COI VULNERABILITIES AND RESILIENCE

Hybrid CoE Working Paper 5

NOVEMBER 2019

HANDBOOK ON MARITIME HYBRID THREATS — 10 Scenarios and Legal Scans

Hybrid CoE

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Handbook on Maritime Hybrid Threats — 10 Scenarios and legal scans

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Hybrid CoE Working Papers are medium-length papers covering work in progress. The aim of these publications is to share ideas and thoughts, as well as to present an analysis of events that are important from the point of view of hybrid threats. Some papers issue recommendations. They cover a wide range of important topics relating to our constantly evolving security environment. Working papers are not peer reviewed.

The Vulnerabilities and Resilience COI focuses on understanding member states' and institutions' vulnerabilities and improving their resilience by sharing best practices, developing new policy proposals and identifying topics to be studied further. The aim of the COI is also to improve public-private and civil-military partnership in countering hybrid threats.

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Hybrid CoE is an international hub for practitioners and experts, building participating states' and institutions' capabilities and enhancing EU-NATO cooperation in countering hybrid threats located in Helsinki, Finland

It has become evident that disturbances in shipping may have immediate and/or long-term effects leading to serious economic and political consequences. Under suitable conditions, the necessity of such disturbances can be quite easily motivated by proclaimed legitimate security concerns. That makes Sea Lines a potential instrument in Hybrid Conflicts.

Since March 2018, Hybrid CoE/COI VR has taken a closer look at the Hybrid Threats vs. Sea Lines of Communication in a workstrand consisting of six events. During the process, it was found useful to propose a taxonomy of maritime hybrid threats that could be used to support various approaches, such as policy discussions aiming at national or EU/NATO-level responses, planning of operational level exercises as well as setting requirements for technologies. This handbook establishes a taxonomy of ten potential scenarios that were gradually developed and proof-tested during the workstrands.

The Hybrid CoE Participating States advocate a strict adherence to international rules and norms. They must necessarily observe the legal framework in political or operational responses to what might be regarded as hybrid threats emerging at sea. Failing that, the consequences might be unintentional and harsh. Sometimes the events may require a rapid reaction, and decision-makers or maritime operators need to base their actions on limited information. In this handbook, ten scenarios are presented, each followed by a short legal analysis. This allows the reader to immediately get on the right track as regards relevant parts of ***Law of the Sea*** and ***International Humanitarian Law***.

Some findings deserve to be highlighted:
Firstly, for experts it seems to be easy to find unity concerning what can be done legally and what cannot. This is good news – the norms are clear enough. On the other hand, outside of a small circle of legal experts, this knowledge is seldom shared. There is a chance for confusion and even mistakes among those actors that remain poorly informed. Some feasible actions are regarded as acts of war and may as such lead to escalations.

Secondly, the legal norms are ambiguous: sometimes two parties may find support for their conflicting positions from norms such as UNCLOS (United Nations Convention on the Law of the Sea). This calls for readiness to defend one's case with all possible international support.

Thirdly, the contemporary interpretation of International Humanitarian Law is quite relevant. Even a small-scale armed confrontation between two states may be regarded as an International Armed Conflict (IAC). In such a case, the countries are regarded as "belligerent" and International Humanitarian Law (IHL) replaces UNCLOS. This means that the Law on Naval Warfare would enter into force as well.

Improving understanding of this legal context on all sides will increase predictability.
I hope this handbook will help our Participating States, the EU and NATO by:

1. Helping them to inform policymakers and maritime operators, such as naval and coast guard officers, on the legal context of possible maritime hybrid operations; and,
2. Providing a structure for policy and concept development, operational planning, exercises and setting technical requirements.

I will use this opportunity to thank those who contributed in their respective fields throughout the work-strand leading up to this publication. The legal scans were provided by a group of advisers on International Law: Professor Terry Gill, Jurist (Univ.) Valentin Schatz, Dr Tadas Jakstas and Dr Pirjo Kleemola-Juntunen. Professor Lauri Ojala provided insights on maritime logistics and the economy, and Ms Tiia Lohela kept the process running smoothly while also contributing to the texts.

Professor Lauri Ojala, representing the University of Turku and the EU-funded ResQU2 project platform, contributed by rendering valuable knowledge and financial support to the events' contents, arrangements and reporting. Also, the European Defence Agency (EDA) rendered important support by co-organising and co-financing two of the events. I am grateful to these partners who helped us in reaching this milestone.

Finally, I also wish to thank the numerous participants in our events, where the ideas and ultimate scenarios were developed and tested.

In Helsinki, November 2019

Capt (Navy), ret. Jukka Savolainen
Director, Community of Interest for Vulnerabilities and Resilience
Hybrid CoE

Contents

ACRONYMSAND ABBREVIATIONS

BSR	Baltic Sea Region; political definition used by the EU, which includes Belarus, Denmark, Estonia, Finland, Latvia, Lithuania, Norway, Poland, Sweden, the northern states of Germany and Northwest Russia
CISE	Common Information Sharing Environment (for EU fisheries management)
COI	Communities of Interest of Hybrid CoE; e.g. on Vulnerabilities and Resilience
COLREG	International Regulations for Preventing Collisions at Sea (1972; in force 1977)
EDA	European Defence Agency
EEZ	Exclusive Economic Zone (cf. a coastal state's jurisdiction over its waters)
EUMSS	European Union Maritime Security Strategy
EUROSUR	European Border Surveillance System
Hybrid CoE	The European Centre of Excellence for Countering Hybrid Threats
IAC	International armed conflict
IHL	International Humanitarian Law; a set of rules that seek, for humanitarian reasons, to limit the effects of armed conflict
IMO	The International Maritime Organization, a United Nations-specialised agency having the role of global standard-setting authority for the safety, security and environmental performance of international shipping
ITLOS	The International Tribunal for the Law of the Sea
LIVEX	An actual military exercise; "live exercise", typically also using live ammunition
NOTMAR	"Notice to Mariners"; information or warning to (merchant) shipping operators and vessels issued by a Competent Authority
NSCMIG	North Sea and Channel Maritime Information Group
PSC	Political and Security Committee

ResQU2	A project in the EU's BSR Interreg Programme to increase preparedness and coordination of operations in maritime and seaport emergencies (2018–2020)
San Remo Manual	The 1994 San Remo Manual on International Law Applicable to Armed Conflicts at Sea; adopted by ***The International Institute of Humanitarian Law*** **(IIHL),** which is an independent, non-profit humanitarian organisation founded in 1970
SAR Convention	International Convention on Maritime Search and Rescue
SLOC	Sea Lines of Communication
SOLAS	Convention for the Safety of Life at Sea
SUA Convention	IMO Convention (1988) for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation, Protocol for the Suppression of Unlawful Acts Against the Safety of Fixed Platforms Located on the Continental Shelf
TTX	Tabletop exercise
TS	Territorial Sea
UNCLOS	United Nations Convention on the Law of the Seas from 10 December 1982
WMD	Weapons of Mass Destruction
UNGA	United Nations General Assembly Resolution 3314 (XXIX).

1. INTRODUCTION – AN ERA OF HYBRID THREATS

We live in an era of hybrid threats. Both state and non-state actors are challenging countries and institutions that they see as a threat, opponent or competitor to their interests and goals. The range of methods and activities at their disposal is broad, including influencing information; logistical weaknesses like energy supply pipelines; economic and trade-related blackmail; undermining international institutions by rendering rules ineffective; and terrorism or increasing insecurity.

Hybrid threats are methods and activities that target the vulnerabilities of the opponent. Vulnerabilities can be created by many things, including historical memory, legislation, old practices, geostrategic factors, strong polarisation of society, technological disadvantages or ideological differences. If the interests and goals of the user of hybrid methods and activities are not achieved, the situation can escalate into hybrid warfare, wherein the role of the military and violence will increase significantly.

Accordingly, Hybrid CoE characterises hybrid threat as

- Coordinated and synchronised action that deliberately targets democratic states' and institutions' systemic vulnerabilities, through a wide range of means.
- The activities exploit the thresholds of detection and attribution as well as different interfaces (war-peace, internal-external, local-state, national-international, friend-enemy).
- The aim of the activity is to influence different forms of decision making at the local (regional), state or institutional level to favour and/or obtain the agent's strategic goals while undermining and/or hurting the target.

Based on experience, hybrid influencing can be divided roughly into two phases: priming phase and operational phase. In the priming phase, the adversary constantly monitors the situation, exercising reasonably subtle means of influencing while gradually improving its assets. If decided, it may initiate a more serious hybrid operation whereby the effect of measures becomes stronger, the means more violent and plausible deniability decreases.[1]

Hybrid CoE/Community of Interest Vulnerabilities and Resilience (COI VR)

The key purpose of the work of Hybrid CoE/ COI Vulnerabilities and Resilience (COI VR) on maritime security has been to increase overall awareness of maritime hybrid threats, identify specific vulnerabilities and formulate actions to mitigate and counter such threats. The ultimate goal of the work is to increase the capabilities and resilience of the participating Member States and organisations.

The work of COI VR on the maritime strand covers:

- **The Workshop on Harbour Protection in the Hybrid Threat Environment**, which was organised jointly with the European Defence Agency (EDA) in its Brussels premises on 29–30 May 2018,
- **The International Symposium on Maritime Security,** which was organised jointly with the Helmut Schmidt Defence University in Hamburg on 4–5 September 2018,
- Conference on **Legal Resilience in an Era of Hybrid Threats**, organised jointly by Hybrid CoE together with the University of Exeter, in which COI VR hosted a panel on *Shipping*

1 The European Centre of Excellence for Countering Hybrid Threats, "Hybrid threats", https://www.hybridcoe.fi/hybrid-threats/

through the Sea of Azov, on 8–10 April 2019 in the United Kingdom,

- **The Workshop on Hybrid Scenarios in the Baltic Sea**, organised in cooperation with the ResQU2 project in the Turku Archipelago, Finland, on 28–29 May 2019,
- **The Workshop on Harbour Protection**, organised in cooperation with the European Defence Agency (EDA) and Project Platform-ResQU2, on 15–16 October 2019 in Finland.

In the course of the COI VR work, several key patterns that could emerge as hybrid threats to Sea Lines of Communications (SLOC) were discovered. Potential proactive and countering measures were explored, especially at the international political level, while not overlooking strategic and operational-level recommendations. Business models in the shipping industry and wider logistics chains were discussed together with existing community-level approaches to the topic, when appropriate.

2. SETTING THE SCENE – MARITIME DOMAIN

Threats in the maritime domain tend to be progressively hybrid in nature and difficult to model on account of their complex appearance and cascading nature. These cascading effects pose particularly serious dangers since they exploit the vulnerabilities of different systems and/or spheres at the same time in an interdependent manner. Furthermore, the effects tend to become magnified rather quickly through global supply chains. Thus, societal systems, such as securing SLOC and maintaining a high level of maritime safety and security, are increasingly connected and interdependent.

In this section, some of the factors playing a key role in the maritime sphere, and thus in maritime hybrid threats, are elaborated upon.

2.1 Rapid digitalisation process and interconnectivity of the naval world

The pace of technological development in maritime systems, including navigational, surveillance and other operational systems, has been rapid. In addition, ubiquitous and all-pervasive digitisation and digitalisation[2] have been quick to penetrate the merchant marine as well as the naval world. This process comprises a range of elements, including i) connected assets; ii) human analytics; iii) remote presence and assets management; and iv) big data analytics.

Rapid digitalisation of the port processes, including the entire logistics chain, has been the current trend. This, in turn, exposes new potential vulnerabilities in terms of hybrid operations, as the opportunities and likelihood for cyberattacks, for example on ships or in critical ports, increases drastically. At worst, this kind of attack could cause economic losses worth billions.

Particularly, situations where a large discrepancy exists between different operators' level of technological maturity and know-how regarding operating the systems create great vulnerabilities in the hybrid context. Operators using common or shared platforms – such as authorities' or seaports' systems – for a certain type of data exchange may become vulnerable to cyberattacks or other malicious activities through loopholes.

This development has also been witnessed in several recent cyberattacks, which have usually been targeted elsewhere, but the maritime community may also have been seriously affected, reportedly by way of "collateral damage" (see, e.g. Kiiski 2018). A similar pattern can also be observed among authorities, such as maritime, coast guard and naval authorities, who operate at different levels of IT maturity within the EU, not to mention globally. The entire port community must recognise this trend and seek the necessary solutions to maintain and improve resilience.

Furthermore, in many countries competent authorities have very tight budgets, and hence, bringing state-of-the-art technology into widespread operational use is not easy. Some capabilities also seem to be in short supply in many countries, such as advanced underwater surveillance equipment and systems, the capacity to analyse sensor data (so-called Big Data Analytics) and the means to leap into digitalised Vessel Traffic Management systems, for example.

This situation needs to be seen against the backdrop of recent developments in European as well as worldwide waters: one seems to be witnessing a deteriorating scenario of hybrid threats, which have already included the use of cyberattacks, Anti Access/Area Denial (A2/AD) tactics and

2 As defined by Gartner, digitisation refers to the process of changing from analogue to digital form, whereas digitalisation refers to the use of digital technologies to change a business or an operations model and provide new revenue and value-producing or other opportunities; in other words, it is the process of moving to digital operations.

submarine/underwater arms systems. As a whole, the highly interconnected and delicate maritime community forms an entity in which imbalances are creating easy targets and entry points for exploitation and hostile activities.

In order to prevent and respond to these activities, intensification of the exchange of information at national and international levels (including speedy implementation of CISE) and structured implementation of existing EU requirements (e.g. EUMSS) are required. Confidence-building measures and regular exchange/interconnection of situational pictures between partners (e.g. NSCMIG; EUROSUR) are just some examples of the work that could be done in this respect.

2.2 The economic impacts of maritime hybrid threats

Sea Lines of Communications are also subject to various types of natural and/or man-made disruptions. Severe weather conditions typically affect available and safe SLOCs or seaport capacities for a relatively short period of time, i.e. days rather than weeks. Some man-made actions, such as enduring strikes, establishing control zones or blocking SLOCs, however, may affect shipping for several weeks or even months.

