

INTERNATIONAL LAW ASSOCIATION

SUBMARINE CABLES AND PIPELINES UNDER INTERNATIONAL LAW

[THIRD] INTERIM REPORT 2024

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* Captain J. Ashley Roach (American Branch) served as Chair until 27 March 2024. Dr Danae Azaria was appointed Chair on 11 May 2024 having served as co-Rapporteur until that date. As of 11 May 2024, Dr Tara Davenport serves as the sole Rapporteur. The Committee would like to thank Eduardo Cavalcanti de Mello Filho and Rachel Quek for their research and editorial assistance.

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I. BACKGROUND AND RATIONALE FOR THIRD INTERIM REPORT

1. The International Law Association (ILA) Committee on Submarine Cables and Pipelines under International Law (“the ILA Committee”) was established by the ILA Executive Council in November 2018. In doing so, the ILA Committee acknowledged that the current international legal regime governing submarine cables and pipelines established by the United Nations Convention on the Law of the Sea of 1982 (LOSC)¹ (and other conventions) may not adequately address the myriad of challenges that States, and entities engaged in cable and pipeline activities, currently face in the development of policies relating to all aspects of submarine cables and pipelines.
2. The ILA Committee’s First Interim Report was issued in December 2020 (“the First Report”).² The First Report’s objective was to “map the field” to help identify the existing law on submarine cables and pipelines, with a specific focus on the LOSC, and to assess whether there is a need for further clarification or development of the law. The mapping exercise resulted in the identification of certain issues that could be the subject of the ILA Committee’s future work.³
3. The Second Interim Report issued in May 2022 (“Second Report”) sets out the Committee’s conclusions on two substantive issues identified in the First Report relating to (1) the difference between marine scientific research and surveys for laying cables and pipelines under the LOSC; and (2) issues relating to LOSC Article 51.⁴ The ILA Committee’s mandate was extended for another four years until November 2026.
4. The Third Interim Report (“Third Report”) focuses on the international law that governs the measures that States can take in response to intentional acts of damage to submarine cables and pipelines committed by States and non-State actors in peacetime. This is in line with one of the issues identified in the First Report, namely “maritime security issues relating to the protection of cables and pipelines, which could include the consideration of, *inter alia*, the application of the laws of war and of terrorism conventions, the developing international law on cyber-attacks to submarine cables and pipelines; and whether a new international legal framework is necessary in relation to maritime security of cables and pipelines, and how national implementation could be improved.”⁵
5. This issue is particularly salient considering recent developments which have underscored the vulnerability of undersea infrastructure to intentional acts of damage. In 2022, segments of the Nord Stream 1 and 2 natural gas pipelines that transported gas from Russia to Germany through the Baltic Sea were the target of explosions in the Exclusive Economic Zones (EEZs) of Denmark and Sweden.⁶ In January 2022, a submarine cable off Svalbard was cut;⁷ in October 2022, a submarine cable connecting Shetland Islands and Faroe Islands was cut although subsequently reported to be accidentally caused by a fishing trawler;⁸ in April 2023, submarine cables connected to Taiwan were cut;⁹ in October 2023, multiple cuts to the Baltic connector gas pipeline and cables under the Baltic sea connecting Estonia to Finland and Sweden were reported;¹⁰ and between February and March 2024, cables in the Red Sea and off the coast of West Africa were damaged by the sinking of a vessel attacked by Houthi rebels.¹¹

¹ *United Nations Convention on the Law of the Sea*, adopted 10 December 1982, 1833 UNTS 397 (entered into force 16 November 1994) (LOSC).

² The First Interim Report (“First Report”) at https://www.ila-hq.org/en_GB/committees/submarine-cables-and-pipelines-under-international-law.

³ *Ibid*, para. 210.

⁴ The Second Interim Report (“Second Report”) at https://www.ila-hq.org/en_GB/committees/submarine-cables-and-pipelines-under-international-law.

⁵ First Report (n 2), para. 210.

⁶ Rebecca R Ruiz and Justin Scheck, “In Nord Stream Mystery, Baltic Seabed Provides a Nearly Ideal Crime Scene,” *New York Times*, 26 December 2022.

⁷ Niels Nagelhus et al, “The subsea cable cut at Svalbard January 2022: What happened, what were the consequences, and how they were managed?” Norwegian Institute of International Affairs Policy Brief 1 (2023).

⁸ Severin Carrell, “Shetland loses telephone and internet services after subsea cable cut,” *The Guardian*, 20 October 2022 which reported that a UK registered trawler was responsible.

⁹ Huizhong Wu and Johnson Lai, “Taiwan suspects Chinese ships cut islands’ internet cables,” *AP News*, 18 April 2023 at <https://apnews.com/article/matsu-taiwan-internet-cables-cut-china-65f10f5f73a346fa788436366d7a7c70>;

¹⁰ Claudia Chiappa, “Estonia says damage to Baltic Sea pipelines and cables is all linked,” *Politico*, 27 October 2023 at <https://www.politico.eu/article/baltic-sea-balticconnector-pipeline-damage-estonia-sweden-finland-kaja-kallas/>.

¹¹ Sean Monaghan, Michael Darrah, Eskil Jakobsen and Otto Svendsen, “Red Sea Cable Damage Reveals Soft Underbelly of Global Economy,” CSIS, 7 March 2024.

6. Damage to submarine cables and pipelines can have serious ramifications. For submarine communication cables, damage may interrupt access to the Internet and associated services, with consequent disruption to critical financial, health, education, safety or security, and government services.¹² Similarly, damage to pipelines resulting in disruption to energy supplies may also result in deprivation of basic services necessary to survive such as sufficient heating, water, and electricity.¹³ Damage to submarine cables and pipelines may also cause harm to the marine environment and associated ecosystem services.¹⁴ The effects of such damage may be prolonged because of repair delays due to inherent challenges of operating in remote locations, coupled with complex repair permitting requirements in certain jurisdictions. Our dependence on submarine cables and pipelines is projected to increase given that they are being increasingly used, or being considered for use in the future, for other purposes, including for supplying power and communications to offshore infrastructure used for hydrocarbon extraction and renewable energy; for transporting carbon dioxide for storage onshore or offshore; or for marine environmental data collection.¹⁵ As observed in the EU-NATO Task Force's *Resilience of Critical Infrastructure Final Assessment Report*, "disruptions to critical infrastructure can have significant negative consequences for vital government functions, essential services to the populations and economic activity" and "complex interdependencies mean that a disruption to critical infrastructure can have cascading or mutually reinforcing effects."¹⁶ Less-developed States, which may not be as well-connected to submarine cables and pipelines, are disproportionately impacted when cable or pipeline damage occurs. For example, developing States that are less connected to submarine cables are unable to reroute data to alternative submarine cable routes and consequently face greater impacts as compared to highly connected developed States.¹⁷
7. Governments, policymakers, and scholars have become increasingly concerned about the possibility of State and non-State actors maliciously damaging submarine cables and pipelines with the intention of disrupting the transmission of communications, energy and electricity to achieve, *inter alia*, strategic, military or political objectives.¹⁸ While there have been few publicly verified instances of intentional damage to submarine cables and pipelines,¹⁹ with the majority of damage resulting from anchoring and fishing activities,²⁰ these concerns are exacerbated by challenges in preventing intentional damage and the fact that submarine cables and pipelines can

¹² See, for example, when Tonga's one submarine cable was damaged after an underwater volcanic eruption in January 2022, it took weeks to repair and months for Tonga to be fully connected and resulted in a communications blackout that disrupted air travel, banking and financial transactions, health and education services: Meghan Tobin and Marian Kupu, "Four months offline: post-quake, many Tongans are still without internet," *Rest of the World*, 30 May 2022, <https://restofworld.org/2022/tonga-earthquake-internet-reconnection-update/>.

¹³ For a discussion on the potential human impact of interruptions in energy supply transmissions, see Danae Azaria, *Treaties on Transit of Energy via Pipelines and Countermeasures* (OUP 2015), Chapter 8, Section 3.3.

¹⁴ Justin Jackson, "Hidden Environmental Danger of Nord Stream pipeline explosions," *Phys Org*, 22 March 2023, at https://phys.org/news/2023-03-hidden-environmental-danger-nordstream-pipeline.html#google_vignette.

¹⁵ Darrell Proctor, "Undersea Cable Projects to Transmit Renewable Energy Move Forward," *Power Magazine*, 1 November 2023, at <https://www.powermag.com/undersea-cable-projects-to-transmit-renewable-energy-move-forward/>; "Carbon Storage Projects across Europe," *Reuters*, 16 August 2023, at <https://www.reuters.com/markets/carbon/carbon-storage-projects-across-europe-2023-03-31/>.

¹⁶ EU-NATO Task Force, *Resilience of Critical Infrastructure: Final Assessment Report*, 29 June 2023, 3 at https://commission.europa.eu/document/34209534-3c59-4b01-b4f0-b2c6ee2df736_en.

¹⁷ Blair Shepard, "Cutting Submarine Cables: The Legality of the Use of Force in Self-Defense," (2020) 31 *Duke Journal of Comparative and International Law* 199, 211–215 at 213. Douglas Guilfoyle, Tamsin Phillipa Paige and Rob McLaughlin, 'The Final Frontier of Cyberspace: The Seabed Beyond National Jurisdiction and the Protection of Submarine Cables,' (2022) 71 *International and Comparative Law Quarterly* 657, 659 – 660.

¹⁸ Rishi Sunak, *Undersea Cables*, Policy Exchange United Kingdom (2017) at <https://policyexchange.org.uk/publication/undersea-cables-indispensable-insecure/>; Christian Bueger, Tobias Liebetrau, Jonas Franken, *Security Threats to Undersea Communications Cables and Infrastructure – Consequences for the EU: In-Depth Analysis for the European Parliament*, June 2022 at [https://www.europarl.europa.eu/thinktank/en/document/EXPO_IDA\(2022\)702557](https://www.europarl.europa.eu/thinktank/en/document/EXPO_IDA(2022)702557); Camino Kavanagh, *Wading Murky Waters: Subsea Communications Cables and Responsible State Behaviour*, UNIDIR 2023 at <https://unidir.org/publication/wading-murky-waters-subsea-communications-cables-and-responsible-state-behaviour/>; EU-NATO Task Force on the Resilience of Critical Infrastructure, *Final Assessment Report*; Directive (EU) 2022/2557 of the European Parliament and of the Council of 14 December 2022 on the resilience of critical entities and repealing Council Directive 2008/114/EC; European Commission Recommendation on Secure and Resilient Submarine Cable Infrastructure, Brussels, 26 February 2024; C(2024) 1181 final; Council of the European Union, *Council Conclusions on the Revised EU Maritime Security Strategy (EUMSS) and its Action Plan*, Brussels, 24 October 2023, 14280/23.

¹⁹ Bueger et al, *Security Threats* (n 18), 31; Jonathan E. Hillman, *Securing the Subsea Network: A Primer for Policy Makers*, CSIS Reconnecting Asia Project, March 2021, 10 – 11, at https://csis-website-prod.s3.amazonaws.com/s3fs-public/publication/210309_Hillman_Subsea_Network_1.pdf?1c7RFgLm3w3apMi0eAPI2rPmqrNNzvwJ.

²⁰ International Cable Protection Committee (ICPC), *Government Best Practices for Protecting and Promoting Resilience of Submarine Telecommunications Cables*, 4 October 2023 (ICPC Government Best Practices), at <https://www.iscpc.org/publications/icpc-best-practices/>.

be damaged relatively easily with, *inter alia*, anchors or fishing equipment, which allow for intentional damage “to take place under a cloak of plausible deniability.”²¹

8. In 2023, the General Assembly (GA) reflected these concerns by recognizing:

the crucial role of international cooperation at the global, regional, subregional and bilateral levels in combating, in accordance with international law, threats to maritime security, including...terrorist acts against...submarine cables and pipelines and other critical infrastructure and maritime interests, through bilateral and multilateral instruments and mechanisms aimed at monitoring, preventing and responding to such threats, the enhanced sharing of information among States relevant to the detection, prevention and suppression of such threats, and the prosecution of offenders with due regard to national legislation, and the need for sustained capacity-building to support such objectives.²²
9. The GA also urged all States, in cooperation with the International Maritime Organization (IMO) and other relevant international organizations and agencies “to improve the protection of offshore installations, submarine cables and pipelines and other critical infrastructure by adopting measures related to the prevention, reporting and investigation of acts of violence against such infrastructure, in accordance with international law, and by implementing such measures through national legislation to ensure proper and adequate enforcement.”²³ Noting that “submarine cables and pipelines are vitally important to the global economy and national security of all States” and that these cables and pipelines “are susceptible to *intentional* and accidental damage,” the General Assembly called upon States “to take measures to protect submarine cables and pipelines and to fully address issues relating to these cables and pipelines, in accordance with international law, as reflected in the [LOSC].”²⁴
10. Against this background, the Third Report examines the international law that governs the measures that States can take in response to intentional acts of damage to submarine cables and pipelines by States and non-State actors applicable in peacetime. The Committee believes that there is much need for clarity on the measures that States can take, consistent with international law, to protect submarine cables and pipelines from acts of intentional damage given the crucial role this undersea infrastructure plays in global society. In the Committee’s view, different fields of international law set out the ambit of the measures that States can take in response to acts of damage to submarine cables and pipelines. However, international law only sets out States’ rights and obligations in general terms, and operationalizing or implementing such measures in practice may give rise to problematic scenarios and potential disputes where clear legal solutions are difficult to identify and open to contestation. In conducting this analysis, the Third Report identifies the applicable international law; the uncertainties in interpretation that may exist; and where possible, highlights legal questions which would benefit from further clarification or development. The overarching goal of this exercise is to contribute to the efforts of the international community to “fully address issues relating to submarine cables and pipelines” as called for by the GA, and to assist States in developing practical solutions consistent with international law to effectively respond to acts of intentional damage to submarine cables and pipelines.
11. The Third Report is structured as follows: Part II discusses the scope of the analysis in the Third Report, including underlying assumptions. Parts III – V examines the applicable law governing the measures that States can take in response to intentional acts of damage to submarine cables and pipelines under the law of the sea; the law on the use of force; and international instruments addressing terrorism. Part VI sets out some conclusions and recommendations.

II. SCOPE OF THIRD REPORT

12. The Third Report examines the measures that States can take, consistent with international law, in response to intentional acts of damage to submarine cables and pipelines committed by States and non-State actors in

²¹ EU-NATO Task Force, Resilience of Critical Infrastructure (n 16), 4.

²² United Nations, General Assembly Resolution Oceans and the law of the sea, Resolution adopted by the General Assembly on 5 December 2023, A/Res/78/69, 11 December 2023, para. 125 (“2023 GA Resolution”).

²³ *Ibid*, para. 147.

²⁴ *Ibid*, para. 175.

peacetime. Part II discusses the scope of the Report's analysis and its underlying assumptions before addressing some practical challenges States may face when taking such measures.

A. Measures taken by States

13. The Committee notes the importance of the role of industry in the protection of submarine cables and pipelines given that private and/or State-owned entities own and operate cables and pipelines and have a vested interest in their protection. Cable and pipeline owners/operators are usually alerted first when there is a disruption in the services provided by cables and pipeline (see discussion in Part H below). Cable and pipeline owners/operators undertake their own measures to protect submarine cables and pipelines from activities at the sea, including burying cables and pipelines, or the use of technology to help detect external threats. For submarine cables, the International Cable Protection Committee (ICPC), a non-governmental organization consisting of both industry and government, has issued a series of recommendations and guidelines primarily directed at cable owners, operators, and suppliers for the protection of submarines cables.²⁵ The ICPC has also issued *Government Best Practices for Protecting and Promoting Resilience of Submarine Telecommunications Cables* (ICPC Government Best Practices) which contain measures States can take to protect submarine cables.²⁶ While the Report focuses primarily on measures that can be taken by States in response to intentional acts of damage to submarine cables and pipelines, the Committee notes that effective protection of submarine cables and pipelines requires collaboration and cooperation between States and industry.²⁷

B. Scope of international law

14. The Third Report focuses on three different fields of international law: the law of the sea; the law on the use of force; and international instruments on terrorism because these fields of law are the most relevant to the issues under discussion. The analysis is based primarily on applicable treaties and where relevant, addresses customary international law. Other fields of international law may also implicitly or explicitly address intentional acts of damage to submarine cables and pipelines, including international human rights law;²⁸ international trade law;²⁹ the international law on cyberspace;³⁰ the various multilateral treaties relating to energy supply; and/or intergovernmental plurilateral or bilateral bespoke pipeline treaties³¹ but these are excluded from this Report due to space constraints.

C. Means of causing damage

15. For purposes of analysis, the term "damage" is used broadly to encompass physical harm that impairs the value, the usefulness or normal functioning of submarine cables and pipelines, which includes disruption to services provided by submarine cables and pipelines and which requires repair.³² This physical damage can be caused by a variety of tools or equipment, including anchors, grapnels, other specialised cutting devices, use of devices or

²⁵ ICPC Recommendations at <https://www.iscpc.org/publications/recommendations/>.

²⁶ ICPC Government Best Practices (n 20).

²⁷ See, for example, Joseph Keller, "The Disconnect on Undersea Cable Security," *Lawfare*, 7 May 2023, <https://www.lawfareblog.com/disconnect-undersea-cable-security>.

²⁸ For a discussion on the potential application of human rights law to disruptions to energy transmission, see Azaria (n 13), Chapter 8, Section 3.3.

²⁹ For example, digital economy agreements may reference the importance of protecting critical infrastructure (see, for example, the Chile-New Zealand-Singapore Digital Economy Partnership Agreement, signed on 12 June 2020, which recognizes the Parties' "shared interest in protecting critical infrastructure and ensuring a safe and reliable Internet that supports innovation and economic and social development" in its preamble).

³⁰ In the UN's discussion on the security and use of information and communications technologies, States have accepted the norm that "States should not conduct or knowingly support ICT activity contrary to their obligations under international law that intentionally damages critical infrastructure or otherwise impairs the use and operation of critical infrastructure to provide services to the public." UN Secretary General, Report of Government Experts on Developments in the Field of Information and Telecommunications in the Context of International Security, para. 13(f), U.N. Doc. A/70/174 (July 22, 2015)], see Kavanagh (n 18), 32 – 33 for further discussion on how this should extend to the physical infrastructure underpinning cyberspace.

³¹ For an overview of various multilateral treaties relating to energy supply, or intergovernmental plurilateral or bilateral bespoke pipeline treaties see Azaria (n 13), Chapter 4.

³² Oxford Dictionary online. For submarine cables, Committee members have pointed out that damage may include, but is not limited to: partial or complete severing of fibres; penetration of the cable sheath to cause an electrical fault; crushing of the cable; severe abrasion of the cable; penetration of or other damage to optical amplifiers (sometimes called repeaters) that impairs regeneration of the optical signal. In addition, it warrants note that the cable industry uses "fault" to mean an event affecting performance that will ultimately require repair. This includes a case of damage to the cable, but also equipment failure.

materials to crush the cable or pipeline, electromagnetic devices that damage the cable or pipeline or amplifiers, devices that cause heat damage to cable materials, or explosives that are placed along the cable or pipeline.³³ For example, the Nord Stream pipelines were reportedly damaged by the placement of underwater explosives,³⁴ whereas the damage to the Baltic connector gas pipeline and cables caused by a ship dragging its anchor.³⁵ While there are a variety of means to inflict damage on submarine cables and pipelines, it will, at minimum, involve a ship and/or a submarine and/or an underwater vehicle. For underwater vehicles, the Committee adopts the terminology used in the LOSC³⁶ but uses it as a catch-all term that encompasses various types of maritime vehicles including, but not limited to, unmanned vehicles, underwater autonomous vehicles, and remotely operated vehicles which have varying degrees of autonomy.³⁷ The Committee notes that the applicable legal regime on underwater vehicles is evolving, and there is uncertainty as to whether an underwater vehicle is considered a ship subject to flag State jurisdiction, but for purposes of analysis, the Report assumes that underwater vehicles are subject to State jurisdiction.³⁸

16. This Report is concerned with *physical* means of acts of damage to submarine cables and pipelines at sea. It does not address cyber operations that result in unauthorized access to data transmitted by submarine communication cables, or physical impairment to submarine cables and pipelines (for example, by the introduction of malware) although this is an issue which may warrant further study. It also excludes situations where acts on land result in acts of damage to submarine cables and pipelines.

D. Intentional acts of damage to submarine cables and pipelines

17. This Report's analysis is concerned with *intentional* or *deliberate* acts of damage to submarine cables and pipelines, i.e., that the acts resulting in damage to submarine cables and pipelines were *intended* by the perpetrator to cause such damage. Such acts may also be described as "sabotage"³⁹ but the term is not used in the Report given its specific use in the law of armed conflict.⁴⁰
18. The use of the term *intentional* introduces complex considerations of whether an act was intentional or accidental, and the state of mind of the perpetrator of the acts of damage. There are inherent difficulties in determining whether acts of damage to submarine cables and pipelines are intentional, accidental or the result of culpable negligence, particularly when the damage is caused by the normal activities of ships, for example, ships dragging or dropping their anchors or the use of fishing equipment.⁴¹ The intention of the perpetrator may or may not be relevant to the measures that States can take under the various fields of international law depending on the terms of the applicable provision.⁴² Nonetheless, the Committee believes that the focus on intentional acts of damage helps in the scoping of the Report's analysis (for example, the law on the use of force and terrorism law would not be relevant for accidental damage), and also may justify different (arguably stronger) State measures as opposed to accidental damage of submarine cables and pipelines (for example, the imposition of criminal penalties).⁴³
19. The Report does not expressly address situations where intentional damage directed against vessels results in damage to submarine cables and pipelines, for example, the sinking of a ship *Rubymar* which was struck by a

³³ Dimitrios Eleftherakis and Raul Vicen-Bueno, "Sensors to Increase the Security of Underwater Communication Cables: A Review of Underwater Monitoring Sensors," 2020 MDPI 737.

³⁴ Niha Masih, "Who blew up the Nord Stream pipelines? What we know one year later," Washington Post, 25 September 2023; Stine Jacobsen and Louise Rasmussen, "Denmark ends probe into 'deliberate' Nord Stream pipeline blasts," Reuters, 26 February 2024.

³⁵ Andrius Sytas and Anne Kauranen, "Three Baltic pipe and cable incidents 'are related,' Estonia says," Reuters, 27 October 2023.

³⁶ LOSC, art 20.

³⁷ For a discussion of the different terminology for underwater vehicles, see Natalie Klein, "Maritime Autonomous Vehicles within the International Law Framework to Enhance Maritime Security," (2019) 95 *International Law Studies* 244, 248 – 250.

³⁸ See, for example, Natalie Klein, Douglas Guilfoyle, MD Saiful Karim and Rob McLaughlin, "Maritime Autonomous Vehicles: New Frontiers in the Law of the Sea," (2020) 69 *International and Comparative Law Quarterly* 719.

³⁹ Danae Azaria and Geir Ulfstein, "Are sabotage of submarine pipelines an 'armed attack' triggering a right to self-defence? EJIL Talk, 18 October 2022, at <https://www.ejiltalk.org/are-sabotage-of-submarine-pipelines-an-armed-attack-triggering-a-right-to-self-defence/>.

⁴⁰ John C. Tramazzo, "Sabotage in Law: Meaning and Misunderstandings," *Articles of War*, Lieber Institute, 23 June 2023. Note that the term "sabotage" is used in Article 5 of Geneva Convention IV. The International Committee of the Red Cross considers "sabotage" to mean an action taken to destroy or damage material, work or installations which by their nature or purposes add to the efficiency of the enemy's armed forces." See ICRC <https://casebook.icrc.org/a-to-z/glossary/saboteur>.

⁴¹ For a discussion on the meaning of culpable negligence in the LOSC, art 113, see First Report (n 2), at paras. 76 – 94.

⁴² For example, LOSC, art 113 obliges States to criminalize the breaking or injury of submarine cables and pipelines "done willfully or through culpable negligence."

⁴³ The LOSC does not oblige States to criminalize accidental damage to submarine cables and pipelines.

missile fired by the Houthis, resulting in it dropping anchor and damaging cables in the Red Sea.⁴⁴ However, some of the measures discussed in Parts III to V may still be applicable to acts which result in collateral damage to submarine cables and pipelines. Similarly, the Report is not primarily focused on damage to submarine cables and pipelines caused accidentally or through culpable negligence, although some measures discussed may also apply to damage to submarine cables and pipelines that are accidental or caused by culpable negligence (for example, flag States have obligations to criminalize damage to submarine cables and pipelines resulting by culpable negligence under LOSC 113).

E. Categories of submarine cables and pipelines

20. The First Report defined submarine cables and pipelines as including submarine communication cables, submarine power cables and submarine pipelines.⁴⁵ *Submarine communication cables* refer to submarine fibre optic cables used for the transmission of data in maritime spaces within and beyond national jurisdiction. Similarly, *submarine power cables* refer to cables used for the transmission of electrical power or energy in maritime spaces within and beyond national jurisdiction. *Pipelines* refers to “any pipeline for the transmission of gas, crude oil and oil products, coal or water (or other materials) located in maritime spaces.”⁴⁶
21. The Third Report utilizes the same definitions but distinguishes between two categories of submarine cables and pipelines. The first category consists of submarine cables and pipelines that connect two or more countries and traverse maritime spaces either under the sovereignty and jurisdiction of two or more States or beyond national jurisdiction, referred to as “cross-border submarine cables and pipelines.”
22. The second category consists of “submarine cable and pipelines connected to offshore infrastructure.” Such offshore infrastructure includes, but is not limited to, artificial islands, installations and structures which are typically utilized for economic purposes (such as offshore oil and gas exploitation or for renewable energy) or scientific purposes⁴⁷ in the territorial sea, EEZ⁴⁸ or continental shelf.⁴⁹ Submarine communication and power cables are used to provide both connectivity and power to offshore infrastructure,⁵⁰ and submarine pipelines transmit resources extracted by offshore infrastructure to storage or processing facilities. Due to space constraints, the Report focuses on offshore infrastructure subject to the exclusive jurisdiction or sovereignty of coastal States and does not address submarine cables and pipelines connected to artificial islands and other installations on the high seas permitted under international law pursuant to LOSC Article 87 (1) (d) or installations and structures used for activities in the Area.⁵¹ The Committee notes that as activities in areas beyond national jurisdiction continue to develop, intentional acts of damage to submarine cables and pipelines connected to LOSC Article 87 (1) (d) artificial islands and installations, and installations used for activities in the Area, may be the subject of future work by the Committee.⁵²
23. The above categories of submarine cables and pipelines can be used for different purposes. For example, militaries depend on cables and pipelines for both defense and warfare purposes;⁵³ submarine communication cables can

⁴⁴ Sean Monaghan, Michael Darragh, Eskil Jakobsen and Otto Svendsen, “Red Sea Cable Damage Reveals Soft Underbelly of Global Economy,” CSIS, 7 March 2024.

