The permissibility of general military activities is properly addressed strictly based on the functional EEZ regime, balancing the rights of coastal States under Article 56 and the freedom under Article 58. Thus, it can be reasonably argued that the principle of peaceful use of the sea does not convert routine military activities, including foreign ISR operations in the EEZ, into a violation.

However, in practice, disputes framed in terms of ‘peaceful purpose’ tend to collapse into the assessment of whether particular conduct amount to a threat or use of force within Article 2(4) of the UN Charter, even where it falls short of an actual use of force. The distinction between “threat or use of force” prohibited under Article 2(4) and other forms of military activity may, in

⁵⁰⁹ UNCLOS, art 19(2).

⁵¹⁰ Raul Pedrozo, ‘Military Activities in the Exclusive Economic Zone: East Asia Focus’ (2014) 90 *International Law Studies* 514, 533.

⁵¹¹ Declaration made upon signature (10 December 1982) and confirmed upon ratification of the Convention (10 December 1982) by Uruguay, in *United Nations Convention on the Law of the Sea* (Montego Bay, 10 December 1982) 1833 UNTS 3.

⁵¹² Declaration made upon signature (10 December 1982) and confirmed upon ratification of the Convention (19 August 1987) by Cabo Verde, in *United Nations Convention on the Law of the Sea* (Montego Bay, 10 December 1982) 1833 UNTS 3.

turn, create an interpretative gap that some States invoke to restrict foreign ISR operations in the EEZ on the basis of the “peaceful purpose” principle. In this sense, the determination of whether a given activity is to be regarded as “peaceful” can be assessed within the framework of Article 2(4), even if it does not rise to the level of an unlawful threat or use of force. This view may be supported by the decisions of the UN Security Council, indicating “military activities which are consistent with the principles of international law embodied in the Charter of the United Nations, in particular with Article 2, paragraph 4, ... are not prohibited by the Convention on the Law of the Sea.”⁵¹³

Although this legal constraint is narrow, it warrants reconsideration in light of the growing integration of UMVs into ISR operations, which has significantly heightened security concerns. Since the rejection of the proposal during the UNCLOS III to include residual security interest within the coastal States’ rights in the EEZ, the belief has remained among many States and scholars that the proliferation of excessive coastal States’ restrictions on military activity in the EEZ erodes the balance of interests which was carefully crafted during the nine-year negotiation of UNCLOS.⁵¹⁴ However, the use of the phrase “carefully balanced” may only refer to the long and complex negotiation history at the time of the establishment of UNCLOS, where none of the new technological developments, such as unmanned maritime vehicles, had yet come into existence.

Klein argues that the legal ambiguity surrounding ISR operations has become increasingly problematic as technological advances have expanded the range and accuracy of weaponry and intelligence collection, while simultaneously enhancing the State’s capacity and strategy for electronic warfare and intelligence gathering.⁵¹⁵ This view suggests that ‘peaceful purposes’ arguments, based on Articles 88 and 301 of UNCLOS and Article 2(4) of the UN Charter, are likely to re-emerge as the enhanced capabilities of unmanned platforms alter the operational character of ISR. Although technological development does not reshape legal doctrine in the EEZ, such evolution refines how existing prohibitions on the threat or use of force are assessed in light of evolving operational capabilities of unmanned systems. The legality of ISR operations in the EEZ therefore turns not on their military character as such, but on whether their conduct may reasonably be characterised as coercive or threatening in light of surrounding

⁵¹³ UN Secretary-General, *Study on the Naval Arms Race*, UN Doc A/40/525 (17 September 1985) pp. 54-55, para. 28.

⁵¹⁴ Raul Pedrozo, ‘Close Encounter at Sea: The USNS *Impeccable* Incident’ (2009) 62 *Naval War College Review* 101, 110.

⁵¹⁵ Natalie Klein, *Maritime Security and the Law of the Sea* (Oxford University Press 2011) 215; see also Mark J Valencia, ‘Introduction: Military and Intelligence Gathering Activities in the Exclusive Economic Zones: Consensus and Disagreement II’ (2005) 29(2) *Marine Policy* 97, 98.

circumstances. The following section thus identifies the trajectory of technological development and assesses their implications for the principle of peaceful use of the sea.

5.3.2 Destructive ISR operations in light of unmanned technologies

Section 5.3.1 advances the argument that the ISR operations, when combined with a coercive character, may amount to a “threat or use of force” in the EEZ, thereby inviting restriction on the basis of Articles 88 and 301 of UNCLOS and Article 2(4) of the UN Charter. This is a relatively narrow line of reasoning; however, in light of the increasing reliance on unmanned vehicles and their expanding operational functions, it warrants close examination of their present development and future potential. This section, therefore, begins with an analysis of unmanned aerial vehicles (UAVs), which have a longer history of deployment than UMVs, tracing their evolution and prospective trajectories. It then considers the extent to which UMVs are likely to follow a similar path, while suggesting that their growing use may present an even greater potential for coercive or threatening applications.

5.3.2.1 The development of unmanned aerial vehicles

The use of unmanned aerial vehicles is not new; the use of UAVs could go further back to around 1849, when it was introduced in the form of a balloon designed to drop explosives.⁵¹⁶ Despite their constant usage, the issues relating to the use of UAVs have continuously arisen, and a simple question arises: why? There might be several explanations for this, but the most plausible one points to a radical technological development since the US's first launch of the UAV in 1964.⁵¹⁷ Thus, examining the evolution of UAVs in terms of their tasks and purposes may provide useful insights into the potential applications of UAVs, and even UMVs in the maritime context. Early development of unmanned vehicles includes pilotless bombs, pre-programmed to function as explosive devices, and remotely controlled aircraft deployed nearby or at a distance to ram or decoy enemy aircraft.⁵¹⁸ As might be expected, the primary purpose of employing UAVs for such roles was the reduction of risks to human life. In effect, these vehicles were “consumed” in order to preserve the lives of pilots. By contrast, the replacement of

⁵¹⁶ ‘Use of Balloons in War’ (*The New York Times*, 12 July 1863)

<<https://www.nytimes.com/1863/07/12/archives/use-of-balloons-in-war.html>> accessed 3 February 2024; Brett Holman, ‘The first air bomb: Venice’, 15 July 1849 (AIRMINDED, 22 August 2009 <<https://airminded.org/2009/08/22/the-first-air-bomb-venice-15-july-1849/>> accessed 3 February 2024).

⁵¹⁷ Joshua L Cornthwaite, ‘Can We Shoot Down That Drone? An Examination of International Law Issues Associated with the Use of Territorially Intrusive Aerial and Maritime Surveillance Drones in Peacetime’ (2019) 52 *Cornell International Law Journal* 475, 480-481.

⁵¹⁸ Katherine Hall Kindervater, ‘The Emergence of Lethal Surveillance: Watching and Killing in the History of Drone Technology’ (2016) 47(3) *Security Dialogue* 223, 225-226.

humans with UAVs for ISR operations appears to have originated for different reasons. Unlike bombing attacks, which require highly precise, controlled, and expeditious actions, ISR operation requires consistency and long endurance regardless of the darkness or poor weather conditions. This initially suggests that the use of unmanned vehicles is no longer just to prevent human casualties, but they may work better and more efficiently than humans in particular fields. Unmanned vehicles engaging in ISR operations thus demonstrate their effectiveness.

Unmanned ISR operations had begun to spread during the Cold War as the US started to develop and enhance their technological capabilities for ISR.⁵¹⁹ According to Ehrhard, UAVs not only served as a main tool to gain intelligence but also were used as jammers or decoys to confuse enemy radar and other electronic communications.⁵²⁰ Subsequently, the enormous use of UAVs in the Vietnam War demonstrated that UAVs are not only suitable for “boring and tiring” missions, e.g., taking photographs and identifying targets, but also the most advantageous, especially in hostile environments.⁵²¹ The means of ISR operation had significantly shifted from human operators to technologies around the 1990s, enabling the best use of UAVs in a way that had never been available before. The *US Predator* and *Global Hawk* illustrate such technological enrichment of UAVs. These systems were initially developed to provide “long endurance reconnaissance, surveillance, and target acquisition (RSTA) capability.”⁵²² Their operational use has shown that UAVs are not confined to data collection but also capable of processing information and supporting decision-making. For instance, UAVs deployed by the European Maritime Safety Agency demonstrate how large maritime areas can be monitored efficiently, including through chemical detection, infrared imagery, and real-time video transmission.⁵²³ Equipped with multiple sensors and communication modules, UAVs can operate autonomously for extended periods while transmitting high-resolution data to command centres.⁵²⁴ This trajectory of development suggests that UAVs originally designed for ISR purposes are

⁵¹⁹ The first surveillance UAV was launched in 1964 by the US and was almost immediately used to trespass in the territorial airspace of China. See Joshua L Cornthwaite, ‘Can We Shoot Down That Drone? An Examination of International Law Issues Associated with the Use of Territorially Intrusive Aerial and Maritime Surveillance Drones in Peacetime’ (2019) 52 *Cornell International Law Journal* 475, 480-481.

⁵²⁰ Thomas P Ehrhard, ‘Air Force UAVs: The Secret History’ (Mitchell Institute Study, 2010) 25.

⁵²¹ Katherine Hall Kindervater, ‘The Emergence of Lethal Surveillance: Watching and Killing in the History of Drone Technology’ (2016) 47(3) *Security Dialogue* 223, 228.

⁵²² Jeffery A Drezner, Geoffrey Sommer and Robert S Leonard, ‘Innovative Management in the DAPRA High Altitude Endurance Unmanned Aerial Vehicle Program: Phase II Experience’ (RAND, 1999) 4-7.

⁵²³ Mario Eisenhut, ‘EU Leverages Advanced Technology to Strengthen Maritime Security and Global Collaboration’ (23 September 2024) <<https://www.linkedin.com/pulse/eu-leverages-advanced-technology-strengthen-maritime-global-eisenhut-9znqe>> accessed 7 October 2024.

⁵²⁴ *Ibid.*

increasingly capable of facilitating or directly enabling kinetic action through integrated targeting and strike capabilities. Future breakthroughs are likely to focus on minimising the gap between assessment and execution while enhancing accuracy, which many States may find attractive given the significant military advantages.

Undoubtedly, the emergence of unmanned systems and rapid technological advancement has created dynamic environments of ISR operations. These have evolved from long endurance and long-range ISR operations to more intrusive and provocative forms, incorporating real-time data sharing between unmanned and manned platforms, and, increasingly, to legal ISR operations with integrated targeting capability. Small UAVs have already been deployed on the battlefield for surveillance and reconnaissance. Since the US first employed armed UAVs in combat in 2001, twenty-seven nations have incorporated weaponised UAVs into their arsenals.⁵²⁵ At least eight other States, including Azerbaijan, Iran, Iraq, Israel, Nigeria, Pakistan, Turkey and the UK, have used UAVs in combat.⁵²⁶ Most recently, UAVs have played a decisive role in the war in Ukraine, assisting Ukrainian units in identifying and destroying targets.⁵²⁷

Although the implications of the use of UAVs differ between wartime and peacetime, these examples demonstrate that ISR and targeting capabilities are no longer distinct functions. Rather, they are increasingly being merged within the same platform. The *Reaper* exemplifies this trend. It is a multipurpose system capable of carrying up to 1,700 kilograms of explosive payload while simultaneously conducting reconnaissance.⁵²⁸ While significant technological, ethical, and humanitarian challenges remain unresolved, the trajectory is clear. Unmanned vehicles are shifting from supportive roles to active ones, with the ability not only to collect, process, and assess data but also to act upon that data through the implementation of decisions.