As a general rule, the shorter the incident or disruption affecting SLOCs, shipping or ports, the smaller its economic impact. If the duration of the disruption grows longer, the direct and indirect economic consequences tend to grow exponentially, which is exemplified below:

INDUSTRY-SPECIFIC IMPACTS

Direct economic losses of:
e.g. higher rates, loss of capacity, longer transit
Shipping industry
Seaport industry
Cargo owners
Ultimately the consumers

Indirect impacts:
Supply chain delays
Supply chain shortages
More complex materials management
Need for alternative:
- Routes and/or transport modes
- Procurement sources

NATIONAL & REGIONAL ECONOMY IMPACTS

Impact on economic activity
Increased uncertainty and need for contingency planning and actions
Security of Supply issues
Possible need for intervention on:
- Shipping supply/demand
- Facilitation of alternative routes or modes
- Other actions by authorities

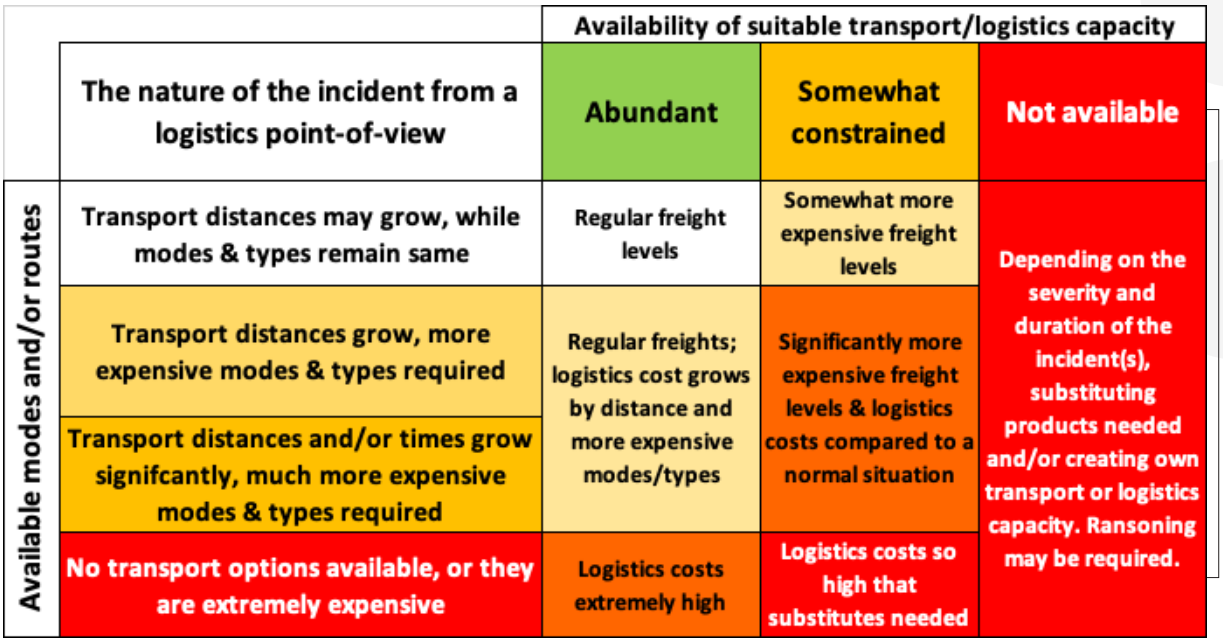


FIGURE X. Simplification of how the supply of logistics service provision adapts to disruptions.

The economic impact of delays for shippers (i.e. cargo owners) varies significantly depending on, e.g. the value and perishability or criticality of goods as well as on the required transport distance. For example, Hummels and Schaur (2013[3]) have estimated that a supply chain delay of one day equals an *ad valorem* customs tariff of 0.6% to 2.1%. The lower boundary typically refers to low-valued and non-perishable goods, while the upper boundary typically refers to high-value, critical and/or perishable goods. This means that even relatively minor disturbances to supply chains may cause significant direct and indirect economic costs or losses for various economic stakeholders.

Depending on, e.g. the severity, duration and geographical coverage of a disruption, the market for transport and other logistics service provision adapts to the situation in various ways, which are exemplified in Figure X.

The demand for transport and other logistics services stems from the demand generated among trading parties, i.e. economic entities selling and buying goods. As such, the supply of logistics services is also constantly being adapted to meet changing market needs in "business as usual" situations. This adaptive behaviour also occurs during disruptions, where the price for logistics services may increase rapidly and significantly if the demand exceeds the available capacity.

2.3 Legal and contractual issues pertaining to the maritime domain

Recent developments, such as those in and around the Sea of Azov and in the Strait of Hormuz in the spring and summer of 2019, have clearly demonstrated how security measures at sea and the disturbance of shipping may have immediate and/or long-term effects on the economy. Some of these security measures have been justified on the basis of the rights granted in international law. Thus, it has become evident that these kinds of methods may be used as a potential instrument tool in a hybrid conflict.

For experts, it seems to be easy to find unity concerning what can and cannot lawfully be done – the norms are clear enough. On the other hand, outside of a small circle of real legal experts, this knowledge is seldom shared. There is a chance for

3 David L. Hummels and Georg Schaur, "Time as a Trade Barrier", American Economic Review 103, no. 7 (December 2013): 2935–59

confusion and even mistakes among those actors that remain poorly informed. There are a few potential situations where two parties may both resort to rights based on the UN Convention on the Law of the Sea (UNCLOS). A good example is the right of a state to use another state's Exclusive Economic Zone (EEZ) for naval exercises while all other nations have the right to free navigation. In such a situation where these rights are being set against one another, any nation should be well prepared to promote its own cause with the support of its allies and partners in international for a, such as the EU, NATO and the UN.

There is a compelling need to study the international legal regime of the sea, such as UNCLOS, International Law Applicable to Armed Conflicts at Sea and Maritime Law, in a hybrid context due to the complex interplay between them. These legal frameworks sometimes produce surprising interpretations of what is allowed and what is not allowed in international and/or territorial waters.

To be able to prevent and/or counter maritime hybrid threats effectively and in a timely manner, political-level audiences as well as competent authorities tasked to secure SLOCs and critical maritime infrastructure need to be informed about the type of potential hybrid operations exploiting the interface of legally permitted or prohibited activities, respectively. To this end, the *Handbook on Maritime Hybrid Threats* aims to provide a better understanding of the existing international legal framework relevant in hybrid operations.

2.4. Towards the Handbook on Maritime Hybrid Threats; the Workshop on Hybrid Scenarios in the Baltic Sea

The Handbook builds on previous maritime security activities of Hybrid CoE/COI VR, and particularly on the ***Workshop on Hybrid Scenarios in the Baltic Sea***, which was organised jointly by Hybrid CoE and the maritime and seaport safety and security project platform ResQU2 and its lead partner, the University of Turku, in Finland, on 28–29 May 2019.

The workshop brought together experts, stakeholders and key decision-makers from the political, military and academic spheres. In the workshop, participants were asked to focus on the dependencies, vulnerabilities and needs of Baltic Sea neighbouring countries that are EU Member States and/or NATO members in view of maritime hybrid threats. The aim was to strengthen the resilience and a comprehensive understanding of and response to threats exploiting maritime vulnerabilities in the region.

During the workshop, multiple potential hybrid threat scenarios with realistic charts and shipping routes were discussed. Scenarios referred to potential economic and political losses, and UNCLOS and other relevant parts of international law were revisited in all cases. Each scenario contained a legal opinion covering the main legal issues and responses in relation to the scenario.

Legal opinions were prepared by three legal experts. Naturally, the legal points of view were only a condensed version of an actual judicial assessment that would be needed in a real case. However, the legal opinions effectively highlighted the interpretational complexities between legal norms of various types and scope and between actual or possible jurisdictions involved.

The workshop produced recommendations based on commonly identified requirements and demands affecting both public- and private-sector stakeholders and covering political, economic, social, technological, environmental, legal and military concerns. Thus, solid policy recommendations at a national as well as a European level could be provided.

The workshop's findings also partially contributed to high-level, scenario-based policy discussions on countering hybrid threats, which were organised in July and September of 2019 by the Finnish Presidency for the Council of the EU. In addition, the scenarios were presented to the EU PSC Ambassadors in the autumn of 2019.

3. MARITIME SCENARIOS

The following section covers topical and realistic maritime hybrid threat scenarios, which have been carefully constructed by a team of legal and logistics experts and Hybrid CoE/COI VR. The scenarios have been put together in expert meetings in Helsinki and Brussels in the course of the spring and summer of 2019.

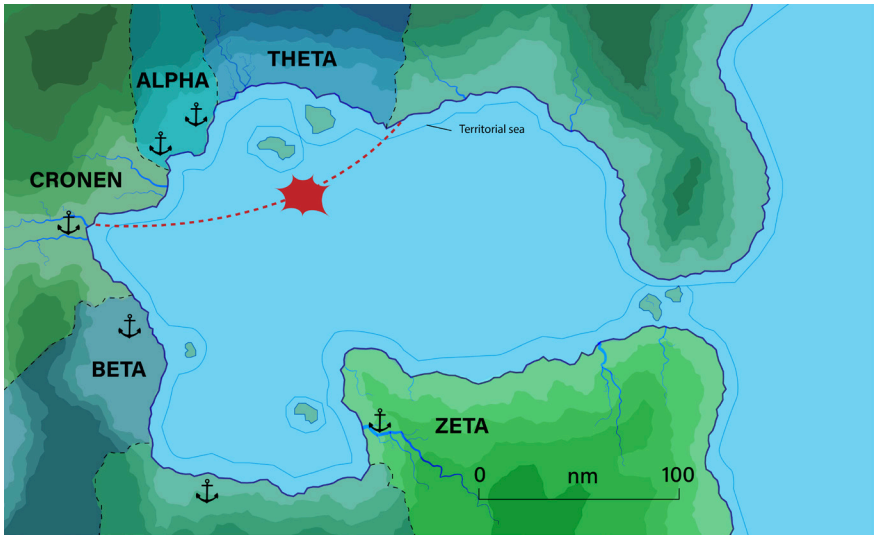
Each of the scenarios describes a security measure hampering shipping. The attached legal scans put the developments in a valid legal framework.

Scenario 1. Protection of an underwater gas pipeline

Weather conditions in the sea involve a storm from the south-east. A large bulk carrier has a blackout and it starts drifting into the EEZ of Country Theta, which is an EU coastal state. Emergency anchorage is necessary because the vessel cannot remain on the windward side, or else it risks shifting its load. The vessel's anchor holds badly, and the vessel starts to drift slightly. When drifting stops, the ship is more or less above an underwater gas pipeline belonging to Corporation Eta, the majority ownership of which is in Country Cronen. After some hours, the problem is fixed, the anchor is raised and the vessel moves on.

Two days later, the majority owner of the pipeline Corporation Eta from Country Cronen, with the support of the Ministry of Foreign Affairs of Country Cronen, approaches the government of Country Theta. They demand that Country Theta cover the cost of the pipeline inspection and possible repairs. They argue that Country Theta should have protected the pipeline by not attempting anchorage next to it and/or should have arranged for towage to help before and during the raising of the anchor.

Can Corporation Eta hold Country Theta liable for damage caused by the bulk carrier in distress within the EEZ/on the continental shelf of Country Theta?



SCENARIO 1. Protection of an underwater gas pipeline

Legal scan of Scenario 1. Protection of an underwater gas pipeline

Corporation Eta, the owner of the underwater pipeline, with the support of the government of Country Cronen, seeks to hold the government of Country Theta liable for damage caused by a bulk carrier in distress within the EEZ/on the continental shelf of Country Theta.

Corporation Eta and Country Cronen base the claim on an alleged violation by Country Theta of a coastal state obligation to ensure the safety of pipelines. In order for the claim to be successful, such an obligation would have to exist under public international law. Such an obligation, which in any case would be an obligation of due diligence that requires only reasonable efforts on behalf of the coastal state and not an absolute prevention of harm, does not exist.

There is an obligation on the part of coastal states to have due regard for the right of other states to lay submarine cables and pipelines (Article 56(2) UNCLOS) and to not impede the laying or maintenance of such cables or pipelines (Article 79(2) UNCLOS).

The coastal state does not even have the necessary rights to fulfil such an obligation, as it only has the right to take reasonable measures for the prevention, reduction and control of pollution from pipelines, not a general right to ensure the safety of the pipeline from international shipping.

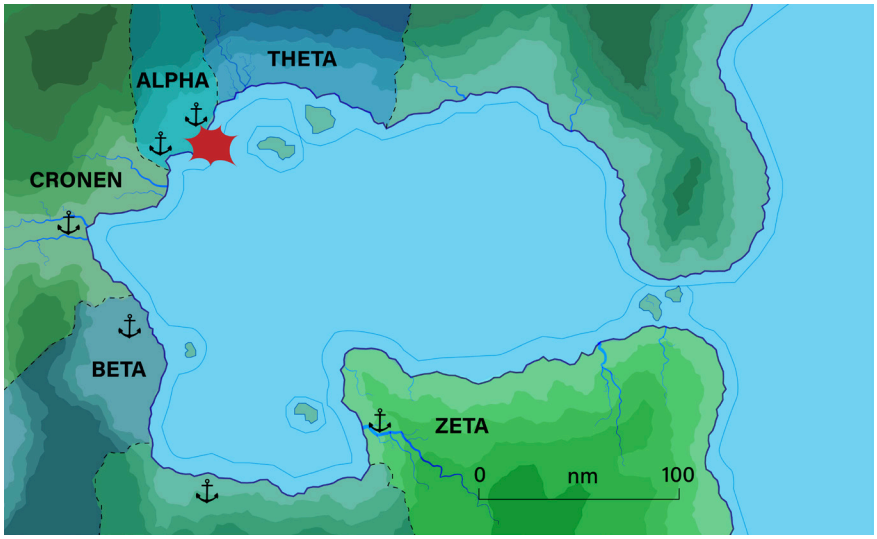
Measures to protect submarine cables in the EEZ against damage by international shipping fall within the responsibility (and exclusive rights) of flag states and the states of nationality of the persons involved (Articles 58(2), 113 of UNCLOS). Therefore, Country Theta has not violated any international obligations and does not bear international responsibility.

Neither Corporation Eta nor Country Cronen can hold Country Theta liable for the damage caused by the EU-flagged ship's anchoring.

Scenario 2. Cyber-attacks against shipping

The focal vessel is a tanker registered in the EU Member State of Zeta and owned by a company headquartered in a non-EU Member State named Rho, which is not a party to UNCLOS. When approaching an oil terminal in the EU Member State of Alpha, the vessel loses steering and engine control, the engines go full speed ahead and the ship crashes into a mooring station for an oil terminal. As a result, the mooring station is seriously damaged, and the tanker sustains a minor oil leak.

After two weeks, specialists find advanced malware in the ship's computer systems and an installed communication link allowing for external



SCENARIO 2. Cyber-attacks against shipping

steering. As a result, insurance companies for the ship claim no responsibility for the crash based on their cyber disclaimer.

After three weeks, some criminal actors blackmail another shipping company, demanding 10 million EUR for revealing the names of other ships where the same malware has been installed. After four weeks, attribution to a state actor (Country Cronen) is discussed and a majority of EU and NATO governments release statements attributing blame to Country Cronen, statements which are deemed credible based on evidence and intelligence.

Has Country Cronen violated international law?

Legal scan of Scenario 2. Cyber-attacks against shipping

In order to constitute a violation of a rule of public international law, which in turn would constitute an internationally wrongful act, one which engages the responsibility of that state, the cyberattack must first of all be attributable to Country Cronen.