⁴⁵ First Report (n 2), para. 13.

⁴⁶ G.K. Walker, *Definitions for the Law of the Sea: Terms not Defined by the 1982 Convention* (Brill, 2012) 310–315.

⁴⁷ See, for example, LOSC, art 258.

⁴⁸ LOSC, art 56, read with art 60.

⁴⁹ LOSC, art 77, read with art 80.

⁵⁰ Wayne Nielsen and Tara Davenport, “Submarine Cables and Offshore Energy,” in D.R. Burnett *et al* (eds), *Submarine Cables: The Handbook of Law and Policy* (Brill, 2014) 351.

⁵¹ LOSC, art 147 (2); art 153 (5); art 209 (2); Regulation 30 and Schedule of Draft regulations on exploitation of Mineral resources in the Area: Consolidated Text, ISBA/29/C/CRP.1, 16 February 2024 (Draft regulations); First Report (n 2), paras. 121 – 122.

⁵² Unlike artificial islands, installations and structures in the EEZ and continental shelf, the LOSC does not specify which State has exclusive jurisdiction over artificial islands and other installations in LOSC Article 87 (1) (d) or installations used for activities in the Area, although the International Seabed Authority (ISA) has the mandate to adopt rules, regulations and procedures on the erection, emplacement and removal of such installations under LOSC art 147 (2). See, for example, Hannah Lily *et al*, Ninth Report of the Code Project: Enforcement of Deep-Sea Mining Regulations at Sea: Unpacking the Tangle of Overlapping Jurisdictions in International Waters, 18 March 2024 at <https://www.pewtrusts.org/-/media/assets/2024/03/code-project--enforcement-of-deep-sea-mining-regulations-at-sea.pdf>.

⁵³ For example, the US Department of Defense Global Information Grid which is a “globally, interconnected, end-to-end set of information capabilities for collecting, processing, storing, disseminating and managing information on demand to warfighters, policy makers and support personnel.” Global Information Grid, National Security Agency, <<https://www.govinfo.gov/content/pkg/GAOREPORTS-GAO-04-858/html/GAOREPORTS-GAO-04-858.htm>>; “If Drones Rules the Waves: Avast, Me Hearties,” *The Economist: The World If (Science and Technology)*, 7 July 2018, 13 – 14.

be used for data collection for scientific purposes, including submarine communication cables that are connected to scientific research installations; dedicated cables used only for data collection; and dual-use submarine cables used for both telecommunications and data collection.⁵⁴ The LOSC does not distinguish between the different purposes for which submarine cables and pipelines can be used and the Report's analysis is applicable to all submarine cables and pipelines regardless of their purpose, unless otherwise specified.

F. State or non-State actors

24. The Third Report is concerned with physical acts of damage committed by States and non-State actors. While acknowledging the permutations of possibilities that may occur, the Report envisages three scenarios:
- a. First, States may commit acts of damage to submarine cables and pipelines directly using their own warships,⁵⁵ government ships operated for non-commercial purposes ("government ships"),⁵⁶ submarines and/or underwater vehicles (collectively referred to as "State ships and associated apparatus").
 - b. Second, States may "channel unlawful acts through private actors,"⁵⁷ and use privately-owned merchant or other ships, submarines and/or underwater vehicles ("private ships and associated apparatus").
 - c. Third, non-State actors may use private ships and associated apparatus to commit acts of damage to submarine cables and pipelines without any direct State involvement.

G. Applicable in peacetime

25. The Third Report is confined to acts of damage to submarine cables and pipelines that occur in peacetime and not during an armed conflict. The law of armed conflict contains several principles applicable to damage to submarine cables and pipelines, although in need of updating.⁵⁸ International law has adopted different thresholds for when an "armed conflict" has arisen,⁵⁹ and it may not always be straightforward to determine whether acts of damage to submarine cables and pipelines have occurred in an armed conflict and whether submarine cables and pipelines are legitimate military objects. This uncertainty is exacerbated by the development in the legal and policy literature of "hybrid conflicts" defined as a "situation in which parties refrain from the overt use of armed forces against each other, relying instead on a combination of military intimidation (falling short of an attack), exploitation of economic and political vulnerabilities, and diplomatic or technological means to pursue their own objectives."⁶⁰ This is said to create a so-called grey zone where it is unclear whether the law of armed conflict applies or the relevant peacetime rules apply. Nonetheless, focusing on the laws applicable in peacetime is a useful starting point for analysis, while not precluding the possibility that the law of armed conflict may be included in the Committee's future work.

H. Practical challenges

26. This section highlights some practical challenges relating to the identification of the cause of damage to submarine cables and pipelines that have implications for State measures responding to intentional acts of damage to submarine cables and pipelines. First, submarine cable and pipeline operators are alerted in different ways when disruptions to services provided by the cable or pipeline occur and may not be able to immediately notify relevant authorities. For *submarine communication cables* which utilize fibre optics, cable operators will usually be alerted that a fault or disruption has occurred and will automatically reroute data to working cable systems, although this

⁵⁴ L. Carter and A.H.A. Soons, "Marine Scientific Research Cables," in D.R. Burnett *et al* (eds), *Submarine Cables: The Handbook of Law and Policy* (2014), 323; SMART Cables Joint Task Force at <https://www.smartcables.org/itf>.

⁵⁵ LOSC, art 29.

⁵⁶ LOSC, arts 31 and 96.

⁵⁷ Vladyslav Lanovoy, "The Use of Force by Non-State Actors and the Limits of Attribution of Conduct," (2017) 28 (2) *European Journal of International Law* 563, 567.

⁵⁸ *Convention for the Protection of Submarine Telegraph Cables*, 163 CTS 241 (14 March 1884, in force 1 May 1888), art XV states that "it is understood that the stipulations of the present Convention do not in any way restrict the freedom of action of belligerents." For a comprehensive discussion on the laws of armed conflict and its applicability to damage to submarine cables, see Guilfoyle *et al* (2022) (n 17); Rob McLaughlin, Tamsin Phillipa Paige & Douglas Guilfoyle, "Submarine Communication Cables and the Law of Armed Conflict: Some Enduring Uncertainties, and Some Proposals, as to Characterization" (2022) 27:3 *Journal of Conflict and Security Law* 297

⁵⁹ See discussion in Dieter Flick *et al*, (eds), *The Handbook of International Humanitarian Law*, 4th edition (OUP 2021), chapter 3.

⁶⁰ European Parliament Research Service, "At a Glance -Understanding Hybrid Threats," Brussels, 2015, 1.

may not be possible in the case of multiple faults (for example, in a systematic coordinated attack).⁶¹ For *submarine power cables*, determining the location of submarine cable faults can be difficult and will depend on the design of the power cable.⁶² For *submarine pipelines*, the primary means of identifying faults is through process monitoring of flow parameters during operation, or through routine inspection which will depend on resources and operating environment.⁶³

27. Second, it may not always be possible to immediately identify the exact cause of the damage i.e., whether it is the result of natural hazards, human-made accidental damage, equipment failure, or intentional acts. A likely cause may not be determined until the repair is completed and recovered materials (such as sections of damaged cable or pipeline) are analyzed in a laboratory on land. To warn vessel operators to avoid damage, and to provide evidence in cases of suspected cable damage, cable and pipeline operators may use vessel tracking information to determine which vessels were present in the area when damage occurred such as Automatic Identification Systems (AIS) or Vessel Monitoring Systems (usually in pursuance of civil claims). This information, however, may not be immediately available and vessels can switch off AIS to evade detection. Moreover, AIS is required only for the largest vessels and most small fishing vessels do not use AIS. Third, there are practical challenges in evidence gathering given that the act takes place at sea, in sometimes remote locations, and may be organized in one or more jurisdictions. These challenges create difficulties in the prevention of, and response to, such acts. Unless there is specific intelligence that a cable or pipeline is about to or has been deliberately damaged, such actions are difficult to prevent, and require intense surveillance and monitoring of maritime activities.⁶⁴ There are also reduced opportunities to send competent enforcement authorities that will immediately respond to incidents of suspected damage to cables and pipelines and accordingly, not possible to immediately identify the perpetrator of intentional acts of damage to submarine cables and pipelines. Nonetheless, these challenges underscore the importance of international legal frameworks to facilitate international cooperation in preventing and responding to intentional acts of damage to submarine cables and pipelines.

III. LAW OF THE SEA

28. Part III examines the law of the sea set out in the LOSC and where relevant, customary international law. Part III's analysis is divided into two main parts: (A) cross-border submarine cables and pipelines; and (B) submarine cables and pipelines connected to offshore infrastructure. In each part, the Report examines a series of measures that States can take in response to intentional acts of damage to submarine cables and pipelines, namely: (1) monitoring measures; (2) enforcement and other prevention measures against ships and associated apparatus suspected of threats or actual acts of damage to submarine cables and pipelines; (3) prosecution of offences in national proceedings; (4) the establishment of State responsibility for acts of damage to submarine cables and pipelines that can be attributed to States; and (5) the establishment of State responsibility for acts of damage to submarine cables and pipelines by non-State actors. Each section is sub-divided into acts of damage to submarine cables and pipelines in (a) areas beyond national jurisdiction (high seas and deep seabed); (b) areas within national jurisdiction (the EEZ, including the contiguous zone, and the continental shelf); and (c) areas under sovereignty (internal waters, the territorial sea and archipelagic waters).

A. Cross-border submarine cables and pipelines

1. *Monitoring of threats to submarine cables and pipelines*

29. The GA has recognized the importance of international cooperation in accordance with international law to combat threats to maritime security, including submarine cables and pipelines through, *inter alia*, monitoring, preventing and responding to such threats.⁶⁵ Monitoring of threats against submarine cables and pipelines is inherently challenging as such infrastructure is not a single target (like ships) but is a “continuous multi-spot target of thousands of kilometres.”⁶⁶

⁶¹ Douglas R. Burnett, “Submarine Cable Security and International Law” (2021) 97 *International Law Studies* 1659, 1664 – 1665.

⁶² Malcolm Eccles, Joska Ferencz and Douglas Burnett, “Submarine Power Cables,” in Douglas Burnett et al (eds), *Submarine Cables: Handbook on Law and Policy* (Brill 2014) 301, 319.

⁶³ Daniel Eastvedt, Greg Naterer, Xili Duan, “Detection of Faults in Subsea pipelines by Flow Monitoring with Regression Supervised Machine Learning,” 161 *Process Safety and Environmental Protection* (May 2022), 409.

⁶⁴ Bueger et al (n 18), 31. Hillman (n 19), 10 – 11.

⁶⁵ 2023 GA Resolution (n 22), para. 125.

⁶⁶ Eleftherakis and Vicen-Buen (n 33), 771.

30. The Report considers two activities which aim to monitor threats to submarine cables and pipelines, namely, *patrols* in areas where submarine cables and pipelines are located;⁶⁷ and *detection* which involves the use of technology to detect potential threats to submarine cables and pipelines including threats from vessels, submarines, divers or underwater vehicles.⁶⁸ This includes (but is not limited to) vessels using monitoring technology such as sonar or sensors, underwater vehicles using monitoring technology, or the placement of fixed sensors either on the seafloor, other platforms, or submarine cables and pipelines.⁶⁹ For submarine cables, there is in-built technology, described as “distributed acoustic sensing,” or DAS which uses optical fibres in the submarine cable itself as a cable protection tool, but can gather data on the marine environment on a secondary basis.⁷⁰ Science Monitoring and Reliable Telecommunication (SMART) submarine cables, which have the overall objective of collecting data on the marine environment for ocean observation purposes, can also be used to improve cable protection through the detection of threats, although SMART cables are not in widespread use.⁷¹
31. The Report views monitoring measures as distinct from enforcement and other prevention measures at sea which refers to “the authority of a State to exercise its power to compel compliance with law.”⁷² However, the Committee notes that monitoring of threats to submarine cables and pipelines *may* be viewed by some States as a military activity, intelligence collection, surveys, and/or marine scientific research (MSR). Military activities,⁷³ surveys,⁷⁴ and MSR⁷⁵ are mentioned but not defined in the LOSC, and intelligence collection,⁷⁶ which can be viewed as a type of military activity,⁷⁷ is not expressly referred to in the LOSC. On whether monitoring of threats to submarine cables and pipelines can be classified as MSR, the Report recalls that the Second Report differentiated MSR from cable and pipeline route surveys, in that “while MSR and cable and pipeline surveys are technically similar...they are functionally different...[t]he purpose of MSR is to ‘contribute to the internationally available scientific knowledge

⁶⁷ Some States conduct patrols in the vicinity of cables and pipelines as part of their overall maritime domain awareness programmes or fishery control activities: Bueger et al (n 18) 53. The UK announced it will use specially equipped patrol vessels which will serve as a “mother ship by operating remote and autonomous offboard systems for underwater surveillance and seabed warfare.” George Allison, “Britain’s new undersea cable protection ship arrives,” UK Defence Journal, 19 January 2023, at <https://ukdefencejournal.org.uk/britains-new-undersea-cable-protection-ship-arrives/>. A Joint Expeditionary Force, consisting of 10-nation military alliance of northern European countries will patrol areas with vulnerable undersea infrastructure: “Britain to send seven Royal Navy ships to patrol areas with undersea cables,” Reuters, 30 November 2023 at <https://www.reuters.com/world/uk/britain-send-seven-royal-navy-ships-patrol-areas-with-undersea-cables-2023-11-30/>. The European Union (EU) is focusing on “promoting international cooperation on information exchange and the surveillance of critical maritime infrastructure, including under seas cables and pipelines: EU Council Conclusions on the Revised EU Maritime Security Strategy (EUMSS) and its Action Plan, Brussels, 24 October 2023.

⁶⁸ For examples of such technology, see Eleftherakis and Vicen-Buen (n 33).

⁶⁹ Historically, the US navy has used hydrophones placed on submarine cables to detect submarine activity during the Cold War: J. Ashley Roach, “Military Cables” in Douglas Burnett et al (eds), *Submarine Cables: Handbook on Law and Policy* (Brill 2014) 339, 339; Steven Stashwick, ‘US Navy Upgrading Undersea Sub-Detecting Sensor Network,’ *The Diplomat*, 4 November 2016.

⁷⁰ ICPC, *Submarine Cable Protection and the Environment: An Update from the ICPC from Dr. Mike Clare*, April 2024 (Issue 8) at <https://www.iscpc.org/publications/submarine-cable-protection-and-the-environment/>.

⁷¹ Howe et al, “SMART Subsea Cables for Observing the Earth and Ocean, Mitigating Environmental Hazards, and Supporting the Blue Economy,” 9 *Frontiers in Earth Science*, 1, 22. For more information on SMART submarine cables, please see The SMART Cables Joint Task Force, at <https://www.smartcables.org/jtf>.

⁷² The ‘*Enrica Lexie*’ Incident (Italy v. India), PCA Case No. 2015-28, 21 May 2020, para. 526. See, for example, LOSC art 73, on “enforcement of laws and regulations of the coastal State” and permits the coastal State to take such measures including boarding, inspection, arrest and judicial proceedings, as may be necessary to ensure compliance with the laws and regulations adopted by it in conformity with the Convention.” However, note that the International Tribunal for the Law of the Sea (ITLOS) has observed that the “word ‘enforce’ is a broad term encompassing the variety of ways and means to ensure compliance with laws and regulations within the framework of the national legal system” which may include “for example, monitoring and inspection, administrative guidance, investigation and prosecution for breaches of laws, and judicial or quasi-judicial proceedings.” *Request for an Advisory Opinion Submitted by the Commission of Small Island States on Climate Change and International Law*, ITLOS Case No. 31, 21 May 2024, para. 284.

⁷³ “LOSC, art 298 (1) (b) allows states to opt out of LOSC compulsory dispute settlement mechanisms for “disputes concerning military activities by government vessels and aircraft engaged in non-commercial service.”

⁷⁴ LOSC, art 19 (2) (j); art 40; art 54.

⁷⁵ LOSC, art 56 (b) (ii); art 87 (1) (f), Part XIII.

⁷⁶ Intelligence collection aims to gather information on activities on the marine environment to enhance the “understanding of anything associated with the [m]aritime [d]omain that could impact the security, safety, economy, or environment” of a State: White House, National Plan to Achieve Maritime Domain Awareness for the National Strategy for Maritime Security, October 2005 https://www.dhs.gov/sites/default/files/publications/HSPD_MDAPlan_0.pdf. Intelligence collection at sea is important for the protection of maritime security of States, both to assess and determine external threats, and to ensure all information is at hand before a course of action is taken: See Natalie Klein, *Maritime Security and Law of the Sea* (OUP 2011), 209 – 214.

⁷⁷ Klein (2011), *ibid*, 42; but also note Kraska: “while intelligence operations overlap substantially with military activities, there are important nuances that make them distinct State operations that sometime lie outside the scope of military activities.” See James Kraska, “Intelligence Collection and the International Law of the Sea,” (2022) 99 *International Legal Studies* 602, 604.

about the sea' whereas 'cable and pipeline surveys enable the owners of these devices to lay and maintain them.'⁷⁸ Similarly, monitoring of threats to submarine cables and pipelines can be differentiated from MSR in that the purpose of the former is to protect submarine cables and pipelines.

32. Nonetheless, the Committee is aware of the disagreements between States on what constitutes military activities, surveys, intelligence collection and MSR and the permissibility of these activities, particularly in the EEZ and on the continental shelf.⁷⁹ For example, it has been observed that certain States could view cables with sensing capabilities as security threats or as MSR and regulate them accordingly.⁸⁰ For present purposes, the Report does not take a view on whether monitoring of threats to submarine cables and pipelines are military activities, surveys, intelligence collection, or MSR (although note discussion on MSR in paragraph 31 above). Such an assessment would require specific analysis on the different means or technology used for detection and goes beyond the scope of the Report. Accordingly, the Report proceeds on the basis that detection measures that have the purpose of monitoring of threats to submarine cables and pipelines may be viewed by some States as military activities, surveys, intelligence collection or MSR and resultantly, open up monitoring measures to similar contestations.⁸¹ The Report therefore confines its analysis to highlighting *possible* arguments that provide a legal basis for monitoring measures in each maritime space and highlights potential areas of disputes that may arise.

a) *Areas beyond national jurisdiction*

33. *Prima facie*, all States may rely on the freedom of navigation afforded to all States under LOSC Article 87 (1) (a), particularly relevant for patrols and detection measures that utilize detection technology employed by vessels, submarines or underwater vehicles.⁸² If patrols and detection measures are considered military activities, intelligence collection, surveys, or MSR, these activities can be considered high seas freedoms (which are not exhaustively listed in LOSC Article 87), or part of the freedom of navigation or the freedom to conduct marine scientific research.⁸³
34. Another possible legal basis is the freedom to lay submarine cables and pipelines in LOSC Articles 87 (1) (c) and 112. The First Report observed that different LOSC provisions refer to different activities relating to submarine cables and pipelines, and this raises questions about the material scope of each provision and whether all or some activities are included or excluded.⁸⁴ The First Report concluded that this question can be interpreted through treaty interpretation and that "the interpretative method and reasoning for determining that the scope of a LOSC provision encompasses other activities relating to cables and pipelines, and if so which ones, will differ, depending on a variety of factors, including the terms of the provision in question, whether the activity relates to a submarine cable or pipeline, the activity itself as well as the maritime space in which such activity takes place."⁸⁵ The First Report suggested, for example, that the LOSC Article 87 freedom to lay submarine cables and pipelines includes the *operation* of cables and pipelines because the purpose of laying in Article 87 is the operation of the cable or pipeline. Repair and maintenance were not necessary for the laying of submarine cables and pipelines, *but* these activities were necessary for the *operation* of cables and pipelines and hence, the freedom to lay submarine cables and pipelines also encompasses operation, repair and maintenance. A similar argument could be made in relation to monitoring measures such as patrols and detection. While monitoring measures are not strictly necessary for the

⁷⁸ Second Report (n 4), para. 11.

⁷⁹ For example, some LOSC States Parties, such as Bangladesh, Brazil, Cape Verde, India, Malaysia, Pakistan and Uruguay, have filed statements under LOSC art 310 stating that they understand the EEZ regime as forbidding third States from undertaking military activities in their EEZ. For an overview of the various debates on the permissibility of military activities, intelligence collection and surveys in the EEZ and whether these activities constitute marine scientific research, please see Klein (2011) (n 76), 24 - 61; Asaf Lubin, "The Dragon-King's Restraint: Proposing a Compromise for the EEZ Surveillance Conundrum," (2018) 57 *Washburn Legal Journal* 17; J. Ashley Roach and Robert Smith, *Excessive Maritime Claims: Fourth Edition* (Brill 2021) 439 – 485.

⁸⁰ Kent Bressie, "International Law, Policy, and Regulatory Considerations for Marine Data Gathering," Presentation at PTC Council, 18 January 2021.

⁸¹ See, for example, the incident when China seized an underwater drone in 2016 that was launched from a US Navy research vessel in the South China Sea, prompting protests from the US: Missy Ryan and Dan Lamothe, "Chinese naval ship seized an unmanned US underwater vehicle in South China Sea," *Washington Post*, 17 December 2016.

⁸² ITLOS found that bunkering on the high seas falls within the freedom of navigation but did not elaborate on its reasoning, although it observed that "the notions of the invalidity of claims of sovereignty over the high seas and exclusive flag State jurisdiction on the high seas are inherent in the legal status of the high seas being open and free." *The M/V "Norstar"* (Panama v. Italy), Judgment, ITLOS Reports 2018 – 2019, p. 10, paras. 218 – 219.

⁸³ Klein (2011) (n 76) 45 and 219 – 220; Kraska (n 77) 605 – 606.

⁸⁴ First Report (n 2), para. 18.

⁸⁵ *Ibid*, para. 18.

laying of submarine cables and pipelines, they are necessary to ensure the uninterrupted operation of such cables and pipelines. On this reasoning, the use of technology like DAS which uses fibre optics already existing in the submarine cable, can reasonably be considered as permitted pursuant to the freedom or entitlement to lay submarine cables and pipelines in areas beyond national jurisdiction.

35. Under the LOSC, the freedom to lay and operate submarine cables and pipelines in areas beyond national jurisdiction is conferred on “all States.” The First Report acknowledged the view that flag States of ships laying the cable or pipeline may be the State exercising the freedom to lay submarine cables and pipelines.⁸⁶ States which are connected to submarine cables and pipelines or States of nationality of the cable or pipeline owner/operator are also considered to be holders of the freedom to lay submarine cables and pipelines and in principle, are entitled to undertake monitoring measures.⁸⁷
36. Provided these activities are undertaken subject to due regard for the interests of other States in their exercise of high seas freedoms and for activities in the Area and that they do not involve a prohibited threat or use of force,⁸⁸ patrols and detection measures in ABNJ are unlikely to be challenged.

b) *Areas beyond sovereignty but within national jurisdiction*

37. **Other States:** Whether States, including States connected to submarine cables and pipelines, States of nationality of the cable and pipeline owner/operator, or the flag State of the vessel conducting laying operations can conduct patrols and detection measures in the EEZ in order to protect submarine cables and pipelines will depend on whether it falls within the freedoms allocated to all States in the EEZ, i.e., the freedom of navigation or the freedom to lay submarine cables and pipelines and “other internationally lawful uses of the sea related to those freedoms, such as those associated with the operation of ships, aircraft, submarine cables and pipelines...and compatible with the other provisions of this Convention” in LOSC Article 58. LOSC Article 78 also preserves these freedoms in the waters above the continental shelf and LOSC Article 79 recognizes that all States are entitled to lay submarine cables and pipelines on the continental shelf.
38. In *Nicaragua v. Colombia* (2022), the ICJ rejected Colombia’s arguments that the actions of its naval vessels in Nicaragua’s EEZ of monitoring, tracking and informing Nicaraguan fishing vessels to leave Nicaragua’s EEZ fell within rights incidental to freedom of navigation in the EEZ.⁸⁹ The Court found that Colombian naval vessels’ conduct was not limited to “observing” predatory or illegal fishing activities or “informing” fishing vessels of such activities, but amounted to “exercising control over fishing activities in Nicaragua’s EEZ, implementing conservation measures on Nicaraguan-flagged or Nicaraguan-licensed ships and hindering operations of Nicaragua’s naval vessels,” and accordingly, Colombia had violated its international obligation to respect Nicaragua’s sovereign rights and jurisdiction in the EEZ.⁹⁰ The ICJ did not decide on Nicaragua’s argument that the ordinary meaning of the word “navigation” limits freedom of navigation to the passage of ships or the movement of ships on water and does not include systematic acts of monitoring and tracking,⁹¹ although the Separate Opinion of Judge Robinson observed that the “activity of patrolling has no direct relationship with the passage or movement of the Colombian ship and Colombia is not exercising freedom of navigation,”⁹² Judge McRae, in his Dissenting Opinion, seemed to suggest that Colombia’s monitoring of illegal fishing activities in Nicaragua’s EEZ could have been justified on the freedom of navigation as there were no actions of control or enforcement such as arrests, detention or prosecution that interfered with Nicaragua’s sovereign rights and jurisdiction, but that Colombia’s monitoring of illegal fishing activities in Nicaragua’s EEZ was instead a breach of the obligation to give due regard to the rights and duties of Nicaragua as the coastal State.⁹³
39. The ICJ’s finding would *prima facie* support the argument that monitoring of threats to submarine cables and pipelines in another State’s EEZ could be justified under either the freedom of navigation (for example, patrols or

⁸⁶ Ibid, para. 71.