A similar trajectory may be anticipated for unmanned maritime vehicles. Just as UAVs have evolved from platforms of observation into potential instruments of direct engagement, UMVs,

⁵²⁵ Raul (Pete) Pedrozo, '10 Unmanned and Autonomous Warships and Military Aircraft' in James Kraska and Young-Kil Part (eds), *Emerging Technology and the Law of the Sea* (Cambridge University Press 2022) 275.

⁵²⁶ Jon Walker, 'Unmanned Aerial Vehicles (UAVs) – Comparing the USA, Israel, and China' (*Emerj*, 31 August 2017) <<https://emerj.com/unmanned-aerial-vehicles-uavs/>> accessed 30 August 2025.

⁵²⁷ Isabelle Khurshudyan and Kamila Hrabchuk, 'How Ukrainian, targeting by drone, attacked Russian artillery in Kherson', (*The Washington Post*, 8 October 2022/10) <<https://www.washingtonpost.com/world/2022/10/08/ukraine-russia-drones-artillery/>> accessed 2 March 2024.

⁵²⁸ Michael Schmitt, 'The Russian Intercept of the U.S. Reaper and International Law' (*Just Security* 15 March 2023) <<https://www.justsecurity.org/85494/the-russian-intercept-of-the-u-s-reaper-and-international-law/>> accessed 6 February 2025.

particularly UUVs, are likely to follow a comparable path. Their persistence, stealth, and adaptability make them especially suited for ISR operations, but the same qualities could facilitate a transition toward more offensive or coercive roles. The analysis of UAVs thus highlights the need to assess not only the current functions of UMVs but also the legal and strategic implications of their foreseeable development.

5.3.2.2 Unblocking the potential of UMVs in ISR operations and relevant security concerns

5.3.2.2.1 Unmanned underwater ISR operations

Contemporary UMVs have not yet been employed as extensively as UAVs, but there is broad recognition of their potential to perform critical maritime and military functions. The underwater domain, in particular, carries distinct strategic value for ISR operations.⁵²⁹ Unlike the surface or aerial domains, the water column and seabed remain a vast, opaque, and technologically challenging environment in which sensing, tracking, and communication are exceedingly difficult. This characteristic renders the underwater domain uniquely conducive to covert and intrusive operations. Moreover, because underwater areas are not a particularly suitable environment for human survival, the deployment of unmanned technologies, especially UUVs, is practically attractive.⁵³⁰ UUVs can operate at considerable distances and for longer periods, thereby enabling States to exploit vast maritime areas with reduced risk and enhanced persistence. Technological advances, such as the development of high-endurance battery systems, further contribute to extending the duration and effectiveness of ISR operations,⁵³¹ reinforcing the covert potential of UUVs beyond that of manned counterparts.⁵³²

Secondly, UUVs provide great accessibility to areas otherwise difficult or impossible to reach, such as shallow waters, disputed maritime zones, or coastal areas close to potential adversaries. They can acquire desired information consistently and discreetly, while avoiding the risks to human operators. The US Navy's *UUV Master Plan* notably describes UUVs as tools

⁵²⁹ Mizuho Kajiwar, '12 Underwater Competition in the Indo-Pacific' in Alexander L Vuving (ed), *Hindsight, Insight, Foresight: Thinking about Security in the Indo-Pacific* (Daniel K Inouye Asia-Pacific Centre for Security Studies 2020) 191; Elizabeth R Johnson, '9 The Hydra and Leviathan: Unmanned Maritime Vehicles and the Militarised Seaspaces' in Irus Braverman and Elizabeth R Johnson (eds.), *Blue Legalities: The Life and Law of the Sea* (Duke University Press 2020) 8.

⁵³⁰ Bradley Martin et al., 'Advancing Autonomous Systems: An Analysis of Current and Future Technology for Unmanned Maritime Vehicles' (RAND, 2019) 1.

⁵³¹ James Kraska and Raul Pedrozo, '6 Seabed Warfare' in James Kraska and Raul Pedrozo (eds.) *Disruptive Technology and The Law of Naval Warfare* (Oxford University Press 2022), 176.

⁵³² Raul (Pete) Pedrozo, '10 Unmanned and Autonomous Warships and Military Aircraft' in James Kraska and Young-Kil Part (eds), *Emerging Technology and the Law of the Sea* (Cambridge University Press 2022) 281.

to “achieve and maintain access to all the world’s littoral at the times and places of its choosing.”⁵³³ This accessibility enables UUVs to operate in close proximity to hostile coastlines, to linger near submarine bases, and to monitor or track adversary vessels from the point of departure to their operations at sea.⁵³⁴ Such capabilities allow for the persistent collection of high-value intelligence, supporting real-time operational planning and intelligence preparation of the battlespace prior to combat.⁵³⁵ Collectively, these capabilities highlight the strategic military advantages of UUVs, which may allow States to secure superior positions in terms of spatial dominance.

Thirdly, Elden views the creation of UMV technologies as an effort to “secure the volume” of underwater space.⁵³⁶ By exploiting the underwater domain, UUVs enable the integration of multiple spatial domains – the surface, water column, and seabed – while also linking to the air domain, given that many UAVs are launched and controlled from surface vessels. This also has led to visions of a future “surveillance ecosystem”, in which UMVs operate in concert with crewed surface and aerial platforms as part of an integrated monitoring network.⁵³⁷ Due to their scalable and adaptable nature, UUVs can be strategically deployed to maximise interoperability between platforms, each positioned where it can provide the greatest operational benefit. In the absence of human presence, UUVs are capable of operational modalities unavailable to manned vehicles, such as remaining on the seabed or submerged for an extended period while transmitting data across platforms. This interlinked and multi-domain environment creates a collaborative information-sharing network that significantly enhances the scale and value of ISR operations. At the same time, the seamless integration of platforms across different domains and the concurrent exchange of data may elevate military preparedness and readiness, thereby intensifying security concerns for less technologically advanced States.⁵³⁸

⁵³³ US Department of the Navy, ‘The Navy Unmanned Undersea Vehicle (UUV) Master plan’ (2004) 31. (UUV Master Plan)

⁵³⁴ Stephen Chen, ‘Surveillance under the sea: How China is listening in near Guam’ (*South China Morning Post*, 22 January 2018) <<https://www.scmp.com/news/china/society/article/2130058/surveillance-under-sea-how-china-listening-near-guam>> accessed 7 June 2024.

⁵³⁵ *UUV Master Plan*, at xx.

⁵³⁶ Stuart Elden, ‘Secure the Volume: Vertical Geopolitics and the Depth of Power’ (2013) 34 *Political Geography* 35.

⁵³⁷ James Mugg, Zoe Hawkins and John Coyne, *Australian Border Security and Unmanned Maritime Vehicles* (Australian Strategic Policy Institute, July 2016) 19

⁵³⁸ Sam Bateman, ‘Hydrographic Surveying in the EEZ: Differences and Overlaps with Marine Scientific Research’ (2005) 29 *Marine Policy* 163, 172; Efthymios Papastavridis, ‘Intelligence Gathering in the Exclusive Economic Zone’ (2017) 93 *International Law Studies* 446, 474; Keyuan Zou, ‘Peaceful Use of the Sea and Military Intelligence Gathering in the EEZ’ (2016) 22 *Asian Yearbook of International Law* 161, 162.

These three distinct features of UUVs – limited transparency, enhanced accessibility, and multi-dimensional connectivity – significantly expand the strategic scope of ISR operations and enable dynamic, persistent information collection. In military practice, intelligence gathering is often regarded as a preparatory activity, forming the foundation of subsequent missions by supporting strategic planning, target identification, and operational decision-making.⁵³⁹ Such a preparatory character is not normatively neutral in the assessment of ‘peaceful use’. As China argued during the *EP-3 incident*, intelligence collection in the EEZ may provide information for future hostilities and thereby undermine international peace and security.⁵⁴⁰ The same concern was raised in relation to the USNS *Impeccable* (T-AGOS-23), whose peacetime collection of undersea acoustic data was perceived as a threat.⁵⁴¹

Moreover, the dual-use potential of ISR networks intensifies another concern. For instance, infrastructure initially designed for environmental or scientific monitoring, such as the Arctic Mobile Observing System (AMOS), may evolve into “a wide-area persistent underwater surveillance system” for strategic military purposes.⁵⁴² Similarly, China’s installation of several floating and fixed platforms with sensor and communication capabilities in the South China Sea demonstrates how ostensibly civilian facilities can be incorporated into broader military surveillance systems.⁵⁴³

To sum up, the distinctive features of UUVs transform ISR operations into activities that are more intrusive, persistent, and strategically consequential than their manned counterparts.⁵⁴⁴

⁵³⁹ Shicun Wu, Mark J Valencia and Nong Hong, *UN Convention on the Law of the Sea and the South China Sea* (Ashgate 2015), 87; US Navy, *NWP 1-14M* (March 2022), para. 4.4.9; Elizabeth R Johnson, ‘9 The Hydra and Leviathan: Unmanned Maritime Vehicles and the Militarised Seaspace’ in Irus Braverman and Elizabeth R Johnson (eds.), *Blue Legalities: The Life and Law of the Sea* (Duke University Press 2020) 17.

⁵⁴⁰ Eric Donnelly, ‘The United States – China EP-3 Incident: Legality and “Realpolitik”’ (2004) 9(1) *Journal of Conflict & Security Law* 25.

⁵⁴¹ Mizuho Kajiwara, ‘12 Underwater Competition in the Indo-Pacific’ in Alexander L Vuving (ed), *Hindsight, Insight, Foresight: Thinking about Security in the Indo-Pacific* (Daniel K Inouye Asia-Pacific Centre for Security Studies 2020) 198.

⁵⁴² Joseph Trevithick, ‘The Navy Is Building a Network of Drone Submarines and Sensor Buoys in the Arctic’ (*THE WARZONE*, 1 October 2020) <<https://www.twz.com/36821/the-navy-is-building-a-network-of-drone-submarines-and-sensor-buoys-in-the-arctic>> accessed 4 June 2025.

⁵⁴³ Asia Maritime Transparency Initiative, ‘Exploring China’s Unmanned Ocean Network’ (16 June 2020) <<https://amti.csis.org/exploring-chinas-unmanned-ocean-network/>> accessed 1 August 2025.

⁵⁴⁴ Raul (Pete) Pedrozo, ‘10 Unmanned and Autonomous Warships and Military Aircraft’ in James Kraska and Young-Kil Part (eds), *Emerging Technology and the Law of the Sea* (Cambridge University Press 2022) 273-274; James Kraska, ‘The Law of Unmanned Naval Systems in War and Peace’ (2010) 5(3) *Journal of Ocean Technology* 44, 46; see also Matt Bartlett, ‘Game of Drones: Unmanned Maritime Vehicles and the Law of the Sea’ (2018) 24 *Auckland University Law Review* 66.