Attribution is always a challenge in such cases, but it is not invariably an insurmountable obstacle. However, attributing legal responsibility requires a fairly high degree of certainty, and this is not always possible.

The question is, thus, whether specific cyber acts could convincingly be attributed to either a state (a governmental agency such as the armed forces, intelligence service, etc.) or to a group of identifiable individuals operating at the behest of and under the direction of a state (so-called "patriotic hacktivists"). In the scenario at hand, attribution is assumed to be possible.

Therefore, the second question is whether there are international obligations that prohibit cyberattacks on navigation. The international law of the sea, and UNCLOS in particular, do not explicitly deal with cyber-security issues such as cyberattacks on ships. However, interference with a merchant ship's navigation and damage to that merchant ship constitute a violation of UNCLOS, depending on where the ship is located at the time of the attack.

If the ship is located on the high seas or in an EEZ, a cyberattack by a state violates the flag state's freedom of navigation, respectively, under Article 87(1)(a) or Article 58(1) of UNCLOS. In the territorial sea, the right of innocent passage comes into play (Article 17 of UNCLOS), as does the coastal state's sovereignty (Article 2(1) UNCLOS).

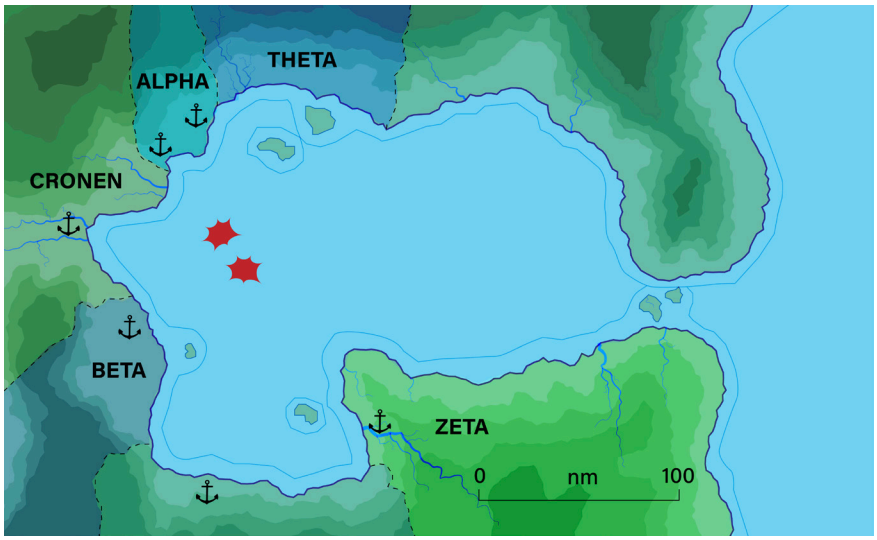
The attack might potentially also violate various other obligations concerning safety at sea arising from treaties, such as the 1972 International Regulations for Preventing Collisions at Sea (COLREGs). If the cyberattack also causes an oil spill or other form of marine pollution, it violates the obligation to protect the marine environment under Article 192 of UNCLOS. Equally, damage caused to port facilities following a cyberattack on a ship constitutes an internationally wrongful act.

Apart from the law of the sea, two further considerations must be taken into account.

Firstly, in the *Tallinn Manual 2.0*[4] experts identified the existence of a rule of customary international law prohibiting (cyber) acts that violate the sovereignty of another state (Rule 4, *Tallinn Manual 2.0*). This rule is based on state practice, UN resolutions and various decisions by international courts and tribunals. Notwithstanding the view expressed by some states that sovereignty is simply a foundational principle and not a rule of international law in itself that can be violated, it is probable that the majority position of states is reflected in the Tallinn Manual rule. Hence, a cyber act that violates the sovereignty of a state would constitute a violation of customary international law in addition to the violations of UNCLOS referred to above. By preventing the flag state from exercising its exclusive jurisdiction and control over the navigation of the vessel, the act violated the sovereignty of the flag state. If the act occurred in the TS of a coastal state it would additionally violate the sovereignty of that state as well. This would strengthen the case of the injured state(s).

Secondly, the question arises whether the cyber act constituted a use of force. Here, as stated, it is a matter for careful consideration and the positions of experts and states are not uniform,

4 Michael N. Schmitt (ed.), *Tallinn Manual 2.0 on the International Law Applicable to Cyber Operations* (Cambridge: Cambridge University Press, 2017).



SCENARIO 3. Clandestine use of underwater weapons

hence conclusions are debatable. But it should be noted that many states and experts take the position that a cyber act that results in physical damage to objects and/or (potential) injury to persons constitutes a use of force in violation of Article 2(4) of the UN Charter. For example, in the previously mentioned *Tallinn Manual*, the experts unanimously took the position that subject to a *de minimis* threshold, "consequences involving physical harm to individuals or property will in and of themselves qualify a cyber operation as a use of force".[5] On the basis of the characterisation of the damage to the mooring station as "serious", it would seem likely that the *de minimis* threshold has been met. Note also that even if one were to conclude this act constituted a use of force, the majority position of states and experts would almost certainly not characterise it as an "armed attack" under Article 51 of the UN Charter. Hence, any response would have to be confined to the utilisation of settlement procedures in pursuance of a claim for damage arising from the incident. These could potentially be complemented by acts of retorsion and/or non-forceful countermeasures subject to the procedural rules governing the imposition of countermeasures (see Annex on Legal Responses).

Scenario 3. Clandestine use of underwater weapons

During the previous six weeks, three explosions sank two vessels owned by the EU Member States of Alpha and Beta (one of which is also a NATO country) en route to a port in Country Alpha, respectively. Two buoyant WWII contact mines are detected by surveillance planes and eliminated by the Navy.

One week after the latest explosion, the government of Country Zeta released technical evidence compromising the assumption about old contact mines: all damage was deeper under the hull, near the stern, and all explosions hit the engine room. After two weeks, attribution claims are presented against Country Cronen based on circumstantial satellite evidence. All parties also continue widespread efforts to find more evidence on the seabed. Country Cronen regards these claims as a serious offence against itself.

What are the consequences if attribution is seriously made to a state actor (Country Cronen)?

Has Country Cronen violated international law?

5 Schmitt, *Tallinn Manual 2.0*, Commentary to Rule 69 on p. 334.

Legal scan of Scenario 3. Clandestine use of underwater weapons

The clandestine use of underwater weapons resulting in (potential) damage to vessels and/or injury or loss of life to the crew of the vessels crosses the line from interference to actual use of force under Article 2(4) of the UN Charter.

The planting of any such explosive devices on board a vessel at sea or in port by individuals not in state service would bring the 1988 SUA Convention and, as far as applicable, its 2005 Protocol into play. This provides for criminal jurisdiction and international legal cooperation in suppressing acts directed against the safety of maritime navigation.

Proceeding on the assumption that the use of clandestine weapons in peacetime is directly attributable to a state, such activities should also be incompatible with the prohibition of the use of force under Article 2(4) of the UN Charter, the obligation to use the high seas/EEZ only for peaceful purposes under Articles 88 and 301 in conjunction with 58(2) of UNCLOS, and finally the freedom of navigation in the high seas/EEZ under Articles 87(1) and 58(1) of UNCLOS.

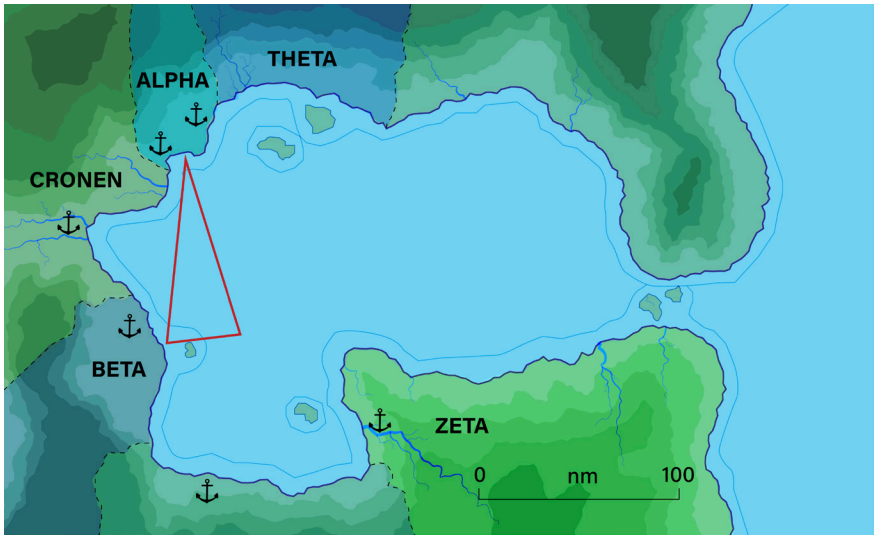
This could potentially be a matter for the UN Security Council or other international organisations, such as NATO or the EU, acting within their scope of authority under the UN Charter and their constituent instruments. While sporadic acts of force not resulting in significant harm or injury would probably fall short of an "armed attack" under Article 51 of the UN Charter, they would nevertheless constitute a serious violation of international law and would result in the responsibility of the state in question.

If the damage were more serious and/or resulted in human casualties, the line between a "hybrid" and a direct threat would be crossed and the right of self-defence under Article 51 of the UN Charter and customary law would come into the picture.

Scenario 4. Shooting and exercise area declared dangerous and blocking SLOCs

Country Cronen declares a shooting and exercise area dangerous and blocks a sea route to a port of EU Member State Beta, which is also a NATO member. An intense LIVEX, including the use of various arms systems, has been ongoing for two weeks and is situated in the vicinity involving merchant vessels navigating through the area. As a result, ferry and liner shipping lines have halted their ships, and some companies have suspended activities. The disruption of SLOCs also affects EU Member State Alpha. Exercises are to continue until further notice.

Has Country Cronen violated international law?



SCENARIO 4. Shooting and exercise area declared dangerous and blocking SLOCs

Legal scan of Scenario 4. Declaring a shooting and exercise area and blocking SLOCs

Military exercises in the territorial sea of another state, as presented in this scenario, are completely illegal because they constitute a violation of the sovereignty of the coastal state in the territorial sea (Article 2(1) of UNCLOS). They are in breach of the regime of innocent passage (see Article 19(1) and 19(2)(b), (e), (f), (l) of UNCLOS). Insofar as they also affect the navigation of vessels of third states, the right of innocent passage of those states has also been violated (Article 17 of UNCLOS).

Military exercises on the high seas and in the EEZ do not per se violate the peaceful purposes clauses in Articles 88 and 301 of UNCLOS. Those provisions do not result in a prohibition of all military activities on the high seas and in EEZs, only those that threaten or use force in a manner inconsistent with Article 2(4) of the UN Charter. However, states conducting military activities on the high seas or in the EEZ of other states must, under Articles 87(2) and 58(3) of UNCLOS, have due regard for the rights and obligations of other states and of the coastal state, respectively.

In essence, these due regard obligations require that the state takes all necessary measures to ensure that its military activities do not undermine the rights and obligations of other states. In other words, the interference in the rights of other states must be as slight as possible and must be commensurate with the military exercise.

Aspects that have a direct bearing on the proportionality of the operations are, among others:

(1) the extent of the area of military exercises,
(2) the duration of the exercises,
(3) the severity of the restrictions imposed on the rights of other states,
(4) the availability of less intrusive alternatives, and
(5) the extent, timeliness and accuracy of the notification (e.g. to NOTMAR) to affected states.

In addition, it is obvious that such an exercise may not involve any use of force against foreign vessels unless a vessel or aircraft posed an immediate threat to the vessels conducting exercises in the exercise zone.

Bearing in mind that live-fire military exercises blocked Country Beta's only port (and potentially one port of EU Member State Alpha), with potentially significant economic losses, and disrupted major civilian (e.g. ferry) shipping lanes and that the navigational warning procedures were not properly executed (i.e. civilian ships were not notified about the duration of the exercise, and therefore, were not able to prepare in advance for disruptions), the naval exercises clearly violated the abovementioned obligations. In addition, further analysis of the relevant circumstances could be required to ascertain, for example:

1) the size of the area of Country Beta's exclusive economic zone that was declared dangerous for shipping due to the military exercises;
2) how many civilian ships had to stop operations or change the course of their navigation due to the military exercises and how substantial the diversion was compared to the original route;
3) whether the other routes that the ships had to use due to the military exercises were equally safe and secure; and
4) whether there were any other negative consequences on unrestricted navigation in the sea, such as failure to deliver cargo on time, extra costs incurred in changing course and disruption of the operations of seaports in Country Beta and Country Alpha, in particular.

Scenario 5. Declaration of a control zone around one of the islands in the sea

Country Cronen declares a control zone in the sea region around one of the islands belonging to EU Member State Alpha, with implicit impacts also on EU Member State Theta, claiming the following as the motivation for such action:

i) an anti-terrorist operation in the area;
ii) an armed conflict elsewhere outside the sea region;
iii) an armed conflict elsewhere within the sea region;
iv) a unilaterally declared (by the offender) armed conflict with the host nation; or
v) a bilaterally declared armed conflict.

Has Country Cronen violated international law?

Legal scan of Scenario 5. Declaration of a control zone around an island

i) An anti-terrorist operation in the area

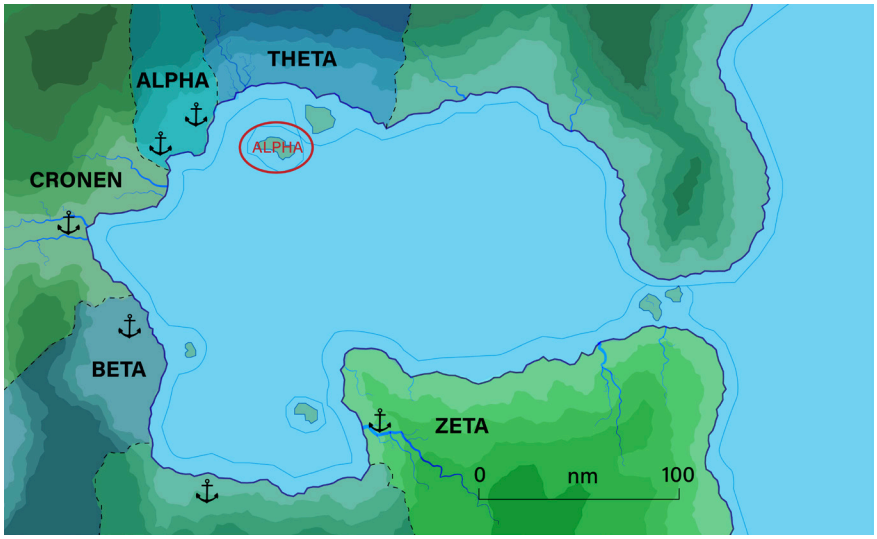
The imposition of a control zone in peacetime around any island would be incompatible with international law regardless of whether it was based on an anti-terrorist operation or on other grounds. Such a zone would be in violation of the sovereignty of the affected territorial state, of the sovereignty of the coastal state in its territorial sea (Article 2(1) of UNCLOS), and of the sovereign rights of the coastal state in its EEZ and on its continental shelf (Articles 56(1) and 77(1) of UNCLOS).