⁸⁷ Ibid, para. 72.

⁸⁸ LOSC, art 87 (2), art 88; art 301.

⁸⁹ *Alleged Violations of Sovereign Rights and Maritime Spaces in the Caribbean Sea* (Nicaragua v. Colombia), Judgment, ICJ Rep 2022, p. 266, paras. 53 and 54.

⁹⁰ Ibid, para. 100.

⁹¹ Ibid, para. 51.

⁹² Ibid, Separate Opinion of Judge Robinson, para. 14.

⁹³ Ibid, Dissenting Opinion of Judge McRae, paras. 26 – 28.

vessels that use detection measures) or freedom to lay submarine cables and pipelines (for example, the use of DAS in cables) or sensors on cables and pipelines, as these competences have been given to third States in the EEZ, and not the coastal State, subject to their obligation to give due regard to the rights and duties of the coastal State's sovereign rights and obligations and the peaceful purposes obligation.⁹⁴ It has also been said that the language "other internationally lawful uses of the sea related to those freedoms, such as those associated with the operation of ships...submarine cables and pipelines...and compatible with the other provisions of this Convention" preserves the high seas freedoms to conduct military activities, intelligence collection and surveys in the EEZ.⁹⁵ However, as argued above, depending on the means used, the monitoring of threats to submarine cables and pipelines may be subject to objections from States that contend that military activities, surveys and intelligence collection are not mentioned in Article 58 and can be regulated by the coastal State; or that such activities are MSR subject to the consent of the coastal State under LOSC Article 246.

40. **Coastal States:** Coastal States have the competence to monitor threats to their sovereign rights over resources for purposes of "conserving and managing the natural resources, whether living or non-living" of the water column and seabed resources under LOSC Article 56 or the right to prevent interference with its sovereign rights in its continental shelf under LOSC Article 77, and this may include patrols or vessels that use detection measures, subject to due regard to the rights and duties of other States in these maritime spaces.⁹⁶ Monitoring of threats to submarine pipelines may also be arguably justified under the coastal State's authority to take under LOSC Article 79 (2) "reasonable measures for...the prevention, reduction and control of pollution from pipelines," provided that it does not impede the laying or maintenance of such pipelines and subject to due regard to the rights and duties of other States in these maritime spaces. The coastal State also has jurisdiction to undertake monitoring measures to protect and preserve the marine environment in its EEZ, and this could include monitoring of threats to submarine cables and pipelines to prevent marine environmental harm and damage to living resources.⁹⁷

c) *Areas under sovereignty*

41. Coastal States have the authority to undertake monitoring measures in the territorial sea pursuant to its sovereignty over the territorial sea.⁹⁸ Warships and government ships of third States cannot undertake any monitoring measures in the territorial sea without the consent of the coastal State. Monitoring of threats by patrols or detection measures in the territorial sea by third States may fall within LOSC Article 19 (2) (l), as any activity not having a direct bearing on passage. Depending on the means used, detection measures may render passage non-innocent under LOSC Article 19 (2) (c) [any act aimed at collecting information to the prejudice of the defence or security of the coastal State although it may be arguable that such monitoring measures aimed at protecting critical infrastructure is not prejudicial to the defence or security of the coastal State]; Article 19 (1) (f) [the launching, landing or taking on board of any military device, which would include underwater vehicles]; Article 19 (2) (j) [the carrying out of research or survey activities]. If these activities are carried out by third States' warships or government ships and are not compliant with the coastal State's regulations concerning passage through the territorial sea, the coastal State can request that these ships comply with these regulations, and if it does not do so, the coastal State may require these ships leave immediately.⁹⁹
42. Similarly, strait States and archipelagic States can undertake monitoring measures in straits used for international navigation (SUIN) and archipelagic waters pursuant to their sovereignty over these maritime spaces. Monitoring measures undertaken by third States in SUIN or in archipelagic waters raise similar issues. It may be open for third States to argue, for example, that monitoring including the use of detection measures by vessels is an activity "incident to their normal modes of continuous and expeditious transit," which would allow vessels "to collect not only data that was incidental to safe navigation, but also operate equipment and sensors that would normally be used in the operation of the vessel..."¹⁰⁰ However, strait States and archipelagic States may perceive any monitoring activity as contrary to transit passage in SUIN and archipelagic sea lanes passage (ASLP) in archipelagic waters, as these

⁹⁴ LOSC, art 58 (3), art 78 (2), art 88 read with art 58 (2).

⁹⁵ Roach and Smith (n 79), 415; Kraska (2022) (n 77) 616.

⁹⁶ LOSC, art 56 (2).

⁹⁷ *Nicaragua v. Colombia* (2022) (n 89), para. 95. Note Judge McRae's observation that third States that are claiming to monitor activities that might harm the marine environment "has added legitimacy in areas where there is a regional concern about the environment." See Judge McRae's Dissenting Opinion, para. 25.

⁹⁸ LOSC, art 2.

⁹⁹ LOSC, art 30.

¹⁰⁰ Klein (2011) (n 76), 217.

passage regimes require continuous and expeditious transit without delay;¹⁰¹ are not permitted under “normal mode of continuous and expeditious transit,” and may also view monitoring activities as research and survey activities subject to their authorization.¹⁰²

2. Enforcement and other prevention measures at sea

43. Section 2 discusses enforcement measures that States may take in response to either threatened or actual acts of damage to submarine cables and pipelines. Enforcement measures include boarding, inspection, and search of a ship at sea suspected of prohibited conduct (“boarding”); and where such suspicions proved justified, taking measures including any combination of arresting the vessel, or arresting persons aboard (“arrest”), and will be referred to collectively as “interdiction of vessels.”¹⁰³ The Report also discusses other possible prevention measures that States may take, which may not strictly fall within “enforcement measures” but are necessary to protect a State’s legally recognized rights and interests.¹⁰⁴
44. Several points warrant note. First, as highlighted in Part II (H) above, there may be limited opportunities for States to take enforcement and other prevention measures to prevent or respond to intentional acts of damage to submarine cables and pipelines. Second, only warships, government ships or other duly authorized ships clearly marked and identified as being on government service can undertake enforcement measures.¹⁰⁵ Third, enforcement measures generally cannot be undertaken against State ships and associated apparatus used to commit acts of damage to submarine cables and pipelines, as they are *prima facie* afforded sovereign immunity in all maritime zones, although the issue of whether underwater vehicles used by States are entitled to sovereign immunity is not clear.¹⁰⁶ The discussion below is confined to enforcement measures against private ships and associated apparatus unless otherwise specified. Fourth, the lawfulness of enforcement and other prevention measures will depend on whether it has a basis in the LOSC and international law.¹⁰⁷ The LOSC carefully circumscribes the grounds on which vessels are subject to enforcement measures by third States beyond the territorial sea due to concerns related to, *inter alia*, interruptions of freedom of navigation, interference with the flag State’s exclusive jurisdiction and the possibility that States may abuse interdiction rights.¹⁰⁸ Klein observes, “[e]stablishing that various maritime security concerns legitimize interference with exclusive flag state control is a difficult one” which is why post-LOSC treaties or instruments addressing maritime security threats incorporate enforcement measures only exercisable with flag State consent.¹⁰⁹ Enforcement measures against foreign-flagged vessels with no lawful basis may be challenged by flag States and incur State responsibility.¹¹⁰ Fifth, enforcement and other prevention measures undertaken in all maritime zones are subject to requirements that the use of force must be avoided as far as possible, and where unavoidable, must not go beyond what is reasonable, proportionate and necessary in the circumstances.¹¹¹ Sixth, the possibility of interdicting vessels suspected of intentional damage to submarine cables and pipelines on the grounds of countermeasures or self-defence is discussed in Section 4 below and in Part IV.

a) Areas beyond national jurisdiction

45. **Flag States of Vessels Suspected of Intentional Damage to Submarine Cables and Pipelines:** Flag States can take enforcement measures against vessels suspected of intentional damage to submarine cables and pipelines

¹⁰¹ LOSC, arts 38, 39, 53, 54.

¹⁰² LOSC, art 40, 54.

¹⁰³ Douglas Guilfoyle, *Shipping Interdiction and the Law of the Sea* (CUP 2009), 4. The Report uses the broader term “enforcement measures” to signify the purpose of such measures, i.e., to enforce laws and regulations. Also see LOSC, art 73 on enforcement measures which gives an indication of what enforcement measures under the LOSC entails.

¹⁰⁴ *Arctic Sunrise Arbitration* (The Kingdom of the Netherlands v. The Russian Federation), Award on the Merits, PCA Case No. 2014-02, 14 August 2015, para. 36.

¹⁰⁵ This is a requirement for the exercise of the right of visit, the right of hot pursuit and the right of arrest (for piracy): LOSC, arts 107, 110 (2) and (5); art 111 (5).

¹⁰⁶ LOSC, arts 32, 95 and 96; Klein et al (2020) (n 38), 725 – 727.

¹⁰⁷ *Arctic Sunrise Arbitration* (n 104), para. 221.

¹⁰⁸ See discussion in Guilfoyle (2009) (n 103), 24 – 25. In the *M/V Norstar*, ITLOS held that principle of exclusive flag State jurisdiction “prohibits not only the exercise of enforcement jurisdiction on the high seas by States other than the flag State but also the extension of their prescriptive jurisdiction to lawful activities conducted by foreign ships on the high seas.” The *M/V “Norstar”* (n 82), para. 225.

¹⁰⁹ Klein (2011) (n 76), 108.

¹¹⁰ See, for example, LOSC, art 106, art 232.

¹¹¹ *M/V “Saiga”*(No. 2) (St Vincent v. Guinea), ITLOS Case No. 2, Merits (1 July 1999), para. 155; The *Duzgit Integrity Arbitration* (Malta v. São Tomé and Príncipe), PCA Case No. 2014-07, 5 September 2016, para. 209; *Arctic Sunrise Arbitration* (n 104), paras. 222, 326-7.

pursuant to their exclusive jurisdiction over their own vessels.¹¹² There is a question on whether flag States are the *only* States which may arrest vessels suspected of intentional damage to submarine cables and pipelines. LOSC Article 97 (1) provides that in the event of a collision or any other “incident of navigation,” involving the penal or disciplinary responsibility of the master or any other person in the service of the ship, no penal or disciplinary proceedings may be instituted against such person except before the judicial or administrative authorities either of the flag State or of the State of which such person is a national. LOSC Article 97 (3) goes on to say that “[n]o arrest or detention of the ship, even as a measure of investigation, shall be ordered by any authorities other than those of the flag State.” The ILC’s 1956 Draft Articles on the Law of the Sea (“the 1956 Draft Articles”) observed that damage to “submarine telegraph, telephone or high-voltage power cable or to a pipeline” *may* be regarded as an incident of navigation and cross-referred Article 62 of the 1956 Draft Articles, which refers to the breaking or injury of a submarine cable or pipeline beneath the high seas done wilfully or through culpable negligence (the predecessor to LOSC Article 113).¹¹³ In the *Enrica Lexie* arbitration, the Tribunal held that an “incident of navigation” refers to “an event that (i) occurs in relation to the movement and manoeuvring of a ship; and (ii) which allegedly causes some form of serious damage or harm, including to the ships involved, their cargo, or the individuals on board.”¹¹⁴ It could be argued that intentional (or wilful) damage to submarine cables and pipelines are incidents of navigation that cause “some form of serious damage or harm” and hence, only flag States can order the arrest of the ship under LOSC Article 97 (3).

46. However, the ILC used the optional term “may,” so it is not mandated that “incidents of navigation” must include intentional damage to submarine cables and pipelines. LOSC Article 97 was motivated by accidental collisions on the high seas, and the need to minimize disputes over which State has jurisdiction in situations like the *Lotus* case,¹¹⁵ and was arguably not intended to cover intentional damage to submarine cables and pipelines. At the most, “incidents of navigation” in LOSC Article 97 only encompasses damage to submarine cables and pipelines caused by the movement or manoeuvring in the normal navigation of the ship, not when ships’ anchors are intentionally used to damage submarine cables and pipelines or where ships are used indirectly, for example, by launching submarines or underwater vehicles to cut cables and pipelines or placement of explosives to damage cables and pipelines. Supporting this interpretation is the *Enrica Lexie Incident Arbitration* where the arbitral tribunal found that there was no incident of navigation under LOSC Article 97 as the harm caused to the Indian fishermen was not caused by the movement or manoeuvring of either ship and the link between any navigational aspect of the incident and damage and harm caused was too tenuous.¹¹⁶
47. **Other States:** There is nothing in the LOSC which expressly permits warships of States other than the flag State to interdict vessels suspected of breaking or injury of submarine cables or pipelines in the high seas. LOSC Article 113 only obliges States to criminalize the breaking or injury of submarine cables and pipelines beneath the high seas by vessels flying their flag and by their nationals. The following paragraphs discuss whether there is any legal basis for other States, including States connected to submarine cables and pipelines, States of nationality of the cable owner/operator, or the flag State of the vessel conducting laying operations (although they may have less incentive to do so), to undertake enforcement and other prevention measures vis-à-vis ships and associated apparatus suspected of intentional damage to submarine cables and pipelines.
48. Breaking or Injury of Submarine Cable or Pipeline: Article X of the 1884 Convention for the Protection of Submarine Telegraph Cables (“1884 Convention”)¹¹⁷ allows warships to board foreign ships suspected of intentionally or by culpable negligence breaking a cable and requires the master to provide documentation to show the ship’s nationality and to make a report to the flag State. The LOSC did not incorporate Article X of the 1884 Convention but preserves the 1884 Convention Article X right for contracting parties to the 1884 Convention (presently ratified by 41 States).¹¹⁸ The United States considers the 1884 Convention to be customary international law.¹¹⁹

¹¹² LOSC, art 92.

¹¹³ ILC, Articles Concerning the Law of the Sea with Commentaries” in Yearbook of the International Law Commission, Vol. II, p. 265 at p. 281, commentary to art 35, para. 2, (“1956 ILC Draft Articles”).

¹¹⁴ ‘*Enrica Lexie*’ Incident (n 72), para. 650.

¹¹⁵ 1956 ILC Draft Articles (n 113), commentary to art 35, 281.

¹¹⁶ ‘*Enrica Lexie*’ Incident (n 72), para. 652 – 653.

¹¹⁷ 1884 Convention (n 58).

¹¹⁸ LOSC, art 110 states “except where acts of interference derive from powers conferred by treaty” which would apply to the 1884 Convention. In 1959, the United States invoked Article X to board and investigate the Soviet trawler, *Novorossiisk*, for damaging five transatlantic cables: See *The Novorossiisk*, Dept. of State Bull (20 April 1959), Vol. 40, No. 1034 at 555.

¹¹⁹ Restatement (Third) of the Foreign Relations of the United States, section 521 (1986).

49. Piracy: It has been argued that intentional acts of damage to submarine cables and pipelines fall within the definition of “piracy” under LOSC Article 101.¹²⁰ Piracy consists of “any illegal acts of violence, or detention, or any act of depredation, committed for private ends by the crew or passengers of a private ship or a private aircraft, and directed... (ii) against a ship, aircraft, persons or property in a place outside the jurisdiction of any State (emphasis added).”¹²¹ Thus, “deliberately damaging a section of submarine cable outside the territorial sea would be an act of violence or depredation against property in a place beyond any State’s jurisdiction and would thus constitute piracy within the meaning of Article 101 (a) (ii).”¹²² This is because the term “outside the jurisdiction” of any State in the 1956 ILC Draft Articles covered acts committed by a ship against persons or property “on an island constituting terra nullius or on the shores of an unoccupied territory”¹²³ and that it is therefore “not incompatible with this intention to apply it to another *terra nullius* (or perhaps *res communis*), the seafloor area beyond national jurisdiction.”¹²⁴ If acts of damage to submarine cables and pipelines are piracy under LOSC Article 105, warships of all States may seize the pirate ship, arrest the persons and seize the property on board and the courts of the seizing State may decide upon the penalties to be imposed.¹²⁵ If State vessels and associated apparatus are employed to commit acts of damage to submarine cables and pipelines, this would not be considered piracy unless the crew has mutinied and taken control of the ship, pursuant to LOSC Article 102.¹²⁶
50. While this interpretation is legally plausible, it is uncertain whether States will accept that they have this right vis-à-vis intentional damage to submarine cables and pipelines under LOSC Articles 101 and 105.¹²⁷ The arbitral tribunal in the *Arctic Sunrise Arbitration* also found that the act of piracy in LOSC Article 101 can only be directed “against another ship,”¹²⁸ which may militate against an interpretation that piracy includes intentional acts of damage to submarine cables and pipelines.
51. Freedom to Lay Submarine Cables and Pipelines: It is uncertain whether the freedom to lay submarine cables and pipelines in LOSC Articles 87 (1) (c) and 112 includes the right to undertake prevention measures in response to threatened or actual damage to submarine cables and pipelines in the high seas, for purposes of protecting this freedom. The arbitral tribunal in the *Arctic Sunrise Arbitration* recognized that coastal States could take prevention measures concerning the coastal State’s protection of its rights and interests in the EEZ, and this could include “the prevention of adverse ecological/environmental consequences, the prevention of terrorism and the prevention of interference with the coastal State’s sovereign rights over the exploration and exploitation of the non-living resources of the EEZ.”¹²⁹ In relation to terrorist attacks, the *Arctic Sunrise* tribunal recognized that:
- One of the rights of a coastal state in its EEZ that may justify some form of preventive action against a vessel would derive from circumstances that give rise to a reasonable belief that the vessel may be involved in a terrorist attack on an installation or structure of the coastal state. Such an attack, if allowed to occur would involve a direct interference with the exercise by the coastal state of its sovereign rights to exploit the non-living resources of its seabed.¹³⁰
52. Along a similar vein, the tribunal affirmed that a coastal State has the right to take measures to prevent interference with its sovereign rights for the exploration and exploitation of its EEZ and the “protection of a coastal State’s sovereign rights is a legitimate aim that allows it to take appropriate measures for that purpose” and such measures must fulfill the tests of reasonableness, necessity and proportionality.¹³¹ In relation to what reasonable measures a

¹²⁰ LR Wrathall, “The Vulnerability of Subsea Infrastructure to Underwater Attack: Legal Shortcomings and the Way Forward,” (2010) 12 *San Diego International Law Journal* 223, 256; DR Burnett and MP Green, “Security of International Submarine Cable Infrastructure: Time to Rethink?” in MH Nordquist, R Long and R Wolfrum (eds), *Legal Challenges in Maritime Security* (Martinus Nijhoff 2008), 557, 557 – 580; Guilfoyle et al (n 17), 670 – 674.

¹²¹ LOSC, art 101 (a) (ii).

¹²² Guilfoyle et al (n 17), 671.

¹²³ 1956 ILC Draft Articles (n 113), 28, art 39.

¹²⁴ Guilfoyle et al (n 17), 671.

¹²⁵ LOSC, art 105.

¹²⁶ See discussion in Douglas Guilfoyle, “Article 101: Definition of Piracy,” in Alexander Proelss (ed.), *United Nations Convention on the Law of the Sea: A Commentary* (Hart 2017), 737, 740 – 742.

¹²⁷ Robert Beckman, “Protecting Submarine Cables from Intentional Damage – the Security Gap,” in Douglas Burnett et al (eds), *Submarine Cables: Handbook on Law and Policy* (Brill 2014), 281, 289.

¹²⁸ *Arctic Sunrise Arbitration* (n 104), para. 238.

¹²⁹ *Ibid*, para. 306.

¹³⁰ *Ibid*, para. 314.

¹³¹ *Ibid*, paras. 324 and 326.

coastal State could take to prevent protests actions that constitute an interference of coastal State sovereign rights, it said:

...the Tribunal considers that it would be reasonable for a coastal State to act to prevent: (i) violations of its laws adopted in conformity with the Convention; (ii) dangerous situations that can result in injuries to persons and damage to equipment and installations; (iii) negative environmental consequences; and (iv) delay or interruption in essential operations. All of these are legitimate interests of coastal States.¹³²

53. Commentators have observed that States have argued that protecting freedom of navigation includes defending their vessels from attacks.¹³³ For example, Security Council Resolution 2722 adopted on 10 January 2024 in response to the attacks against shipping in the Red Sea, took note “of the rights of Member States, in accordance with international law, to defend their vessels from attacks, including those that undermine navigational rights and freedoms,”¹³⁴ However, there are divergent State and scholarly views on whether a State can invoke *the right of self-defence* in response to attacks against merchant vessels flagged in that State,¹³⁵ It is also unclear to what extent preventing interference with the freedom of navigation permits flag States to prevent or respond to attacks against their vessels that do not amount to a use of force or an armed attack or fall within piracy.
54. The question is whether the warships or government ships of States that are holders of the freedom to lay submarine cables and pipelines can argue that protection of this freedom is a legitimate aim that allows it to take appropriate measures to prevent interference with this freedom, if it encounters a threatened or actual act of damage to submarine cables and pipelines in the high seas. Intentional acts of damage to submarine cables and pipelines interferes with the freedom to lay submarine cables and pipelines, which encompasses the freedom to operate submarine cables and pipelines. In *M/V Norstar*, ITLOS held that “physical or material interference with navigation of foreign ships on the high seas violates the freedom of navigation.”¹³⁶ In the *Enrica Lexie Incident*, the arbitral tribunal held that the freedom of navigation involves a positive and negative aspect, “positively, vessels of every State may freely navigate on the high seas,” and “negatively, no State may exercise any authority against any vessel sailing under the flag of another State.”¹³⁷ It went on to find that “a breach of freedom of navigation may result from acts ranging from physical or material interference with navigation of a foreign vessel, to the threat or use of force against a foreign vessel, to non-physical forms of interference whose effect is that of instilling fear against, or causing hindrance to, the enjoyment of the freedom of navigation.”¹³⁸ If coastal States may take prevention measures to protect its sovereign rights under the LOSC, and flag States are (arguably) allowed to at least take prevention measures to defend their vessels from attacks which undermine navigational rights and freedoms under the LOSC, it is not unreasonable to argue that States that are the holders of the freedom to operate submarine cables and pipelines may take appropriate measures for the prevention of interference with this freedom subject to the tests of reasonableness, necessity and proportionality.
55. Nonetheless, this argument is untested and may be objected to by other States. First, the ambit or extent of such prevention measures is unclear. If prevention measures involve a use of force (which is allowed in maritime enforcement operations subject to the requirements of necessity, reasonableness and proportionality), it can risk conflict at sea, and in certain circumstances, may be deemed as a prohibited use of force under LOSC Article 301.¹³⁹

¹³² Ibid, para. 327.

¹³³ See, for example, Shani Friedman, “Does breaching UNCLOS invoke the right of self-defence?” CIL Dialogues, 19 February 2024.

¹³⁴ UN Security Council Resolution 2722, S/Res/2722 (2024), 10 January 2024, para. 3.

¹³⁵ See, for example, Raul (Pete) Pedrozo, “Protecting the Free Flow of Commerce from Houthi Attacks off the Arabian Peninsula,” 103 *International Law Studies* (2024) 49 – 73; Stefan Talmon, “Germany Support Expansive Interpretation of the Right to Self-Defence Against Attacks by the Houthis on Commercial Shipping in the Red Sea,” German Practice in International Law, 23 January 2024 at <https://gpil.jura.uni-bonn.de/2024/01/germany-supports-expansive-interpretation-of-the-right-to-self-defence-against-attacks-by-the-houthis-on-commercial-shipping-in-the-red-sea/>; Martin Fink, “Protecting Commercial Shipping with Strikes into Yemen: Do attacks against merchant shipping trigger the right of self-defence,” EJIL Talk, 26 January 2024 at <https://www.ejiltalk.org/protecting-commercial-shipping-with-strikes-into-yemen-do-attacks-against-merchant-shipping-trigger-the-right-of-self-defence/>; Matteo Tondini, “The legality of ASPIDES Protection Activities in the Framework of the Collective Countermeasures Doctrine,” EJIL Talk, 24 May 2024 at <https://www.ejiltalk.org/the-legality-of-aspides-protection-activities-in-the-framework-of-the-collective-countermeasures-doctrine/>.

¹³⁶ *M/V “Norstar”* (n 82), para. 222.

¹³⁷ ‘*Enrica Lexie*’ *Incident* (n 72), para. 465.

¹³⁸ Ibid, para. 1038.

¹³⁹ See, for example, *Guyana v. Suriname* where law enforcement activities in a disputed EEZ and continental shelf “seemed more akin to a threat of military action rather than a mere law enforcement activity” and was hence a prohibited use of force: *Guyana v. Suriname*, Annex VII Arbitration, Award of 17 September 2007.

To the extent that measures include interdiction of vessels exercising the freedom of navigation on the high seas, it may be deemed as contrary to the exclusive jurisdiction of the flag State which is only displaced in limited circumstances.¹⁴⁰ Second, unlike coastal States and flag States, there are several States that are potentially holders of the freedom to lay submarine cables and pipelines, which expands the number of States that are entitled to take prevention measures to protect this freedom. Certainly, States that are connected to submarine cables and pipelines have a legitimate interest in preventing or responding to acts of damage to submarine cables and pipelines. However, it is not clear that the same can be said about, for example, States of nationality of the owner/operator of the submarine cable and pipeline, which may not have a substantial connection with the cable/pipeline owner or operator, and who would at the most be preventing interference with the economic interests of its nationals. This, coupled with challenges in identifying the cause of damage to submarine cables and pipelines, currently militates against an interpretation of the freedom to lay submarine cables and pipelines that allows States that hold this freedom to take appropriate prevention measures, without further clarification from States or international courts and tribunals. This does not preclude such States from relying on grounds of necessity, which is discussed below.