Indeed, their preparatory and enabling functions in military planning raise doubt about whether they can be characterised as entirely peaceful. Data collected through UUVs not only facilitates vigilance and situational awareness but can also be directly utilised for target acquisition and battlespace preparation, thereby blurring the line between observation and coercion. As a result, the enhanced ISR operations increasingly conducted by UUVs carry an inherent security dimension that challenges the conventional assumption that ISR operations are purely passive activities.

5.3.2.2.2 Changing the nature of ISR operations – swarm operations

In 2005, Hayashi described “potential” ISR operations as activities that intercept naval radar and other emitters, thereby enabling the location, identification and tracking of surface ships, as well as the planning and preparation of electronic or missile attacks against them.⁵⁴⁵ Many of these predictions have since materialised with the rapid advancement of unmanned technologies. Today, the use of unmanned aerial and maritime systems to support military operations has expanded dramatically, both in scale and in the complexity of missions assigned to them.⁵⁴⁶ The US Navy has identified nine high-priority missions for UUVs, ranging from ISR and mine countermeasures to anti-submarine warfare, payload delivery, and even time-critical strike.⁵⁴⁷ Among these, ISR operations consistently emerge as a foundational capability, often combined with or enabling other missions.⁵⁴⁸ This indicates that UUVs are rarely confined to a single, observational role. Rather, ISR operations are deeply interconnected with broader operational purposes, supporting planning, targeting, and battlespace preparation. Under such circumstances, ISR operations cannot always be considered passive; instead, their increasing integration into wider missions suggests that ISR operations may, at least in part, assume the characteristics that are functionally adjacent to destructive military activities, raising doubts as to whether such operations can be regarded as entirely peaceful.

In particular, swarm operations and the progressive integration of lethal capabilities into UUVs may qualitatively change the nature of ISR operations. Once ISR operations are coupled with distributed and autonomous platforms possessing strike functions, the process of information collection is increasingly transformed into an actionable combat capacity. UUVs thus do not merely intensify existing military strategies, but also have the potential to reshape them

⁵⁴⁵ Moritaka Hayashi, ‘Military and Intelligence Gathering Activities in the EEZ: Definition of Key Terms’ (2005) 29 *Marine Policy* 123 126.

⁵⁴⁶ Raul (Pete) Pedrozo, ‘10 Unmanned and Autonomous Warships and Military Aircraft’ in ... (Cambridge University Press 2022) 272

⁵⁴⁷ US Department of the Navy, *The Navy Unmanned Undersea Vehicle (UUV) Master Plan* (2004) at xvi.

⁵⁴⁸ *UUV Master Plan*, at xx.

substantially. Valencia likewise observes that the rapid advancement of technology transforms both the art of intelligence gathering and its mode of operation,⁵⁴⁹ and it is further argued that ISR operations, while playing strategic and tactical roles, have altered the forms of warfare.⁵⁵⁰

Firstly, the absence of the physical presence of humans on board allows UUVs to assume diverse forms and operations unattainable for manned counterparts. Small and low-cost units can be deployed in large numbers and operate collectively as a coordinated system, providing persistent coverage of extensive maritime regions.⁵⁵¹ From the operational perspective, extended scale and dispersal materially alter the character of ISR operations. Distributed platforms no longer function solely as data collection units. Instead, they become integral components of a broader force posture when linked to responsive strike chains or command-and-control networks. DARPA's Hydra programme, launched in 2013, articulated its aim "to cover vast regions of interest around the globe" through such distributed unmanned platforms, illustrating how swarms can alter the operational character of ISR operations.⁵⁵²

Secondly, swarm operations generate tactical advantages distinct from those of conventional networked fleets. By increasing the number of deployed units, swarms complicate an adversary's detection, identification, and targeting calculus, which is often described as "swarm tactics".⁵⁵³ They may be employed to protect high-value units, intercept threats at greater standoff distances, and absorb levels of attrition that would be unacceptable for manned platforms. The US Navy's 2014 swarm demonstration, in which autonomous unmanned surface vessels manoeuvred collectively to intercept and block a target vessel, illustrates how swarms can provide both defensive and offensive advantages.⁵⁵⁴ These

⁵⁴⁹ Shicun Wu, Mark Valencia and Nong Hong, *UN Convention on the Law of the Sea and the South China Sea* (Ashgate 2015) 33.

⁵⁵⁰ Derek Gregory, 'The Everywhere War' (2011) 177(3) *Geographical Journal* 238; Ian Shaw and Majed Akhtar, 'The Unbearable Humanness of Drone Warfare in FATA, Pakistan' (2012) 44(4) *Antipode* 1490; Katharine Kindervater, 'Drone Strikes, Ephemeral Sovereignty, and Changing Conceptions of Territory' (2017) 5(2) *Territory, Politics, Governance* 207.

⁵⁵¹ John Yoo, 'Embracing the Machines: Rationalist War and New Weapons Technologies' (2017) 105 *California Law Review* 443, 454.

⁵⁵² DEFENCE ADVANCED RESEARCH PROJECTS AGENCY (DARPA), 'Hydra' <<https://www.darpa.mil/research/programs/hydra>> accessed 8 June 2025.

⁵⁵³ Raul (Pete) Pedrozo, '10 Unmanned and Autonomous Warships and Military Aircraft' in James Kraska and Young-Kil Part (eds), *Emerging Technology and the Law of the Sea* (Cambridge University Press 2022) 276-277; Kara Chadwick, '6 Unmanned Maritime Systems Will Shape the Future of Naval Operations: Is International Law Ready?' in Malcolm D Evans and Sofia Galani (eds), *Maritime Security and the Law of the Sea: Help or Hinderance?* (Edward Elgar 2020) 136.

⁵⁵⁴ Sydney J. Freedberg JR, 'Naval Drones 'Swarm,' But Who Pulls the Trigger?' (*BREAKING DEEFNSE*, 5 October 2014) <<https://breakingdefense.com/2014/10/who-pulls-trigger-for-new-navy-drone-swarm-boats/>> accessed 24 June 2025.

characteristics make swarms particularly attractive for operations in high-risk or contested environments.

Lastly, a further dimension concerns the progressive incorporation of lethal capabilities into UUVs. Traditionally, ISR platforms were primarily observational, but the trajectory of unmanned technologies, as observed in section 5.3.2.1, indicates an increasing convergence between ISR operations and strike functions. For UUVs, the emergence of extra-large UUV prototypes demonstrates how endurance, payload capacity, and modular payload bays enable them to undertake a broad spectrum of missions. The most advanced UUV prototype is arguably the *Orca*, an extra-large UUV (XLUUV) submarine. It is 51 feet in length, too large for deployment from a manned submarine, and designed to operate autonomously for up to 6,500 miles, capable of intelligence gathering, mine placement and clearance, anti-submarine warfare, stand-off strikes, and other missions.⁵⁵⁵

The integration of autonomy, distributed sensing, and potential lethal capabilities produces a fusion of roles – surveillance, targeting and engagement, thereby eroding the traditional separation between observation and attack. Where a swarm’s sensors, data link, and weapons are tightly coupled, ISR operations can feed directly into the real-time targeting pipeline. In such circumstances, the boundary between preparatory ISR operations and operational use of force becomes blurred. Reports from recent conflicts, including the use of swarms in Ukraine, indicate that such technologies have already been used to overwhelm conventional defence and merge surveillance with strike.⁵⁵⁶ Even in the absence of an actual strike, the credible capability and posture of an armed, coordinated swarm may themselves be perceived as coercive.

In sum, the lawfulness of the act will depend on the nature of the act itself and the context in which it takes place.⁵⁵⁷ Swarm-enabled UUVs magnify the potential of ISR operations by combining scale, persistence, and versatility. That combination increases the likelihood that

⁵⁵⁵ US Congressional Research Service, *Navy Large Unmanned Surface and Undersea Vehicles: Background and Issues for Congress* (CRS Pub. No R45757, updated 19 December 2024); David Axe, Here Come the Robot Submarines: Meet Boeing’s 4 Huge Robotic Subs, *Nat’l Int. (The National Interest)*, 11 March 2019 <<https://nationalinterest.org/blog/buzz/here-come-robot-submarines-meet-boeings-4-huge-robotic-subs-46732>> accessed 19 June 2024; Ben Werner, ‘Navy Awards Boeing \$ Million to Build Four Orca XLUUVs’ (*U.S. Naval Institute News*, 13 February 2019) <<https://news.usni.org/2019/02/13/41119>> accessed 13 June 2024.

⁵⁵⁶ David Pinion, ‘The Navy and Marine Corps Need to Prepare for the Swarm of the Future’, (*War on the Rocks*, 28 March 2018) <<https://warontherocks.com/2018/03/the-navy-and-marine-corps-must-plan-for-the-swarm-of-the-future/>> accessed 22 February 2023.

⁵⁵⁷ Efthymios Papastavridis, ‘Intelligence Gathering in the Exclusive Economic Zone’ (2017) 93 *International Law Studies* 446, 451.

such operations will be perceived as more than merely peaceful observation. While the deployment of such platforms does not in itself amount to a breach of international law, their expanding operational profile raises the question of whether such activities remain compatible with the principle of the peaceful use of the seas under Articles 88 and 301 of UNCLOS.

5.3.3 Legal implications of unmanned ISR technologies for the principle of peaceful purposes

Military activities, including ISR operations, do not automatically violate the principle of peaceful purposes under Articles 88 and 301 of UNCLOS. As argued earlier, any violation of this principle must be strictly assessed through the threshold of Article 2(4) of the UN Charter. The key question is therefore not whether ISR operations are “peaceful” or “non-peaceful” in the abstract, but whether they objectively meet the criteria of a prohibited threat or use of force under Article 2(4). Ordinary ISR operations, even with the increasing integration of UUVs, generally fall short of this threshold, which requires a considerable degree of coercion or an explicit or implicit threat of aggressive action.⁵⁵⁸ Only in exceptional circumstances, where ISR operations are coupled with coercive conduct amounting to an unlawful threat of force, would the peaceful purpose constraint be engaged.

From the analysis in section 5.3.2.2, the development of unmanned platforms, particularly UUVs, has rendered ISR operations more “dynamic”. They extend data collection by establishing an integrated space, encompassing the water surface, underwater, the seabed and the air. Their persistence and autonomy also significantly increase the scale and effectiveness of ISR capabilities. As ISR operations are often regarded as a core military strategy, the facilitation of such operations through UUVs inevitably raises security concerns. Moreover, the general trajectory of unmanned technology points toward increasingly “lethal” systems with combat and targeting capabilities. This also reinforces the view that unmanned ISR operations exhibit clear military characteristics, which may support the argument that such activities cannot be regarded as entirely peaceful.

However, the trajectory toward lethality does not equate to coercive conduct. Article 2(4) requires an objective manifestation of threat or use of force. The mere possession of advanced capabilities is legally insufficient; thus, it does not transform unmanned ISR operations into an unlawful threat. Security concerns are legally relevant only where unmanned ISR operations are linked to actual or threatened use of force. As argued in **Error! Reference source not found.**,

⁵⁵⁸ *Nicaragua paramilitary case*, para. 191; *Oil Platforms (Islamic Republic of Iran v. United States of America)*, Judgement, ICJ Reports 2003, p. 161 at pp. 186-187, para. 51.

even ISR operations conducted in the foreign territorial sea are generally not considered to meet such a threshold.⁵⁵⁹ Given that the EEZ confers a more limited competence for the coastal State compared to the territorial sea, it is even less likely that ISR operations in the EEZ would be characterised as a threat under Article 2(4).