In addition, it would constitute an impermissible intervention into the domestic affairs of the affected state and, if coupled with the threat or actual use of armed force, would constitute a use of force in violation of Article 2(4) of the UN Charter and, if rising above a small-scale armed incident not resulting in significant material damage or injury, would also amount to an "armed attack" triggering the right of individual or collective self-defence under Article 51 of the UN Charter along with Article 5 of the NATO Treaty and/or Art. 42(7) of the EU Treaty, as the case may be.

As far as other states exercising navigational rights in peacetime are concerned, the control zone violates the right of innocent passage in the territorial sea (Article 17 of UNCLOS) and the freedom of navigation under Article 58(1) of UNCLOS.

ii) An armed conflict elsewhere outside the sea region; and
iii) An armed conflict elsewhere within the sea region

In these sub-scenarios, there is as yet no armed conflict in progress between the state imposing the "control zone" and the affected territorial state; hence, the law of armed conflict is not applicable to the situation until such time as actual



SCENARIO 5. Declaration of a control zone around one of the islands in the sea

force is employed by either state against the other. The affected territorial state has the status of a neutral state vis-à-vis the armed conflict ongoing elsewhere, unless it has become a party to the conflict by engaging in hostilities against a belligerent state or by providing direct combat support to a belligerent state.

As a neutral state, its territory is inviolable and may not be interfered with or entered by a belligerent party, except in the event of a serious violation of neutrality. Thus, the result is largely the same as in sub-scenario i).

iv) A unilaterally declared (by the offender) armed conflict with the host nation; or
v) A bilaterally declared armed conflict

In these sub-scenarios, the situation is different assuming that the declaration of a state of armed conflict was either a formal declaration of war or resulted in actual hostilities. In either case, the law of armed conflict would become applicable and would apply to all belligerent states equally, irrespective of other legal considerations, such as which state is the aggressor or is lawfully exercising self-defence. It operates alongside other bodies of law, including the law of the sea, human rights law and other treaties and bodies of law.

To the extent that the obligations arising from more than one body of law are compatible and are applicable to the situation at hand, both bodies of law will be given full application. If a conflict of obligation should arise, the more specific rule will take precedence. In most, but not all, cases, this will mean that the rule of the law of armed conflict will take precedence over rules of more general application.

During an international armed conflict, the law of naval warfare is applicable between belligerent states. This enables belligerent states to conduct attacks against lawful military objectives of the enemy state (e.g. warships, military aircraft and military installations, such as barracks, naval bases and military airfields) and engage in measures of control and denial of enemy coasts through blockades and similar measures aimed at interdicting commerce.

There are detailed rules on how such measures must be conducted. Most of them are now a matter of customary law, as the conventions on naval warfare dating from the beginning of the 20th century are now largely outdated. An authoritative guide to the contemporary law of naval warfare can be found in the *San Remo Manual on the Law of Armed Conflict at Sea* (1994), currently in the process of being updated.[6]

However, setting out these rules in detail goes beyond the scope of this condensed legal analysis. The rights of third states not party to the armed conflict are regulated in the law of neutrality and the law of naval warfare.

Scenario 6A. WIDE Force Protection Areas

Country Cronen declares that its Navy is on full alert and reserves the right to force protection by use of arms against any approaching sea or airborne targets. Merchant ships cannot easily avoid the force protection zones. After 12 hours, two merchant ships are fired upon by light cannons, and they turn back. After three days, the zones are maintained, and traffic has halted.

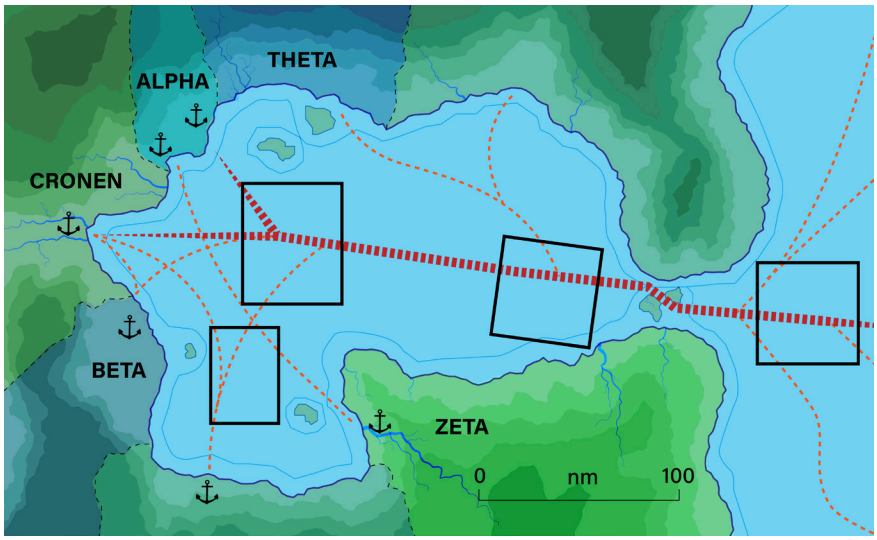
Has Country Cronen violated international law?

Legal scan of Scenario 6A. WIDE Force Protection Areas

The imposition of a wide "force protection zone" by Country Cronen, particularly in sea areas where navigation and access to a number of states would be impeded or denied due to geographical circumstances, such as narrow straits, is without any doubt unlawful. Such actions would breach the right to innocent passage in the territorial sea (Article 17 of UNCLOS) and the freedom of navigation in the EEZ (Article 58(1) of UNCLOS).

In addition, a wide "force protection zone", as indicated in the scenario, would potentially breach due regard obligations (Article 58(3) of UNCLOS) not only with respect to the sovereign rights of the

6 The *San Remo Manual* was adopted by the International Institute of Humanitarian Law (IIHL), which is an independent, non-profit humanitarian organisation based in San Remo, Italy.



SCENARIO 6A. WIDE Force Protection Areas

coastal state to explore and exploit, conserve and manage the natural resources of the exclusive economic zone as well as to engage in other activities for the economic exploitation and exploration of the zone, but also the freedoms that all states enjoy in the exclusive economic zone of another state. These include freedoms of navigation and overflight, the freedom to lay 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 the Convention (Articles 58 and 87 of UNCLOS). If the zone covers parts of a coastal state's territorial sea, it would also violate that coastal state's sovereignty (Article 2(1) of UNCLOS).

If such zones were enforced by treating any intrusion as grounds for automatically opening fire, it would constitute a serious violation of international law in a number of ways (violation of the law relating to the use of force under Article 2(4) of the UN Charter, violation of human rights law, etc.).

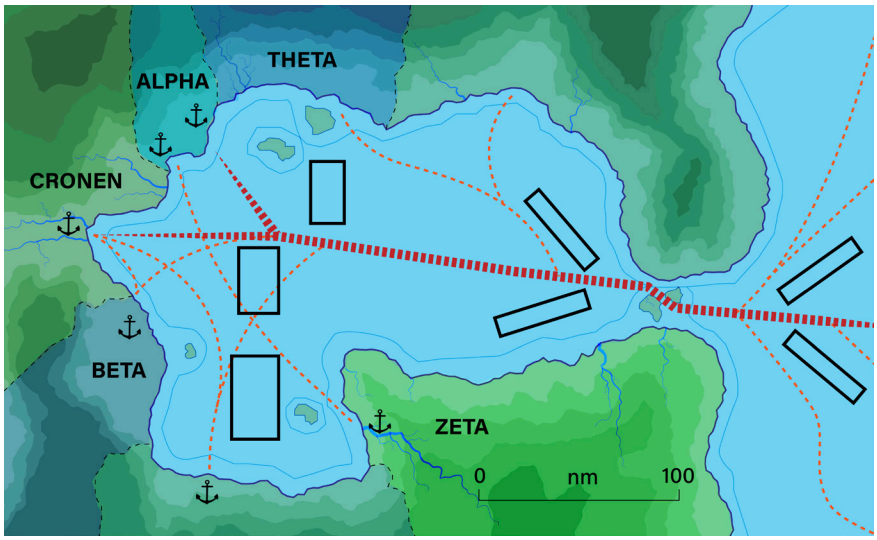
While states have the right to conduct military exercises in international waters and/or take reasonable measures of protection (see analysis concerning Scenario 4), this must be conducted in a way that pays full attention to the due regard requirement for vessels operating in the EEZ of another state, does not impede free navigation and does not involve the indiscriminate use of force. The zone as described here is in violation of all of these criteria.

In the event that such a zone were implemented, the affected states would be within their rights to provide protection to vessels sailing under their national flag and could operate joint patrols to ensure safe and unimpeded navigation, while taking into account any reasonable measures of protection (i.e. a safety zone that others were notified of in advance, that was of a temporary nature and that did not have the effect of denying free navigation or the exercise of the coastal state's rights within its own EEZ). Such measures could be taken alongside traditional diplomatic and economic measures of retorsion or countermeasures in the event of ongoing interference.

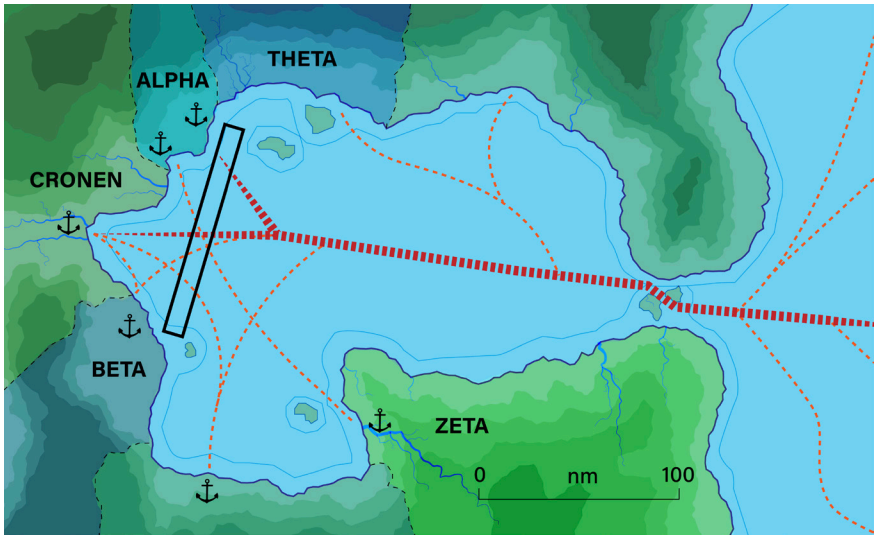
Scenario 6B. NARROW Force Protection Areas

After international reactions, the force protection zones in Scenario 6A are reduced in size, and in most cases, can easily be avoided by merchant ships. After 12 hours, two merchant ships are fired upon by light cannons, and they turn back.

Has Country Cronen violated international law?



SCENARIO 6B. NARROW Force Protection Areas



SCENARIO 7A. Ship Inspection Zone in front of countries Alpha and Beta

Legal scan of Scenario 6B. NARROW Force Protection Areas

Military exercises and activities are not illegal under the conditions analysed in the context of Scenario 4. However, "Force Protection Areas" in which vessels will be indiscriminately fired upon are completely illegal (see **Scenario 6A**), and in this scenario two merchant ships have been illegally fired upon (again, see **Scenario 6A**).

Scenario 7A. Ship Inspection Zone in front of countries Alpha and Beta

Country Cronen establishes a control zone where ships bound to two EU Member States (Country Alpha and Country Beta, the latter of which is also a NATO member) are stopped and searched by Country Cronen's navy and/or coast guard. The motivation for these acts, as announced by Country Cronen, is a suspected terrorist threat against undefined strategic targets.

Ships are subjected to random controls covering approximately 10% of all vessels within the control zone. Delays ranging from five hours to two days ensue; the average waiting time per vessel is 20 hours.

The first reaction by Country Alpha and Country Beta is to immediately protest the actions. Both countries (Alpha and Beta) send one coast guard vessel each to the site and heighten their naval and air force readiness.

After one week, the controls established by Country Cronen continue. Country Cronen shows evidence of explosives and WMDs found on board one Asian-registered ship. This is widely publicised on all of Country Cronen's media channels. Country Cronen declares that it will have to continue controls until further notice and possibly intensify them.

After three weeks, the controls established by Country Cronen have increased to cover approximately 20% of traffic. This increases the average delay per vessel to two days.

Country Cronen demands that Country Alpha and Country Beta allow controls to be made in their territorial waters for shelter purposes, depending on wind speed and direction.

Has Country Cronen violated international law?

Legal scan of Scenario 7A: Ship Inspection Zone in front of countries Alpha and Beta

A "Ship Inspection Zone" outside of internal waters off the coast of any state is unlawful under UNCLOS and the customary international law of the sea. It would clearly be in violation of:

- freedom of navigation in the EEZ (Article 58(1) of UNCLOS; the right of visit under Article 110 in conjunction with Article 58(2) of UNCLOS does not apply),
- the rights of innocent passage of ships passing through the territorial sea in this area (Article 17 of UNCLOS), and
- the coastal states' sovereignty (Article 2(1) of UNCLOS);
- insofar as EEZ areas are affected, there is also likely a violation of the obligation to show due regard to the rights and obligations of the coastal state under Article 58(3) of UNCLOS.

In the event of sporadic interference of a relatively minor nature, diplomatic measures and possible claims potentially combined with countermeasures (see above, under Scenario 1.2) aimed at halting further interference and providing reparations would be the normal response. If persistent and/or more invasive measures of control were exercised by a state in international waters, the state(s) affected could individually or jointly provide protection for their vessels in the form of a naval escort to ensure safe and unimpeded navigation.

In the event that such a naval escort was met with armed interference (use of weapons, ramming, attempted boarding) directed against either the escorting warship(s) or the vessels under its (their) protection, this could trigger proportionate and necessary measures of protection short of armed force, such as blocking counter manoeuvres or warnings, including warning shots where called for, and, in the event of a direct use of force, measures of self-defence aimed at warding off the unlawful armed interference.

What would constitute a necessary and proportionate measure of protection or self-defence would depend on the nature of the interference and the factual circumstances.

Scenario 7B. Ship Inspection Zone in front of countries Alpha and Beta

One month since establishing a control zone (Scenario 7A), the controlling of SLOCs by Country Cronen continues. There is a clash between Country Cronen's naval ships and coast guard vessels from two EU Member States (Country Alpha and Beta), the latter of which is also a member of NATO. The clash also involves warning shots and ramming. Country Cronen's frigate and destroyer vessels intervene and apprehend one coast guard vessel from both Country Alpha and Country Beta, and it takes the two vessels to Country Cronen's port. During the incident, the frigate uses missiles to shoot down one approaching military fighter jet plane from both Country Alpha and Country Beta. The two planes flew above the EEZs of the respective countries. The pilots were found dead.