56. Protection and Preservation of the Marine Environment: States have obligations to protect and preserve the marine environment, primarily set out in LOSC Part XII, including obligations to prevent, reduce and control “pollution of the marine environment” as defined in LOSC Article 1 (1) (4). Part XII obligations apply irrespective of the maritime zone in which the activity resulting in damage to the marine environment has taken place.¹⁴¹ LOSC Article 192 stipulates that “States have the obligation to protect and preserve the marine environment;” LOSC Article 194 (1) obliges States to take “all measures consistent with this Convention that are necessary to prevent, reduce and control pollution of the marine environment from any source, using for this purpose the best practicable means at their disposal and in accordance with their capabilities...” and LOSC Article 194 (2) provides that:

States shall take all measures necessary to ensure that activities under their jurisdiction or control are so conducted as not to cause damage by pollution to other States and their environment, and that pollution arising from incidents or activities under their jurisdiction or control does not spread beyond the areas where they exercise sovereign rights in accordance with this Convention.

57. Depending on the means used, intentional acts of damage to submarine cables and pipelines may result in pollution of the marine environment under LOSC Article 1 (1) (4) if it results, or is likely to result, in the indirect or direct introduction of substances or energy into the environment that has deleterious effects on the marine environment. For submarine communication and power cables, the use of underwater explosives is an introduction of substances or energy into the environment that is likely to result in damage to the surrounding biodiversity and resources, as well as a hindrance to marine activities. For example, the shockwaves of the explosions at the Nord Stream pipelines reportedly impacted Baltic Sea life.¹⁴² On the other hand, cutting submarine communication and power cables may not result in deleterious effects, subject to the caveat that cutting of submarine power cables may result in increased introduction of electromagnetic fields into the marine environment.¹⁴³ For submarine pipelines, acts of damage by any means will most likely result in pollution of the marine environment.¹⁴⁴ For example, the explosions at the Nord Stream pipelines resulted in significant gas leakage even though there was no gas transported through the Nord Stream pipelines at the time.¹⁴⁵ The extent of the pollution to the marine environment and damage suffered will depend on the specific circumstances.
58. While the obligations relating to the protection and preservation of the marine environment of the high seas and the Area are *erga omnes (partes)*,¹⁴⁶ it is not clear that this allows all LOSC State parties to take enforcement or prevention measures against ships and associated apparatus suspected of threatened or actual acts damage to submarine cables and pipelines that cause or are likely to cause pollution. The *erga omnes partes* characterisation

¹⁴⁰ LOSC arts 105, 109, 110, 111.

¹⁴¹ *South China Sea Arbitration* (Philippines v. China), Award, PCA Case no. 2013-19, 12 July 2016, para. 927.

¹⁴² Justin Jackson, “Hidden Environmental Danger of Nord Stream pipeline explosions,” Phys Org, 22 March 2023, at https://phys.org/news/2023-03-hidden-environmental-danger-nordstream-pipeline.html#google_vignette.

¹⁴³ Eccles et al (n 62), 310 – 312.

¹⁴⁴ Azaria & Ulfstein (n 39).

¹⁴⁵ See, for example, Karl Mathiesen and Zie Weise, “8 things to know about the environmental impact of unprecedented Nord Stream leaks,” Politico, 28 September 2022, <https://www.politico.eu/article/8-thing-know-environmental-impact-unprecedented-nord-stream-leak/>.

¹⁴⁶ *Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area* (Advisory Opinion of 1 February 2011, ITLOS Reports 2011, 10, para. 180.

of marine environmental obligations in areas beyond national jurisdiction appear to be confined to allowing States to invoke the responsibility of States for breaches of their obligations.

59. **Necessity:** States may base prevention measures against ships suspected of intentional acts of damage to submarine cables and pipelines on the ground of “necessity” under customary international law on the basis that it is the only way for that State to safeguard an essential interest against a grave and imminent peril and the act did not seriously impair an essential interest of the State towards which the obligation existed.¹⁴⁷ Under Article 25 of the 2001 *Draft Articles on Responsibility of States for Internationally Wrongful Acts*, (ASR), a plea of necessity is recognized as a circumstance precluding wrongfulness, i.e. it is a possible defense to claims by flag States that the interdicting State had no legal grounds to interdict the vessel under the LOSC or customary international law.¹⁴⁸ However, necessity “can only be invoked under certain strictly defined conditions which must be cumulatively satisfied” and “the State concerned is not the sole judge of whether those conditions have been met.”¹⁴⁹ As observed by the ILC, “necessity will only be rarely available to excuse non-performance of an obligation and...it is subject to strict limitations to safeguard against possible abuse.”¹⁵⁰
60. States that are served by the submarine cable and pipeline could argue that prevention measures are justified on the high seas vis-à-vis vessels suspected of intentional damage to submarine cables and pipelines on the basis that such actions are necessary to protect its “essential interests.” Essential interests “extends to particular interests of the State and its people, as well as of the international community as a whole,”¹⁵¹ which is wide enough to encompass the interests served by submarine cables and pipelines. These essential interests must be threatened by a “grave and imminent peril” which is to be objectively established and not merely possible, although lack of certainty does not necessarily disqualify reliance on necessity.¹⁵² Grave and imminent peril “represents a grave danger to the existence of the State itself, its political or economic survival, the continued functioning of its essential services, the maintenance of internal peace, the survival of a sector of its population, the preservation of the environment of its territory or part thereof.”¹⁵³ States claiming necessity will also have to show that the measures taken were the *only* way to safeguard essential interests served by submarine cables and pipelines. It is not clear whether States of the nationality of the owner/operator of the submarine cable and pipeline will be able to argue that enforcement or prevention measures were necessary to protect its “essential interests” against a “grave and imminent peril” especially if the only link between cable and pipeline owners/operators and their States of nationality is incorporation. It is also uncertain whether all States can argue necessity to respond to intentional acts of damage to submarine cables and pipelines that harm the marine environment in areas beyond national jurisdiction, unless they can establish such harm is against their essential interests.
61. **Coastal States:** LOSC Article 221 may provide the necessary legal basis to coastal States to undertake measures against ships and associated apparatus for suspected damage to submarine cables and pipelines that results in pollution or a threat of pollution in the high seas.¹⁵⁴ Article 221 preserves the rights of coastal States to take and enforce measures beyond the territorial sea proportionate to the actual or threatened damage to protect their coastline or related interests, including fishing, from pollution or threat of pollution following a maritime casualty or acts relating to such a casualty, which may reasonably be expected to result in major harmful consequences. Maritime casualty means “a collision of vessels, stranding or other incident of navigation, or other occurrence on board a vessel or external to it resulting in material damage or imminent threat of material damage to a vessel or cargo.”¹⁵⁵ Damage to submarine cables and pipelines arising out of a navigational incident may fall within “incidents

¹⁴⁷ ILC, *Draft Articles on Responsibility of States for Internationally Wrongful Acts, with Commentaries* (2001) UN Doc/A/56/10 (ASR), art 25 (1) (a).

¹⁴⁸ ASR, *ibid*, commentary to art 25, 80, para. 1. For example, Canada argued that the arrest of a Spanish fishing vessel in the high seas was necessary to stop the overfishing of Greenland Halibut by Spanish fishermen in response to the EU and Spain’s argument that they had no right to arrest vessels for conservation reasons. The ICJ ultimately held that it did not have jurisdiction: See *Fisheries Jurisdiction (Spain v. Canada)*, Jurisdiction of the Court, Judgment, ICJ Reports 1998, p. 432.

¹⁴⁹ *Gabčíkovo-Nagymoros Project* (Hungary v. Slovakia), Judgment of 25 September 1997, ICJ Reports (1997), 3, paras. 51 – 52.

¹⁵⁰ ASR (n 147), commentary to art 25, para. 2. For example, ITLOS rejected Guinea’s argument that its “essential interests were in grave and imminent peril,” justified its application of its customs laws in its EEZ and that it was not the only means of safeguarding its interests. See *MV “Saiga”* (n 111), para. 135.

¹⁵¹ ASR, *ibid*, commentary to art 25, para. 15.

¹⁵² *Ibid*.

¹⁵³ Addendum – Eighth report on State responsibility by Mr. Roberto Ago, Special Rapporteur, Yearbook of the International Law Commission (1980) vol. II (1), A/CN.4/318/ADD. 5 – 7, para. 2.

¹⁵⁴ For a discussion on the legislative history of Article 221, see Kristin Bartenstein, “Article 221” in Alexander Proelss (ed.), *United Nations Convention on the Law of the Sea: A Commentary* (Hart 2017), 1512 – 1521.

¹⁵⁵ LOSC, art 221 (2).

of navigation” (see discussion in paragraphs 45 – 46) or may be an “other occurrence on board a vessel or external to it resulting in material damage or imminent threat of material damage to a vessel or cargo” although questions may be raised on whether there is “material damage to a vessel or cargo.”¹⁵⁶ LOSC Article 221 may accordingly allow coastal States to take enforcement and other prevention measures against vessels and associated apparatus if it meets the conditions in Article 221. Coastal States may also rely on “necessity” to take such enforcement and prevention measures (indeed, LOSC Article 221 refers to customary international law which includes the defense of necessity).¹⁵⁷

b) *Areas beyond sovereignty but within national jurisdiction*

62. **Flag States of Vessels Suspected of Intentional Damage to Submarine Cables and Pipelines:** As discussed in paragraphs 45 - 46, flag States can take interdiction measures against their own vessels suspected of intentional damage to submarine cables and pipelines.¹⁵⁸
63. **Other States:** The analysis in paragraphs 47 - 59 on enforcement and prevention measures in areas beyond national jurisdiction is also relevant to enforcement and prevention measures in the EEZ and continental shelf and will only be briefly summarized here. The LOSC does not expressly permit other States to undertake enforcement and prevention measures in the EEZ or continental shelf against ships for suspected intentional damage to submarine cables and pipelines.
- a. Breaking or Injury of a Submarine Cable or Pipeline: The Article X right of boarding in the 1884 Convention (confined to submarine cables) and preserved between parties to the 1884 Convention, may apply in the EEZ given that the 1884 Convention, although adopted before the establishment of the EEZ, states that it “applies outside territorial waters to all legally established submarine cables landed on the territories, colonies or possessions of one or more of the High Contracting Parties.”¹⁵⁹
 - b. Piracy: It is unclear whether intentional acts of damage to submarine cables and pipelines can be considered piracy for reasons explained above, but if it were, the warships of all States would have the right to interdict vessels for threatened or actual acts of intentional damage to submarine cables and pipelines in the EEZ (see paragraphs 49 – 50).¹⁶⁰
 - c. Freedom to lay submarine cables and pipelines: It is unclear whether the freedom to lay submarine cables and pipelines in the EEZ in LOSC Article 58 (1) and/or the entitlement to lay submarine cables and pipelines on the continental shelf in LOSC Article 79 (1) confers upon States that hold this freedom the right undertake prevention measures against vessels suspected of threatened or actual damage to submarine cables and pipelines in the EEZ and continental shelf (see paragraphs 51 – 55).
 - d. Protection and Preservation of the Marine Environment: Even though all LOSC States Parties have obligations to protect and preserve the marine environment which apply irrespective of where acts resulting in harm to the marine environment have taken place (see paragraph 56), the coastal State has jurisdiction over the protection and preservation of the marine environment under LOSC Article 56 (1) (b) (iii) and “bears the responsibility within its exclusive economic zone to take legislative, administrative and enforcement measures in accordance with customary international law, as reflected in the relevant provisions of [the LOSC], for the purpose of conserving the living resources and protecting and preserving the marine environment.”¹⁶¹ Accordingly, any enforcement and prevention measures against vessels suspected of threatened or actual damage to submarine cables and pipelines on the basis that it has caused pollution of the marine environment in the EEZ and continental shelf must be taken by the coastal State.
 - e. Necessity: The discussion in paragraphs 59 – 60 is applicable.

¹⁵⁶ The tribunal in the *Arctic Sunrise Arbitration* noted that Russia could not rely on Article 221 to arrest the *Arctic Sunrise* as the threatened damage to Russia’s interests could not reasonably have been expected to result in major familiar harmful consequences: *Arctic Sunrise Arbitration* (n 104), para. 310.

¹⁵⁷ Bartenstein, “Article 221” (n 154), 1519.

¹⁵⁸ LOSC, art 92, applicable in the EEZ by virtue of LOSC art 58 (2).

¹⁵⁹ 1884 Convention (n 58), art I.

¹⁶⁰ LOSC, art 58 (2), read with arts 110 and 105.

¹⁶¹ *Nicaragua v. Colombia* (2022) (n 89), para. 95.

64. **Coastal State:** As outlined in paragraph 57 above, acts of damage to submarine cables and pipelines in the EEZ and continental shelf may result in pollution of the marine environment, as well as damage to natural resources in the EEZ and continental shelf.¹⁶² While the freedom to lay submarine cables and pipelines in the EEZ and continental shelf is a competence afforded to other States in these maritime spaces, coastal States may have a legal basis under the LOSC to take enforcement or other prevention measures against suspected intentional damage to submarine cables and pipelines if it results in a violation of its laws and regulations related to its sovereign rights over resources and jurisdiction in the EEZ and continental shelf adopted in conformity with the LOSC; if it relates to the prevention of interference with its sovereign rights; and/or if it relates to its jurisdiction over the marine environment.¹⁶³
65. Coastal State Enforcement and Prevention Measures Related to its Sovereign Rights Over Resources: Coastal States can enforce their laws and regulations relating to its sovereign rights over both its living resources and non-living resources. For living resources, LOSC Article 73 provides that such enforcement would include “boarding, inspection, arrest and judicial proceedings as may be necessary to ensure compliance with the laws and regulations adopted by it in conformity with this Convention.”¹⁶⁴ With regard to non-living resources, the ILC and international courts and tribunals have affirmed that while there is no equivalent to Article 73 for enforcement of laws relating to non-living resources found in the EEZ and continental shelf, such rights exist.¹⁶⁵ The coastal State can also exercise the right of hot pursuit if it has “good reasons to believe” (information which could raise “no more than a suspicion” is not sufficient ground for commencing hot pursuit)¹⁶⁶ that a vessel has violated the coastal State’s laws and regulations applicable in accordance with the LOSC to the EEZ and continental shelf, including violations of applicable safety zones around artificial islands, installations and structures.¹⁶⁷ The coastal State can only adopt laws and regulations in its EEZ and continental shelf related to its sovereign rights over resources, or jurisdiction over the marine environment, marine scientific research or artificial islands, installations and structures.¹⁶⁸ Such laws will not cover intentional damage to submarine cables and pipelines unless it can be established that ancillary harm or interference with its sovereign rights to resources and hence entails a violation of its EEZ and continental shelf laws adopted in conformity with the LOSC.
66. As discussed in paragraphs 51 – 52, the *Arctic Sunrise Arbitration* recognized that coastal States have the right to take measures to prevent interference with its sovereign rights for the exploration and exploitation of its EEZ and the “protection of a coastal State’s sovereign rights is a legitimate aim that allows it to take appropriate measures for that purpose” and such measures must fulfill the tests of reasonableness, necessity and proportionality.¹⁶⁹ The Tribunal found that it would be reasonable for a coastal State to act to prevent: (i) violations of its laws adopted in conformity with the Convention (ii) dangerous situations that can result in injuries to persons and damage to equipment and installations; (iii) negative environmental consequences; and (iv) delay or interruption in essential operations.¹⁷⁰
67. It also affirmed that:
- One of the rights of a coastal State in its EEZ that may justify some form of preventive action against a vessel would derive from circumstances that give rise to a reasonable belief that the vessel may be involved in a terrorist attack on an installation or structure of the coastal

¹⁶² Note the finding by ITLOS that the conservation of living resources of the sea is an element in the protection and preservation of the marine environment: See *Southern Bluefin Tuna* (New Zealand v. Japan; Australia v. Japan, Provisional Measures, Order of 27 August 1999, ITLOS Reports, p. 280, para. 70.

¹⁶³ *Arctic Sunrise Arbitration* (n 104), para. 231.

¹⁶⁴ LOSC, art 73.

¹⁶⁵ For coastal State enforcement of laws relating to non-living resources, there is no equivalent of Article 73, but the ILC in its Draft Articles on the Law of the Sea observed that the rights conferred upon the coastal State cover all the rights necessary for and connected with the exploration and exploitation of the resources of the continental shelf, including “jurisdiction in connexion with the prevention and punishment of violations of the law:” 1956 ILC Draft Articles (n 113), 297. The *Arctic Sunrise Arbitration* also recognized that such a right to enforce its laws in relation to non-living resources in the EEZ exist: *Arctic Sunrise Arbitration* (n 104), para. 283.

¹⁶⁶ *The M/V “Saiga”* (n 111), para. 147.

¹⁶⁷ LOSC, art 111, read with art 60 (4) – (6) and art 80.

¹⁶⁸ LOSC, art 56.

¹⁶⁹ *Arctic Sunrise Arbitration* (n 104), paras. 324 and 326.

¹⁷⁰ *Ibid*, para. 327.

state. Such an attack, if allowed to occur would involve a direct interference with the exercise by the coastal state of its sovereign rights to exploit the non-living resources of its seabed.¹⁷¹

68. Although cross-border submarine cables and pipelines are not installations or structures of the coastal State, by the same reasoning, acts of intentional damage to submarine cables and pipelines may involve an interference with the exercise by the coastal State of its sovereign rights to exploit the resources in these zones, and hence may justify prevention measures, subject to the tests of reasonableness, necessity and proportionality. The coastal State, if challenged, will have to provide sufficient evidence that it was indeed undertaking prevention measures to protect its legitimate interests in the EEZ and continental shelf.¹⁷²
69. Coastal State Enforcement and Prevention Measures Related to its Jurisdiction over the Marine Environment: The coastal State has jurisdiction over its marine environment in its EEZ under LOSC Article 56 (b) (ii) and has certain specified enforcement jurisdiction with respect to pollution in the EEZ from different sources set out in Part XII. However, LOSC Article 220, which gives the coastal State enforcement powers ranging from inspection to detention, would not be applicable. It is contingent on certain conditions, including there being “clear grounds” or “clear objective evidence” that the vessel has committed a violation of “applicable international rules and standards for the prevention, reduction and control of *pollution from vessels* or laws and regulations of that State conforming and giving effect to such rules and standards.” The acts of damage to submarine cables and pipelines in which a vessel is involved may cause pollution but cannot be considered pollution from vessels *per se*. LOSC Article 79 (2) permits the coastal State to subject the laying (and operation) of pipelines (only) to reasonable measures for the prevention, reduction and control of pollution from pipelines. This competence may include the right to take enforcement or prevention measures against vessels suspected of committing acts of damage to pipelines to prevent, reduce and control pollution from pipelines.¹⁷³ As discussed in paragraph 61, coastal States may also rely on LOSC Article 221 to take and enforce measures against vessels for suspected damage to submarine cables and pipelines that results in pollution or a threat of pollution in the EEZ which may reasonably be expected to result in major harmful consequences to the coastal State if damage to submarine cables and pipelines falls within the definition of “maritime casualty.”
70. Necessity: Coastal States may also rely on “necessity” under customary international law to take prevention measures if it is the only way for it to safeguard an essential interest against a grave and imminent peril and the act did not seriously impair an essential interest of the State towards which the obligation existed (see discussion in paragraph 61).¹⁷⁴

c) *Areas under sovereignty*

71. **Territorial Sea**: Only the coastal State can take enforcement measures in the territorial sea and other States cannot conduct enforcement measures without the consent of the coastal State (although it is of course possible for other States to argue that such enforcement measures were justified by “necessity”). The coastal State can rely on several grounds to undertake enforcement measures against vessels and associated apparatus suspected of intentional damage to submarine cables and pipelines in the territorial sea.
72. Innocent Passage: Coastal States can “take necessary steps in its territorial sea to prevent passage which is not innocent” under LOSC Article 25. All “necessary steps” includes the full range of enforcement jurisdiction subject to the discretion of the coastal State which must be in conformity with general principles of international law and not go beyond what is reasonable and necessary.¹⁷⁵ Both acts of damage to submarine cables and pipelines and the means used to damage submarine cables and pipelines may render passage of State vessels and private vessels (and associated apparatus) non-innocent under LOSC Article 19. Depending on the circumstances, such acts of damage are both prejudicial to the peace, good order or security of the coastal State under Article 19 (1) and are

¹⁷¹ Ibid, para. 314.

¹⁷² In the *Arctic Sunrise Arbitration*, the tribunal found there was no reasonable grounds for Russian authorities to suspect the Arctic Sunrise of terrorism or that the Arctic Sunrise was interfering with Russia’s exercise of its sovereign rights for the exploration and exploitation of non-living resources of its continental shelf.

¹⁷³ Klein (2011) (n 76), 100.

¹⁷⁴ ASR (n 147), art 25 (1) (a).

¹⁷⁵ See discussion in Richard Barnes, “Article 25: Rights of Protection of the Coastal State,” in Alexander Proelss (ed.), *United Nations Convention on the Law of the Sea: A Commentary* (Hart 2017), 222, 224 – 225.

covered by specific activities listed in Article 19 (2), particularly Articles 19 (2) (a), (f), (h), (k) and (l). This is elaborated on below.

- a. Article 19 (2) (a) of the LOSC states that “any threat or use of force against the sovereignty, territorial integrity or political independence of the coastal State, or in any manner in violation of the principles of international law embodied in the Charter of the United Nations” renders passage non-innocent. The Report addresses whether acts of damage to submarine cables and pipelines constitute a use of force in Part IV.
- b. Article 19 (2) (k) stipulates that “any act aimed at interfering with any systems of communication or other facilities or installations of the coastal State” is prejudicial to the peace, good order or security of coastal States. Any acts of damage to submarine communications cables that land in the coastal State would be considered “systems of communication” of that coastal State and would render passage non-innocent. A question may be raised as to whether submarine communication cables that transit the territorial sea without making landfall would be deemed “systems of communications or other facilities of installations of the coastal State” as such cables do not serve the coastal State. The Tallinn Manual 2.0 observed that States enjoy sovereign authority over cyber infrastructure physically located within its territory (including its territorial sea) regardless of whether that infrastructure belongs to or is operated by government institutions, private companies or private individuals and includes computer networks and systems supported by that cyber infrastructure, which would include submarine communication cables.¹⁷⁶ However, the Tallinn Manual 2.0 does not specify whether this sovereign authority is confined to submarine communication cables that land in the relevant State (and hence serve that state) or extends to submarine communication cables that are transiting the territorial sea. Nonetheless, given that coastal States have been given the authority to regulate innocent passage to protect submarine cables under LOSC Article 21 (1) (c), which does not distinguish between cables that transit or make landfall, Article 19 (2) (k) can be interpreted broadly to cover submarine communication cables that are located within the territorial sea of the coastal State regardless of whether they land in the coastal State.
- c. Submarine power cables and submarine pipelines are not “systems of communications,” and will not fall within “facilities or installations” of the coastal State, particularly as the terms “facilities” and “installations” are used frequently throughout LOSC, distinct from “cables” and “pipelines.”¹⁷⁷
- d. Article 19 (2) (h) provides that any act of wilful and serious pollution contrary to this Convention is prejudicial to the peace, good order or security of the coastal State. Acts of damage to submarine cables and pipelines may result in pollution (as defined in LOSC Article 1 (1) (4)) and depending on whether pollution is serious, hence will be covered by this provision.¹⁷⁸
- e. Article 19 (2) (l) is a catch-all phrase that covers “any activity not having a direct bearing on passage,” and while open-ended, would cover vessels engaged in any acts of damage to submarine cables and pipelines.
- f. The *means* used to damage submarine cables and pipelines may also render passage non-innocent. Article 19 (2) (f) states that the launching, landing or taking on board of any military device is an activity considered to be prejudicial to the peace, good order or security of the coastal State. While “military device” is not defined in the LOSC, it has been suggested that “military device” should be interpreted purposively to include “drones and unmanned submersibles” which fall into the category of underwater vehicles.¹⁷⁹ If such military device is launched from a vessel traversing the territorial sea, for purposes of damaging a cable or pipeline, this would also render passage non-innocent.
- g. LOSC Article 20 requires submarines and other underwater vehicles to navigate on the surface and show their flag in the territorial sea.” There are divergent opinions on whether a breach of Article 20 would render passage non-innocent.¹⁸⁰ On one view, submerged passage does not render passage non-innocent - it is not listed in

¹⁷⁶ Michael N. Schmitt (ed.), *Tallinn Manual 2.0 on the International Law Applicable to Cyber Operations* (CUP 2017) (“Tallinn Manual 2.0”), commentary to rule 2, para. 4.

¹⁷⁷ See, for example, LOSC, art 21 (1) (b), art 125 (3), art 126, art 127 for facilities; and art 60, art 80, art 147 for installations.

¹⁷⁸ Also see LOSC, art 211 (4).

¹⁷⁹ Richard Barnes, “Article 19: Meaning of innocent passage,” in Alexander Proelss (ed.), *United Nations Convention on the Law of the Sea: A Commentary* (Hart 2017), 187, 194 – 195.

¹⁸⁰ Richard Barnes, “Article 20: Submarines and underwater vehicles” in Alexander Proelss (ed.), *United Nations Convention on the Law of the Sea: A Commentary* (Hart 2017), 196, 198 – 199.