At the same time, technological disparities exacerbate vulnerabilities. States lacking sophisticated detection systems may feel particularly exposed to intrusive UUV deployments, heightening their security concerns.⁵⁶⁰ By contrast, technologically advanced States may exploit these gaps to their advantage. However, such disparities, too, cannot alter the interpretation and application of the principle of the peaceful use of the sea. Mere security concerns, even in the context of unmanned technologies, must be distinguished from the prohibition of the threat or use of force. In the absence of coercive signalling sufficient to meet the threshold of Article 2(4), ISR operations remain within the ambit of permissible military activities under Article 58 of UNCLOS, subject only to constraints set out in Part V of UNCLOS. One practical way to alleviate these imbalances is to adopt a capabilities-based approach to the due regard obligation: UMVs should be equipped with a mechanism for identification, communication, and operational mitigation, enabling them to minimise interference with coastal State rights under Articles 56 and 58.

Accordingly, unmanned ISR operations may alter the mode of operation, thereby recalibrating risk, but they do not change the category of rights established under UNCLOS. As Papastavridis rightly noted, it is often the underlying conduct, rather than intelligence gathering itself, that may constitute a violation.⁵⁶¹ The lawfulness of ISR operations must therefore be assessed on a case-by-case basis. As Prezas has emphasised, it is important to distinguish between rules governing jurisdiction and those governing the exercise of rights.⁵⁶² Articles 88 and 301 should be understood as interpretive provisions governing the exercise of rights, rather than

⁵⁵⁹ *Nicaragua paramilitary case*, para. 227. “The Court is however not satisfied that the manoeuvres complained of, in the circumstances in which they were held, constituted on the part of the United States a breach, as against Nicaragua, of the principle forbidding recourse of the treat or use of force.”; see also Moritaka Hayashi, ‘Military Activities in the EEZ of Foreign Coastal States’ (2012) 27 *International Journal of Marine and Coastal Law* 801; James Kraska, ‘Intelligence Collection and the International Law of the Sea’ (2022) 9 *International Law Studies* 602.

⁵⁶⁰ Matt Bartlett, ‘Game of Drones: Unmanned Maritime Vehicles and the Law of the Sea’ (2018) 24 *Auckland University Law Review* 66, 71.

⁵⁶¹ Efthymios Papastavridis, ‘Intelligence Gathering in the Exclusive Economic Zone’ (2017) 93 *International Law Studies* 446, 475; see also Raul Pedrozo, ‘Military Activities in the Exclusive Economic Zone: East Asia Focus’ (2014) 90 *International Law Studies* 514, 529.

⁵⁶² Ioannis Prezas, ‘Foreign Military Activities in the Exclusive Economic Zone: Remarks on the Applicability and Scope of the Reciprocal ‘Due Regard’ Duties of Coastal and Third States’ (2019) 34 *International Journal of Marine and Coastal Law* 97, 114.

independent sources of coastal State jurisdiction. While they do not confer new enforcement powers, they require States to exercise their rights in accordance with the UN Charter. Although ISR operations, even when enhanced by unmanned technologies, do not automatically fall within the scope of “threat or use of force” under Article 2(4) of the UN Charter, they nevertheless amplify their security implications by increasing their perceived coercive potential. Within the framework of UNCLOS, however, such development underscores the need for doctrinal clarity to prevent misinterpretation or escalation. This analysis is thus valuable in shifting the debate away from long-standing controversies over security rights in the EEZ and towards clearer doctrinal clarification.

Chapter 6 Conclusion

The analysis throughout this thesis has pursued a clear objective set out at the beginning: to examine areas of legal uncertainty arising from unmanned ISR operations in the territorial sea and the EEZ, and consider how relevant provisions of UNCLOS are more appropriately interpreted in light of technological developments, within the boundaries of the current legal framework. The ultimate aim is to contribute to a more coherent harmonisation of the rights and interests of coastal and other States in responding to the legal challenges posed by unmanned ISR operations.

The thesis has demonstrated that, while UNCLOS remains the primary legal framework governing maritime activities, it has clear limitations in accommodating new technologies, as it was negotiated when maritime operations were almost entirely conducted by manned vessels and aircraft. The advent of UUVs has exposed interpretative gaps, particularly concerning the exercise of the right and duties of coastal vis-à-vis foreign ISR operations. The central claim advanced is that applying a strictly textual interpretation of UNCLOS leaves coastal States without clear doctrinal tools to address enhanced unmanned ISR operations, thereby resulting in unilateral and legally unstable responses. More refined interpretations of existing provisions are therefore necessary to restore balance between the navigational freedoms of other States and the security interests of coastal States.

Two areas of ambiguity have been the focus of the thesis: first, the limited responses available to coastal States to enhanced foreign ISR operations in the territorial sea; and second, the potential interference with coastal States' rights in the EEZ, regardless of the general permissibility of such operations. The first issue was addressed within the scope of the territorial sea, where the coastal State has territorial sovereignty. The second was examined in the EEZ, where the contention over traditional ISR operations has long persisted and where the advent of UUVs is expected to generate further complications.

In the territorial sea, the analysis revealed a persistent discrepancy between theory and practice. Some coastal States have resorted to forcible measures against foreign ISR operations, yet the legal basis for such actions remains tenuous. International law permits the use of force only under narrow conditions: self-defence in response to an "armed attack" under Article 51 of the UN Charter, or law enforcement measures consistent with necessity,

proportionality, and reasonableness.⁵⁶³ The deployment of UMVs, even when equipped with advanced or combat capabilities, does not lower the high threshold of “armed attack”, which remains firmly tied to actual use of force producing destructive consequences, or to acts equivalent in scale and effect.⁵⁶⁴

The use of force, outside the framework of self-defence, presents additional complexities. In particular, the principle of sovereign immunity, navigational rights, and the principle of necessity, proportionality, and reasonableness demand closer legal clarification, as several features of UMVs complicate their applications. A central difficulty arises from the absence of humans on board, which raises questions about whether such vehicles can be regarded as “ships” and, consequently, whether they are entitled to navigational rights. This uncertainty contributes to confusion over what constitutes a lawful response to unmanned ISR operations. The analysis undertaken here has sought to clarify these ambiguities. From a practical perspective, it highlights the importance of ensuring that UMVs are equipped with adequate communication capabilities to avoid escalation. The destruction of UMVs may, in narrowly defined circumstances, be argued as proportionate, where communication is impossible and an immediate threat to protected interests is credibly established.

Secondly, in the EEZ, the analysis demonstrated that the balance of rights and duties under Articles 56 and 58 of UNCLOS requires recalibration in light of unmanned ISR operations. The exceptional persistence and stealth of UMVs appear to shift this balance, intensifying coastal State concerns. The thesis examined both existing and potential arguments from the coastal States' perspective, testing their possible claims. It was not intended to argue for a new security jurisdiction; rather, to move the debate away from contested notions of “security rights” toward doctrinal clarity in light of UMVs.

In this regard, the thesis suggests a practical approach to interpreting the due regard obligation in relation to unmanned operations. This would protect coastal States against enhanced ISR operations that undermine resource management, environmental obligations, and maritime security. The due regard obligation can be operationalised by requiring UMVs to possess minimum technical and administrative capabilities, such as persistent identification, two-way communication, real-time controllability, and environmental mitigation. Such an approach

⁵⁶³ *M/V “SAIGA” (No.2) (Saint Vincent and the Grenadines v. Guinea)*, Judgement, ITLOS Reports 1999, p. 10, paras. 153-159.

⁵⁶⁴ *Military and Paramilitary Activities in and against Nicaragua (Nicaragua v. United States of America)*, Merits, Judgment, ICJ Reports 1986, p. 14 at p. 101, para. 191. (Paramilitary case); *Oil Platforms (Islamic Republic of Iran v. United States of America)*, Judgment, ICJ Reports 2003, p. 161 at p. 191, para. 64. (Oil Platforms)

would enable the due regard obligation to function as an effective safeguard against intrusive ISR operations, while respecting the parallel rights of all States under Article 58.

A central premise underpinning this study is that UNCLOS must be understood as a living treaty,⁵⁶⁵ capable of adapting to new technological realities. The analysis has demonstrated that unmanned ISR operations amplify existing ambiguities, generate new forms of operational practice, and compel reconsideration of how principles, such as sovereignty, innocent passage, due regard, and sovereign immunity, are to be understood in light of technological change. In essence, the integration of UUVs into ISR operations does not in itself necessitate a fundamental rewriting of the law, not requiring new rights, new jurisdiction, or new prohibitions, but requires a refined understanding of how existing rights are to be exercised under conditions of technological transformation. UNCLOS is not obsolete, but its application becomes strained when the factual conditions it presupposes no longer consistently exist.

Ultimately, the legal challenges posed by unmanned ISR operations do not stem from the absence of law, but from the need to apply existing rules with greater doctrinal precision and operational sensitivity. The original contribution thus lies in assessing how existing rights are exercised in this context by operationalising the principle of necessity and due regard obligation through a capability-based approach, thereby showing how technological features of unmanned systems affect legal compliance. This bridges doctrines under the law of the sea with contemporary operational realities, offering a structured way to assess the emerging claims surrounding unmanned ISR operations.

Lastly, the normative effect of unmanned ISR practices will depend not only on how States attempt to operationalise their preferred rules but also on how other States perceive and respond to them. Continuous observation of State practice, especially interactive practice, is therefore essential. Only through such an interactive process can the law of the sea evolve to balance freedom of navigation with coastal States' security in the era of unmanned operation.

⁵⁶⁵ *Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970), Advisory Opinion, I.C.J. Reports 1971*, p. 16, para. 53; *Dispute Regarding Navigational and Related Rights (Costa Rica v. Nicaragua), Judgment, I.C.J. Reports 2009*, p. 213, paras. 63-66; See also Tullio Treves, 'Law of the Sea: UNCLOS as a Living Treaty' in Jill M Barrett and Richard Barnes (eds), *Law of the Sea: UNCLOS as a Living Treaty* (BIICL 2016); R R Churchill, A V Lowe and A Sander, *The Law of the Sea* (4th ed, Manchester University Press 2022).