The local media provides "strong" evidence of provocation from the West, where Country Cronen's coast guard vessels were intentionally damaged and under serious threat of being targeted by the missiles of the jet planes. The frigate acted in self-defence.

Based on increased tension, in two separate cases, i) and ii), Country Cronen declares measures against:

i) Country Alpha, in which hostile Western support is allegedly being prepared. Country Cronen reserves the right to stop and search, and if necessary, prevent all shipping to Country Alpha. In doing so, Country Cronen *de facto* controls traffic to a substantial part of the coastline of Country Alpha.
ii) Country Beta, where NATO forces are allegedly gathering for an offensive. Country Cronen reserves the right to stop and search, and if necessary, prevent all shipping to Country Beta.

Has Country Cronen violated international law?

Legal scan of Scenario 7B. Ship Inspection Zone in front of countries Alpha and Beta

Based on this scenario, the attacks against ships and the ensuing seizure of Country Alpha and Country Beta coast guard vessels by Country Cronen constitute a direct use of force in violation of Article 2(4) of the UN Charter. In addition, the attacks and seizure, depending on whether they took place in the EEZ or in the territorial sea, violate the coastal states' sovereignty in the territorial sea (Article 2(1) of UNCLOS), the prohibition of non-peaceful uses of the sea under Articles 88 and 301 of UNCLOS, the freedom of navigation under Articles 87(1) and 58(1) of UNCLOS, and the sovereign immunity of government vessels under Articles 32 and 96 of UNCLOS.

The shooting down of approaching military aircraft during an incident in which Country Cronen is engaged in illegally apprehending coast guard vessels of Country Alpha and Country Beta is a violation of Article 2(4) of the Charter and cannot be plausibly defended as a legitimate measure of self-defence. Firstly, it cannot be defended because the apprehension of the coast guard vessels was in itself illegal and self-defence is the use of lawful force to counter a prior or imminent use of unlawful force. Secondly, it cannot be defended because there is no indication that the approaching aircraft constituted a direct threat of attack upon Country Cronen's vessels. The shooting down of the two aircraft was consequently neither necessary nor proportionate. The same applies to the measures implemented against Country Alpha and Country Beta following the shooting incident. The measures referred to have no basis in international law, as they do not constitute either lawful measures of self-defence against an armed attack, nor can they otherwise be justified as countermeasures since no unlawful act has been committed and such measures do not conform to the criteria for the taking of countermeasures. Hence, they are illegal and, if they were actually carried out, would clearly constitute a violation of Article 2(4) of the Charter and, to the extent they were tantamount to a blockade, would additionally reach the threshold of constituting an armed attack (see, e.g. Article 3C of the Definition of Aggression annexed to UNGA Res. 3314 (XXIX) 12 November 1974).

In the ensuing situations i) and ii), assuming that an international armed conflict ensues (which would not be the case with a mere declaration,

but rather due to naval clashes beforehand), the conduct of Country Cronen would need to be assessed against the law of naval warfare. The rights of visit and search of merchant vessels are listed in the *San Remo Manual* in Section II, Articles 118 to 124.

These provisions allow military ships and aircraft to visit and search merchant vessels outside neutral waters if there are reasonable grounds to believe that they are subject to capture. As an alternative to capture, a vessel may also be diverted from its destination.

A neutral merchant vessel is exempt from the right of search and visit if it is bound to a neutral port, is under a convoy accompanying a neutral warship, the neutral warship's flag state warrants that the vessel is not carrying contraband or is otherwise not engaged in activities that are not neutral and if the commander of the neutral warship provides, if requested by the belligerent state, all information as to the nature of the merchant vessel and its cargo as could otherwise be obtained by visit and search.

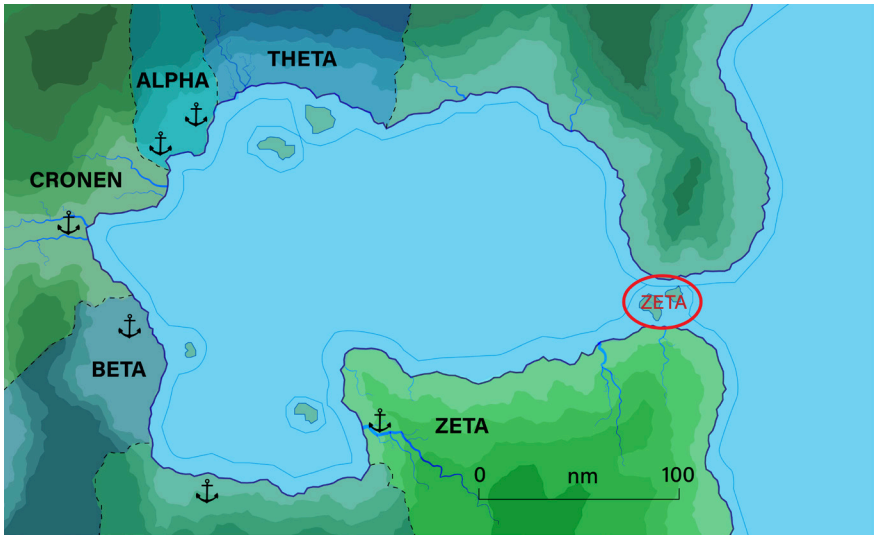
A belligerent warship or aircraft may divert a merchant vessel to an appropriate area or port to exercise search and visit if it is impossible or unsafe to conduct such activity at sea. Finally, as measures of supervision, belligerent states may establish reasonable measures for the inspection of the cargo of a merchant vessel as an alternative to visit and search, the compliance of which is not to be considered an act of a non-neutral nature with regard to an opposing belligerent.

In addition, neutral states are encouraged to enforce adequate control measures and certification procedures to ensure that the merchant vessel is not carrying contraband.[7]

Scenario 7C. Blockage of straits

In the event of Country Cronen's International Armed Conflict (IAC) with Country Alpha (EU Member State) and with Country Beta (both an EU Member State and a member of NATO), the EU's and also NATO's reactions are considered. In addition, the legality of possible blockage of the straits against Country Cronen, which is also a littoral state, is evaluated.

Is there any room for manoeuvre below the threshold of war?



SCENARIO 7C. Blockage of straits

7 An arrest of a governmental vessel (a coast guard vessel qualifies) would be completely illegal, unless it was conducted in internal or territorial waters of the arresting state when the coast guard vessels were engaged in unauthorised entry into internal waters or activities prejudicial to the peace and good order of the arresting coastal state and persistently refused to comply with orders to leave. However, it would not in and of itself trigger an IAC, unless by armed force, beyond what was strictly necessary to conduct a lawful peacetime arrest against the vessel or crew.

Legal scan of Scenario 7C. Blockage of straits

During peacetime, naval blockades (or other measures of control impeding free passage) are breaches of UNCLOS, as they interfere with the sovereignty and sovereign rights of coastal states and freedom of navigation on the high seas and in the EEZ, among other rules (see analysis of scenarios above), unless they are measures imposed by the UN Security Council to maintain international peace and security. (Note that a blockade is not synonymous with an embargo ordered on the basis of a resolution of the UN Security Council under Chapter VII of the UN Charter.) A blockade is a measure imposed by a state that prevents free access to a coast or ports of the state against which it is directed. A blockade is considered to constitute a use of force, which would constitute a violation of the prohibition of force under Article 2(4) UN Charter, unless it had justification under the right of (collective) self-defence (see, e.g. the "Definition of Aggression", UNGA RES. 3314, Art. 3C). Whether or not it would qualify as a lawful use of force in the context of (collective) self-defence would depend on whether it met the criteria for the exercise of (collective) self-defence (a prior or imminent armed attack, a request by an attacked state(s) for assistance, and necessity and proportionality *ad bellum*).

A blockade that is simply rhetorical, i.e. not enforced, is an unfriendly act, but not a real blockade factually or legally, and hence, it would not qualify as a use of force nor would it violate UNCLOS or trigger an armed conflict so long as it was strictly verbal. However, a closure of international straits linking third state and others with the open sea constitutes a *de facto* blockade, regardless of what term is used to describe it. Since a blockade constitutes a use of force, it would trigger an international armed conflict between the state(s) imposing it and the state it was directed against, and consequently, the applicability of the law of naval warfare. For a blockade to be lawful under this sub-regime of the law of armed conflict, it must meet a number of conditions (see Part IV, Section II, *San Remo Manual*). It must be duly notified and effectively and impartially enforced. Certain goods bound for an adversary are exempted from seizure if they meet the criteria of being strictly intended for humanitarian relief. Access to neutral ports by neutral vessels may not be denied. In a blockade, all vessels are, in principle, subject to belligerent visit and search. Neutral vessels may only be captured if they resist visit and search. In some cases, the visit and search of neutral vessels may be restricted or precluded if neutral vessels are traveling under neutral convoy (see above under Scenario 6). Belligerent merchant vessels are subject to capture and, if they perform certain acts, may be attacked as military objectives (e.g. providing intelligence to belligerent warships or aircraft). In summary, any blockade that in fact constitutes a "real" blockade through the act of being enforced is a blockade irrespective of what term is used to describe it and constitutes an "act of war", which renders the blockading state(s) parties to an international armed conflict.

Assuming that Country Cronen is engaged in an international armed conflict with either Country Alpha or Country Beta, and the (other) MS, EU and NATO states have not (yet) entered the armed conflict, they cannot lawfully take any measures against Country Cronen in terms of blocking the straits used for international navigation. Therefore, any kind of enforced blockade would be completely illegal. Once the states made the decision to exercise self-defence, their act would have to conform to the criteria for the lawful exercise of self-defence set out above for it to be legal under the UN Charter and the customary law relating to self-defence. It would additionally have to conform to the conditions for the imposition of a blockade under the law of naval warfare referred to above, irrespective of its legality as a measure of self-defence. It must be stressed that the question of applicability of international humanitarian law, including the law of naval warfare regulating blockade, is completely separate from whether an act is lawful under the law regulating the use of force. As stated above, once a blockade is imposed and enforced, it triggers an international armed conflict regardless of other considerations.

Scenario 8. Exploitation of a contested continental shelf/EEZ

Country Upsilon and Country Delta have a long-standing historical dispute over their continental shelf/EEZ boundary, with a large maritime area being contested by these two countries.

Country Upsilon has moved an oil rig into the disputed maritime area and drilled for oil there, claiming that it is exercising its sovereign rights to exploit the natural resources of its continental shelf/EEZ. Country Delta has frequently, but unsuccessfully, requested that Country Upsilon stop its drilling activities and negotiate a provisional boundary agreement.

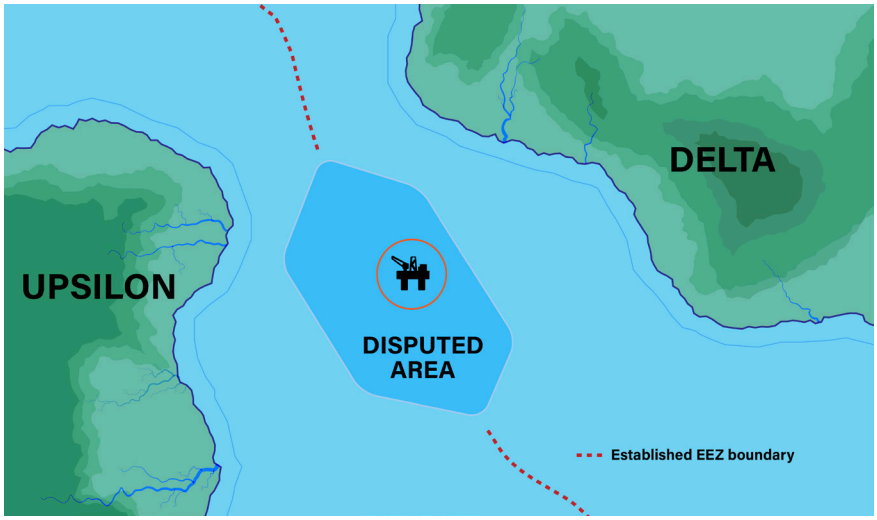
Country Upsilon has declared a 3000-metre safety zone around the oil rig. Coast guard ships from Country Upsilon are patrolling in the vicinity of the oil rig and harassing any approaching coast guard ships and fishing vessels from Country Delta in the safety zone. This has led to some material damage of the vessels and economic losses due to reduced fishing activity and potential economic losses due to exploitation of the disputed resources.

→ Can Country Delta successfully claim that Country Upsilon has violated international law?

Legal scan of Scenario 8. Exploitation of a contested continental shelf/EEZ

Country Delta can pursue two separate legal arguments against Country Upsilon based on (1) the latter's oil drilling activity in the disputed area and (2) the interference with Country Delta's coast guard ships and fishing vessels.

Concerning the oil drilling activity in an area of disputed EEZ and/or continental shelf, Country Delta can invoke Articles 74 and 83 of UNCLOS, respectively. These provisions, framed in identical terms, provide that the delimitation of the EEZ and continental shelf between states with coastlines on opposing or adjacent sides of a body of water shall be affected by agreement (Articles 74(1) and 83(1) of UNCLOS). Pending such agreement, as is the case in this scenario, both states have an obligation to make every effort to enter into provisional arrangements of a practical nature and an obligation not to hamper or jeopardise the reaching of a final agreement on the maritime boundary (Articles 74(3) and 83(3) of UNCLOS). The obligation "not to hamper or jeopardise" entails a prohibition against unilateral activities that might affect the other coastal state's rights in the disputed area in a permanent manner – such as making physical



SCENARIO 8. Exploitation of a contested continental shelf/EEZ

changes to the marine environment.[8] Oil drilling is such an activity. Therefore, by drilling for oil in the disputed area, despite refusing to negotiate a provisional boundary arrangement in light of Country Delta's attempts to initiate negotiations, Country Upsilon has violated both obligations in Articles 74(3) and 83(3) of UNCLOS.

Concerning the harassment of Country Delta's coast guard ships and fishing vessels by Country Upsilon's coast guard vessels in the vicinity of the oil rig, Country Delta may invoke its freedom of navigation in the EEZ, which applies also to disputes in EEZ/continental shelf areas (Article 58(1) of UNCLOS) and its right to fish in the disputed area, pending delimitation of the maritime boundary pursuant to Article 56(1)(a) of UNCLOS (to the extent that such fishing does not constitute a permanent physical change to the marine environment of the area).

The harassment of vessels not posing an immediate danger violates these rights, as it is not justified as an enforcement and protection measure in the safety zone around the oil rig (Articles 60(4) and 80 of UNCLOS). Safety zones around artificial islands, installations and structures – such as oil rigs – in the EEZ/continental shelf may not exceed a limit of 500 m unless authorised by the applicable international standards or by the IMO (Articles 60(5) and 80 of UNCLOS).[9] The safety zone established by Country Upsilon extends to 3000 m, and therefore, it far exceeds the permissible limits. It cannot be used to justify measures taken against foreign vessels, at least in its outer 2500 m.