Article 19 UNCLOS as one of the activities that renders passage non-innocent.¹⁸¹ However, this cannot be conclusively determined from the *travaux préparatoires* and there is no conclusive State practice on this issue.¹⁸² The better view, in the Committee's opinion, is that submerged passage of submarines and underwater vehicles does render passage non-innocent, or at the very least, permits coastal States to take into consideration the submerged passage in determining whether the passage is innocent or non-innocent.¹⁸³ The territorial sea is a zone in which the security interest of the coastal State is explicitly recognized and which the coastal State has the prerogative to determine whether specific behaviour is prejudicial to the peace good order, security of the territorial sea.¹⁸⁴

73. Breaches of Coastal State Laws and Regulations: The LOSC is silent on the consequences of breaches of coastal State laws and regulations under LOSC Article 21. However, it seems evident that coastal States may also undertake enforcement and other prevention measures against vessels and associated apparatus for violations of laws and regulations relating to innocent passage in respect of the protection of cables and pipelines under LOSC Article 21 (1) (c) which may include restrictions on anchoring and criminal penalties for damage done to pipelines and cables.¹⁸⁵ Foreign ships shall comply with all such laws and regulations.¹⁸⁶ If coastal States have adopted laws and regulations on the protection of cables and pipelines, acts of damage to such cables and pipelines would be a breach of those laws and regulations. While LOSC Article 25 is limited to necessary steps to prevent passage which is non-innocent and does not apply *per se* to breaches of coastal States' laws and regulations, the existence of prescriptive jurisdiction in relation to the protection of submarine cables and pipelines under LOSC Article 21 (1) (c) gives coastal States the authority to undertake enforcement measures to secure compliance with its laws.¹⁸⁷ This is supported by the fact that coastal States have general criminal jurisdiction in their territorial sea pursuant to its sovereignty, which includes the exercise of general criminal jurisdiction over criminal offences related to the damage of submarine cables and pipelines provided they have adopted the necessary national legislation. The limit on the coastal State's exercise of criminal jurisdiction on board a foreign ship passing through the territorial sea in Article 27 of the LOSC does not apply. Acts of damage to submarine cables and pipelines are not "crimes on board the ship," have consequences that extend to the coastal State and are also the kind "to disturb the peace of the country of the country or the good order of the territorial sea."¹⁸⁸
74. Similarly, coastal States can adopt laws and regulations on innocent passage "on the preservation of the environment of the coastal state and the prevention, reduction and control of pollution thereof" under LOSC Article 21 (1) (f). This could conceivably include laws and regulations on intentional harm or pollution to the marine environment and could cover intentional acts of damage to submarine cables and pipelines by vessels and associated apparatus. LOSC Article 220 (2) gives coastal States the power to undertake physical inspection of vessels where there are clear grounds for believing that a vessel navigating in the territorial sea has violated laws and regulations of that State adopted in accordance with the LOSC, and may, where the evidence warrants, institute proceedings including detention of the vessel.
75. Hot Pursuit: Coastal States have the right of hot pursuit under LOSC Article 111 if there is "good reason to believe" that the ship has violated the coastal State's laws and regulations within its internal waters, or territorial sea, and such pursuit has commenced when the ship is within these zones, and provided it meets the requirements in LOSC Article 111.
76. State vessels and associated apparatus: When State vessels and associated apparatus are suspected of committing acts of damage to submarine cables and pipelines, and this is a breach of coastal state laws and regulations relating to passage (see paragraph 73), the only avenue open to the coastal State is to "require the

¹⁸¹ David Froman, 'Uncharted Waters: Non-Innocent Passage of Warships in the Territorial Sea' (1983) 21 *San Diego Law Review* 833, 928.

¹⁸² Barnes, "Article 20" (n 180), 199.

¹⁸³ *Ibid.*

¹⁸⁴ Note that Nordquist et al observe that the use of the term "are required" leaves open the possibility that coastal State may decide to waive this requirement. Myron H Nordquist, Satya Nandan, Shabtai Rosenne (eds), *United Nations Convention on the Law of the Sea 1982: A commentary*, vol. II (1993), 183; Barnes, "Article 20" (n 180), 199.

¹⁸⁵ Richard Barnes, "Article 21: Laws and Regulations of the Coastal State," in Alexander Proelss (ed.), *United Nations Convention on the Law of the Sea: A Commentary* (Hart 2017), 199, 205.

¹⁸⁶ LOSC, art 21 (4).

¹⁸⁷ Barnes, "Article 21" (n 185), 203.

¹⁸⁸ LOSC, art 27 (1) (a) and (b).

warship to leave the territorial sea immediately” pursuant to Article 30 of the LOSC.¹⁸⁹ This is consistent with the general immunities of warships and government ships in the territorial preserved in LOSC.¹⁹⁰

77. **Straits used for navigation and archipelagic waters:** In SUIN, private vessels and associated apparatus that are engaged in acts of intentional damage to submarine cables and pipelines are not exercising transit passage under LOSC Article 38 (2), which requires navigation solely for the purpose of continuous and expeditious transit; and such acts are not in compliance with the LOSC Articles 39 (1) (a) and (c) duties of States exercising transit passage.¹⁹¹ There is no explicit provision which allows strait States to suspend or prevent non-transit passage or preserve its criminal jurisdiction over vessels exercising transit.¹⁹² LOSC Article 233 provides that strait States may take appropriate enforcement measures if a foreign vessel has violated laws and regulations referred to in LOSC Articles 42 (1) (a) and (b).¹⁹³ This does not cover intentional acts of damage to submarine cables and pipelines by vessels. On one view, strait States can only undertake enforcement measures for violations of laws that are specified in LOSC Article 233 and do not have enforcement powers over transiting ships.¹⁹⁴ The other, more palatable view, also expressed by the ILA Committee on Coastal Jurisdiction on Marine Pollution, is that ships engaging in activities which are not an exercise of transit passage are considered to be in non-transit passage and through LOSC Article 38 (3), will automatically fall under the innocent passage regime, bringing LOSC Article 25 (1) into operation (see paragraph 72).¹⁹⁵
78. In archipelagic waters, vessels and associated apparatus engaged in intentional damage to submarine cables and pipelines will not be exercising innocent passage (see paragraph 72) or archipelagic sea lanes passage, for the same reasons why vessels and associated apparatus are not exercising transit passage in SUIN (see paragraph 77).¹⁹⁶ Archipelagic States may undertake necessary steps (including enforcement measures) to prevent non-innocent passage in archipelagic waters, as set out in paragraph 72.¹⁹⁷ There is no express authority for archipelagic States to prevent passage which is not in archipelagic sea lanes passage or explicit enforcement jurisdiction equivalent to LOSC Article 233.¹⁹⁸ However, archipelagic States can take enforcement measures against foreign ships in non-archipelagic sea lanes passage pursuant to their sovereignty over its waters for violations of its laws.¹⁹⁹ This is confirmed by the *Duzgit Integrity Arbitration* where the arbitral tribunal affirmed that archipelagic States had enforcement jurisdiction resulting from its sovereignty over its archipelagic waters to arrest vessels undertaking ship-to-ship transfers in archipelagic waters without the archipelagic State’s consent, and that such vessels were not exercising innocent passage.²⁰⁰

3. Prosecution of offences related to intentional damage to submarine cables and pipelines

79. This section examines the prosecution of offences related to damage to submarine cables and pipelines, which requires, *inter alia*, the adoption of national legislation making damage to submarine cables and pipelines an offence with appropriate penalties; investigations in response to threatened or actual damage to submarine cables and pipelines; the arrest of perpetrators; and the adjudication by national courts or equivalent processes to determine whether the perpetrator is responsible for the offence and the imposition of suitable penalties.²⁰¹

¹⁸⁹ LOSC, art 30

¹⁹⁰ LOSC, art 32.

¹⁹¹ Arguably, the fact that submarines and underwater vehicles can travel submerged in SUIN may make intentional acts of damage harder to detect.

¹⁹² Hugo Caminos and Vincent Cogliati-Bantz, *The Legal Regime of Straits* (CUP 2014), 280 – 281.

¹⁹³ LOSC art 233, read with art 42 (1) (a) and (b).

¹⁹⁴ Caminos and Cogliati-Bantz (n 192), 280 – 292.

¹⁹⁵ ILA Committee on Coastal State Jurisdiction Relating to Marine Pollution, Final Report (2000), 15 – 16. Also see Statement relating to Art. 233 of the Draft Convention on the Law of the Sea in its Application to the Straits of Malacca and Singapore, made by Indonesia, Malaysia and Singapore, 28 April 1982, Official Records Vol. XVI, pp 250 -251, UN Doc.A/CONF.62/L.145, which noted that Article 42 and 233 of [the LOSC] do not affect the rights and obligations of states bordering the Straits regarding appropriate enforcement measures with respect to vessels in the Straits not in transit passage.

¹⁹⁶ LOSC, art 52 and art 53.

¹⁹⁷ LOSC, art 52, read with art 25.

¹⁹⁸ See discussion in the ILA Committee’s Final Report on Coastal State Jurisdiction (n 195), 18 – 19.

¹⁹⁹ Robin Churchill and AV Lowe, *The Law of the Sea*, 4th Edition (Melland Schill), chapter 6.

²⁰⁰ *Duzgit Integrity Arbitration* (n 111), paras. 234 – 236, 310.

²⁰¹ Also see 2023 GA Resolution (n 22), para. 147.

80. States must have a legal basis, consistent with the LOSC and/or with other rules of international law, to prosecute offences related to acts of damage to submarine cables or pipelines.²⁰² The legal basis for prosecution of such offences in national law is determined by whether States have jurisdiction over acts of damage to submarine cables and pipelines. The Report focuses primarily on whether States have *prescriptive* jurisdiction over such acts based on principles of criminal jurisdiction i.e., territorial criminal jurisdiction (subjective and objective territoriality); and extraterritorial jurisdiction based on the nationality principle, passive personality principle, the protective principle and the universality principle,²⁰³ although it acknowledges that there is uncertainty on the precise scope of these particular principles.²⁰⁴ Principles of criminal jurisdiction require that a State “must identify a sufficient nexus between itself and the object of its assertion of jurisdiction,” and assertions of extraterritorial jurisdiction are entitled to recognition by other States only to the extent that it is consistent with international law.²⁰⁵ That general international law other than the LOSC can be considered in interpreting and applying LOSC provisions is warranted by LOSC Article 293, Article 31 (3) (c) of the Vienna Convention on the Law of Treaties and has been recognized by ITLOS and Annex VII arbitral decisions.²⁰⁶ For example, in the *Enrica Lexie* Arbitration, India invoked the “territoriality principle” and the “passive personality principle” and the Tribunal found that “to justify India’s exercise of jurisdiction in the present case, it would be sufficient for either of the two bases to be compatible with the Convention.”²⁰⁷ The Report assumes that once prescriptive jurisdiction is established, that enforcement and adjudicative jurisdiction can be exercised only if the perpetrator is in its territory.²⁰⁸

a) *Areas beyond national jurisdiction*

81. **Flag States:** Under LOSC Article 113, (1) flag States of the ship and (2) States of persons “subject to its jurisdiction” who have engaged in wilful or culpably negligent conduct that has resulted or is likely to result in breaking or injury of submarine cables and pipelines on the high seas are obliged to adopt laws and regulations to provide that such breaking or injury is a punishable offence. Article 113 requires States to exercise their prescriptive jurisdiction penalizing particular conduct, but without prescribing prosecution and does not specify any minimum penalty. The breaking or injury must be done in a manner as to be liable to interrupt or obstruct communications or the transmission of power or substances and applies to conduct calculated or likely to result in such breaking or injury, which suggests that there does not have to be actual interruption of services provided by this infrastructure. Breaking or injury “by a ship” in LOSC Article 113 should be interpreted to cover all instances of intentional damage to submarine cables and pipelines, including, for example, where ships are used *indirectly* to commit such acts, for example, damage caused using divers or underwater vehicles launched by such ships.

82. Notable examples of implementation of LOSC Article 113 in national legislation are New Zealand’s Submarine Cables and Pipelines Protection Act 1996²⁰⁹ and Australia’s Submarine Cables and Pipelines Protection Act 1963 (updated in 2016).²¹⁰ However, it has also been observed that LOSC Article 113 has not been widely implemented, and the GA has called upon States to implement LOSC Article 113 in their national legislation.²¹¹

83. **States of the Nationality of the Perpetrator:** LOSC Article 113 also obliges States of persons “subject to its jurisdiction” to adopt laws and regulations to provide that breaking or injury of submarine cables and pipelines is a punishable offence. A question arises on whether this is limited to the State of nationality of the offender or is broader to encompass States that may exercise criminal jurisdiction over such acts based on some other recognized

²⁰² Cedric Ryngaert, *Jurisdiction in International Law* (OUP 2008), 21 – 41.

²⁰³ For a comprehensive discussion on the principles governing the exercise of criminal jurisdiction, see Kenneth S Gallant, *International Criminal Jurisdiction: Whose Law Must be Obeyed* (OUP 2022).

²⁰⁴ Cedric Ryngaert, “International Jurisdiction Law,” in Austen Parrish and Cedric Ryngaert (eds), *Research Handbook on Extraterritoriality in International Law*, 13, 30.

²⁰⁵ Bernie Oxman, “Jurisdiction of States” in Rudiger Wolfrum (ed), *Max Planck Encyclopedias of International Law*, para. 10; ILC, “Extraterritorial Jurisdiction,” Annex E, Report of the work of the fifty-eighth session, A/61/10 (2006), 234 – 235, para. 28.

²⁰⁶ See, for example, *MV “Saiga”* (n 111) para. 155; *South China Sea Arbitration* (n 141), para. 941; *Arctic Sunrise Arbitration* (n 104) paras. 191 – 192; 197.

²⁰⁷ *‘Enrica Lexie’ Incident* (n 72) paras. 362 – 363.

²⁰⁸ The perpetrator could be in the territory of the State because they were apprehended through the interdiction measures discussed in Section 2 above, or potentially through an applicable extradition arrangement. International law does not allow States to exercise enforcement jurisdiction over criminal acts in the territory of another State without the consent of that State, even where the offence is within the prescriptive jurisdiction of that State.

²⁰⁹ New Zealand’s Submarine Cables and Pipelines Protection Act 1996 at <https://legislation.govt.nz/act/public/1996/0022/latest/DLM375803.html>

²¹⁰ Australia’s Submarine Cables and Pipelines Protection Act 1963 at <https://www.legislation.gov.au/C1963A00061/latest/text>

²¹¹ 2023 GA Resolution (n 22), para. 177.

principle of criminal jurisdiction. The legislative history of LOSC Article 113 suggests that it was intended to be confined to the State of nationality of the offender. Article VIII of the 1884 Convention (on which Article 113 was based) specifically confers secondary jurisdiction to the State of citizenship of the offender, which suggests that “person subject to its jurisdiction” refers to persons who are the same nationality of the State based on the active nationality principle of jurisdiction.²¹² Article 62 of the 1956 ILC Draft Articles, which was based on Article II of the 1884 Convention, placed an obligation on every State to take necessary legislative measures but did not specify which State.²¹³ During the First Conference on the Law of the Sea, the Netherlands commented that the discussions on Article 62 raised questions of international penal law and that “it was clearly not the intention of the article to enable any State to take legislative measures against nationals of another State causing injury to a submarine cable.”²¹⁴ Accordingly, considering Article VIII of the 1884 Convention, the Netherlands proposed that Article 62 include the words “by a ship flying its flag or by a person subject to its jurisdiction.”²¹⁵

84. The question is whether States other than the flag State of the vessel and the State of nationality of the person suspected of committing such acts are entitled to assert criminal jurisdiction, including prescribing laws, and initiating penal or criminal proceedings in their national courts (presuming that such perpetrators are within the territorial jurisdiction of the State). It could, for example, be argued that the LOSC confers *exclusive* jurisdiction on the flag State or the State of nationality perpetrator for offences that fall within Article 113. If damage to submarine cables and pipelines are considered “incidents of navigation” on the high seas, Article 97 states “no penal or disciplinary proceedings may be instituted against such person *except* before the judicial or administrative authorities either of the flag State or of the State of which such person is a national.” This would seem to exclude other States from exercising jurisdiction over acts of damage to submarine cables and pipelines that occur on the high seas. However, as discussed in paragraphs 45 – 46, arguments can be made that intentional acts of damage to submarine cables and pipelines do not fall within the ordinary meaning of “incident of navigation.”
85. Another possible argument may arise from the *MV Norstar*, which found that that the principle of exclusive flag State jurisdiction “prohibits not only the exercise of enforcement jurisdiction on the high seas by States other than the flag State but also the extension of their prescriptive jurisdiction to lawful activities conducted by foreign ships on the high seas.”²¹⁶ In the present case, States would be extending prescriptive jurisdiction over *unlawful activities* committed by vessels on the high seas (i.e., acts of damage to submarine cables and pipelines) and thus falls outside the principle in the *MV Norstar*.
86. **States connected to the submarine cable and pipeline:** States connected to the submarine cable or pipeline could assert extraterritorial prescriptive criminal jurisdiction based on the objective territoriality principle, i.e., “the State in which a criminal result occurs has jurisdiction to prescribe and to adjudicate concerning the event.”²¹⁷ The ‘*Enrica Lexie*’ Incident arbitration accepted that the objective territoriality principle provided a valid basis for India’s exercise of jurisdiction over an incident in India’s EEZ which involved the shooting of two fishermen on board an Indian vessel originating from an Italian vessel, because the offence was completed on board the Indian vessel.²¹⁸ It could be argued that the unlawful act of intentional damage to submarine cables and pipelines taking place on the high seas has results in the territory of the State being served by that submarine cable and pipeline.²¹⁹ Objective territoriality usually requires that the results occurring in the State claiming jurisdiction must be an element of the crime charged, and because States have discretion to define their own laws, States “have great leeway in deciding what local ill effects caused by outside actions will be criminalized.”²²⁰ Notwithstanding this discretion, making the results of intentional damage to submarine cables and pipelines a “constituent” element of the crime in national legislation may not be straightforward, as opposed to the scenario in the *Enrica Lexie* where death is usually a constituent element of the crime of homicide.
87. Another possible ground for States connected to the submarine cable and pipeline is the *effects doctrine* according to which jurisdiction is asserted over “the conduct of a foreign national occurring outside the territory of a State which

²¹² 1884 Convention (n 58), art II and art VIII.

²¹³ 1956 ILC Draft Articles (n 113), commentary to art 62, 294.

²¹⁴ See Comments by the Netherlands, UNCLOS I, Official Records, Vol. IV, Doc. A/CONF.13/40, (1958), 88.

²¹⁵ *Ibid.*

²¹⁶ *Ibid.*

²¹⁷ Gallant (n 203), 268, 269.

²¹⁸ ‘*Enrica Lexie*’ Incident (n 72), paras. 366 – 368.

²¹⁹ Oxman (n 213), paras. 22 – 26; Gallant (n 203), 268 – 271.

²²⁰ Gallant, *ibid.*, 274.

has a substantial effect within that territory,” which is related to the objective territoriality principle but does not require that an element of the conduct take place in the territory of the regulating State (unlike the objective territoriality principle).²²¹ The effects doctrine, while previously a controversial basis of extraterritorial jurisdiction, has become more commonly utilized basis of extraterritorial jurisdiction, particularly for drug related matters and cybercrimes.²²² Accordingly, on the basis that damage to submarine cables and pipelines on the high seas has a substantial effect in the State served by that submarine cable and pipeline, such States can criminalize such damage.

88. The *protective principle* refers to the “jurisdiction that a State may exercise with respect to persons, property or acts abroad which constitute a threat to the fundamental national interests of a State, such as a foreign threat to the national interests of a State.”²²³ While the protective principle has traditionally been confined to a limited number of offenses, including espionage, sedition and crimes committed by the enemy in times of war, the practice of States reflects a broadening of the concept of national or vital interests including terrorism and cybercrimes.²²⁴ Given that the GA has recognized that submarine cables and pipelines are “vitaly important to the global economy and the national security of all states,”²²⁵ there is basis to claim that acts of damage against submarine cables and pipelines threaten critical communications and energy supplies and are prejudicial to the national interests of States.
89. While the Committee has not done an exhaustive review of all State practice on criminalizing damage to submarine cables and pipelines, there appear to be no examples of States served by that cable or pipeline that have adopted national legislation explicitly criminalizing acts of damage to submarine cables and pipelines outside of their territorial waters by foreign vessels or foreign nationals. For example, both New Zealand and Australia’s national legislation on the protection of submarine cables and pipelines require the consent of relevant competent authorities if an offence relating to submarine cables and pipelines is committed by a non-national.²²⁶ Australia’s Telecommunications Act 1997 makes it an offence for any person to damage a submarine cable in a cable protection zone in its EEZ which would *prima facie* include foreign vessels and foreign nationals.²²⁷ However, the Act makes clear that the offences do not apply to acts done by foreign nationals or foreign vessels unless it is connected with the exploration of the continental shelf, the exploitation of the resources of the continental shelf, or the operation of artificial islands, installations or structures that are under Australia’s jurisdiction.²²⁸ That said, some States have, for example, adopted legislation relating to terrorist offences relating to serious interference or disruption to an electronic system which includes telecommunication systems that occurs outside the territory of that State, and which can be interpreted to include submarine communication cables.²²⁹
90. **State of Nationality of Owner/Shareholder:** It is not clear whether the State of nationality of the owner of the cable or pipeline, or the State of shareholders of the owner of the cable or pipeline could also assert criminal jurisdiction over perpetrators of acts of damage to submarine cables and pipelines that take place outside their territory. An arguable basis may be the *passive personality principle* in that damage to submarine cables and pipelines is a crime related to the property of their nationals. While the exercise of passive personality jurisdiction is traditionally associated with victims who are citizens, a few States treat corporations as victims for purposes of asserting extraterritorial criminal jurisdiction against acts outside their borders.²³⁰ Existing review of State practice (which admittedly is not exhaustive) does not suggest that States of nationality of the owner of the cable or pipeline, or the

²²¹ ILC, Extraterritorial Jurisdiction (n 205), para. 12. Also see *Situation in the People’s Republic of Bangladesh/Republic of the Union of Myanmar* [2019] ICC-01/19 58, para. 56.

²²² ILC, Extraterritorial Jurisdiction (n 205), 233, para. 21; UN Office of Drugs and Crime, *Comprehensive Study on Cybercrime*, February 2013; Gallant (n 203), 277 – 278.

²²³ ILC, Extraterritorial Jurisdiction, *ibid*, 233, para.13.

²²⁴ ILC, Extraterritorial Jurisdiction, *ibid*, 232, para. 20; Gallant (n 203), 422- 435; see also the UN Convention against Corruption 1999 art 42 (2); International Convention for the Suppression of the Financing of Terrorism 1999, art 2; International Convention against the Taking of Hostages 1979, art 5.

²²⁵ 2023 GA Resolution (n 22), para. 175.

²²⁶ See New Zealand’s Submarine Cables and Pipelines Protection Act 1996 (n 219), s 27; Australia’s Submarine Cables and Pipelines Protection Act 1963 (n 219), s 5A read with s 16.1 of Australia’s Criminal Code 1995.

²²⁷ Australia’s Telecommunications Act 1997, Schedule 3A, sections 36 and 37.

²²⁸ Australia’s Telecommunications Act 1997, Schedule 3A, section 44A. For a comprehensive discussion of Australia’s legislation, see Holly Matley, “Closing the gaps in the regulation of submarine cables: lessons from the Australian experience,” (2019) 11: 3 *Australian Journal of Maritime and Ocean Affairs* 165.

²²⁹ See, for example, United Kingdom’s Terrorism Act 2000 (c. 11), United Kingdom, s. 1(2)(e); Australia’s Criminal Code Act 1995, s. 100.1(1).

²³⁰ Gallant (n 203), 448.

State of shareholders have asserted extraterritorial criminal jurisdiction over acts of damage to submarine cables or pipelines owned directly or indirectly by their nationals.

b) *Areas beyond sovereignty but within national jurisdiction*

91. The analysis above in relation to flag States, States of nationality of the perpetrator, States that are connected to the submarine cable or pipeline, States of nationality of the owner/operator, or shareholder of the owner/operator of the submarine cable and pipeline also applies equally to the prosecution of offences for acts of damage to submarine cables and pipelines in the EEZ and continental shelf. This section will focus on coastal States' prescriptive criminal jurisdiction over acts of damage to submarine cables and pipelines that transit their EEZ and continental shelf without making landfall.²³¹
92. LOSC Article 58 (3) obliges States to have due regard to the rights and duties of the coastal State and shall comply with the laws and regulations adopted by the coastal State in accordance with the provisions of this Convention and other rules of international law in so far as they are not incompatible with this Part." International courts and tribunals have scrutinized whether a coastal State's application of its laws and regulations within the EEZ and continental shelf are consistent with the rights conferred upon them in the LOSC. For example, in *MV Saiga*, ITLOS found that Guinea's application of its customs laws in certain parts of its EEZ on the basis that they are "other rules of international law" in LOSC Article 58 (3) would "entitle a coastal State to prohibit any activities in the exclusive economic zone which it decides to characterize as activities which affect its economic 'public interest' or entail 'fiscal losses' for it" and this "would curtail the rights of other States in the exclusive economic zone" and hence be incompatible with articles 56 and 58 of the LOSC.²³² The '*Enrica Lexie*' Incident arbitral tribunal did not rule on Italy's claims relating to the legality of India's extension of its Penal Code and Code of Criminal Procedure over acts that took place in its EEZ, although it acknowledged that questions may arise as to the compatibility of India's legislation with the LOSC.²³³
93. It is also relevant that the Swedish Prosecutor stated that the Swedish criminal investigation regarding gross sabotage against the Nord Stream pipelines had been concluded and nothing had suggested that Swedish citizens were involved or that Swedish territory was used to carry out the act and that it can be assumed that Swedish courts lacks jurisdiction.²³⁴ The Danish authorities also announced the conclusion of the Danish criminal investigation and stated that, based on the investigation conducted, the Danish authorities determined that there were insufficient grounds to pursue a criminal case in Denmark as their nationals were not involved.²³⁵
94. On the other hand, it could be argued that the LOSC is silent on coastal State criminal jurisdiction over acts that take place in the EEZ and continental shelf. For example, the dissenting opinions of Judge Bouguetaia, Judge Ndiaye and Judge Lucky in the ITLOS Provisional Measures order in the *Enrica Lexie Incident*, expressed the opinion that the LOSC is silent on which State would have criminal jurisdiction in cases where there is a murder involving two or more States in the EEZ.²³⁶ This could potentially bring into play LOSC Article 59 as a case where the LOSC does not attribute rights or jurisdiction to the coastal State or to other States within the EEZ.
95. In the Committee's view, the better view is that coastal States can only exercise criminal jurisdiction over acts of damage to transit submarine cables and pipelines that take place in its EEZ and continental shelf that infringe its sovereign rights or jurisdiction recognized in these zones in the LOSC, including its jurisdiction over the marine environment.²³⁷ For acts of damage to submarine pipelines, the coastal State has been conferred the competence

²³¹ Coastal States that are connected to submarine cables and pipelines that are damaged in their own EEZs and continental shelves can exercise prescriptive jurisdiction on the principles of criminal jurisdiction discussed in relation to "States connected to submarine cables and pipelines."