Bibliography

Primary sources

Statues

Antarctic Treaty (adopted 1 December 1959, entered into force 23 June 1961) 402 UNTS 71

Charter of the United Nations 1945

Convention on International Civil Aviation 1944

Convention on the Continental Shelf 1958

Convention on the Territorial Sea and Contiguous Zone 1958

Convention relative to Certain Restriction with regard to the Exercise of the Right of Capture in Naval War (adopted 18 October 1907, entered into force 26 January 1910) 205 CTS 381

Foreign States Immunities Act 1985 (Cth)

Law of the People's Republic of China on the Territorial Sea and the Contiguous Zone 1992

Responsibility of States for Internationally Wrongful Acts 2001

The International Convention for the Prevention of Pollution from Ships 1973

The International Convention for the Safety of Life at Sea 1972

The International Regulation for Preventing Collision at Sea 1972

Treaty on Open Skies Treaty (adopted 24 March 1992, entered into force 1 January 2002) 1982 UNTS 340

Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (adopted 27 January 1967, entered into force 10 October 1967) 610 UNTS 205

Treaty on the Non-proliferation of Nuclear Weapons (adopted 1 July 1968, entered into force 5 March 1970) 729 UNTS 161

United Nations Convention on Jurisdictional Immunities of States and Their Property 2004

United Nations Convention on the Law of the Sea 1982

Bibliography

US Foreign Sovereign Immunity Act, 28 USC

Cases

Aegean Sea Continental Shelf (Greece v. Turkey), Interim Protection, Order of 11 September 1976, ICJ Reports 1976

Arbitration between Guyana and Suriname (Award), PCA Case No 2004-04, 17 September 2007

Arbitration Between the Republic of Croatia and the Republic of Slovenia (Final Award), PCA Case No 2012-04, 29 June 2017

Arctic Sunrise Arbitration (Netherlands v. Russia) (Award), Merit, PCA Case No 2014-02, 14 August 2015

Case concerning the Detention of Three Ukrainian Naval Vessels (Ukraine v. Russian Federation), Provisional Measures, Order of 25 May 2019

Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v. Nicaragua) and Construction of a Road in Costa Rica along the San Juan River (Nicaragua v. Costa Rica), Judgment, ICJ Reports 2015, p. 665

Chagos Marine Protected Area Arbitration (Mauritius v. United Kingdom) (Award), PCA Case No 2011-03, 18 March 2015

Dispute concerning Coastal State Rights in the Black Sea, Sea of Azov, and Kerch Strait (Ukraine v. Russian Federation), Preliminary Objections, Award of 21 February 2020

Dispute Concerning Delimitation of the Maritime Boundary Between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar), Judgment, ITLOS Reports 2012, p. 4

Dispute Concerning the Detention of Ukrainian Naval Vessels and Servicemen (Ukraine v. Russian Federation), Preliminary Objection, Award of 27 November 2021, PCA Case No 2019-28

Dispute Regarding Navigational and Related Rights (Costa Rica v. Nicaragua), Judgment, I.C.J. Reports 2009, p. 213

Fisheries Jurisdiction (United Kingdom v. Iceland) (Merit), Judgement of 25 July 1974, [1974] ICJ Rep 3

Fisheries Jurisdiction (Federal Republic of Germany v. Iceland) (Merit), Judgment of 25 July 1974, [1974] ICJ Rep 175

Bibliography

Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970), Advisory Opinion, I.C.J. Reports 1971

Merchants' Marine Insurance Co v North of England Protecting & Indemnity Association [1926] 26 Lloyd's List L Rep 201, 203 (CA)

Military and Paramilitary Activities in and against Nicaragua (Nicaragua v. United States), Merits, Judgment, ICJ Reports 1986, p. 14

M/V "SAIGA" (No.2) (Saint Vincent and the Grenadines v. Guinea), Judgment, ITLOS Reports 1999, p. 10

M/V "Virginia G" (Panama/Guinea-Bissau), Judgment, ITLOS Reports 2014, p.4

Oil Platforms (Islamic Republic of Iran v. United States of America), Judgment, ICJ Reports 2003, p. 161

Pulp Mills on the River Uruguay (Argentina v. Uruguay), Judgment, I.C.J. Report 2010

Request for an Advisory Opinion submitted by the Commission of Small Island States on Climate Change and International Law (Advisory Opinion) ITLOS Case No 31, 21 May 2023

Request for an Advisory Opinion submitted by the Sub-regional Fisheries Commission, Advisory Opinion, 2 April 2016, ITLOS Reports 2015, p. 4

Responsibilities and obligations of States with respect to activities in the Area, Advisory Opinion, 1 February 2011, ITLOS Reports 2011, p. 10

South China Sea Arbitration (The Republic of the Philippines v. The People's Republic of China), (Award), PCA Case No 2013-19, 12 July 2016

Southern Bluefin Tuna (New Zealand v. Japan; Australia v. Japan) (Provisional Measures), Order of 27 August 1999, ITLOS Reports 1999

S.S. "I'm Alone" (Canada v. United States) (1935) UNRIAA vol, III, 1609

S.S. Lotus (France v. Turkey) (Judgment) PCIJ Rep Series A No. 10 18 (7 September 1927)

The "ARA Liberated" Case (Argentina v. Ghana), Provisional Measures, Order of 15 December 2012

The Corfu Channel Case (merits), (United Kingdom v. Albania), Judgment, ICJ Reports 1949

The "Enrica Lexie" Incident (Italy v. India) (Award), PCA Case No 2015-28, 21 May 2020

Bibliography

The Red Crusader (Commission of Enquiry, Denmark v. United Kingdom) (1962) 35 ILR 485

Secondary sources

Books

Andreone G, 'The Exclusive Economic Zone' in Donald Rothwell, Alex Oude Elferink, Karen Scott, and Tim Stephens (eds) *The Oxford Handbook of the Law of the Sea* (2016)

Attard DJ, *The Exclusive Economic Zone in International Law* (Clarendon Press 1987)

Bateman S, 'The Regime of the Exclusive Economic Zone: Military Activities and the Need for Compromise' in Tafsir Malick Ndiaye and Rudiger Wolfrum (eds), *Law of the Sea, Environmental Law and Settlement of Disputes* (Martinus Nijhoff 2007)

Brown C and O'Keefe R, 'Article 19' in Roger O'Keefe and Christian J. Tams (eds.) *The United Nations Convention on Jurisdictional Immunities of States and Their Property* (Oxford University Press 2013)

Churchill RR and Lowe AV, *The Law of the Sea* (4th edn, Manchester University Press 2022).

Dinstein Y, *War, Aggression and Self-defence* (6th edn, Cambridge University Press 2017)

Evans MD and Galani S, *Maritime Security and the Law of the Sea: Help or Hindrance?* (Edward Elgar Publishing 2020)

Gill TD and Fleck D, 'Ch. 20 The Law of Military Operations at Sea' in Terry D. Gill and Dieter Fleck (eds.) *THE HANDBOOK OF THE LAW OF INTERNATIONAL MILITARY OPERATIONS* (2nd edn., Oxford University Press 2015)

Gill TD and Szabó KT, *The use of force and the international legal system* (Cambridge University Press, 2024)

Happold M, 'Immunity from Executive of Military and Cultural Property' in Tom Ruys, Nicolas Angelet and Luca Ferro (eds.) *The Cambridge Handbook of Immunities and International Law* (Cambridge University Press 2019)

Heintschel von Heinegg W, 'Unmanned Maritime Systems: Does the Increasing Use of Naval Weapon Systems Present a Challenge for IHL?' in Wolff Heintschel von Heinegg, Robert Frau and Tassilo Singer (eds.) *Dehumanisation of Warfare: Legal Implications of New Weapon Technologies* (Springer, 2018)

Hoffman AJ, 'Freedom of Navigation' in Rudiger Wolfrum (ed), *Max Planck Encyclopedia of Public International Law* (OUP online edn, 2011)

Bibliography

- Johnson ER, '9 The Hydra and Leviathan: Unmanned Maritime Vehicles and the Militarised Seaspaces' in Irus Braverman and Elizabeth R Johnson (eds.), *Blue Legalities: The Life and Law of the Sea* (Duke University Press 2020)
- Kajiwar M, '12 Underwater Competition in the Indo-Pacific' in Alexander L Vuving (ed), *Hindsight, Insight, Foresight: Thinking about Security in the Indo-Pacific* (Daniel K Inouye Asia-Pacific Centre for Security Studies 2020)
- Kardon IB, *China's Law of the Sea: The New Rules of Maritime Order* (Yale University Press 2023)
- Klein N, *Maritime security and the Law of the Sea* (Oxford University Press 2011)
- Klein K, Mossop J, and Rothwell DR, 'Australia, New Zealand and Maritime Security' in Natalie Klein, Joanna Mossop, and Donald R Rothwell (eds), *Maritime Security: International Law and Policy Perspectives from Australia and New Zealand* (Routledge, 2010)
- Kaikobad KH, 'Non-Consensual Aerial Surveillance in the Airspace over the Exclusive Economic Zone for Military and Defence Purposes' in KH Kaikobad and M Bohlander (eds), *International Law and Power: Perspectives on Legal Order and Justice* (Martinus Nijhoff 2009)
- Kraska J, 'Naval Force in the Exclusive Economic Zone', *Maritime Power and the Law of the Sea: Expeditionary Operations in World Politics* (New York: Oxford University Press 2011)
- Kraska J and Pedrozo R, '6 Seabed Warfare' in James Kraska and Raul Pedrozo (eds.) *Disruptive Technology and The Law of Naval Warfare* (Oxford University Press 2022)
- Kraska J and Pedrozo R, *International Maritime Security Law* (BRILL 2013)
- Lott A, *Hybrid Threats and the Law of the Sea: Use of Force and Discriminatory Navigational Restrictions in Straits* (Brill Nijhoff 2022)
- McLaughlin R, 'Unmanned Naval Vehicles and the Law of Naval Warfare' in Hitoshi Nasu and Robert McLaughlin (eds), *New Technologies and the Law of Armed Conflict* (TMC Asser Press, 2014)
- O'Connell DP (ed IA Shearer), 'Ch 7 Innocent Passage in the Territorial Sea' in DP O'Connell, *The International Law of the Sea*, vol I (OUP 1982)
- O'Connell DP and Shearer IA, *The international law of the sea*, vol 1 (Clarendon Press 2015)
- Panetta L and Newton J, *Worthy fights: A memoir of leadership in war and peace* (Penguin Press 2014)

Bibliography

Pedrozo RP, '10 Unmanned and Autonomous Warships and Military Aircraft' in James Kraska and Young-Kil Part (eds), *Emerging Technology and the Law of the Sea* (Cambridge University Press 2022)

Pedrozo R, 'Military Activities In and Over The Exclusive Economic Zone' *Freedom of Seas, Passage Rights and the 1982 Law of the Sea Convention* (Brill Nijhoff 2009)

Ruys A, 'Armed Attack' and Article 51 of the UN Charter: *Evolutions in Customary Law and Practice* (Cambridge University Press, 2010)

Schachter O, *International Law in Theory and Practice* (Nijhoff 1991)

Simma B et al. (eds), *The Charter of the United Nations: A Commentary, vol 1* (3rd edn, Oxford University Press, 2012)

Soons AHA, *Marine Scientific Research and the Law of the Sea* (Kluwer Law and Taxation Publisher 1982)

Stephens T and Rothwell DR, 'Marine Scientific Research', in Donald Rothwell, Alex Oude Elferink, Karen Scott, Tim Stephens (eds.), *The Oxford Handbook of the Law of the Sea* (Oxford University Press 2015)

Vinogradov S, 'Challenges of Nord Stream: Streamlining International Legal Frameworks and Regimes for Submarine Pipelines' (2009) 52 *German Yearbook of International Law* 241

Roach JA, *Excessive Maritime Claims* (4th edn, BRILL 2021) 243.