In addition, Country Upsilon's coast guard ships, by harassing any approaching coast guard ships and fishing vessels from Country Delta, have likely violated obligations to take measures to prevent collisions at sea. Flag states are under an obligation to effectively exercise their jurisdiction and control over vessels flying their flag (Articles 94(1) and 58(2) of UNCLOS). In particular, they shall take such measures as are necessary to ensure safety at sea with regard to the prevention of collisions (Articles 94(3)(c) and 58(2) of UNCLOS). In taking these measures, Country Upsilon is required to conform to generally accepted international regulations, procedures and practices and to take any steps that may be necessary to secure their observance (Articles 94(5) and 58(2) of UNCLOS). It has been accepted in international jurisprudence that these accepted international regulations include the Convention on the International Regulations for Preventing Collisions at Sea (COLREGs).[10] Here, Country Upsilon's own coast guard ships, whose conduct is directly attributable to Country Upsilon, have intentionally harassed and possibly even rammed fishing vessels from Country Delta (although the latter is not entirely clear based on the facts of the case). Irrespective of whether material damage has resulted from deliberate collisions or as a result of recklessness, the actions are in violation of these regulations and Country Upsilon is *ipso facto* liable for any damage resulting from them, as the conduct of coast guard vessels is, as mentioned, directly attributable to the state.

Finally, based on the facts available, the harassment activities by Country Upsilon's coast guard ships do not amount to a use of force as prohibited by Article 2(4) of the UN Charter. However, depending on the extent and intensity of force used, the threshold for a violation of the use of force could hypothetically be crossed by conduct like that of Country Upsilon – particularly when directed at government vessels of the coastal state.

Scenario 9. Non-state actors

Country Omega and Country Kappa have had a long-term historical dispute over their EEZ boundary. Recently, the disputed area has been allocated to Country Kappa via a decision taken by an international judicial body, which is binding upon both states.

8 PCA, Guyana v. Suriname, Award of the Arbitral Tribunal, 17 September 2007, paras. 465–470; ITLOS, Dispute Concerning Delimitation of the Maritime Boundary between Ghana and Côte d'Ivoire in the Atlantic Ocean (Ghana/Côte d'Ivoire), Judgment, 23 September 2017, paras. 624–634.
9 IMO, Report to the Maritime Safety Committee, IMO NAV, 56th Session, Agenda Item 20, IMO Doc. NAV 56/20, 31 August 2010.
10 PCA, The South China Sea Arbitration (The Republic of Philippines v. The People's Republic of China), Award, 11 July 2016, paras. 1081–1109.

There are concerns that Country Omega is utilising politically motivated fishing vessels under its flag in the EEZ of Country Kappa. It has been suspected that these fishing vessels have harassed Country Kappa's fishing vessels by disrupting them, blocking their navigation through dangerous navigational practices and intentional ramming. The fishing vessels of Country Omega are escorted by a frigate from Country Omega's navy. Country Kappa claims that these actions are motivated by Country Omega's claim to traditional fishing rights in the area. No bilateral fisheries access agreement exists between the two states.

→ Can Country Kappa successfully claim that Country Omega has violated international law?

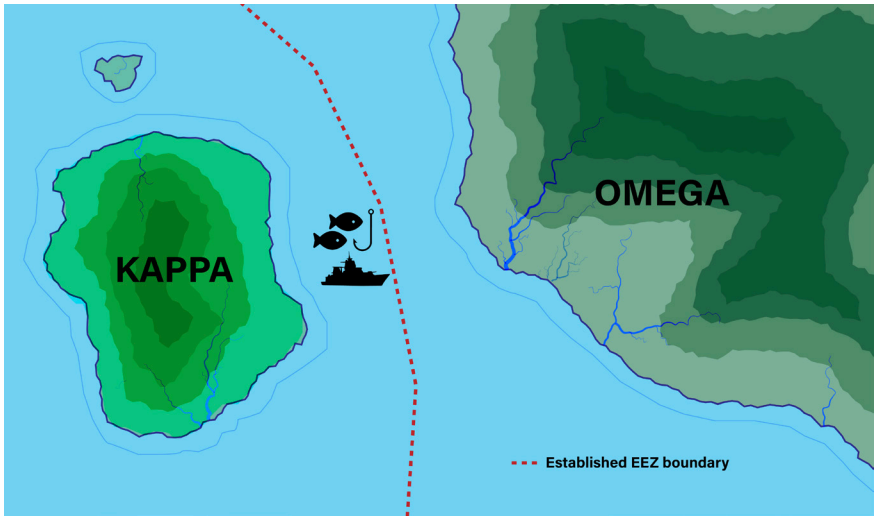
Legal scan of Scenario 9. Non-state actors

In this scenario, Country Omega appears to be using state-controlled "private actors", namely fishing vessels, as a proxy to assert its claim to traditional fishing rights in the EEZ of Country Kappa. However, Country Omega also maintains a presence in Country Kappa's EEZ with a warship that escorts its fishing vessels – likely to prevent enforcement actions by the coastal state against them.

As the coastal state, Country Kappa has sovereign rights over the marine life resources of its EEZ (Article 56(1)(a) of UNCLOS), which includes prescriptive jurisdiction (Article 62(4) of UNCLOS) and enforcement jurisdiction (Article 73(1) of UNCLOS). In the EEZ, all states enjoy freedom of navigation (Article 58(1) of UNCLOS). However, freedom of navigation does not include fishing in these waters without the consent of Country Kappa. So-called "traditional fishing rights" by third states in the EEZ have been held by international courts and tribunals to have been extinguished by the EEZ fisheries regime of UNCLOS, meaning that they cannot form a valid legal basis for the conduct of Country Omega's fishing vessels.[11] Therefore, Country Kappa can take enforcement measures against Country Omega's fishing vessels in order to ensure compliance with its law and regulations.

Against this background, Country Omega has potentially violated international law in several ways:

Firstly, if the conduct of the fishing vessels can be attributed to Country Omega because the seemingly "private" fishing vessels are in fact acting under its control and following its orders,



SCENARIO 9. Non-state actors

11 PCA, The South China Sea Arbitration (The Republic of Philippines v. The People's Republic of China), Award, 11 July 2016, paras. 239–262.

then Country Omega would have violated Country Kappa's sovereign rights over fisheries in the EEZ (Article 56(1)(a) of UNCLOS).

Secondly, failing such attribution, Country Omega has evidently failed to take the necessary measures to prevent the fishing vessels under its flag from fishing illegally in the EEZ of Country Kappa. The presence of its frigate as an escort to its fishing vessels is clear proof of Country Omega's knowledge of the illegal conduct by its fishing vessels and its ability to intervene. Article 58(3) of UNCLOS imposes a due regard obligation on all third states to respect the laws and regulations of the coastal state, which has been interpreted (sometimes in conjunction with Article 62(4) of UNCLOS) by both the International Tribunal for the Law of the Sea and an UNCLOS Annex VII arbitral tribunal as an obligation to ensure that fishing vessels under their flag do not fish illegally in the EEZs of other states. The omission by Country Omega of any measures to prevent illegal fishing by its fishing vessels constitutes a violation of its corresponding due diligence obligation under Article 58(3) of UNCLOS.[12]

Thirdly, any interference with Country Kappa's enforcement measures taken against the fishing vessels of Country Omega by that state's warship would constitute a violation of Country Kappa's sovereign rights over fisheries in the EEZ (Article 56(1)(a) of UNCLOS).

Fourthly, as the flag state of the fishing vessels, Country Omega is under an obligation to effectively exercise its jurisdiction and control over them (Articles 94(1) and 58(2) of UNCLOS). In particular, it shall take such measures for ships flying its flag as are necessary to ensure safety at sea with regard to the prevention of collisions (Articles 94(3)(c) and 58(2) of UNCLOS). In taking these measures, Country Omega is required to conform to generally accepted international regulations, procedures and practices and to take any steps that may be necessary to secure their observance (Articles 94(5) and 58(2) of UNCLOS). It has been accepted in international jurisprudence that these accepted international regulations include the Convention on the International Regulations for Preventing Collisions at Sea (COLREGs).[13] By failing to take measures to prevent its fishing vessels from ramming Country Kappa's fishing vessels, Country Omega has violated its due diligence obligation to ensure that its vessels respect international standards for the prevention of collisions.

Scenario 10A. Detention of a vessel by a coastal state based on an alleged terrorist attack

Political tension between Country Gamma and Country Iota is growing. A passenger cruise ship, sailing under the flag of Country Gamma and owned by Company X in Country Omicron, with over 2,000 passengers from several nations, receives warning of a terrorist attack on board. The crew of 500 persons also represents several different nations.

The cruise ship is currently in passage through the territorial sea of Country Iota to its destination, a popular tourist port in Country Gamma. The threat is issued by a small group of individuals, under instructions from Country Iota, who are threatening to blow up the cruise ship unless their demands are met.

Country Iota's law enforcement authorities rapidly launch a counter operation to allegedly eliminate the severe threat. The ship is boarded and detained by Country Iota for further inspections and action until further notice. No passenger or crew casualties nor material damage were reported, while Country Iota claims to have neutralised the alleged threat.

At the time of the unilateral actions taken by Country Iota, the cruise ship is located i) in the territorial sea of Country Iota or ii) in the EEZ of Country Iota.

→ Can Country Gamma successfully claim that Country Iota has violated international law?

12 PCA, The South China Sea Arbitration (The Republic of Philippines v. The People's Republic of China), Award, 11 July 2016, paras. 735–757.
13 PCA, The South China Sea Arbitration (The Republic of Philippines v. The People's Republic of China), Award, 11 July 2016, paras. 1081–1109.

Legal scan of Scenario 10A. Detention of a vessel by a coastal state based on an alleged terrorist attack

In this scenario, the coastal state (Country Iota) apparently stages a terrorist threat against a cruise ship sailing under the flag of its political opponent, Country Gamma, in order to intercept and detain the ship and damage Country Gamma's tourist industry.

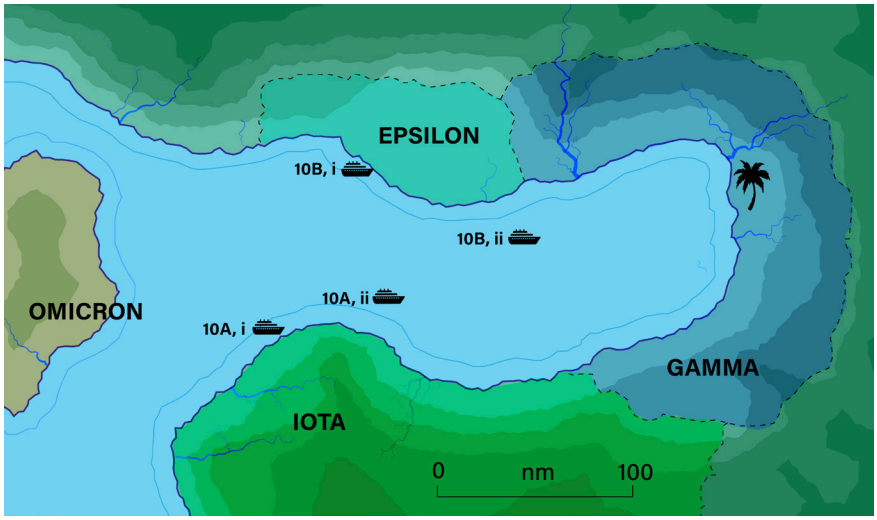
From an international legal perspective, it might be difficult to attribute the terrorist threat to Country Iota due to a lack of evidence. This is the main challenge for an assessment of the legality of the conduct of Country Iota. For this reason, it is useful to first analyse the situation by assuming that there was a real terrorist threat without any role on the part of Country Iota. Subsequently, the situation will be analysed on the basis of the assumption that sufficient evidence exists to attribute the terrorist incident to Country Iota.

Situation i): Territorial Sea of Country Iota

The coastal state has sovereignty in its territorial sea (Article 2(1) of UNCLOS), which also involves criminal jurisdiction (cf. Article 27 of UNCLOS). However, all states have a right of innocent passage through the territorial sea (Article 17 of UNCLOS), and coastal states are prohibited from hampering the innocent passage of foreign vessels (Article 24(1) of UNCLOS) except where they are expressly permitted to do so by UNCLOS or where the flag state has given its consent (Article 27(1)(c) of UNCLOS).

There is a general presumption that passage by foreign vessels is an innocent act (Article 19(1) of UNCLOS), but passage may be non-innocent if it is "prejudicial to the peace, good order or security of the coastal State" (Article 19(1) of UNCLOS). Article 19(2) of UNCLOS contains a non-exhaustive list of activities that are non-innocent. Terrorist activity is not explicitly included within one of the listed examples. However, terrorist activity can nonetheless be considered non-innocent either on the basis of the "backup" category in Article 19(2)(l) of UNCLOS or directly on the basis of Article 19(1) of UNCLOS, as it is "prejudicial to the peace, good order or security of the coastal State". Here, it should be noted that UN Security Council resolutions 1368 (2001) and 1373 (2001), adopted under Chapter VII of the UN Charter, indicate that terrorist attacks may be considered to pose a threat to international peace and security.

In this case, the coastal state may take "the necessary steps in its territorial sea to prevent passage which is not innocent" (Article 25(1) of UNCLOS). Depending on the circumstances, the



SCENARIO 10A. Detention of a vessel by a coastal state based on an alleged terrorist attack

boarding of a vessel may be a "necessary step" to prevent its non-innocent passage.

In any case, the coastal state may exercise criminal jurisdiction on board a foreign ship in passage "to arrest any person or to conduct any investigation in connection with any crime committed on board the ship during its passage", at least "if the consequences of the crime extend to the coastal State" or "if the crime is of a kind to disturb the peace of the country or the good order of the territorial sea" (Article 27(1)(a) and (b) of UNCLOS). In the case of terrorist activity, both these requirements may be fulfilled and the coastal state (in this scenario Country Iota) may lawfully board the affected vessel in order to neutralise the threat and exercise criminal jurisdiction.

However, the coastal state may only detain the vessel and crew for as long as it is necessary to neutralise the threat, make arrests/collect evidence and conclude its investigations.

To conclude: if there had been a real terrorist threat, Country Iota may have lawfully exercised jurisdiction over the cruise ship, but the legality of the ongoing detention depends on the circumstances of the case.

If, on the other hand, it is assumed that Country Iota has staged the terrorist threat, and if there is sufficient evidence to attribute the orchestrated threat to Country Iota, then Country Iota has clearly violated international law. The boarding and detention of the cruise ship would violate the right of innocent passage of Country Gamma (Article 17 of UNCLOS) and its obligation to not hamper innocent passage (Article 24(1) of UNCLOS). Given the malicious intent of Country Iota, as evidenced by the staging of the terrorist threat (assuming that sufficient evidence exists), these violations likely amount to bad faith and thus also involve a breach of Article 300 of UNCLOS.