²³² *MV "Saiga Case"* (n 111), para. 131.

²³³ '*Enrica Lexie*' Incident (n 72), para. 361.

²³⁴ "The Prosecutor closes the Swedish investigation concerning gross sabotage against the Nord Stream," 7 February 2024, <https://www.aklagare.se/en/media/press-releases/2024/february/the-prosecutor-closes-the-swedish-investigation-concerning-gross-sabotage-against-nord-stream/>

²³⁵ "Københavns Politi og PET's fælles efterforskning af sprængningerne af Nord Stream indstilles", 26 February 2024, <https://politi.dk/kobenhavns-politi/nyhedsliste/kobenhavns-politi-og-pets-faelles-efterforskning-af-spraengningerne-af-nord-stream-indstilles/2024/02/26>

²³⁶ The "*Enrica Lexie*" Incident (Italy v. India), Provisional Measures Order, Case No. 24, 24 August 2015, Dissenting Opinions of Vice-President Bouguetaia, para. 15; Judge Ndiaye, para. 15; Judge Lucky, paras. 35 – 39, para. 60.

²³⁷ *Nicaragua v Colombia* (2022) (n 89), para. 95.

to adopt reasonable measures for the prevention, reduction and control of pollution from pipelines under LOSC Article 79 (2), and this conceivably includes the prosecution of offences relating to acts of damage to submarine pipelines.

96. If coastal States do not have prescriptive criminal jurisdiction over intentional acts of damage to submarine cables and pipelines that transit their EEZ and continental shelf, another question is whether they can still undertake *investigative measures* over such acts in their EEZ and continental shelf. The limited State practice available suggests that there is nothing to prevent coastal States from investigating acts of damage to submarine cables and pipelines in their own EEZ and continental shelf provided they exercise due regard for the freedoms of other States in these zones. As discussed in paragraph 93, both Sweden and Denmark undertook criminal investigations on the attacks on the Nord Stream pipelines that occurred in their EEZs (along with Germany, the State of destination). Russia, which is the State of origin of the Nord Stream pipelines, and whose nationals are shareholders of the Swiss corporation that owns and operates the Nord Stream pipelines, proposed a resolution in the Security Council that requested the Secretary-General establish an international, independent investigation commission to conduct a comprehensive, transparent and impartial international investigation of all aspects of the act of sabotage on the Nord Stream pipelines, including identification of its perpetrators, sponsors, organizers and accomplices.²³⁸ This draft resolution was rejected (with Brazil, China and the Russian Federation in favour and the rest abstaining). The thrust of the positions of States who abstained is that the national investigations should proceed without interference and that a parallel investigation would not be beneficial. Several of the States mentioned that the outcome of the national investigations should be shared in a transparent manner.²³⁹ This suggests that there is State support for coastal States conducting investigations vis-à-vis acts of damage to submarine cables and pipelines that transit their EEZ and continental shelf, which is reasonable given the location of the incident.

c) *Areas under sovereignty*

97. The coastal State has criminal jurisdiction in its territorial sea pursuant to its sovereignty and also has the authority to adopt laws and regulations relating to innocent passage to protect submarine cables and pipelines, as well as relating to the preservation of the environment of the coastal State and the prevention, reduction and control of pollution thereof, which could include laws criminalizing intentional damage to submarine cables and pipelines or intentional harm or pollution to the marine environment.²⁴⁰ This applies to submarine cables and pipelines that make landfall in the coastal State or transits the territorial sea without making landfall (see discussion in paragraph 72 (b)). The same analysis applies to the criminalization of intentional damage to submarine cables and pipelines in archipelagic waters and SUIN.

4. State responsibility for intentional damage to submarine cables and pipelines attributable to States

98. This section examines whether LOSC States Parties can invoke the responsibility of other LOSC States Parties for intentional damage to submarine cables and pipelines that is attributable to them either because they used State ships and associated apparatus, or the conduct of private ships and associated apparatus can be attributed to them (see paragraph 24).²⁴¹ It is structured as follows: subsections 4 (a) – (c) address whether intentional damage to submarine cables and pipelines is a wrongful act and which State may invoke the responsibility of the State responsible for these wrongful acts in each maritime space, as these two questions are interlinked and are determined by where intentional damage to submarine cables and pipelines occurs. Subsections 4 (d) – (f) address attribution; legal consequences of breaches; and avenues available for the implementation of State responsibility

²³⁸ “Security Council Rejects Draft Resolution Establishing Commission to Investigate Sabotage of Nord Stream Pipeline.” SC 15243, 27 March 2023, at <https://press.un.org/en/2023/sc15243.doc.htm#:~:text=The%20Security%20Council%20failed%20today,pipeline%20in%20the%20Baltic%20Sea>.

²³⁹ See remarks of Russia, Brazil, and United Arab Emirates, *ibid*.

²⁴⁰ LOSC, art 21 (1) (c), 21 (1) (f).

²⁴¹ The ASR are not formally binding but many of its articles have been accepted as reflecting customary international law: *Activities in the Area Advisory Opinion* (n 151) para. 169. LOSC, art 304 notes the “provisions of this Convention regarding responsibility and liability for damage are without prejudice to the application of existing rules and the development of further rules regarding responsibility and liability under international law.” It has been said that the “regime of responsibility for breaches of the Convention can be said to largely follow the general approach which the Convention ‘fine-tunes’ and refines in special circumstances.” See Christian Tams and James Devaney, “Article 304: Responsibility and liability for damage,” in Alexander Proelss (ed.), *United Nations Convention on the Law of the Sea: A Commentary* (Hart 2017), 1961, 1967.

respectively. Whether States can be held responsible for the failure to exercise due diligence to prevent intentional acts of damage by non-State actors will be addressed in Section 5.

a) *Areas beyond national jurisdiction: primary obligations and invocation of responsibility*

99. With regard to primary obligations, the LOSC does not establish an explicit prohibition on intentional acts of damage to submarine cables and pipelines by States.²⁴² The three LOSC provisions which address damage to submarine cables and pipelines, Articles 113, 114 and 115, do not prohibit *States* from damaging submarine cables and pipelines *per se* and only oblige States to adopt national laws and regulations relating to damage to submarine cables and pipelines by vessels and other non-State actors. However, the Report proceeds on the basis that specific provisions in the LOSC, when interpreted “in good faith with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose,”²⁴³ apply to intentional damage to submarine cables and pipelines by States and constrain State conduct vis-à-vis submarine cables and pipelines.
100. With regard to invocation of responsibility, the LOSC is a “matrix of individual and community interests of states” but does not pronounce on the legal nature of its obligations, nor identify who has standing to invoke responsibility.²⁴⁴ Identification on the nature of the obligations in the LOSC i.e., whether they are bilateral obligations, interdependent obligations or *erga omnes partes* obligations owed to all LOSC States Parties,²⁴⁵ is a matter of treaty interpretation.²⁴⁶ Determining the nature of the obligation, or in other words, who it is owed to, will determine who has standing to invoke the responsibility of the State that has committed the wrongful act.
101. **Freedom or entitlement to lay submarine cables and pipelines:** LOSC Articles 87 (1) (c) and 112 freedom or entitlement of States to lay submarine cables and pipelines on the high seas must necessarily include the freedom to *operate* such cables and pipelines.²⁴⁷ As discussed in paragraph 54, this freedom or entitlement includes a positive right on States to operate submarine cables and pipelines and corresponding negative obligation on other States not to interfere with this freedom or entitlement to operate submarine cables and pipelines.²⁴⁸ Acts of intentional damage to submarine cables and pipelines result in physical or material interference with the freedom or entitlement to operate submarine cables and pipelines and are accordingly a breach of the obligation not to interfere with the freedom or entitlement to lay submarine cables and pipelines.²⁴⁹
102. This interpretation is consistent with the object and purpose of the LOSC to promote the freedom of transit to facilitate navigation and commerce.²⁵⁰ The LOSC preamble recognizes the desirability of establishing “a legal order for the seas and oceans which will *facilitate international communication...*” Moreover, LOSC Articles 113 - 115 oblige States to adopt national laws and regulations on breaking or injury of submarine cables and pipelines and LOSC Article 21 (1) (c) gives States the right to regulate innocent passage to protect submarine cables and pipelines. It is also pertinent that States have consistently affirmed the importance of submarine cables and pipelines in various international forums and the need to protect critical infrastructure such as cables and pipelines from malicious or intentional damage, including in the Security Council,²⁵¹ General Assembly,²⁵² and in regional forums such as the EU.²⁵³ This reflects the common understanding of States that submarine cables and pipelines cannot be the target of intentional damage whether by State or non-State actors.

²⁴² Azaria and Ulfstein (n 39).

²⁴³ Vienna Convention on the Law of Treaties, art 31 (1).

²⁴⁴ Eirini-Erasmia Fasia, “No Provision Left Behind – Law of the Sea Convention’s Dispute Settlement System and Obligations *Erga Omnes*,” (2021) 20 *Law and Practice of International Courts and Tribunal* 519, 528.

²⁴⁵ For a discussion on nature of obligations, see Azaria (n 13), chapter 4.

²⁴⁶ ASR (n 147) commentary to art 42, 118, para. 6.

²⁴⁷ First Report (n 2), para. 18 (c).

²⁴⁸ A point acknowledged by the Tallinn Manual 2.0 (n 176), 256.

²⁴⁹ ‘*Enrica Lexie*’ Incident (n 72) paras. 465, 1038; *MV “Norstar”* (n 82), para. 222.

²⁵⁰ See discussion on the freedom of transit in international law in Azaria (n 13), chapter 2.

²⁵¹ In the discussions in the Security Council on the attacks against the Nord Stream pipelines, States consistently condemned all acts of sabotage targeting critical infrastructure: see, for example, “United Nations has no added details on Nord Stream Explosions, Security Council hears, as Members underscore the need to protect critical infrastructure,” 9619th Meeting, SC/15683, 26 April 2024.

²⁵² 2023 GA Resolution (n 22), paras. 125, 147, 175.

²⁵³ Declaration by the High Representative on behalf of the European Union on leaks in the Nord Stream gas pipelines, 28 September 2022.

103. The prohibition against infliction of intentional damage to submarine cables has been said to be recognized under customary international law. The Tallinn Manual 2.0 on the International Law Applicable to Cyberoperations notes:
- [t]he infliction of damage to cables is prohibited as a matter of customary international law since doing so would run contrary to the object and purpose of the law governing submarine cables. The Experts based this conclusion on the fact that it would be incongruent to provide States a right to lay such cables without a corresponding obligation on the part of other States to respect them. Thus, for instance, the law of the sea does not provide a legal basis for a State to cut another State's submarine fibre optic cable in order to reduce trans-continental Internet traffic in times of tension.²⁵⁴
104. While not referring to submarine power cables or submarine pipelines, the same argument could also be applied on the basis that States also have the freedom to lay submarine power cables and pipelines under the LOSC.²⁵⁵
105. Intentional damage to submarine cables and pipelines by States by vessels and associated apparatus is a breach of the obligation to exercise due regard for the interests of other States in the freedom to operate submarine cables and pipelines under LOSC Article 87 (2).²⁵⁶
106. A question may be raised on whether LOSC Articles 87 (1) (c), 87 (2) and 112 will be considered breached if there are acts of damage to submarine cables and pipelines, but they do not result in interruptions to the operation of such cables and pipelines or in any or significant damage to the State that can invoke responsibility. For example, when there are attempts to damage submarine cables and pipelines, but these attempts are thwarted, or where there is no (or minimal) interruption in the services provided by the submarine cable and pipeline because data was rerouted or because the submarine cable and pipeline was non-operational. In this regard, the Report notes as a general point that even if there is no interruption to the operation of the submarine cable and pipeline, most acts of damage will most likely require that submarine cables and pipelines be repaired, incurring some form of expenditure or loss. Nonetheless, the Committee takes the view that threatened or actual acts of damage to submarine cables and pipelines will still be a breach of the freedom to operate submarine cables and pipelines even though there was no actual interruption to the operation of the submarine cable and pipeline or consequent damage. First, under the ASR, there is no requirement for material harm or damage unless required by the primary obligation.²⁵⁷ LOSC Articles 87 and 112 do not specify that material harm or damage is required before these obligations can be said to be breached (unlike, for example, LOSC Article 139). Second, as observed in the '*Enrica Lexie*' Incident, "a breach of freedom of navigation may result from acts ranging from physical or material interference with navigation of a foreign vessel, to the threat or use of force against a foreign vessel, to non-physical forms of interference whose effect is that of instilling fear against, or causing hindrance to, the enjoyment of the freedom of navigation."²⁵⁸ Threatened or actual acts of damage to submarine cables and pipelines is interference which has the effect of instilling fear against, or causing hindrance to, the enjoyment of the freedom to operate submarine cables and pipelines. Provided that there is a threatened or actual act of damage to submarine cables and pipelines, this would be an act "not in conformity with what is required... by that obligation."²⁵⁹ Of course, the extent of damage suffered may be relevant for States deciding whether to invoke the responsibility of another State and in determining the extent of reparation (including compensation) is available (discussed in Section 4 (e)).
107. Under the ASR, the State that can invoke responsibility is determined by which State is owed the obligation not to interfere with the freedom to operate submarine cables and pipelines. This is in turn determined by whether the obligation not to interfere with the freedom to operate submarine cables and pipelines in LOSC Articles 87 (1) (c), 87 (2) and 112 is characterised as a bilateral obligation or an *erga omnes partes* obligation.
108. If the obligation not to interfere with the freedom to operate submarine cables and pipelines is a bilateral obligation, "injured States" will be able to invoke the responsibility of the State that breached this obligation. An "injured State"

²⁵⁴ Tallinn Manual 2.0 (n 176), commentary to rule 54, para. 15.

²⁵⁵ Note there is debate on whether the Tallinn Manual 2.0 is reflective of existing international law or the view of an international group of experts on how international law *should* be applied: Dan Efrony and Yuval Shany, 'A Rule Book on the Shelf? Tallinn Manual 2.0 on Cyberoperations and Subsequent State Practice,' (2018) 112 (4) *American Journal of International Law* 583, 589

²⁵⁶ For a discussion on the "due regard" obligation in Article 87 (2), see the First Report (n 2), paras. 41 – 53.

²⁵⁷ ASR (n 147), commentary to art 2, 36, para. 9.

²⁵⁸ '*Enrica Lexie*' Incident (n 72) para. 1038.

²⁵⁹ ASR (n 147), art 12.

is a “State whose individual right has been denied or impaired by the internationally wrongful act or which has otherwise been particularly affected by that act.”²⁶⁰ ASR Article 42 (a) stipulates that an injured state is entitled to invoke the responsibility of another State if the obligation breached is owed to that State individually. This includes obligations owed under multilateral treaties as “although a multilateral treaty will characteristically establish a framework of rules applicable to all the States parties, in certain cases its performance in a given situation involves a relationship of a bilateral character between two parties” described as “bundles of bilateral relations.”²⁶¹ In the *Arctic Sunrise Arbitration*, the Tribunal found that Russia’s obligation to ensure that any law enforcement measures taken against a Netherlands-flagged vessel within its EEZ complied with LOSC requirements was an obligation of a bilateral character owed to the Netherlands as flag State, based on the freedom of all States of navigation and overflight and of the laying of submarine cables and pipelines under Article 58 of the LOSC.²⁶²

109. Along this line of reasoning, the obligation to not interfere in the operation of submarine cables and pipelines may be classified as a bilateral obligation, and the States that are holders of the freedom to operate submarine cables and pipelines are the States that may invoke responsibility. As mentioned in paragraph 36 above, the LOSC freedom to operate submarine cables and pipelines in the high seas (Articles 87 and 112) is conferred on “all States.” The following paragraphs discuss the extent to which different categories of States may be considered “injured” by intentional acts of damage to submarine cables and pipelines.
- a. *States which the submarine cable and pipeline are connected to* can be considered injured individually as acts of damage to submarine cables and pipelines threaten its supply of communication services, electrical and energy supply, and consequently, interfere with its freedom to operate submarine cables and pipelines. For submarine cables, this would include any State in which the cable makes landfall (and could include multiple States). Submarine pipelines which have States of origin (exporting States) and States of destination (importing States) can both argue that they are individually injured when acts of damage interrupt the transmission of power and energy.
 - b. *States which are not connected to the submarine cables and pipelines but are still dependent on the services or energy supply provided by the cable or pipeline*, may also be considered individually injured by acts of damage. For example, transit States of pipelines can be dependent on oil and gas from a submarine pipeline even though not directly connected to it.²⁶³ Similarly, a State may be connected by a submarine communications cable landing in a third State that interconnects with a second submarine cable providing onward connectivity and Internet access.²⁶⁴
 - c. *States of nationality of the corporate entity that own and operate submarine cables and pipelines* may also argue that it is individually injured as a State as they are also holders of the freedom to lay submarine cables and pipelines under LOSC Articles 87 and 112 or may exercise rights of diplomatic protection as acts of damage to submarine cables and pipelines are damage to the property of its nationals. The latter would be on the basis that the corporate entity suffered damage including the losses suffered from the interruption of operation and the costs of repair and restoration.²⁶⁵ This decision to espouse a claim of a national is completely within the discretion of a State although there is recognition that states “should...give due consideration to the possibility of exercising diplomatic protection, especially when a significant injury has occurred.”²⁶⁶ A State can espouse the claim of a corporation but espousal will not be recognized if the corporation is controlled by nationals of another State or States and has no substantial business activities in the State of incorporation and the seat of management and financial control of the corporation are both located in another state, which may pose challenges given the complex ownership structures of cable and pipeline owner and operators.²⁶⁷ If these States

²⁶⁰ ASR, *ibid*, commentary to principle 42, 116, para 2.

²⁶¹ ASR, *ibid*, commentary to art 42, 118, para. 8.

²⁶² *Arctic Sunrise Arbitration* (n 108), para. 168.

²⁶³ Danae Azaria, “Transit of Energy via Pipelines in International Law,” *Proceedings of the Annual Meeting (American Society of International Law Vol. 110 (March 30 – April 2, 2016))*, 131, 131.

²⁶⁴ This is particularly true of submarine communications cable configurations in the Pacific Ocean region, where many States connect to regional hubs in Fiji, French Polynesia, and Guam, where they interconnect with other trans-Pacific submarine communications cables.

²⁶⁵ 2006 Draft Articles on Diplomatic Protection, art 1: See 2006 Draft Articles on Diplomatic Protection, *Yearbook of the International Law Commission 2006*, vol. II, Part Two, 26 – 55.

²⁶⁶ *Ibid*, art 19.

²⁶⁷ *Ibid*, art 9.

are using LOSC Part XV dispute settlement procedures (outlined in Section f below), there may also be issues raised on whether the owner/operator of submarine cables and pipelines have exhausted local remedies when a State is exercising diplomatic protection, which may then depend on whether the State's claim is preponderantly an injury to the State or an injury to an individual.²⁶⁸

- d. *States of nationality of the shareholders of the corporate entity* is not individually owed the obligation not to interfere with the freedom to operate submarine cables and pipelines (as they are not holders of the freedom) and may also find it difficult to claim diplomatic protection because of losses suffered. As affirmed by the ICJ in *Barcelona Traction*²⁶⁹ and *Ahmadou Sadio Diallo*,²⁷⁰ international law does not permit States to espouse the claims of shareholders in respect of indirect losses.²⁷¹

110. The obligation not to interfere in the freedom of operation of submarine cables and pipelines is not only a bilateral obligation but may also be an obligation *erga omnes partes*. The ASR uses the term *erga omnes partes* to describe those "obligations owed to a group of States and established for the protection of a collective interest of the group of States established by a treaty or customary international law"²⁷² or collective obligations which "apply between more than two States and whose performance in the given case is not owed to one State individually, but to a group of States, or even the international community as a whole."²⁷³ The commentary does not elaborate on what is meant by collective interest except to say that the principal purpose would be to foster a "common interest, over and above any interests of the State concerned individually."²⁷⁴ The ASR cite examples such as the environment or security of region and note that they are not limited to arrangements established only in the interests of member States but would extend to agreements established by a group of States in some wider common interest, transcending the sphere of bilateral relations of States Parties.²⁷⁵ The ICJ has recognized that the *Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment* and the *Convention on the Prevention and Punishment of the Crime of Genocide* are treaties that establish obligations *erga omnes partes*.²⁷⁶ ITLOS' Seabed Disputes Chamber has recognized the *erga omnes* character of the obligations relating to the preservation of the environment of the high seas and the Area," although not specifying whether such obligations were *erga omnes* or *erga omnes partes*.²⁷⁷ The freedom of navigation has also been said to be a "communitarian norm" which is a right of all nations and also an *erga omnes partes* obligation.²⁷⁸ In the *Arctic Sunrise Arbitration*, the Netherlands argued that the obligation to respect the freedom of navigation has an *erga omnes (partes)* character which is owned by Russia in its EEZ to all States, but this argument was ultimately not considered by the arbitral tribunal given its' finding that the Netherlands had standing on the basis of the bilateral character of the obligation not to interfere with the freedom of navigation.²⁷⁹
111. It could be argued that the freedom to operate submarine cables and pipelines conferred on LOSC States Parties and the corresponding obligation not to interfere in the operation of such cables and pipelines is established for a "group of States which have combined to achieve some collective purpose and which may be considered for that purpose as making up a community of States of a functional character."²⁸⁰ The LOSC has been established for the collective purpose, *inter alia*, of States Parties in preserving the freedom of communications and transit, and all LOSC States Parties have a common interest in compliance with the obligation not to interfere with the freedom to operate submarine cables and pipelines.

²⁶⁸ See LOSC art 295 on exhaustion of local remedies; and discussion in *The Duzgit Integrity Arbitration* (n 111), paras. 147 – 157.

²⁶⁹ *Barcelona Traction, Light and Power Company Ltd* (Belgium v. Spain), Judgment of 5 February 1970, ICJ Rep 3.

²⁷⁰ *Ahmadou Sadio Diallo* (Republic of Guinea v. Democratic Republic of the Congo), Judgment of 30 November 2010, ICJ Rep 639.

²⁷¹ *Barcelona Traction* (n 269), paras. 33 – 35.

²⁷² ASR (n 147) commentary to art 48, 126, para. 6.

²⁷³ ASR, *ibid*, commentary to art 42, 119, para. 12.

²⁷⁴ ASR, *ibid*, commentary to art 48, 126, para 7.

²⁷⁵ ASR, *ibid*, commentary to art 48, 126, para. 7.

²⁷⁶ *Questions Relating to the Obligation to Prosecute or Extradite* (Belgium v. Senegal) (2012) ICJ Rep 422; *Application of the Convention on the Prevention and Punishment of the Crime of Genocide* (The Gambia v. Myanmar) (Order for Provisional Measures) (2020) ICJ Rep 3.

²⁷⁷ *Activities in the Area Advisory Opinion* (n 146), para.180.

²⁷⁸ *Fasia* (n 244), 529; Also see *S.S Wimbledon* (Great Britain and others v. Germany) (Judgment of 17 August 1923) PCIJ Rep Series A No. 1, 22, which is said to be the basis for *erga omnes partes*: ASR (n 147), commentary to art 48, 126, para. 6.

²⁷⁹ *Arctic Sunrise Arbitration* (n 104), paras. 180 – 186.

²⁸⁰ ASR (n 147), commentary to art 42, 118.

112. Two categories of States may invoke responsibility for breaches of the freedom to operate submarine cables and pipelines, *specially affected States* under ASR Article 42 (b) (i) or *non-injured States* under Article 48 (b) (i) of the ASR. For specially affected States, the ASR do not define the nature or extent of the special impact that a State must have sustained in order to be considered “injured” which is to be assessed on a case-by-case basis, “having regard to the object and primary purpose of the primary obligation breached and the facts of each case.”²⁸¹ It goes on to say that for “a State to be considered injured it must be affected by the breach in a way which distinguishes it from the generality of other States to which the obligation is owed.”²⁸² As to which States would be “specially affected,” the same analysis discussed in relation to individually injured States in paragraph 109 would apply. Non-injured States claiming under ASR Article 48 (b) (i) may argue that as the obligation not to interfere with the freedom to operate submarine cables and pipelines are obligations *erga omnes partes* in that each State party has an interest in compliance with them in any given case, any State party to the LOSC “may invoke the responsibility of another State party with a view to ascertaining the alleged failure to comply with its obligations *erga omnes partes*, and to bring that failure to an end,”²⁸³ although this argument remains untested, and States which are not directly injured may have no incentive to invoke the responsibility of another LOSC State Party.
113. **Obligations to Protect and Preserve the Marine Environment:** As mentioned in paragraphs 56 – 57 above, acts of damage to submarine cables and pipelines may result in pollution to the marine environment as defined in LOSC Article 1 (1) (4), including living resources, in areas beyond national jurisdiction. All LOSC States Parties have obligations to protect the marine environment under LOSC Article 192 and 194, which applies irrespective of the maritime zone in which the activity resulting to damage to the marine environment has taken place.²⁸⁴ Articles 192 and 194 “set forth obligations not only in relation to activities directly taken by States and their organs, but also in relation to ensuring activities within their jurisdiction and control do not harm the marine environment.”²⁸⁵ They are obligations of conduct in that they require “due diligence in not only adopting appropriate rules and measures but also a ‘certain level of vigilance in their enforcement and exercise of administrative control.’”²⁸⁶ Article 235 reiterates that States are responsible for the fulfilment of their international obligations concerning the protection and preservation of the marine environment and shall be liable in accordance with international law. If States intentionally damage submarine cables and pipelines resulting in pollution to the marine environment, they are *prima facie* in breach of LOSC Articles 192 and 194.
114. If acts of damage to submarine cables and pipelines in areas beyond jurisdiction result in pollution of the marine environment therein, in principle, any LOSC State Party would be able to invoke the responsibility of the responsible State based on the *erga omnes partes* character of the obligations relating to the preservation of the environment of the high seas and the Area.²⁸⁷ If the pollution impacts the coastal State (which may happen particularly in relation to damage to pipelines) coastal States may also be able to argue that they are “specially affected States” under Article 42 (b) (i).²⁸⁸
115. **Prohibition on the Use of Force:** LOSC Article 301 incorporates the UN Charter Article 2 (4) prohibition on the use of force in the UN Charter albeit with some minor differences and the discussion on whether acts of damage to submarine cables and pipelines constitute a prohibition on the use of force will be addressed in Part IV on The Use of Force.²⁸⁹
- b) *Areas beyond sovereignty but within national jurisdiction: primary obligations and invocation of responsibility*
116. **Freedom to lay submarine cables and pipelines:** LOSC Articles 58 (1) and 79 (1) affirm the freedom and entitlement to lay submarine cables and pipelines in the EEZ and continental shelf respectively. The analysis on whether intentional damage to submarine cables and pipelines is a breach of the obligation not to interfere with the

²⁸¹ ASR, *ibid*, commentary to art 42, 119, para. 12.