Watts A JR (eds), *Oppenheim's International Law: Volume 1 Peace* (9th edition, Oxford University Press 2008)

Williams AS, 'Aerial Reconnaissance by Military Aircraft in the Exclusive Economic Zone' in Peter A Dutton (ed), *Military Activities in the EEZ: A US-China Dialogue on Security and International Law in the Maritime Commons* (Naval War College Press 2010)

Wright Q, 'Espionage and the Doctrine of non-intervention in internal affairs' (1962)

Wu S, Valencia M and Hong N, *UN Convention of the Law of the Sea and the South China Sea* (1st edn, Routledge 2016)

Journal articles

Bibliography

- Afriansyah A, Bernard L and Immanuel C, 'Should Indonesia regulate foreign military activities in its EEZ?' (2024) 159 *Marine Policy* 1
- Bartlett M, 'Game of Drones: Unmanned Maritime Vehicles and the Law of the Sea' (2018) 24 *Auckland University Law Review* 66
- Bateman S, 'A Response to Pedrozo: The Wider Utility of Hydrographic Surveys' (2011) 10(1) *Chinese Journal of International Law* 177
- Bateman S, 'Clashes at Sea: when Chinese vessels harass US Ships' (2009) (RSIS Commentaries No. 027) Singapore: Nanyang Technological University
- Bateman S, 'Hydrographic Surveying in the EEZ: Differences and Overlaps with Marine Scientific Research' (2005) 29 *Marine Policy* 163
- Bork K et al, 'The Legal Regulation of Floats and Gliders – In Quest of a New Regime?' (2008) 39(3) *Ocean Development & International Law* 298
- Burke WT, 'Contemporary Law of the Sea: Transportation, Communication and Flight' (1976) 2 *Yale Studies in World Public Order* 183
- Colby JE, 'The developing international law on gathering and sharing security intelligence' (1974) 1 *Yale Studies in World Public Order* 49
- Cornthwaite JL, 'Can We Shoot Down That Drone? An Examination of International Law Issues Associated with the Use of Territorially Intrusive Aerial and Maritime Surveillance Drones in Peacetime' (2019) 52 *Cornell International Law Journal* 475
- Dalton JG, 'Future Navies – Present Issues' (2006) 59(1) *Naval War College Review* 1
- Delupis I, 'Foreign Warships and Immunity for Espionage' (1984) 78(1) *American Journal of International Law* 53
- Donnelly E, 'The United States – China EP-3 Incident: Legality and “Realpolitik”' (2004) 9(1) *Journal of Conflict & Security Law* 25
- Elden S, 'Secure the Volume: Vertical Geopolitics and the Depth of Power' (2013) 34 *Political Geography* 35
- Fife RE, 'Obligations of 'Due Regard' in the Exclusive Economic Zone: Their Context, Purpose and State Practice' (2019) 34 *International Journal of Marine and Coastal Law* 43

Bibliography

- Fitzmaurice G, 'Some Results of the Geneva Conference on the Law of the Sea: Part I - The Territorial Sea and Contiguous Zone and Related Topics' (1959) 8(1) *International and Comparative Law Quarterly* 73
- Forteau M, 'The Legal Nature and Content of 'Due Regard' Obligations in Recent International Case Law' (2019) 34 *International Journal of Marine and Coastal Law* 25
- Froman FD, 'Uncharted Waters: Non-innocent Passage of Warships in the Territorial Sea' (1984) 21 *San Diego Law Review* 625
- Gaunce J, 'On the Interpretation of the General Duty of "Due Regard"' (2018) 32 *Ocean Yearbook Online* 27
- Gregory D, 'The Everywhere War' (2011) 177(3) *Geographical Journal* 238
- Guangyi L, Binhua W and Hongjie Z, 'On the Rights and Obligations of Military Activities in the Exclusive Economic Zone' (2011) *China Oceans Law Review* 148
- Guobin Z, 'A Discussion on Due Regard in the United Nations Convention on the Law of the Sea' (2014) 2 *China Oceans Law Review* 70
- Hamamoto S, 'The Genesis of the 'Due Regard' Obligations in the United Nations Convention on the Law of the Sea' (2019) 34 *International Journal of Marine and Coastal Law* 7
- Hayashi M, 'Military and intelligence gathering activities in the EEZ: Definition of Key Terms' (2005) 29(2) *Marine Policy* 123
- Hayashi M, 'Military Activities in the EEZ of foreign Coastal States' (2012) 27 *International Journal of Marine and Coastal Law* 801
- Heintschel von Heinegg W, 'Military Activities in the Exclusive Economic Zone' (2014) 47 *Revue Belge de Droit International* 45
- Hitt Jr JC, 'Oceans Law and Superpower Relations: The Bumping of the Yorktown and the Caron in the Black Sea' (1989) 24 *Virginia Journal of International Law* 713
- Hooydonk EV, 'The Law of Unmanned Merchant Shipping – An Exploration' (2014) 20 *Journal of International Maritime Law* 403
- Kajiwara M, 'Maritime Security and Underwater Surveillance Technology: Lessons from the Cold War' (2024) 1(3) *Centre for Indo-Pacific Affairs* 1
- Kammerhofer J, 'The Armed Activities Case and Non-State Actors in Self-Defence Law' (2007) 20 *Leiden Journal of International law* 89

Bibliography

- Kaye S, 'Freedom of Navigation, Surveillance and Security: Legal Issues Surrounding the Collection of Intelligence from beyond the Littoral' (2005) 24 *Australian Yearbook of International Law* 93
- Klein N, 'Maritime Autonomous Vehicles within the International Law Framework to Enhance Maritime Security' (2019) 95 *International Law Studies* 244
- Kreps S and Zenko M, 'The Next Drone Wars: Preparing for Proliferation' (2014) 93(2) *Foreign Affairs* 68
- Kindervater K, 'Drone Strikes, Ephemeral Sovereignty, and Changing Conceptions of Territory' (2017) 5(2) *Territory, Politics, Governance* 207
- Kindervater KH, 'The Emergence of Lethal Surveillance: Watching and Killing in the History of Drone Technology' (2016) 47(3) *Security Dialogue* 223
- Koivurova T and Polonen I, 'Transboundary Environmental Impact Assessment in the Case of the Baltic Sea Gas Pipeline' (2010) 25 *International Journal of Marine and Coastal Law*, 151
- Kraska J, 'Intelligence Collection and the International Law of the Sea' (2022) 99 *International Law Studies* 602
- Kraska J, 'Resources Rights and Environmental Protection in the Exclusive Economic Zone: The Functional Approach to Naval Operations' in Peter A Dutton (ed), *Military Activities in the EEZ: A U.S-China Dialogue on Security and International Law in the Maritime Commons* (CMSI Red Books, Study No. 7, 2010)
- Kraska J, 'Putting Your Head in the Tiger's Mouth: Submarine Espionage in Territorial Waters' (2015) 54 *Columbia Journal of Transnational Law* 164
- Kraska J, 'The Law of Unmanned Naval Systems in War and Peace' (2010) 5(3) *Journal of Ocean Technology* 44
- Kwast PJ, 'Maritime Law Enforcement and the Use of Force: Reflections on the Categorisation of Forcible Action at sea in the Light of the Guyana/Suriname Award' (2008) 13 *Journal of Conflict and Security Law* 49
- McKenzie S, 'Autonomous Technology and Dynamic Obligations: Uncrewed Maritime Vehicles and the Regulation of Maritime Military Surveillance in the Exclusive Economic Zone' (2021) 11(1) *Asian Journal of International Law* 146
- Mckenzie S, 'Sovereign Immunity of Uncrewed Surveillance Vehicles and the Limits of Enforcement Jurisdiction' [2023] *Nordic Journal of International Law* 573

Bibliography

- McKenzie S, 'When is a Ship a Ship? Use by State Armed Forces of Uncrewed Maritime Vehicles and the United Nations Convention on the Law of the Sea' (2020) 21 *Melbourne Journal of International Law* 373
- McLaughlin R, 'Unmanned Naval Vehicles at Sea: USVs, UUVs, and the Adequacy of the Law' (2011) 21(2) *Journal of Law, Information & Science* 100
- Miyoshi M, 'The Submerged Passage of a Submarine through the Territorial Sea – The Incident of A Chinese Atomic-Powered Submarine' (2006) 10 *Singapore Year Book of International Law* 243
- Nasu H and Letts D, 'The Legal Characterisation of Lethal Autonomous Maritime Systems: Warship, Torpedo, or Naval Mine?' (2020) 96(1) *International Law Studies* 79
- Norris A, *Legal Issues Relating to Unmanned Maritime Systems Monograph* (US Naval War College, Newport 2013)
- O'Connell DP, 'International Law and Contemporary Naval Operations' (1970) 44 *British Yearbook of International Law* 19
- Oxman BH, 'The Regime of Warships under the United Nations Convention on the Law of the Sea' (1984) 24 *Virginia Journal of International Law* 809
- Papastavridis E, 'Intelligence Gathering in the Exclusive Economic Zone' (2017) 93 *International Law Studies* 446
- Pedrozo R, 'Close Encounter at Sea: The USNS *Impeccable* Incident' (2009) 62 *Naval War College Review* 101
- Pedrozo R, 'Military Activities in the Exclusive Economic Zone: East Asia Focus' (2014) 90 *International Law Studies* 514
- Pedrozo R, 'Preserving Navigational Rights and Freedom: The Right to Conduct Military Activities in China's Exclusive Economic Zone' (2010) 9(1) *Chinese Journal of International Law* 9
- Pedrozo R, 'The Legal Framework Applicable to Intrusive Intelligence, Surveillance, and Reconnaissance Operations in the Air and Maritime Domain' (2022) 99 *International Law Studies* 847
- Prezas I, 'Foreign Military Activities in the Exclusive Economic Zone: Remarks on the Applicability and Scope of the Reciprocal 'Due Regard' Duties of Coastal and Third States' (2019) 34 *International Journal of Marine and Coastal Law* 97

Bibliography

- Ruys T, 'The Meaning of "Force" and the Boundaries of the *Jus Ad Bellum*: Are "Minimal" Uses of Force Excluded from UN Charter Article 2(4)?' (2014) 108 *American Journal of International Law* 159
- Sadurska R, 'Foreign Submarines in Swedish Waters: The Erosion of an International Norm' (1984) 10 *Yale Journal of International Law* 34
- Sahashi R, 'Japan's strategy amid US-China confrontation' (2020) 2 *China International Strategy Review* 232
- Schachter O, 'The Right of States to Use Armed Force' (1984) 82(5) *Michigan Law Review* 1620
- Schmitt MN and Goddard DS, 'International Law and the Military Use of Unmanned Maritime Systems' (2016) 98(2) *International Review of the Red Cross* 567
- Severance A and Sandgren M, 'Flagging the Floating Turbine Unit: Navigating towards a Registerable, First-Ranking Security Interest in Floating Wind Turbines' (2014) 39 *Tulane Maritime Law Journal* 1
- Shaw I and Akhtar M, 'The Unbearable Humanness of Drone Warfare in FATA, Pakistan' (2012) 44(4) *Antipode* 1490
- Treves T, 'Coastal States' rights in the Maritime Areas under UNCLOS' (2015) 12(1) *Revista de Direito Internacional* 39
- Treves T, 'Law of the Sea: UNCLOS as a Living Treaty' in Jill M Barrett and Richard Barnes (eds), *Law of the Sea: UNCLOS as a Living Treaty* (BIICL 2016)
- 'United States Confronts China over Seizure of Unmanned Drone in the South China Sea' 111(2) (2017) *The American Journal of International Law* 513
- Wilmshurst E, 'The Chatham House Principles of International Law on the Use of Force by States in Self-Defence' (2006) 55(4) *International & Comparative Law Quarterly* 963
- Wilson B, 'An Avoidable Maritime Conflict: Disputes Regarding Military Activities in the Exclusive Economic Zone' (2010) 41 *Journal of Maritime Law and Commerce* 421
- Valencia MJ, 'Introduction: Military and Intelligence Gathering Activities in the Exclusive Economic Zones: Consensus and Disagreement II' (2005) 29 *Marine Policy* 97
- Veal R and Ringbom HM, 'Unmanned Ships and the International Regulatory Framework' (2017) 23 *Journal of International Maritime Law* 100