Potentially, and depending on the human rights obligations of Country Iota arising from the human rights instruments it is a party to, Country Iota would likely also violate the rights of the individuals on board the vessel (both passengers and crew) to not be subjected to illegal detention or restriction of liberty.

<u>Situation ii): EEZ of Country Iota</u>

If the interception and detention of the cruise ship takes place in the EEZ of Country Iota, and if it is assumed that the terrorist threat was real and not attributable to Country Iota, then the state's conduct nonetheless constitutes a *prima facie* violation of international law, which might be justified under exceptional circumstances.

As the flag state of the cruise ship, Country Gamma enjoys freedom of navigation in the EEZ of Country Iota (Article 58(1) of UNCLOS) and exclusive enforcement jurisdiction (Articles 92(1) and 58(2) of UNCLOS). The issue of terrorist activity is not covered by coastal state jurisdiction (e.g. Article 56(1) of UNCLOS) and does not fall within an exception to exclusive flag state enforcement jurisdiction (e.g. Articles 110 and 58(2) of UNCLOS). Therefore, boarding and arrest are subject to the consent of the flag state (Country Gamma). However, no consent was obtained in the present scenario.

So even if the terrorist threat was real, Country Iota's interception and detention of the cruise ship constitutes a *prima facie* violation of Article 58(1) of UNCLOS and Articles 92(1) and 58(2) of UNCLOS. Notwithstanding the foregoing, there could be circumstances in which a boarding of the vessel might exceptionally be justified. In a situation where a clear threat to the safety of the vessel and the lives and safety of its passengers and crew appeared to be imminent and grave based on reliable information available at the time, a non-consensual boarding could potentially be justified under the rubric "state of necessity" under the law of state responsibility if it was the only means available to prevent the threat of detonating the vessel, endangering the lives of more than 2000 persons, and there was no realistic prospect of receiving timely consent from the flag state.

However, if the terrorist threat were staged by Country Iota and was attributable to that state based on the available evidence, then the staging of the terrorist threat itself might amount to a violation of the freedom of navigation of Country Gamma (Article 58(1) of UNCLOS). In any case, the interception and detention of the cruise ship would constitute a violation of Country

Gamma's freedom of navigation (Article 58(1) of UNCLOS) and its exclusive flag state jurisdiction (Articles 92(1) and 58(2) of UNCLOS). Given the malicious intent of Country Iota, as evidenced by the staging of the terrorist threat (if sufficient evidence is available), these violations likely amount to bad faith and thus also involve a breach of Article 300 of UNCLOS.

If the staging of the terrorist threat involves armed force, it could also constitute a violation of Article 2(4) of the UN Charter. However, the facts provided in the present scenario do not unequivocally point to such a conclusion. However, the persons responsible for a staged terrorist threat and ensuing seizure of the vessel and the persons on board in the context of a bogus criminal investigation may be subject to criminal prosecution under the laws of Country Gamma or those of the states whose nationals were subjected to intimidation and unlawful detention by agents of Country Iota or persons acting under its instructions. The owners of the vessel would be entitled to compensation for its unlawful seizure and detention under private law.

The assessment would be the same if the interception and detention had been conducted on the high seas, as the applicable legal rules are essentially the same (Articles 87(1)(a) and 90 of UNCLOS for the freedom of navigation and Article 92(1) of UNCLOS for exclusive flag state jurisdiction).

Potentially, and depending on the human rights obligations of Country Iota arising from the human rights instruments it is a party to, Country Iota's conduct would certainly constitute a serious violation of the rights of the individuals on board to not be subjected to threats of physical and psychological violence.

Scenario 10B. Detention of a vessel by a third country based on an alleged terrorist attack

Political tension between Country Gamma and Country Iota is growing. A passenger cruise ship, sailing under the flag of Country Gamma and owned by Company X in Country Omicron, with over 2,000 passengers from several nations, many of whom are from Country Iota, receives warning of a terror attack on board. The crew of 500 persons also represents several different nations.

The cruise ship is currently in passage close to Country Epsilon's waters, on its way to a popular tourist port in Country Gamma. The threat is issued by small group of individuals, who are threatening to cause an explosion on board the cruise ship unless their demands are met.

After receiving a distress call from the cruise ship, law enforcement authorities from Country Gamma and Country Epsilon are preparing to launch a counterterrorism operation to eliminate the severe threat. However, Country Iota unilaterally executes a counterterrorism operation in order to protect its citizens before the operation by Country Gamma and Country Epsilon has begun.

In the execution of its counterterrorism operation, Country Iota uses special forces to board the cruise ship and escorts it to a port in Country Iota for further investigation. No passenger or crew casualties nor material damage were reported, while Country Iota claims to have neutralised the alleged threat.

At the time of the unilateral actions taken by Country Iota, the cruise ship was located i) in the territorial sea of Country Epsilon or ii) in the EEZ of Country Epsilon.

→ Can Country Gamma and/or Country Epsilon successfully claim that Country Iota has violated international law?

Legal Scan of Scenario 10B:

In this scenario, a third state (Country Iota) that is neither the flag state nor the coastal state intercepts and detains a cruise ship sailing under the flag of its political opponent, Country Gamma, under the veil of an antiterrorism/rescue operation in order to damage Country Gamma's tourist industry. Both the flag state (Country Gamma) and the coastal state (Country Epsilon) might claim violations of international law.

<u>Situation i): Territorial Sea of Country Epsilon</u>

The coastal state (Country Epsilon) has sovereignty in its territorial sea (Article 2(1) of UNCLOS), which extends to combatting criminal activity that

affects its security and the good order of the territorial sea (Articles 25(1) and 27(1) of UNCLOS). There is no room for similar enforcement action by other states. Therefore, by intercepting and detaining the cruise ship in the territorial sea of Country Epsilon, Country Iota violated the sovereignty of Country Epsilon (Article 2(1) of UNCLOS).

In addition, all states have a right to innocent passage through the territorial sea (Article 17 of UNCLOS), which provides for unimpeded passage through the territorial sea of a coastal state (subject to some exceptions set out earlier). However, in this case it is not the coastal state (Country Epsilon) that intercepts and detains the cruise ship, but a third state (Country Iota). Third states have no jurisdiction whatsoever in the territorial sea of a coastal state and must respect the right of the flag state vis-à-vis vessels sailing under its flag. Hence, any act of law enforcement would be subject to the consent of the coastal state and would have to respect the flag state's rights.

However, Country Iota has not obtained the consent of Country Gamma to intercept and detain the cruise ship. Furthermore, none of the exceptions from exclusive flag state jurisdiction on the high seas apply in the territorial sea (e.g. Article 110 of UNCLOS). In addition, the duty to render assistance to ships in distress (Article 98 of UNCLOS),[14] which might also apply in the territorial sea, does not constitute an exception to exclusive flag state jurisdiction that can be used for the interception of foreign vessels.

In the absence of a legal basis for its conduct in UNCLOS, Country Iota could try to argue that it has a right under customary international law to rescue and evacuate its nationals from the cruise ship in light of the severe danger to their lives and safety. However, no such right is clearly established. Even if one accepts that such a right may allow for rescue operations in certain circumstances, it is unlikely that the criteria for forcible protection/evacuation of nationals in this case have been met, as it appears that no attempt was made to coordinate the operation with the coastal state and there is no reason to assume that the coastal state was not capable of addressing the threat. Alternatively, Country Iota could recognise the initial illegality of its operation but make a similar argument based on the defence of necessity under the law of state responsibility. However, it is unlikely that such a plea would be successful in this case for the reasons relating to the other putative justification, particularly in the absence of any attempt to coordinate their actions with the authorities of Country Gamma and Country Epsilon. At any rate, a right to rescue its nationals from the ship would not have entailed a right for Country Iota to detain the ship and escort it to one of its ports.

Against this background, the interception and detention of the cruise ship by Country Iota constitutes a violation of the flag state rights of Country Gamma.

Situation ii): EEZ of Country Epsilon

If the interception and detention of the cruise ship sailing under the flag of Country Gamma by Country Iota takes place in the EEZ of Country Epsilon, the legal situation differs slightly. The reason is that no coastal state rights of Country Epsilon are at issue if the events take place in its EEZ, where it does not have sovereignty and where the high seas regime of navigation applies largely *mutatis mutandis* (Articles 58(1), (2) of UNCLOS).

However, with respect to the rights of the flag state in an EEZ (Country Gamma), the situation is one whereby the flag state enjoys freedom of navigation (Article 58(1) of UNCLOS) and exclusive jurisdiction over its vessels (Articles 92(1) and 58(2) of UNCLOS) vis-á-vis third states, except for matters regulated under Articles 110, 111 or 105 of UNCLOS (each in conjunction with Article 58(2) of UNCLOS). Neither of these conditions is relevant here. In the circumstances of the present scenario especially, it is not tenable to maintain that piracy is at issue because the events are taking place

14 The duty to rescue is further clarified in a number of treaties, including the Convention for the Safety of Life at Sea (SOLAS) and the International Convention on Maritime Search and Rescue (SAR Convention).

on the same ship, without an attack on another ship, and are not undertaken for private ends (cf. Articles 101 and 105 of UNCLOS). While some commentators have argued that maritime terrorism should be considered tantamount to piracy, the prevailing position of both experts and states is that it is a separate category of unlawful acts against the safety of navigation, which is regulated by a separate convention.[15] Even if this were the case, the view that maritime terrorism constitutes piracy is generally rejected, although a minority opinion supports such an interpretation. Finally, the obligation to render assistance in cases of distress (Article 98 of UNCLOS) does not constitute an exception to exclusive flag state jurisdiction that could be used as a legal basis for the interception and detention of a foreign vessel.

In the absence of a legal basis for its conduct in UNCLOS, Country Iota could try to argue that it has a right under customary international law to rescue and evacuate its nationals from the cruise ship in light of the severe danger to their safety and life. However, as shown with respect to Situation i) above, such an argument would not be successful. In any case, a right to rescue its nationals from the ship would not have entailed a right for Country Iota to detain the ship and escort it to one of its ports.

Against this background, the interception and detention of the cruise ship by Country Iota constitutes a violation of Country Gamma's freedom of navigation (Article 58(1) of UNCLOS) and its exclusive flag state jurisdiction in the EEZ (Articles 92(1) and 58(2) of UNCLOS).

The assessment would be the same if the interception and detention had been conducted on the high seas, as the applicable legal rules are essentially the same (Articles 87(1)(a) and 90 of UNCLOS for the freedom of navigation and Article 92(1) of UNCLOS for exclusive flag state jurisdiction).

15 For the majority view, see R. Churchill, "The piracy provisions of the UN Convention on the Law of the Sea: Fit for purpose?", in The Law and Practice of Piracy at Sea: European and International Perspectives, eds. P. Koutrakos and A. Skordas (Oxford: Hard Publishing, 2014), p. 9.

4. LEGAL RESPONSES TO MARITIME HYBRID SCENARIOS

Where it has been established that a state has violated another state's rights under public international law, and specifically the international law of the sea, various responses may be considered. These may be operational, political or legal options. This Annex specifically addresses legal responses available to states willing to hold other states accountable for violations of their rights.

Reactive measures: diplomatic summons, sanctions, countermeasures and self-defence

There exists a variety of "reactive" measures that a state can take in reaction to violations of public international law. Diplomatic responses such as consultations or negotiations are usually the least escalating measures. The severity of the issue and the extent of disapproval can also be highlighted, for example by a public summons of high-level diplomats from another state. Additionally, states may have recourse to self-help measures, such as economic sanctions (including sanctions by a political block such as the EU) and the withholding of certain benefits in order to induce the perpetrator to comply with its international obligations. In some cases, self-help measures (retorsion) may include physical acts not involving the use of force, such as providing protection at sea to vessels of the protecting state's nationality against threats of unlawful interference and engaging in "freedom of navigation" exercises to affirm a right that is being challenged. It is important to bear in mind that while such self-help measures do not in themselves violate international law, they must be carried out in a way that strictly conforms to international law and does not pose a threat to international peace and security.

Where appropriate, the injured state(s) may also choose to adopt countermeasures against the perpetrator under the law of state responsibility (see, in particular, the Articles on Responsibility of States for Internationally Wrongful Acts of 2001 drafted by the International Law Commission).[16] Countermeasures are subject to a number of conditions, which must be met in order for them to be lawful. These include a prior demand for redress whenever feasible, proportionality of the measures to the harm inflicted, no measures violating fundamental human rights and no use or threat of armed force (as prohibited by Article 2(4) of the UN Charter), to name the most important.

However, where a state is subject to an illegal use of force by another state that amounts to an "armed attack", it may use force in self-defence (Article 51(1) of the UN Charter). Additionally, the injured state may consider seeking assistance from the UN Security Council (Articles 39 ff. of the UN Charter) or under another multilateral system, such as NATO. Whatever measures are taken, ideally parallel diplomatic efforts should continue.

Proactive means of peaceful dispute settlement: diplomatic means and binding third-party dispute settlement procedures

As a basic principle of the international legal order, disputes must be resolved peacefully (Article 2(3) of the UN Charter). "Proactive" means of peaceful dispute settlement listed in Article 33(1) of the UN Charter include:

- Negotiation
- Enquiry
- Mediation
- Conciliation
- Arbitration
- Judicial settlement
- Resort to regional agencies or arrangements
- Other peaceful means of their own choice

16 http://legal.un.org/ilc/texts/instruments/english/draft_articles/9_6_2001.pdf.

Diplomatic means, in particular negotiation, provide the greatest degree of control and flexibility by the disputing states. They are also the least intrusive with respect to the sovereignty of the disputing states. For this reason, negotiation is usually the first step in international dispute settlement – and also most often the final one. Procedures such as enquiry, mediation and conciliation involve a third party that supports the negotiation process without, however, rendering any binding decisions. The ultimate decision remains with the disputing states.

In addition to diplomatic means, the injured state may seek to take the dispute to binding third-party dispute settlement (arbitration or judicial settlement) before an international court or tribunal. Such litigation is supplementary to other measures and is usually considered when diplomatic means do not resolve the dispute in a timely fashion. In such cases, the relationship between the two disputing states is usually such that this step is warranted and does not undermine, for example, fruitful ongoing diplomatic talks.

Perhaps the most important aspect of litigation before international courts and tribunals is the **question of jurisdiction**, meaning the question of whether a court or tribunal is competent to decide on a given dispute. As there is no court or tribunal of general jurisdiction in public international law, and because states must have given consent to jurisdiction over their disputes, in many cases no legal avenue is available that can be pursued for the purposes of litigation. The situation is relatively positive with respect to the international law of the sea – at least with respect to disputes concerning the interpretation and application of UNCLOS.