²⁸² ASR, *ibid*, commentary to art 42, 119, para. 12.

²⁸³ *Belgium v. Senegal* (n 276), para. 68; *The Gambia v. Myanmar* (n 276), para. 41.

²⁸⁴ South China Sea Arbitration (n 141), para. 927.

²⁸⁵ *Ibid*, para. 944.

²⁸⁶ *Ibid*; *Activities in the Area Advisory Opinion* (n 146), paras. 99 – 102; *Request for Advisory Opinion submitted by the Sub-Regional Fisheries Commission*, Advisory Opinion, 2 April 2015, ITLOS Reports 2015, p. 4, para. 131 (SRFC Advisory Opinion).

²⁸⁷ *Activities in the Area Advisory Opinion* (n 146), para. 180, citing ASR, art 48.

²⁸⁸ For example, the ASR observes that a “specially affected state” may arise in the case of pollution of the high seas in breach of LOSC Article 194 as this “may particularly impact on one of the several States whose breaches may be polluted by toxic residues or whose coastal fisheries may be closed.” ASR (n 147), commentary to art 42, 119, para. 12.

²⁸⁹ See also LOSC, arts. 88 and 141.

freedom to operate submarine cables and pipelines in areas beyond national jurisdiction in paragraphs 101 - 112 also applies to intentional damage to submarine cables and pipelines in the EEZ and continental shelf.

117. Coastal States in whose EEZ and continental shelf submarine cables and pipelines transit without making landfall are not injured by the breach of the obligation not to interfere with the freedom to operate submarine cables and pipelines in the EEZ and continental shelf. As mentioned above, both Sweden and Denmark have taken the position that the attacks against the Nord Stream pipeline which transited their EEZs was not directed against them, and have indeed, closed the investigations into the attack. This does not preclude the possibility that coastal States may be considered injured States on some other basis discussed below.
118. **Coastal States' Sovereign Rights Over Resources:** As discussed in paragraphs 62 - 70, States that intentionally damage submarine cables and pipelines in the EEZ and continental shelf that result in interference with the coastal State's sovereign rights over resources in these zones, may also breach the obligation not to interfere with the coastal State's sovereign rights over these resources in these zones under LOSC Articles 56 and 77.²⁹⁰
119. **Coastal State Jurisdiction over the Marine Environment:** If States commit acts of intentional damage to submarine cables and pipelines in the EEZ and continental shelf which result in pollution to the marine environment as defined in LOSC Article 1 (1) (4) in the EEZ and continental shelf of the coastal State, this may constitute a breach of LOSC Articles 192, 194 and 235.²⁹¹ A coastal State has jurisdiction over the protection and preservation of the marine environment in LOSC Article 56 (1) (b) (iii) and "bears the responsibility within its exclusive economic zone to take legislative, administrative and enforcement measures in accordance with customary international law, as reflected in the relevant provisions of [the LOSC], for the purpose of conserving the living resources and protecting and preserving the marine environment."²⁹² The coastal State is therefore an injured State under ASR Article 42.²⁹³

c) *Areas under sovereignty: primary obligations and invocation of responsibility*

120. Intentional acts of damage to submarine cables and pipelines in the territorial sea may constitute a breach of the rules of innocent passage under LOSC Articles 19 (2) (f), (h) (k) and (l) (see paragraph 72). If intentional acts of damage to submarine cables and pipelines causes pollution to the marine environment, such acts may constitute a breach of LOSC Articles 192 and 194 obligations on the marine environment (see paragraph 116). Depending on the means used, intentional acts of damage to submarine cables and pipelines in the territorial sea may also constitute a breach of the sovereignty of the coastal State in its territorial sea in LOSC Article 2. In *Nicaragua v. the United States of America*, the ICJ found that blowing up of underwater pipelines, and attacks against ports and oil installations "not only amount to an unlawful use of force, but also constitute infringements of the territorial sovereignty of Nicaragua and incursions into its territorial and internal waters."²⁹⁴ Similarly, the laying of mines within the internal waters and territorial sea "not only constitute breaches of the non-use of force, but also affect Nicaragua's sovereignty over certain maritime expanses" and hence constitute a violation of Nicaragua's sovereignty.²⁹⁵ These are primary obligations on LOSC States Parties, the breach of which will *prima facie* incur international responsibility. The coastal State is the injured State and will be able to invoke the responsibility for intentional acts of damage to submarine cables and pipelines that constitute breaches of the obligation to exercise innocent passage in the territorial sea; breaches of the obligations in relation to the marine environment in the territorial sea; and breaches of the obligation to respect the sovereignty of the coastal State.
121. Similarly, in archipelagic waters and SUIN, intentional damage to submarine cables and pipelines may also constitute a breach of the obligations to exercise innocent passage, transit passage or archipelagic sea lane

²⁹⁰ For examples of activities that constitute interference with coastal State sovereign rights in its EEZ and continental shelf, see *South China Sea Arbitration* (n 147), para. 716; *Nicaragua v. Colombia* (2022) (n 89), para. 101.

²⁹¹ *South China Sea Arbitration*, *ibid*, para. 927.

²⁹² *Nicaragua v. Colombia* (2022) (n 89), para. 95.

²⁹³ ASR (n 147), commentary to principle 42, 116, para 2. For example, the *South China Sea Arbitration* did not dispute that the Philippines was entitled to bring proceedings against China for the latter's activities that took place in the Philippines' EEZ that caused harm to the marine environment.

²⁹⁴ *Case Concerning Military and Paramilitary Activities in and Against Nicaragua* (*Nicaragua v. United States of America*), Merits, Judgment, ICJ Rep 1986, p 14, para. 251.

²⁹⁵ *Ibid*, para, 251.

passage (see paragraphs 77 - 78); or a breach of the sovereignty of the archipelagic State or strait State (see paragraph 120) and the archipelagic State or strait State is the “injured State.”

d) *Attribution*

122. Attribution involves establishing “that a given event is sufficiently connected to conduct (whether an act or omission)...is attributable to the State.”²⁹⁶ The Report discusses two scenarios for illustrative purposes, namely, where States commit acts of damage using their own State ships and associated apparatus; and where States use private ships and associated apparatus. As highlighted in paragraphs 27 – 28, there are practical challenges in identifying the cause of damage to submarine cables and pipelines, including the fact that damage to cables and pipelines can occur for a variety of reasons and it may be difficult to identify the vessel responsible as AIS and other vessel tracking systems may be turned off. Even if there is evidence (for example, established by AIS data) that a vessel was in the vicinity when the damage occurred, it must be proved that a State is in fact involved in the act of damage to submarine cables and pipelines to attribute that act to the State.
123. **State vessels and associated apparatus:** If State vessels and associated apparatus are used to commit such acts, then such acts are “acts of state” committed by an organ of the State that is legally attributable to the flag State.²⁹⁷ The immunity of State vessels and associated apparatus from the jurisdiction of any State other than the flag State does not preclude the flag State from bearing responsibility for wrongful acts.²⁹⁸ In the *South China Sea Arbitration*, the Tribunal observed that the actions of government-operated ships in interfering with the sovereign rights of the Philippines in its EEZ were attributable to China.²⁹⁹ Similarly, the ICJ also found that the conduct of Colombian frigates in Nicaragua’s EEZ was attributable to Colombia.³⁰⁰
124. A possible exception to the conclusion above may arise for breaches of LOSC obligations to protect the marine environment committed by State vessels and associated apparatus. LOSC Article 236 provides that the LOSC provisions regarding the protection and preservation of the marine environment do not apply to any warship, naval auxiliary, other vessels or aircraft owned or operated by a State and used, for the time being, only on government non-commercial service. Stephens argues that “States will not be responsible in cases of marine environmental damage caused by the operation of such vessels in circumstances that would otherwise be a breach of [the LOSC].”³⁰¹ However, it is arguable that LOSC Article 236 was only intended to exempt flag States of State vessels from being held responsible for accidental or operational pollution caused by their vessels and not intentional damage.
125. **Private vessels and associated apparatus:** If States employ non-State actors that use private vessels and associated apparatus, either flagged in their own States or other States, to commit deliberate acts of damage against submarine cables and pipelines, such acts are not automatically attributed to the State that employed such non-State actors. Generally, the conduct of non-State actors will be attributed to the State if it is empowered by that State’s law to exercise elements of “governmental authority”; or if the non-State actor is in fact acting on the “instructions of, or under the direction or control” of that State in carrying out the conduct; or if the State acknowledges and adopts the conduct in question as its own.³⁰² Both the “governmental authority” and “instructions, direction or control” tests impose high thresholds in attributing the conduct of non-State actors to States.³⁰³ To establish governmental authority, the internal law of the State must specifically authorize the conduct as involving the exercise of public authority.³⁰⁴ For instructions, direction, or control, international courts and tribunals have vacillated between “an effective control test” and an “overall control test,”³⁰⁵ with the ICJ embracing

²⁹⁶ ASR, (n 147), commentary to art 2, 35, para. 6.

²⁹⁷ ASR, *ibid*, art 4, 40; Richard Barnes, “Article 31: Responsibility of the Flag State for Damage Caused by a Warship or Other Government Ship Operated for Non-Commercial Purposes,” in Alexander Proelss (ed), *United Nations Convention on the Law of the Sea: A Commentary* (Hart 2017), 248, 249.

²⁹⁸ LOSC, arts 25, 95 and 96. State vessels have immunity in the EEZ by virtue of LOSC, art 58 (2).

²⁹⁹ *South China Sea Arbitration* (n 141), paras. 703, 708, 1091.

³⁰⁰ *Nicaragua v. Colombia* (2022) (n 89), para. 132.

³⁰¹ Tim Stephens, “Article 236: Sovereign Immunity,” in Alexander Proelss (ed), *United Nations Convention on the Law of the Sea: A Commentary* (Hart 2017), 1593, 1595.

³⁰² ASR (n 147), art 5, art 8, art 11.

³⁰³ Lanovoy (n 57), 578.

³⁰⁴ ASR (n 147), commentary to art 5, para. 2.

³⁰⁵ For a discussion on how courts have addressed these two tests, see James Crawford, *State Responsibility: The General Part* (CUP 2013), 147 – 150.

the “effective control” test where it must be demonstrated that the State had effective or factual control over the action which resulted in the wrongful conduct.³⁰⁶ Thus, the test requires that the “States’ instructions be given, in respect of each operation in which the alleged violations occurred, not generally in respect of the overall operations taken by the persons or group having committed the violations.”³⁰⁷ Although flag States are required to exercise jurisdiction and control over vessels in a range of matters under the LOSC, the owners/operators of vessels or the Master/crew are not automatically acting under the direct governmental authority or instructions, direction, or control of the flag State.³⁰⁸ This does not preclude flag State responsibility on other grounds such as the failure to exercise due diligence to prevent non-State actors’ unlawful conduct (see Section 5).

e) *Legal consequences of an internationally wrongful act*

126. If a State can establish that it is an injured State either individually or specially affected (under ASR Article 42) by acts of damage to submarine cables and pipelines which constitute a breach of an obligation under the LOSC and/or customary international law, it may claim cessation, assurances and guarantees of non-repetition of the internationally wrongful act and reparation.³⁰⁹ For non-injured States arguing that intentional damage to submarine cables and pipelines are breaches of *erga omnes partes* obligations under the LOSC (under ASR Article 48), they may claim cessation, assurances and guarantees of non-repetition of the internationally wrongful act and reparation, but in the interest of the injured State or the beneficiaries of the obligation breached.³¹⁰
127. While all remedies are potentially applicable to intentional damage to submarine cables and pipelines, the Report focuses on reparation, as it raises issues of causation that are particularly salient for intentional damage to submarine cables and pipelines. The responsible State is “under an obligation to make full reparation for the injury caused by the internationally wrongful act” and that “full reparation for the injury caused by the internationally wrongful act shall take the form of restitution, compensation and satisfaction, either singly or in combination...”³¹¹ If States claim reparation, there must be a causal link between the injury and the internationally wrongful act, with the ASR defining injury as any damage, whether material (referring to damage to property or other interests of the State and its nationals which is assessable in financial terms) or moral (for example, individual pain and suffering, loss of loved ones or personal affront associated with an intrusion on one’s home or personal life).³¹² Similarly, States are obliged to compensate for “the damage caused thereby” which shall cover “any financially accessible damage including loss of profits insofar as it is established.”³¹³ The causal link requires both factual causation as well as legal causation to “determine whether there is any further element that could impinge upon the availability on the scope of reparation.”³¹⁴ The ASR does not take a position on the applicable standard of legal causation that is applicable in the determination of reparation.³¹⁵ There are varying standards of legal causation that have been employed, including the standard of “sufficiently direct and certain causal nexus,” between the wrongful act and the injury suffered; “proximity” i.e. whether the consequences are proximate or not too remote from the wrongful act;³¹⁶ and “reasonable foreseeability,” i.e., whether the consequences of the act were reasonably foreseeable in the circumstances.³¹⁷
128. Determining which standard of causation is applicable in determining reparations for injury resulting from intentional damage to submarine cables and pipelines will depend on the nature of the primary obligation breached, the nature of the injury suffered and the factual circumstances of each case (for example, determining the standard of causation for reparation for injury resulting from breach of the obligation not to interfere with the freedom to operate cables and pipelines may be different from reparation for injury resulting from breach of marine environmental

³⁰⁶ See *Application of the Convention on the Prevention and Punishment of the Crime of Genocide* (Bosnia & Herzegovina v. Serbia & Montenegro), Judgment (2007) ICJ Rep 43, para. 412; *Nicaragua v. USA* (n 294), paras. 115 and 190. 190.

³⁰⁷ *Bosnian Genocide Case*, *ibid*, para. 404.

³⁰⁸ As observed by ITLOS, “the liability of the flag state does not arise from a failure of vessels flying its flag to comply with the laws and regulations of the SRFC member states concerning IUU fishing activities in their exclusive economic zones, as a violation of such laws and regulations by vessels is not per se attributable to the flag state.” *SRFC Advisory Opinion* (n 286), para.146.

³⁰⁹ ASR (n 152), art 42.

³¹⁰ ASR, *ibid*, art 48 (2).

³¹¹ ASR, *ibid*, art 31, 91; art 34.

³¹² ASR, *ibid*, art 31 (2), 91; commentary to art 31, 91-92, para. 5.

³¹³ ASR, *ibid*, art 36.

³¹⁴ Vladyslav Lanovoy, “Causation in the Law of State Responsibility,” (2022) *British Yearbook of International Law* 1, 39.

³¹⁵ *Ibid*.

³¹⁶ *Ibid*, 47.

³¹⁷ *Ibid*, 47 – 60.

obligations).³¹⁸ While a detailed examination of what should be the legal standard of causation is beyond the scope of the Report, the Committee notes that adopting a “sufficiently direct and certain causal nexus” may exclude certain consequences of intentional damage to submarine cables and pipelines which may not result in full reparation. For example, while costs of repairs and other economic losses may be a direct cause of damage to submarine cables and pipelines, more indirect consequences such as financial impacts of disruptions to communications or energy supplies, marine environmental harm, or damage to property and injury to persons that happens further down the line may not be considered “sufficiently direct.” A test of “reasonable foreseeability” is more likely to reflect the full extent of injury caused by intentional damage to submarine cables and pipelines.

f) *Avenues for implementation of State responsibility*

129. Injured States can potentially use the LOSC Part XV dispute settlement mechanisms to bring proceedings against the State Party who is responsible for acts of damage to submarine cables and pipelines if it can frame the dispute as one over the interpretation or application of the LOSC.³¹⁹ Non-injured States may also utilize Part XV dispute settlement mechanisms – LOSC Article 286, which triggers the jurisdiction of an LOSC court or tribunal, is drafted in general terms and only requires a dispute concerning the interpretation or application of the LOSC, “without requiring that the applicant should demonstrate a special interest.”³²⁰
130. Another mechanism for implementing State responsibility is countermeasures.³²¹ While the existence of the Part XV dispute settlement procedures does not preclude resort to countermeasures,³²² it warrants note that the arbitral tribunal in *Guyana v. Suriname*, on determining whether Suriname’s use of force was a lawful countermeasure taken in response to Guyana’s internationally wrongful acts, found that “[p]eaceful means of addressing Guyana’s alleged breach of international law with respect to exploratory drilling were available to Suriname under the Convention.” Accordingly, “[a] State faced with such a dispute should resort to the compulsory procedures provided for in Section 2 of Part XV of the Convention, which provide among other things that, where the urgency of the situation so requires, a State may request that ITLOS prescribe provisional measures.”³²³ In addition, if a dispute settlement procedure is being implemented in good faith, unilateral countermeasures are not justified.³²⁴
131. The Report reiterates that an injured State must satisfy substantive and procedural requirements before it can exercise countermeasures because as acknowledged by the ASR, there is a “need to ensure that countermeasures are strictly limited to the requirements of the situation and that there are adequate safeguards against abuse.”³²⁵ These include the requirement that countermeasures do not involve the use of force and must be commensurate with the injury suffered taking into account the gravity of the prior unlawful act and of the right in question.³²⁶ It is not possible to conclude whether States whose rights have been infringed by intentional acts of damage to submarine cables and pipelines are able to base interdiction measures on countermeasures. There is a divergence of views on whether lawful countermeasures include interdiction against vessels for other unlawful acts such as unlawful fishing or proliferation of weapons of mass destruction on the high seas or EEZ.³²⁷ Similar uncertainties surround the ability of groups of States to rely on collective countermeasures as a basis for interdiction measures or other forcible actions not amounting to a prohibited use of force in order to protect the freedom to lay/operate submarine cables and pipelines.³²⁸

³¹⁸ See discussion in ASR (n 147), commentary to art 31, para. 10.

³¹⁹ LOSC, art 286, subject to the exceptions in arts 297 and 298.

³²⁰ Yoshifumi Tanaka, “Reflections on *Locus Standi* in Response to a Breach of Obligations *Erga Omnes Partes*: A Comparative Analysis of the *Whaling in the Antarctic* and *South China Sea* Cases” (2018) 17 *Law and Practice of International Courts and Tribunals* 527, 545–551.

³²¹ For a definition of countermeasures, see ASR (n 147), Chapter II, 128, para. 1.

³²² See discussion in Azaria (n 13), chapter 6, section 2.1; Natalie Klein, “Responding to Law of the Sea Violations,” (2020) *Australian International Law Journal* 1, 19 – 22.

³²³ *Guyana v. Suriname* (n 139), para. 446.

³²⁴ ASR (n 147), commentary to art 53, para. 7.

³²⁵ ASR, *ibid*, 129, para. 6.

³²⁶ ASR, *ibid*, art 50 (1) (a); 51.

³²⁷ Klein (2020) (n 322), 20.

³²⁸ See, for example, Matteo Tondini, “The legality of ASPIDES Protection Activities in the Framework of the Collective Countermeasures Doctrine,” EJIL Talk, 24 May 2024; Michael Schmitt, 26 April 2022, “Responding to Malicious or Hostile Actions under International Law, Lieber Institute White Paper, 26 April 2022. It is presently unclear whether non-injured States are entitled to take countermeasures in responses to breaches of *erga omnes partes* obligations to induce a responsible State to comply with its obligations, but the ASR does not preclude this possibility and leaves resolution of the matter to the further development of international law ASR, (n 147), art 54, 139, paras. 6 – 7.

5. State responsibility for acts of damage to submarine cables and pipelines committed by non-State actors

132. This section considers the scenario of non-State actors committing acts of damage to submarine cables and pipelines without any direct State involvement, but where the State may still be held responsible for failure to prevent such intentional acts of damage. It focuses on flag States although the analysis may apply to other States. This obligation stems from the obligation under customary law and treaty law to not knowingly allow its territory to be used for acts contrary to the rights of other States.³²⁹
133. The ASR also notes that “[a] state may be responsible for the effects of the conduct of private parties, if it failed to take necessary measures to prevent those effects.”³³⁰ This obligation is usually subject to “best effort obligations, requiring States to take all reasonable or needs necessary measures to prevent a given event from occurring but without warranting that the event will not occur,”³³¹ otherwise known as due diligence obligations, a topic which has also been considered by the ILA Study Group on Due Diligence in International Law.³³² In the context of the law of the sea, international courts and tribunals have affirmed that States have due diligence obligations to ensure that private actors subject to its jurisdiction do not engage in conduct that results in breaches of the LOSC. For example, the Seabed Disputes Chamber observed that the expression “to ensure” is “often used in international legal instruments to refer to obligations in respect of which, while it is not considered reasonable to make a State liable for each and every violation committed by persons under its jurisdiction, it is equally not considered satisfactory to rely on the mere application of the principle that conduct of private persons or entities is not attributable to the State under international law.”³³³ The Chamber accordingly found that States sponsoring private actors conducting deep seabed mining activities in the Area have a due diligence obligation to ensure that such private actors comply with the LOSC and related instruments.³³⁴ In its 2015 Advisory Opinion on illegal, unreported or unregulated (IUU) fishing, ITLOS found that “flag States also have the responsibility to ensure that vessels flying their flag do not conduct IUU fishing activities in the exclusive economic zones of the SRFC Member States.”³³⁵ In the *South China Sea Arbitration*, the Tribunal held that flag States have a due diligence obligation to prevent its vessels from fishing in the EEZ of other States; as well as a due diligence obligation to ensure that Chinese fishing vessels take measures not to pollute the marine environment.³³⁶
134. Flag States of private vessels and associated apparatus that are used by non-State actors to engage in intentional acts of damage to submarine cables and pipelines could be held responsible for such acts.³³⁷ This is on the basis that they failed to exercise due diligence to prevent vessels subject to its jurisdiction from committing acts of damage to submarine cables and pipelines that constitute breaches of the LOSC (see discussion in Section 4 on applicable primary obligations in the LOSC).³³⁸ The content of due diligence obligations “may not easily be described in precise terms”³³⁹ and is determined on a case-by-case basis. As noted by the ILA Study Group on Due Diligence, “normative and institutional fragmentation has revealed significant divergences in the application of due diligence, both in terms of the scope of its application, and also seemingly its content.”³⁴⁰ The *South China Sea Arbitration* also acknowledged that “the precise scope and application of the obligation on a flag State to exercise due diligence in respect of fishing by vessels flying its flag in the exclusive economic zone of another State may be difficult to determine” as “unlawful fishing will be carried out covertly, far from any official presence, and it will be far from obvious what the flag State could realistically have done to prevent it.”³⁴¹ Nonetheless, such due diligence obligations certainly entail “not only the adoption of appropriate rules and measures, but also a certain level of

³²⁹ *Island of Palmas Arbitration* (The Netherlands v. United States of America), Decision of 4 April 1928, UNRIIAA, vol. 2, 829, 839; *Corfu Channel* (United Kingdom v. Albania), Judgment of 9 April 1949, ICJ Rep 4, at 22; *Trail Smelter case* (United States v. Canada), Award of 16 April 1938 and 11 March 1941, III Reports of International Arbitral Awards 1905 – 1982, 1965.

³³⁰ ASR (n 147), commentary to Chapter II, 39, para. 4.

³³¹ ASR, *ibid*, commentary to art 14, 62, para 14.

³³² ILA Study Group on Due Diligence in International Law at <https://www.ila-hq.org/en/study-groups/due-diligence-in-international-law>

³³³ *Activities in the Area Advisory Opinion* (n 146), para. 112.

³³⁴ *Ibid*, para. 177.

³³⁵ *SRFC Advisory Opinion* (n 286), para. 124.

³³⁶ *South China Sea Arbitration* (n 141), paras. 744, 755 and 971.

³³⁷ See discussion in relation to state responsibility for accidental damage in Guilfoyle et al (n 17), 665 – 670.

³³⁸ In the context of accidental damage, Guilfoyle et al observe that “it would therefore seem reasonable to apply a duty of due diligence to flag States to take appropriate measures in respect of vessels flying their flags to prevent damage to submarine cables in line with both the Obligations in the Area and SRFC advisory opinions.” Guilfoyle et al, *ibid*, 669.

³³⁹ *Activities in the Area Advisory Opinion* (n 146), para. 133.

³⁴⁰ ILA Study Group on Due Diligence in International Law, First Report 2014 (n 332), 3.