Bibliography

- Veal R, Tsimplis M, Serdy A, Ntovas A and Quinn S, *Liability for operations in Unmanned Maritime Vehicles with Differing Levels of Autonomy* (University of Southampton 2016)
- Veal R, Tsimplis M and Serdy A, 'The Legal Status and Operation of Unmanned Maritime Vehicles' (2019) 50 *Ocean Development and International Law* 23
- Xiaofeng R and Xizhong C, 'A Chinese Perspective' (2005) 29 *Marine Policy* 139
- Yoo J, 'Embracing the Machines: Rationalist War and New Weapons Technologies' (2017) 105 *California Law Review* 443
- Zhang H, 'Is It Safeguarding the Freedom of Navigation or Maritime Hegemony of the United States? - Comments on Paul (Pete) Pedrozo's Article on Military Activities in the EEZ' (2010) 9(1) *Chinese Journal of International Law* 31
- Zou K, 'Peaceful Use of the Sea and Military Intelligence Gathering in the EEZ' (2016) 22 *Asian Yearbook of International Law* 162

Other secondary resources

- A/AC.138/SC.II/L.10, art III, reproduced in *SBC Report 1972*, 180 (Kenya)
- A/AC.138/SC.II/L.21, arts 9-10, reproduced in *III SBC Report 1973*, 19, 20 (Columbia, Mexico and Venezuela)
- A/AC.138/SC.II/L.28, art 80(1), reproduced in *III SBC Report 1973*, 35, 61 (Malta)
- A/AC.138/SC.II/L.37, para 13, reproduced in *III SBC Report 1973*, 78, 80 (Argentina)
- A/AC.138/80, reproduced in *SBC Report 1972*, 70, 72 (Specialised Conference of the Caribbean Countries on Problems of the Sea)
- A/AC.138/SC.II/L.40 and Corr 1-3, art IV, reproduced in *III SBC Report 1973*, 87, 88 (Algeria, Cameroon, Chana, Ivory Coast, Kenya, Liberia, Madagascar, Mauritius, Senegal, Sierra Leone, Somalia, Sudan, Tunisia and United Republic of Tanzania)
- A/CONF.62/L.4 (1974), arts 14-15 and 17, reproduced in *III Official Records* 81, 82 (Canada, Chile, Iceland, India, Indonesia, Mauritius, Mexico, New Zealand and Norway)
- Asia Maritime Transparency Initiative, 'Exploring China's Unmanned Ocean Network' (16 June 2020) <<https://amti.csis.org/exploring-chinas-unmanned-ocean-network/>> accessed 1 August 2025

Bibliography

Belgium, *Regulations Relating to the Admission of Foreign Warships into Belgium Ports and Harbors* (Brussels, 30 December 1923) reprinted in (1923) *British and Foreign State Papers* 43

C.2/Informal Meeting/30 (1978, mimeo), art 17 (Argentina, Bangladesh, China, Democratic Yemen, Ecuador, Madagascar, Pakistan, Peru and the Philippines)

Cabo Verde, 'Declaration made upon signature (10 December 1982) and confirmed upon ratification (19 August 1987)' in *United Nations Convention on the Law of the Sea* (Montego Bay, 10 December 1982) 1833 UNTS 3

Chief of Naval Operations, *Navigational Plan* (26 July 2022)

Chen S, 'Surveillance under the sea: How China is listening in near Guam' (*South China Morning Post*, 22 January 2018)

<<https://www.scmp.com/news/china/society/article/2130058/surveillance-under-sea-how-china-listening-near-guam>> accessed 7 June 2024

Comité Maritime International, *Regulatory Scoping Exercise for the Use of Maritime Autonomous Surface Ships (MASS)* (MSC 99/INF.8) (13 February 2018)

DARPA, 'ACTUV: Anti-Submarine Warfare (ASW) Continuous Trail Unmanned Vessel'

<<https://www.darpa.mil/program/anti-submarine-warfare-continuous-trail-unmanned-vessel>> accessed 8 June 2024

DARPA, 'Hydra' <<https://www.darpa.mil/research/programs/hydra>> accessed 8 June 2025

DARPA, 'Upward Falling Payloads (UFP)' (Archived) <<https://www.darpa.mil/program/upward-falling-payloads>> accessed 28 July 2025

Davis M, 'Autonomous military and naval logic gains life of its own' (*The Australian* 8 October 2019) <<https://www.aspi.org.au/opinion/autonomous-military-and-naval-logic-gains-life-its-own>> accessed 24 November 2024

Declaration of France (11 April 2008)

Declaration of the People's Republic of China (25 August 2006)

Deeks A and Anderson SR, 'Iran Shoots down a U.S. Drone: Domestic and International Legal Implications' (*Lawfare*, 20 June 2019) <<https://www.lawfaremedia.org/article/iran-shoots-down-us-drone-domestic-and-international-legal-implications>> accessed 29 January 2025

Drezner JA, Sommer G and Leonard RS, 'Innovative Management in the DAPRA High Altitude Endurance Unmanned Aerial Vehicle Program: Phase II Experience' (RAND, 1999)

Bibliography

Ehrhard TP, 'Air Force UAVs: The Secret History' (Mitchell Institute Study, 2010)

Eisenhut M, 'EU Leverages Advanced Technology to Strengthen Maritime Security and Global Collaboration' (23 September 2024) <<https://www.linkedin.com/pulse/eu-leverages-advanced-technology-strengthen-maritime-global-eisenhut-9znqe>> accessed 7 October 2024

Goodman R, 'Cyber Operations and the U.S. Definition of "Armed Attack"' (*Just Security*, 8 March 2018) <<https://www.justsecurity.org/53495/cyber-operations-u-s-definition-armed-attack/>> accessed 22 July 2025

Hafner G, United Nations Convention on Jurisdictional Immunities of States and Their Property (2004) (Max Planck Encyclopaedia of Public International Law 2010)

Helal M, 'The Global Hawk Incident: Self-defence against Aerial Incursions – Reflections on the Applicable Law' (*Opinio Juris*, 4 June 2019) <<https://opiniojuris.org/2019/07/04/the-global-hawk-incident-self-defense-against-aerial-incursions-reflections-on-the-applicable-law/>> accessed 23 March 2024

IMO, Report of the Maritime Safety Committee on Its Ninety-Ninth Session Annex 1, IMO Doc. MSC 99/20 (13 February 2018)

Ingber R and Haque AA, 'Iran's Shifting Views on Self-Defence and "Intraterritorial" Force' (*Just Security*, 3 July 2019) <<https://www.justsecurity.org/64800/irans-shifting-views-on-self-defense-and-intraterritorial-force/>> accessed 7 June 2025

International Law Commission, Draft Articles on Responsibility of States for Internationally Wrongful Acts, with Commentary (2001) II (2) Yearbook of the International Law Commission

Joint Statement by the United States of America and the Union of Soviet Socialist Republics on the Uniform Interpretation of the Rules of International Law Governing Innocent Passage (Jackson Hole, Wyoming, 23 September 1989) 28 ILM 1444

Kraska J, 'Military Activities on the Continental shelf' (*LAWFARE*, 22 August 2016) <<https://www.lawfaremedia.org/article/military-activities-continental-shelf>> accessed 3 February 2025

Kraska J and Pedrozo R, 'China's Capture of U.S. Underwater Drone Violates Law of the Sea' (*Lawfare*, 16 December 2016) <<https://www.lawfaremedia.org/article/chinas-capture-us-underwater-drone-violates-law-sea>> accessed 29 January 2024

Laws and Regulations on the Regime of the Territorial Sea (UN Legislative Series, ST/LEG/SER B/6, December 1956) 361-362 (Sweden), 377-378 (Germany).

Bibliography

Letter dated 20 June 2019 from the Permanent Representative of the Islamic Republic of Iran to the United Nations addressed to the Secretary-General (20 June 2019) UN Doc S/2019/512

Malakoff D, 'Q&A: China Just Seized a Research Robot from a U.S. Navy Ship. What Was It Doing?' (*Science*, 16 December 2016) <<https://www.science.org/content/article/qa-china-just-seized-research-robot-us-navy-ship-what-was-it-doing>> accessed 28 January 2022

Nandan SN and Rosenne S (eds), *United Nations Convention on the Law of the Sea 1982: A Commentary*, vol. IV (Martinus Nijhoff 1991)

Martin B et al., 'Advancing Autonomous Systems: An Analysis of Current and Future Technology for Unmanned Maritime Vehicles' (RAND, 2019)

Mugg J, Hawkins Z and Coyne J, *Australian Border Security and Unmanned Maritime Vehicles* (Australian Strategic Policy Institute, July 2016)

Newport Manual on the Law of Naval Warfare (US Naval War College 2017)

Nordquist MH (ed), *United Nations Convention on the Law of the Sea, 1982: A Commentary*, vol II (Martinus Nijhoff 1993)

Nordquist MH (ed), *United Nations Convention on the Law of the Sea, 1982: A Commentary*, vol III (Martinus Nijhoff 1995)

Parmley CJ and Pedrozo R, 'New Edition of the Commander's Handbook on the Law of Naval Operation' (*LIEBER INSTITUTE WEST POINT* 20 April 2022) <<https://lieber.westpoint.edu/new-edition-commanders-handbook-law-of-naval-operations/>> accessed 22 January 2024

Rothwell D, 'Too much hot air? A balloon which tested the limits of international law' (*Australian National University*, 16 February 2023) <<https://law.anu.edu.au/too-much-hot-air-balloon-which-tested-limits-international-law>> accessed 5 May 2024

Schmitt M, 'The Russian Intercept of the U.S. Reaper and International Law' (*Just Security* 15 March 2023) <<https://www.justsecurity.org/85494/the-russian-intercept-of-the-u-s-reaper-and-international-law/>> accessed 6 February 2025

Taft WH, 'Written Statement of William H Taft, Legal Adviser, US Department of State Before the Senate Select Committee on Intelligence, 8 June 2004' reprinted in *Senate Executive Report* 110-9, at 37 (19 December 2007)

The Association for Uncrewed Vehicle System International (AUVSI), *2023 Defence Budget for Uncrewed Systems and Robotics* (executive summary, 2022)

Bibliography

THE COMMANDER'S HANDBOOK ON THE LAW OF NAVAL OPERATIONS (NWP 1-14 M) (2017)

THE COMMANDER'S HANDBOOK ON THE LAW OF NAVAL OPERATIONS (NWP 1-14 M) (2022)

UN Doc A/AC.138/SC.II/L.34, item 1, para 8, reprinted in *Official Records of the Sea-Bed Committee*, vol III (1973) 71, 72 (China)

UN Doc A/CONF.62/L.117 (1982), art 21(1)(h), reprinted in *Third United Nations Conference on the Law of the Sea: Official Records*, vol XVI (1982) 225 (Algeria, Bahrain, Benin, Cape Verde, China, Congo, Democratic People's Republic of Korea, Democratic Yemen, Djibouti, Egypt, Guinea-Bissau, Iran, Libyan Arab Jamahiriya, Malta, Morocco, Oman, Pakistan, Papua New Guinea, Philippines, Romania, Sao Tome and Principe, Sierra Leone, Somalia, Sudan, Suriname, Syria, Uruguay and Yemen)

UN Doc A/AC.138/SC.II/L.42 and Corr 1, art 3, paras 1-2, reprinted in (1973) vol III *Official Records of the Sea-Bed Committee* 91, 92 (Fiji)

UN Doc A/CONF.62/SR.176 (24 April 1982).