For present purposes, the most important avenues of inter-state litigation concerning maritime disputes are the International Court of Justice and the compulsory dispute settlement mechanism of Section 2 of Part XV of UNCLOS. Litigation before the International Court of Justice has been excluded from the scope of this analysis as it entails an ad hoc analysis of declarations by the disputing states under Article 36(2) of the Statute of the International Court of Justice. Therefore, the present analysis is confined to the dispute settlement mechanism of UNCLOS as it applies to all States Parties to UNCLOS (note that various important states are not parties to UNCLOS).

Litigation under Section 2 of Part XV of UNCLOS

The obligation to settle disputes peacefully is also enshrined in UNCLOS (Articles 279 and 301 of UNCLOS). Various optional means are listed in Section 1 of Part XV (Articles 280–282 and 284 of UNCLOS). In addition, States Parties have an obligation to proceed expeditiously to an **exchange of views** regarding the settlement of the dispute by negotiation or other peaceful means (Article 283 of UNCLOS). Only where recourse to Section 1 of Part XV (including an exchange of views) has not led to a resolution of the dispute can States Parties turn to binding dispute settlement under Section 2 (Article 286 of UNCLOS).

Choice of forum

State Parties can at any time (but prior to the initiation of proceedings in a given dispute) select one or more of four fora for the settlement of their dispute under UNCLOS (Article 287(1) of UNCLOS):

- the International Tribunal for the Law of the Sea (ITLOS)
- the International Court of Justice
- an arbitral tribunal constituted in accordance with Annex VII of UNCLOS
- a special arbitral tribunal constituted in accordance with Annex VIII of UNCLOS for one or more of the categories of disputes specified therein (fisheries, protection and preservation of the marine environment, marine scientific research or navigation, including pollution from vessels and by dumping)

If the two disputing states have selected the same forum for their dispute, the selected forum will be competent to hear the dispute (Article 287(4) of UNCLOS). If that is not the case, or if no selection has been made at all, an arbitral tribunal under Annex VII of UNCLOS will be deemed competent to hear the dispute **by default** (Article 287(3)-(5) of UNCLOS). In practice, this means that most

disputes are decided by an arbitral tribunal under Annex VII of UNCLOS. For certain specific categories of disputes, which are not of particular interest for present purposes, the ITLOS has exclusive jurisdiction. Importantly, however, the ITLOS is competent to grant **provisional measures** pending the constitution of an arbitral tribunal under Annex VII or Annex VIII of UNCLOS (Article 290(5) of UNCLOS). This procedure is frequently used.

Subject-matter jurisdiction

The extent of subject-matter jurisdiction of fora under Section 2 of Part XV of UNCLOS is a **key issue** in most cases. If no subject-matter jurisdiction exists, the case will **not** proceed to the merits, **even if there has been a violation of international law**.

Step 1: In principle, subject-matter jurisdiction is limited to "any dispute concerning the interpretation or application of [UNCLOS]" (Article 288(1) of UNCLOS). This means that disputes concerning other treaties or customary international law (such as the law of naval warfare) in principle fall **outside** the scope of Article 288(1) of UNCLOS. However, disputes concerning the interpretation or application of other treaties may in exceptional cases be decided under Section 2 of Part XV if the relevant treaty so provides (Article 288(2) of UNCLOS).

Step 2: Even where Article 288(1) of UNCLOS provides for subject-matter jurisdiction, this subject-matter jurisdiction is **automatically** limited by Article 297 of UNCLOS. The limitations concern issues potentially relevant in the present context, namely coastal state measures concerning marine scientific research activities of third states in the EEZ/continental shelf (Article 297(2) of UNCLOS) and coastal state fisheries measures (Article 297(3) of UNCLOS).

Step 3: Finally, even where a dispute falls within Article 288(1) of UNCLOS and is not subject to one of the limitations in Article 297 of UNCLOS, it may still be excluded from the scope of subject-matter jurisdiction if a state has excluded it by lodging a **declaration** on the basis of Article 298(1) of UNCLOS. The types of disputes that can be excluded are maritime delimitation disputes and disputes concerning historic bays or titles (Article 298(1)(a) of UNCLOS), disputes concerning military activities, including military activities by government vessels and aircraft engaged in non-commercial service, as well as disputes concerning law enforcement activities in regard to the exercise of sovereign rights or jurisdiction excluded from the jurisdiction of a court or tribunal under Article 297(2)-(3) of UNCLOS (Article 298(1)(b) of UNCLOS). In addition, states can exclude disputes in respect to which the UN Security Council is exercising the functions assigned to it by the UN Charter (Article 298(1)(c) of UNCLOS).

Given the importance of the question of subject-matter jurisdiction, **it is of utmost importance to streamline legal narratives** released publicly and vis-á-vis the other perpetrating state in accordance with the narratives to be pursued in a potential litigation phase of the dispute. This is especially the case where hybrid maritime operations are concerned, as such operations often exploit legal grey zones and ambiguities – including the not always clearly defined line between maritime law enforcement operations and military operations. For example, where a coastal state conducts a hybrid military operation under the veil of a maritime law enforcement narrative, this might backfire when the same state tries to rely on its declaration under Article 298(1)(b) of UNCLOS to argue that an international court or tribunal established pursuant to Section 2 of Part XV of UNCLOS lacks jurisdiction over "military activities".[17] Conversely, the injured state in such an operation might have to contradict itself if it chooses to classify a hybrid maritime operation by its opponent as a military activity, a use of force (Article 2(4) of the UN Charter) or a measure in an armed conflict subject to international humanitarian law.

17 ITLOS, Case concerning the detention of three Ukrainian naval vessels (Ukraine v. Russian Federation), Provisional Measures, Order, 25 May 2019, paras. 33–77.

5. CONCLUSIONS

The purpose of the previous chapters was to illustrate how public international law, and specifically the international law of the sea, can be harnessed as a tool for detrimental security measures at sea. By juxtaposing the rights contained in the international maritime law, the malicious hybrid actor has the opportunity to create a confusing and challenging situation, in which the target may have the utmost difficulty, and the larger international community as well, in forming an accurate situational awareness and making the necessary decisions on proper counter responses in a timely fashion. During the past few years, the world has already witnessed several such activities, highlighting how preparedness at all levels needs to be improved to meet, counter and recover from such situations.

At worst, malicious security measures at sea may lead to significant damage. A minor but deadly military measure, provoked or not, may trigger International Armed Conflict to enter into force, which would allow one state to apply such measures as confiscations, controls and even blockades. In a hybrid conflict, these kinds of measures would enable one state to put a stranglehold on the shipping to and from another state. Particularly, if a third party implements IHL/Naval warfare against an EU/NATO member leading to International Armed Conflict, this will put NATO Collective defence Article 5 and the mutual defence clause Article 42(7) of the Treaty on European Union under a tough, concrete test.

When a hybrid conflict emerges at sea, it is recommended that mitigation and proactive multinational measures be launched at the earliest possible convenience. This may prevent controversial situations from escalating into serious conflict, or worse. There should be low tolerance for infringements and a low threshold for initiating consultations with EU/NATO/United Nations. A unified, multinational response and/or presence at an early stage is likely to lower the risk of facing more serious impacts. Here, attribution (technical and political) plays a key role in defining countermeasures and as a tool of deterrence.

The search for solutions at a multilateral level and common ways to better identify vulnerabilities in the maritime domain should continue in order to make such vulnerabilities fewer and weaker and to increase the overall resilience of the operational environment. For its part, this Handbook is intended to contribute to this work.

TABLE: Jurisdiction under Article 288 of UNCLOS concerning Scenarios 1–11B

Scenario	Rights and obligations violated (depending on factual circumstances)	Jurisdiction (Article 288(1))	Exclusion of Jurisdiction (Articles 297, 298)
1	–	–	–
2	Depending on location: Article 2(1) UNCLOS (coastal state) Article 17 UNCLOS (flag state) Article 87(1)(a) UNCLOS (flag state) Article 58(1) UNCLOS (flag state) Depending on facts: Article 2(4) UN Charter	 Yes Yes Yes Yes No	Classification of measures as "military activities" under Article 298(1)(b) UNCLOS may be attempted (success unclear).
3	Article 2(4) UN Charter Articles 88, 301 and 58(2) UNCLOS (flag state) Article 58(1) UNCLOS (flag state)	No Yes Yes	(Article 298(1)(b) UNCLOS) Article 298(1)(b) UNCLOS Article 298(1)(b) UNCLOS
4	Depending on location: Article 2(1) UNCLOS (coastal state) Article 17 UNCLOS (flag state) Article 87(2) UNCLOS (flag state) Article 58(3) UNCLOS (coastal state)	 Yes Yes Yes Yes	 Article 298(1)(b) UNCLOS Article 298(1)(b) UNCLOS Article 298(1)(b) UNCLOS Article 298(1)(b) UNCLOS
5(i)	sovereignty of the territorial state (Article 2(4) UN Charter) Depending on location: Article 2(1) UNCLOS (coastal state) Article 17 UNCLOS (flag state) Articles 56(1) and 77(1) UNCLOS (coastal state)	No No Yes Yes Yes	Classification of measures as "military activities" under Article 298(1)(b) UNCLOS may be attempted (success unclear).
5(ii)	See Scenario 5(i).		
5(iii)	See Scenario 5(i).		
5(iv)	After international armed conflict ensues: Mainly potential breaches of law of naval warfare, not of UNCLOS	No	(Article 298(1)(b) UNCLOS)
5(v)	See Scenario 5(iv).		
6A)	Article 2(4) UN Charter Depending on location: Article 2(1) UNCLOS (coastal state) Article 17 UNCLOS (flag state) Article 58(1) UNCLOS (flag state) Article 58(3) UNCLOS (coastal state)	No Yes Yes Yes Yes Yes	(Article 298(1)(b) UNCLOS) Article 298(1)(b) UNCLOS Article 298(1)(b) UNCLOS Article 298(1)(b) UNCLOS Article 298(1)(b) UNCLOS Article 298(1)(b) UNCLOS

6B	Article 2(4) UN Charter Depending on location: Article 2(1) UNCLOS (coastal state) Article 17 UNCLOS (flag state) Article 58(1) UNCLOS (flag state) Article 58(3) UNCLOS (coastal state)	No Yes Yes Yes Yes Yes	(Article 298(1)(b) UNCLOS) Article 298(1)(b) UNCLOS Article 298(1)(b) UNCLOS Article 298(1)(b) UNCLOS Article 298(1)(b) UNCLOS Article 298(1)(b) UNCLOS
7A	Depending on location: Article 2(1) UNCLOS (coastal state) Article 17 UNCLOS (flag state) Article 58(1) UNCLOS (flag state) Article 58(3) UNCLOS (coastal state)	 Yes Yes Yes Yes	Classification of measures as "military activities" under Article 298(1)(b) UNCLOS may be attempted (success unclear).
7B	After international armed conflict ensues: Potential breaches of law of naval warfare, not of UNCLOS	 No	 (Article 298(1)(b) UNCLOS)
7C	If blockade is imposed without justification: Navigational rights under UNCLOS Article 2(4) UN Charter Measures once blockade is established: Potential breaches of law of naval warfare, not of UNCLOS	 Yes No No	 Article 298(1)(b) UNCLOS (Article 298(1)(b) UNCLOS) (Article 298(1)(b) UNCLOS)
8	Article 74(3) UNCLOS (coastal state) Article 83(3) UNCLOS (coastal state) Article 56(1)(a) UNCLOS (coastal state) Article 58(1) UNCLOS (flag state) Articles 94 and 58(2) UNCLOS in conjunction with COLREGs (flag state)	Yes Yes Yes Yes Yes	Article 298(1)(a) UNCLOS Article 298(1)(a) UNCLOS No No No
9	Article 56(1)(a) UNCLOS (coastal state) Article 58(3) UNCLOS (coastal state) Articles 94 and 58(2) UNCLOS in conjunction with COLREGs (flag state)	Yes Yes Yes	No No No
10A(i)	Article 17 UNCLOS (flag state) Article 24(1) UNCLOS (flag state)	Yes Yes	No No
10A(ii)	Article 58(1) UNCLOS (flag state) Articles 92(1) and 58(2) UNCLOS (flag state)	Yes Yes	No No
10B(i)	Article 2(1) UNCLOS (coastal state) Article 17 UNCLOS (flag state)	Yes Yes	No No
10B(ii)	Article 58(1) UNCLOS (flag state) Articles 92(1) and 58(2) UNCLOS (flag state)	Yes Yes	No No

LIST: STATES THAT ARE NOT STATES PARTIES TO UNCLOS

- Afghanistan
- Andorra
- Bhutan
- Burundi
- Cambodia
- Central African Republic
- Colombia
- El Salvador
- Eritrea
- Ethiopia
- Iran
- Israel
- Kazakhstan
- Kyrgyzstan
- Libya
- Liechtenstein
- North Korea
- Peru
- Rwanda
- San Marino
- South Sudan
- Syria
- Tajikistan
- Turkey
- Turkmenistan
- United Arab Emirates
- United States
- Uzbekistan
- Vatican City State/Holy See
- Venezuela

TABLE: States that have lodged declarations under Article 298(1) of UNCLOS

State	Military activities (lit. b)	Law enforcement activities in the EEZ (lit. b)	UN Security Council exercising its functions (lit. c)	Delimitation and historic bays or titles (lit. a)
Algeria	X	X	X	X
Angola				X
Argentina		X	X	X
Australia				X
Belarus	X		X	X
Canada	X	X	X	X
Cabo Verde	X	X		
Chile	X	X	X	X
China	X	X	X	X
Cuba	X	X	X	X
Democratic Republic of the Congo				(X)
Denmark	X	X	X	X
Ecuador	X	X	X	X
Egypt	X	X	X	X
Equatorial Guinea				X

State	Military activities (lit. b)	Law enforcement activities in the EEZ (lit. b)	UN Security Council exercising its functions (lit. c)	Delimitation and historic bays or titles (lit. a)
France	X	X	X	X
Gabon				X
Greece	X	X	X	X
Guinea-Bissau	X	X	X	X
Iceland				(X)
Italy				X
Kenya				X
Malaysia				X
Montenegro				X
Nicaragua	(X)	(X)	(X)	(X)
Norway	(X)	(X)	(X)	(X)
Palau				X
Portugal	X	X	X	X
Republic of Korea	X	X	X	X
Russian Federation	X	X	X	X
Saudi Arabia	X	X		X
Singapore				X
Slovenia	(X)	(X)	(X)	(X)

State	Military activities (lit. b)	Law enforcement activities in the EEZ (lit. b)	UN Security Council exercising its functions (lit. c)	Delimitation and historic bays or titles (lit. a)
Spain				X
Thailand	X	X	X	X
Togo			X	X
Tunisia	X	X	X	X
Ukraine	X			X
United Kingdom	X	X	X	
Uruguay		X		

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