United Nations Convention on the Law of the Sea, Declaration of the Russian Federation (12 March 1997)

United Nations, Multilateral Treaties Deposited with the Secretary-General (UN ST/LEG/SER.E)

United States Department of Defence (DoD), *Unmanned Systems Integrated Roadmap* (FY 2013-2038, 2013)

United Nations Treaty Collection, 'Declarations and Statements: United Nations Convention on the Law of the Sea (China, 7 June 1996)

<https://treaties.un.org/Pages/ViewDetailsIII.aspx?src=TREATY&mtdsg_no=XXI-6&chapter=21&Temp=mtdsg3&clang=_en#EndDec> accessed 12 September 2025

Union of Soviet Socialist Republics-United States: Joint Statement with Attached Uniform Interpretation of Rules of International Law Governing Innocent Passage (1989) 28 *International Legal Materials* 1444

UN Secretary-General, *Study on the Naval Arms Race*, UN Doc A/40/525 (17 September 1985)

Uruguay, 'Declaration made upon signature and confirmed upon ratification (10 December 1982) in *United Nations Convention on the Law of the Sea* (Montego Bay, 10 December 1982) 1833 UNTS 3

Bibliography

US Congressional Research Service, *Navy Large Unmanned Surface and Undersea Vehicles: Background and Issues for Congress* (CRS Pub. No R45757, updated 19 December 2024)

US Department of the Navy, 'The Navy Unmanned Undersea Vehicle (UUV) Master plan' (2004)

Newspaper articles

Axe D, Here Come the Robot Submarines: Meet Boeing's 4 Huge Robotic Subs, Nat'l Int. (*The National Interest*, 11 March 2019) <<https://nationalinterest.org/blog/buzz/here-come-robot-submarines-meet-boeings-4-huge-robotic-subs-46732>> accessed 19 June 2024

Borger J, 'Chinese warship seizes US underwater drone in international waters' (*The Guardian*, 16 December 2016) <<https://www.theguardian.com/world/2016/dec/16/china-seizes-us-underwater-drone-south-china-sea>> accessed 28 January 2025

Casimiro C, 'Indian Air Force Practices Shooting Down Chinese Spy Balloons' (*The Defense Post*, 8 October 2024) <<https://thedefensepost.com/2024/10/08/india-chinese-spy-balloons/>> accessed 18 December 2024

Cavas CP, 'China Grabs Underwater Drone Operated by US Navy in South China Sea' (*Defence News*, 16 December 2016) <<https://www.defensenews.com/naval/2016/12/16/china-grabs-underwater-drone-operated-by-us-navy-in-south-china-sea/>> accessed 28 January 2025

Cooper H and Wong E, 'Downing of Chinese Spy Balloon Ends Chapter in a Diplomatic Crisis' (*The New York Times*, 4 February 2023) <<https://www.nytimes.com/2023/02/04/us/politics/chinese-spy-balloon-shot-down.html>> accessed 20 January 2025

Davison H, 'Chinese spy balloon may have been blown off intended course – report' (*The Guardian*, 15 February 2023) <<https://www.theguardian.com/world/2023/feb/15/japan-says-aerial-objects-spotted-in-recent-years-were-likely-chinese-spy-balloons>> accessed 5 May 2025

'Factbox: The Global Hawk drone shot down by Iran' (*Reuters*, 2019) <<https://www.reuters.com/article/us-mideast-iran-usa-factbox/factbox-the-global-hawk-drone-shot-down-by-iran-idUSKCN1TL29K>> accessed 23 October 2024

Freedberg JR SJ, 'Naval Drones 'Swarm,' But Who Pulls the Trigger?' (*BREAKING DEFENSE*, 5 October 2014) <<https://breakingdefense.com/2014/10/who-pulls-trigger-for-new-navy-drone-swarm-boats/>> accessed 24 June 2025

Gettinger D, 'Japan's Growing Drone Budget' (*THE DIPLOMATE*, 22 July 2023) <<https://thediplomat.com/2023/07/japans-growing-drone-budget/>> accessed 3 October 2024

Bibliography

- Green M, Hicks K, Cooper Z, Schaus J, and Doublas J, 'Counter-Coercion Series: Harassment of the USNS Impeccable' (*Asia Maritime Transparency Initiative*, 9 May 2017) <<https://amti.csis.org/counter-co-harassment-usns-impeccable/>> accessed 1 December 2024
- Holman B, 'The first air bomb: Venice', 15 July 1849 (*AIRMINDED*, 22 August 2009) <<https://airminded.org/2009/08/22/the-first-air-bomb-venice-15-july-1849/>> accessed 3 February 2024.
- Huang Z, 'China and India are now arguing over a crashed drone near their disputed border' (*QUARTZ*, 7 December 2017) <<https://qz.com/india/1150951/china-and-india-are-now-arguing-over-a-crashed-drone-near-their-disputed-border>> accessed 17 January 2024
- Johnston I and Rush J, 'Swedish Military Prepared to Use "Armed Force" as Search for "Russian Submarine" Continues' (*THE INDEPENDENT*, 22 October 2014) <<https://www.independent.co.uk/news/world/europe/swedish-military-prepared-to-use-armed-force-as-search-for-russian-submarine-continues-9810495.html>> accessed 20 March 2025
- Khurshudyan I and Hrabchuk K, 'How Ukrainian, targeting by drone, attacked Russian artillery in Kherson', (*The Washington Post*, 8 October 2022/10) <<https://www.washingtonpost.com/world/2022/10/08/ukraine-russia-drones-artillery/>> accessed 2 March 2024
- Kumaraswami S, 'US Navy challenges India's excessive maritime claims at Lakshadweep islands' (*The Asian Age*, 10 April 2021) <<https://asianage.com/world/americas/100421/us-navy-challenges-indias-excessive-maritime-claims-at-lakshadweep-islands.html>> accessed 13 October 2024
- Law T, 'Iran Shot Down at \$176 Million U.S. Drone. Here's What to Know About the RQ-4 Global Hawk' (*TIME*, 21 June 2019) <<https://time.com/5611222/rq-4-global-hawk-iran-shot-down/>> accessed 2 August 2025
- McCarthy T, 'Iranian fighter jets fired on US drone, Pentagon confirms' (*The Guardian*, 8 November 2012) <<https://www.theguardian.com/world/2012/nov/08/iranian-jets-us-drone-pentagon>> accessed 21 January 2024.
- McGreal C and Shah S, 'Pakistan let China examine helicopter used in Bin Laden raid, says US' (*The Guardian*, 15 August 2011) <<https://www.theguardian.com/world/2011/aug/15/us-helicopter-pakistan-china-wreckage>> accessed 20 January 2024

Bibliography

- 'Pentagon Plans for Cuts to Drone Budget' (*Military.com*, 2 January 2014) <<https://www.military.com/dodbuzz/2014/01/02/pentagon-plans-for-cuts-to-drone-budgets>> accessed 17 January 2024
- Pham TN, 'Time for the US to stop losing ground to China in the South China Sea' (*The Diplomat*, 24 October 2017) <<https://thediplomat.com/2017/10/time-for-the-us-to-stop-losing-ground-to-china-in-the-south-china-sea/>> accessed 13 October 2024
- Pinion D, 'The Navy and Marine Corps Need to Prepare for the Swarm of the Future', (*War on the Rocks*, 28 March 2018) <<https://warontherocks.com/2018/03/the-navy-and-marine-corps-must-plan-for-the-swarm-of-the-future/>> accessed 22 February 2024
- Schmitt M, 'Top Expert Backgrounder: Aborted U.S. Strike, Cyber Operation Against Iran and International Law' (*Just Security*, 24 June 2019) <<https://www.justsecurity.org/64669/top-expert-backgrounder-on-aborted-u-s-strike-cyber-operation-against-iran-and-international-law/>> accessed 23 November 2024
- Shanker T and Gladstone R, 'Iran Fired on Military Drone in First Such Attack, U.S. Says' (*The New York Times*, 8 November 2012) <<https://www.nytimes.com/2012/11/09/world/middleeast/pentagon-says-iran-fired-at-surveillance-drone-last-week.html>> accessed 21 January 2024
- Trevithick J, 'The Navy Is Building a Network of Drone Submarines and Sensor Buoys in the Arctic' (*THE WARZONE*, 1 October 2020) <<https://www.twz.com/36821/the-navy-is-building-a-network-of-drone-submarines-and-sensor-buoys-in-the-arctic>> accessed 4 June 2025.
- Tyson AAS, 'China Draws U.S. Protest over Shadowing of Ships' (*Washington Post*, 10 March 2009) <<https://www.washingtonpost.com/archive/national/2009/03/10/china-draws-us-protest-over-shadowing-of-ships/1a3824a7-6b52-4058-91f8-3e72363cd4d9/>> accessed 20 November 2024.
- 'Use of Balloons in War' (*The New York Times*, 12 July 1863) <<https://www.nytimes.com/1863/07/12/archives/use-of-balloons-in-war.html>> accessed 3 February 2024
- Valencia M, 'US-China Underwater Drone Incident: Legal Grey Areas' (*THE DIPLOMAT*, 11 January 2017) <<https://thediplomat.com/2017/01/us-china-underwater-drone-incident-legal-grey-areas/>> accessed 28 January 2024
- Walker J, 'Unmanned Aerial Vehicles (UAVs) – Comparing the USA, Israel, and China' (*Emerj*, 31 August 2017) <<https://emerj.com/unmanned-aerial-vehicles-uavs/>> accessed 30 August 2025

Bibliography

Werner B, 'Navy Awards Boeing \$ Million to Build Four Orca XLUUVs' (*U.S. Naval Institute News*, 13 February 2019) <<https://news.usni.org/2019/02/13/41119>> accessed 13 June 2024.

'World-Wide Conventional Submarines' (*Global Security*, 2017)

<<https://www.globalsecurity.org/military/world/ss-intro.htm>> accessed 21 August 2023