³⁴¹ *South China Sea Arbitration* (n 141), para. 754.

vigilance and their enforcement and the exercise of administrative control applicable to public and private operators, such as the monitoring of activities undertaken by such operators to safeguard the rights of the other party.”³⁴²

135. The exact nature of due diligence required by flag States to ensure that their vessels do not commit acts of damage will depend on the circumstances at hand. For example, LOSC Article 113 obliges States to adopt laws and regulations criminalizing the breaking or injury by a ship flying its flag or a person subject to its jurisdiction of submarine cables and pipelines in the high seas and EEZ, and LOSC Articles 114 and 115 also require States to adopt national regulations on damage to submarine cables and pipelines. Flag States shall effectively exercise their jurisdiction and control in administrative, technical and social matters over ships flying its flag under Article 94 (1) of the LOSC, which includes matters governed by Article 113.³⁴³ If private vessels and associated apparatus are used by non-State actors to commit deliberate acts of damage to submarine cables and pipelines and the flag State has not fulfilled its obligations under Article 113, this may be a factor relevant to whether it has fulfilled its due diligence obligations to ensure that vessels flying its flag do not commit acts of damage to submarine cables and pipelines. Moreover, while flag States have discretion as to the nature of the laws, regulations and measures that are to be adopted, it also has the obligation to “include in them enforcement mechanisms to monitor and secure compliance with these laws and regulations” and sanctions must be “sufficient to deter violations.”³⁴⁴ Even if States have implemented their obligations under Article 113, the sanctions or penalties imposed must be sufficient to deter violations, and failure to do so may be a breach of their due diligence obligations.³⁴⁵

B. Submarine cables and pipelines connected to offshore infrastructure

136. This section briefly discusses what measures States can take in response to acts of damage to submarine cables and pipelines connected to offshore infrastructure in areas within national jurisdiction and areas under sovereignty, which the Report assumes are the same measures that States can take in response to intentional acts of damage against offshore infrastructure (see discussion in paragraph 22). As mentioned above, the term “offshore infrastructure” includes artificial islands, installations, structures (which are terms used in the LOSC although not defined), which can be used for a variety of purposes, including economic and scientific.³⁴⁶ The Report notes that some offshore infrastructure which *prima facie* can be described as artificial islands, installations, or structures may in certain circumstances be classified as a “ship” or “vessel” in either IMO regulations or national legislation, depending on “its location, the nature of the activity it is engaged in and how the relevant legal instruments define their scope of application,”³⁴⁷ in which case it would be subject to flag State jurisdiction. The Report assumes for purposes of analysis that the artificial islands, installations, and structures that are discussed herein are not vessels or ships.

1. Areas beyond sovereignty but within national jurisdiction

137. Under LOSC Articles 60 and 80, the coastal State has the exclusive right to construct, authorize and regulate the construction, operation and use of, as well as exclusive jurisdiction over, artificial islands, installations and structures for LOSC Article 56 and other economic purposes; and installations and structures which may interfere with the exercise of the rights of the coastal State in the EEZ and continental shelf.³⁴⁸ LOSC Article 79 (4) stipulates that nothing in Part VI affects coastal State’s jurisdiction over cables and pipelines constructed or used in connection with the exploration of its continental shelf or exploitation of its resources or the operations of artificial islands, installations and structures under its jurisdiction. This suggests that the coastal State has exclusive jurisdiction over

³⁴² *Pulp Mills on the River Uruguay* (Argentina v. Uruguay) (2010) Judgment, ICJ Rep 14, para. 197; *Activities in the Area Advisory Opinion* (n 146), para. 115; *SRFC Advisory Opinion* (n 286), para. 131.

³⁴³ Guilfoyle et al (n 17), 669.

³⁴⁴ *SRFC Advisory Opinion* (n 286), para. 138.

³⁴⁵ The First Report observed that a common criticism of national implementation of LOSC Article 113 is the low penalties imposed.

³⁴⁶ See, for example, LOSC, arts 11, 21 (1) (b), 60, 79 (4), 80, 87 (1) (d), 145 (a), 147, 153 (5), 194 (3) (c) and (d), 208, 209, 258.

³⁴⁷ Richard Barnes, “Flag States,” in Donald Rothwell et al, *Oxford Handbook on the Law of the Sea* (OUP 2015) 304, 311. Certain installations may be subject to some of the IMO conventions – the 1973/1978 MARPOL Convention, for example, stipulates that “ship” means a vessel of any type whatsoever operating in the marine environment and includes hydrofoil boats, air-cushion vehicles, submersibles, floating craft and *fixed or floating platforms* (See Article 2, MARPOL Convention), whereas others such as SOLAS, the STCW and the Load Line Conventions only apply to ships underway or engaged in an international voyage (see IMO Guidance for the Application of Safety, Security and Environmental Protection Provisions to FPSOs, and FSUs, MSC-MEPC.2/Circ.9, 25 May 2010).

³⁴⁸ LOSC, art 60 (1) and (2), art 80.

such submarine cables and pipelines, pursuant to its sovereign rights over resources and exclusive jurisdiction over artificial islands, installations and structures under its jurisdiction.

138. LOSC Articles 60 and 80 also affirm that the coastal State has exclusive jurisdiction over artificial islands, installations and structures used for marine scientific research, as this is one of the purposes provided for in LOSC Article 56 (1) (b) (ii).³⁴⁹ To the extent that submarine cables and pipelines are connected to artificial islands, installations and structures used for marine scientific research, they would also be under the exclusive jurisdiction of the coastal State under LOSC Article 79 (4).

a) *Monitoring measures*

139. The analysis in paragraph 40 also applies here. Coastal States have the authority to monitor threats to their sovereign rights over resources including threats to artificial islands, installations and structures under its jurisdiction under LOSC Articles 56 and 77, and exclusive jurisdiction to undertake monitoring measures to protect and preserve the marine environment in its EEZ.³⁵⁰

b) *Enforcement and other prevention measures*

140. As discussed in paragraphs 64 – 70, the coastal State is empowered to board, seize and arrest private vessels and associated apparatus suspected of breaches of the 500 m safety zones around artificial islands, installations and structures, including possible terrorist offences within the 500 m safety zone, pursuant to the right of hot pursuit in LOSC Article 111 and provided the conditions of hot pursuit are met.³⁵¹ If intentional damage to submarine cables and pipelines connected thereto are a breach of its laws in relation to non-living resources in its EEZ and continental shelf, the coastal State also has the authority to enforce its laws in relation to these non-living resources, which would include boarding inspection, arrest and judicial proceedings. A coastal State may also take prevention measures pursuant to its protection of its rights and interests in the EEZ, including the prevention of adverse environmental harm under LOSC Article 221, prevention of terrorism offences, and the prevention of interference with the coastal State's rights over the exploration and exploitation of its non-living resources of the EEZ.³⁵²

141. Third States would not be able to undertake enforcement and prevention measures to prevent or respond to any suspected or actual damage to submarine cables and pipelines connected to artificial islands, installations and structures under the jurisdiction of the coastal State.³⁵³ The piracy provisions do not apply in light of the finding in the *Arctic Sunrise Arbitration* that piracy can only be committed by one ship against another ship and not a fixed platform.³⁵⁴

c) *Prosecution of offences*

142. Coastal States also have a legal basis to incorporate offences against artificial islands, installations and structures under their jurisdiction in their EEZ or continental shelf in their national laws, given the exclusive jurisdiction that the coastal State has over such offshore infrastructure, including with regard to customs, fiscal, health, safety and immigration laws and regulations.³⁵⁵

d) *State responsibility*

143. Intentional damage to submarine cables and pipelines connected to artificial islands, installations and structures under the coastal State's jurisdiction is an interference with the coastal State's sovereign rights over non-living resources and jurisdiction over artificial islands, installations and structures under LOSC Article 56, 60 and 80. The coastal State is the injured State. The discussion in Sections 4 (d) – (f) on attribution, legal consequences and implementation of State responsibility also apply here.

³⁴⁹ Also see LOSC, art 246 (5) (c), and art 258.

³⁵⁰ *Nicaragua v. Colombia* (2022), (n 89), para. 93.

³⁵¹ *Arctic Sunrise Arbitration* (n 104), para. 244, 278.

³⁵² *Ibid*, para. 306.

³⁵³ *Nicaragua v. Colombia* (2022) (n 89), para. 95: "a third State has no jurisdiction to enforce conservation standards on fishing vessels of other States in the exclusive economic zone."

³⁵⁴ *Arctic Sunrise Arbitration* (n 104), para. 238.

³⁵⁵ LOSC, art 60 (2).

2. Areas under sovereignty

144. Coastal States, pursuant to their sovereignty over the territorial sea, have the *prima facie* competence to take monitoring measures, enforcement and other prevention measures, prosecution of offences, and establish State responsibility of States vis-à-vis intentional damage to submarine cables and pipelines connected to artificial islands, installations and structures in the territorial sea. In relation to enforcement measures, intentional damage to submarine cables and pipelines connected to offshore infrastructure may render passage non-innocent under LOSC Article 19 (2) (a), (e), (f), (h) and (k). It may also constitute a breach of the coastal States' laws and regulations on the protection of facilities or installations under LOSC Article 21 (1) (b) or on the preservation of the environment of the coastal State and the prevention, reduction and control of pollution thereof under LOSC Article 21 (1) (f); and may also constitute a breach of the obligation to respect the sovereignty of the coastal State (see discussion in paragraph 120). This would entitle coastal States to take all necessary measures to prevent passage which is not innocent, against private vessels and associated apparatus, including enforcement measures; or to ensure compliance with its laws and regulations adopted in conformity with the LOSC. The responsibility for breaches of obligations not to comply with innocent passage rules in LOSC Article 19 or to respect the sovereignty of the coastal State in LOSC Article 2 can also be invoked by the coastal State and Sections 4 (d) – (f) on attribution, legal consequences and implementation of State responsibility is also applicable. Similar arguments apply to intentional damage to submarine cables and pipelines connected to offshore infrastructure in archipelagic waters.

IV. USE OF FORCE

145. Part IV examines selected issues relating to whether intentional acts of damage to submarine cables and pipelines amount to (1) a use of force under Article 2 (4) of the UN Charter (and consequently a breach of LOSC Articles 19 (2) (a), 39 (1) (b), 54 and 301) entailing State responsibility; and (2) whether such acts amount to an “armed attack” under Article 51 of the UN Charter, entitling the targeted State to exercise the right of self-defense. The Report confines its analysis to use of force and armed attack by State actors that can be attributable to States and excludes analysis on the use of force vis-à-vis non-State actors that are not attributable to States, although it acknowledges the long-standing debate on the applicability of UN Charter Articles 2 (4) and 51 to non-State actors.³⁵⁶ The Report also does not discuss whether intentional damage to submarine cables and pipelines is a “threat to peace, breach of peace or act of aggression” under Article 39 of the UN Charter justifying the Security Council taking collective security measures, although it notes that this is a possibility, depending on whether the Security Council perceives the situation as one of sufficient gravity to warrant such a finding.³⁵⁷ This section divides analysis into (A) cross-border submarine cables and pipelines and (B) submarine cables and pipelines serving offshore infrastructure. It explores whether intentional damage to submarine cables and pipelines qualifies as (1) a prohibited use of force under Article 2 (4) of the UN Charter; (2) or as an armed attack under Article 51 of the UN Charter; (3) who is the victim of a threat or use of force or armed attack against submarine cables and pipelines; (4) attribution of the acts of intentional damage to submarine cables and pipelines to the attacking State; and (5) measures that States can take in response to intentional acts of damage to submarine cables and pipelines that qualify as a use of force or armed attack.
146. Two points warrant mention. First, as observed by the ILA Committee on the Use of Force, the use of force is a “contested field of law.”³⁵⁸ A determination of whether there has been a “use of force” or an “armed attack” is both “politically sensitive” and “legally complex” and international law has not always been consistent in determining whether a particular State action constitutes a use or a threat of use of force either falling short of an armed attack or meeting the threshold of an armed attack.³⁵⁹ Current interpretations on the use of force are also evolving as States grapple with the legal implications of *cyber operations* for the use of force.³⁶⁰ The Third Report is only concerned with physical acts of damage and the discussions on the applicable international law on cyber operations, are *prima facie* not directly transposable. However, the discussions on legal implications of *cyber operations* for the

³⁵⁶ There is debate on whether the use of force and armed attack can be committed by non-State actors (that cannot be attributed to States). For a more comprehensive discussion on this issue, see the ILA Committee on the Use of Force, “Final Report on Aggression and the Use of Force (2018),” Russell Buchan and Nicholas Tsagourias, *Regulating the Use of Force in International Law* (Edward Elgar 2021), 53 – 59.

³⁵⁷ Guilfoyle et al (n 17), 676 – 678.

³⁵⁸ ILA Committee on the Use of Force, “Final Report on Aggression and the Use of Force (2018) (n 356), 2.

³⁵⁹ Claus Kress, “On the Principle of the Non-Use of Force in Current International Law,” *Just Security*, 30 September 2019 at <https://www.justsecurity.org/66372/on-the-principle-of-non-use-of-force-in-current-international-law/>.

³⁶⁰ Tallinn Manual 2.0 (n 176), chapter 14.

use of force may provide important insight on States' views on attacks against critical infrastructure and may have implications for determinations on future characterizations of intentional physical damage to submarine cables and pipelines in the context of the use of force.³⁶¹

147. Second, there is uncertainty on whether intentional acts of damage to submarine cables and pipelines will meet the tests for a use of force or armed attack, including whether the scale and effects of such acts meet the requisite gravity; identification of the victim State or States given the multi-jurisdictional nature of submarine cables and pipelines; challenges in determining whether such acts are accidental or intentional and to the extent they are intentional, whether they are acts attributable to States. It is relevant that in the recent incidents relating to the Nord Stream and the Baltic connector, States did not publicly characterize the acts of damage as a use of force or armed attacks, although they did highlight the seriousness of such acts for critical infrastructure, describing it as a “grave threat to energy security and regional stability” and emphasizing its environmental and economic consequences.³⁶² Russia has described the Nord Stream as a “criminal act” and has said that it will wait for the outcome of investigations before making any requests for compensation.³⁶³ In light of this, while the Report does not preclude the possibility that intentional acts of damage to submarine cables and pipelines may constitute a prohibited use of force or armed attack in certain circumstances, especially when the effects of such damage meet the requisite scale and effects tests, caution should nonetheless therefore be exercised given the importance of maintaining international peace and security.³⁶⁴

A. Cross-border submarine cables and pipelines

1. Threat or the use of force

148. Article 2 (4) of the UN Charter provides that Member States of the UN “shall refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any state, or in any other manner inconsistent with the Purposes of the United Nations.”³⁶⁵ The Report assumes that breaches of the prohibition on the use of force in Article 2 (4) of the UN Charter and customary international law will also constitute breaches of LOSC Article 19 (2) (a) in the territorial sea; Article 39 (1) (b) in straits used for international navigation; Article 54 in archipelagic waters and Article 301, subject to the caveat that Articles 19 (2) (a), 39 (1) (b) and 54 are wider than both LOSC Article 301 and Article 2 (4) of the UN Charter as it refers to “sovereignty.” Whether acts of damage to submarine cables and pipelines constitute a use of force is context specific, in that it depends on the effects of such damage and is also complicated by the uncertainties surrounding the definition of the “use of force.”³⁶⁶
149. Questions may arise on whether all means used to damage submarine cables and pipelines (discussed in Part II.C above) will fall within the prohibition on the use of force.³⁶⁷ Traditional conceptions of use of force interpret “force” narrowly in that it is limited to force by arms or military force that produces a kinetic effect i.e., shockwaves and heat.³⁶⁸ On this reasoning, the use of explosives to damage submarine cables and pipelines is a use of force, but the cutting of cables and pipelines by anchors or other equipment may not be. The counter-argument is that Article

³⁶¹ See, for example, the work by the Group of Governmental Experts on advancing responsible State behavior in cyberspace in the context of international security at <https://disarmament.unoda.org/group-of-governmental-experts/>; Open-ended Working Group on developments in the field of information and telecommunications in the context of international security at <https://disarmament.unoda.org/group-of-governmental-experts/>. This point was also noted by the ILA Committee on the Use of Force which observed that “if harm which causes damage to a State’s economic interests, environment or infrastructure are all to be characterized as ‘armed attacks,’ however the damage is caused, the scope of justifiable use of force in self-defence could be unacceptably enlarged.” ILA Committee on the Use of Force, “Final Report on Aggression and the Use of Force (2018) (n 356), 30.

³⁶² See, for example, the remarks of Malta, Brazil, Ecuador and Gabon in “One Year On, Security Council Hears Renewed Calls to Determine the Cause of Undersea Explosions Targeting the Nord Stream Gas Pipelines” Security Council Meeting Coverage SC/15422, 26 September 2023 at <https://press.un.org/en/2023/sc15422.doc.htm>.

³⁶³ “One Year On, Security Council Hears Renewed Calls to Determine the Cause of Undersea Explosions Targeting the Nord Stream Gas Pipelines” Security Council Meeting Coverage SC/15422, 26 September 2023 at <https://press.un.org/en/2023/sc15422.doc.htm>; “Russia may seek compensation over Nord Stream blasts,” Reuters, 21 November 2023 at <https://www.reuters.com/world/europe/russia-may-seek-compensation-over-nord-stream-blasts-ria-2023-11-21/>.

³⁶⁴ Also see ILA Committee on the Use of Force, “Final Report on Aggression and the Use of Force (2018) (n 356), p 30

³⁶⁵ This is also established in customary international law: See *Nicaragua v. USA* (n 294), para. 34.

³⁶⁶ See, for example, Erin Pobjie, *Prohibited Force: The Meaning of ‘Use of Force’ in International Law* (CUP 2024), 1 – 14.

³⁶⁷ See generally, Pobjie, *ibid*, 106 – 131.

³⁶⁸ Killian O’Brien, “Article 301: Peaceful Uses of the Sea,” in Alexander Proelss (ed.), *United Nations Convention on the Law of the Sea: A Commentary* (Hart 2017), 1943, 1944; Buchan and Tsagourias (n 391), 20.

2 (4) of the UN Charter does not limit the use of force to conventional weapons.³⁶⁹ The ICJ has observed in the *Legality of Nuclear Weapons Advisory Opinions* case that Article 2 (4) and Article 51 of the UN Charter do not refer to specific weapons and apply to use of force regardless of the weapons employed.³⁷⁰ Accordingly, “it is neither the designation of a device, nor its normal use, which make it a weapon but the intent with which it is used and its effect” and the “use of any device or number of devices which results in a considerable loss of life and/or extensive destruction of property must therefore be deemed to fulfill the conditions on an ‘armed’ attack.”³⁷¹ Acts of damage to submarine cables and pipelines by the use of ordinary equipment to cut cables and pipelines would not be excluded from “use of force.”

150. In determining whether an act is a threat or use of force, the *scale and effects* of such acts (as opposed to the means) is said to be the more decisive criterion.³⁷² This raises several issues for intentional acts of damage to submarine cables and pipelines. First, it is uncertain whether the *effects* of acts of damage to submarine cables and pipelines fall within the prohibition on the use of force. On the basis that physical acts with direct physical effects on persons or objects fall within the prohibition on the use of force,³⁷³ it could be argued that acts of damage to submarine cables and pipelines are *prima facie* damage to objects or property. However, it could also be argued that the immediate effects of the acts of damage to submarine cables and pipelines are interruptions to the services or functions provided by submarine cables and pipelines, and such interruptions may or may not result in *physical* harm to persons or objects. For example, acts of damage to submarine cables and pipelines which result in purely economic consequences may not qualify as a use of force, whereas damage to submarine cables and pipelines that result in consequent physical harm to persons and property would more clearly qualify as a use of force.³⁷⁴ Even if physical harm to persons and damage to property is a result of damage to submarine cables and pipelines, there is a question on whether there is a sufficient causal connection between the acts of damage and the ensuing effects with which the prohibition of the use of force is concerned. Such effects may not be “sufficiently direct” in that the physical harm to persons and objects may not manifest immediately.³⁷⁵
151. The second issue is the *scale* of the effects of damage to submarine cables and pipelines. International law is not consistent in determining whether a particular State action constitutes a use or a threat of use of force falling short of an armed attack,³⁷⁶ although the primary difference between a threat or use of force and an armed attack is the gravity of the latter.³⁷⁷ There is debate on whether there is a *de minimis* gravity threshold for a prohibited use of force under Article 2 (4) of the UN Charter.³⁷⁸ Some scholars have said that no specific gravity threshold can be read into Article 2 (4),³⁷⁹ whereas others have said that “a *de minimis* threshold is integrated into Article 2 (4) UN Charter.”³⁸⁰ The *de minimis* threshold would exclude certain low-level acts of violence from the ambit of a prohibited use of force. Constraints of space prohibit an in-depth discussion on this, and it suffices to note that there is

³⁶⁹ Pobjie (n 365), 125 – 130.

³⁷⁰ *Legality of the Threat or Use of Nuclear Weapons Advisory Opinion*, Advisory Opinion of 8 July, ICJ Rep 1996, p. 226, para. 39.

³⁷¹ Karl Zemanek, “Armed Attack,” in Rudiger Wolfrum, *Max Planck Encyclopedia of Public International Law* (OUP 2013), para. 21, also drawing on the use of civilian airliners to commit the 9/11 attacks. In the context of cyber operations, the Tallinn Manual 2.0 also noted that the term “armed” did not necessarily require the employment of weapons. See Tallinn Manual 2.0 (n 176), commentary to Rule 71, para. 5.

³⁷² Pobjie (n 365), 132; In the context of cyber operations, more States appear to accept that when the scale and effects of a cyber operation are comparable to a traditional use of armed force, such cyber operations constitute a breach of Article 2 (4) of the UN Charter: Kress (n 393).

³⁷³ Tallinn Manual 2.0, “acts that injure or kill persons or physically damage or destroy objects are uses of force.” Tallinn Manual 2.0 (n 176), commentary to rule 69, para. 8.

³⁷⁴ Although force does not include economic pressure or coercion, the Tallinn Manual 2.0 notes that “some may categorize massive cyber operations that cripple an economy as a use of force, even though economic coercion is presumptively lawful.” Tallinn Manual 2.0 (n 176), commentary to article 69, para. 10.

³⁷⁵ Pobjie (n 365), 134 – 135.

³⁷⁶ Kress (n 359).

³⁷⁷ *Nicaragua v. USA* (n 294), para. 247. Some States claim that any unlawful use of force qualifies as an armed attack triggering the right of self-defense without any gravity threshold to distinguish uses of force from armed attacks. The United States construes the term “armed attack” consistent with the “customary practice that enables any State effectively to protect itself...from every illegal use of force aimed at the State.” See, e.g., Office of the General Counsel of the Department of Defense Law of War Manual, para. 1.11.5.2 (2023).

³⁷⁸ Pobjie (n 399), 138; ILA Committee on the Use of Force, “Final Report on Aggression and the Use of Force (2018) (n 356), 5.

³⁷⁹ Oliver Dorr, “Use of force, Prohibition of,” *Max Planck Encyclopedia of Public International Law*, August 2019, para. 19; Tom Ruys, “The Meaning of ‘Force’ and the Boundaries of the *Jus Ad Bellum*: Are ‘Minimal’ Uses of Force Excluded from the UN Charter Article 2 (4)?” (2014) 108 *American Journal of International Law* 159.

³⁸⁰ Buchan and Tsagourias (n 356), 23.

uncertainty on the level of gravity that is necessary for acts of damage to submarine cables and pipelines to be considered a use of force falling short of an armed attack.

152. Regarding the requirement of intention, it is not clear whether hostile intent is an element of the prohibited threat or use of force, and whether hostile intention refers to an intended action, intended effects or intended coercion, with different views being expressed.³⁸¹ It has been argued that at the very least, an intended action is required, and that hostile intent “is an indicative factor that can turn a forcible act that would otherwise not meet various criteria (such as gravity or if the harm is only potential but unrealised) into a ‘use of force.’”³⁸² If hostile intent (at least in terms of intended action) is required to establish that acts of damage to submarine cables and pipelines are a prohibited use of force, the means used to damage such cables and pipelines will be relevant (i.e., the use of explosives would indicate hostile intent as opposed to anchors and other equipment), as well as the need to establish that the attacking State was aware of which submarine cable and pipeline it was attacking, and that State was deliberately targeted.

2. *Armed attack*

153. Article 51 of the UN Charter, which is an exception to prohibited use of force in Article 2 (4) of the UN Charter, provides that nothing “shall impair the inherent right of individual or collective self-defense if an armed attack occurs against a Member State of the United Nations, until the Security Council has taken the measures necessary to maintain international peace and security.” Judicial decisions suggest that (1) whether there is a use of force constituting an armed attack is a question of fact; (2) only the most grave forms of the use of force will constitute an “armed attack”; and (3) the “scale and effects” of the attack will be used to distinguish it from a “mere frontier incident.”³⁸³ However, the case law has not indicated a specific threshold that must be reached for the use of force to qualify as an armed attack.³⁸⁴ As observed by Buchan and Tsagourias, “whether a use of force is ‘grave’ will depend upon the circumstances and this requires an assessment of various factors such as the number of troops involved in the attack, the types of weapons used, the attack’s duration and the degree of harm it inflicts on the victim State.”³⁸⁵
154. Applying the above principles to acts of damage to submarine cables and pipelines raises several questions. First, as discussed in paragraph 149, “armed attack” can encompass acts of damage to submarine cables and pipelines by weapons such as explosives or other devices not conventionally thought of as weapons, such as anchors or dredging equipment, although there are also views that “armed” attack requires weapons.³⁸⁶ Second, whether acts of damage to cables and pipelines will meet the gravity required by the scales and effects tests to amount to an armed attack is context specific. For example, an act of damage against one submarine cable and pipeline may not amount to an armed attack, but a series of coordinated attacks against multiple submarine cables and pipelines might.³⁸⁷ Similar questions on effects that were raised in the context of a use of force also arise in determining whether an act was an “armed attack.” If acts to damage to submarine cables and pipelines result in death, harm to persons and physical damage to property, it is easier to meet the gravity threshold so as constitute an armed attack.³⁸⁸ The more difficult question is whether acts of damage to submarine cables and pipelines that do not result in injury, death, damage or destruction is still an “armed attack.” Purely economic consequences or political disruption are not relevant in ascertaining the gravity of an attack, although some States have taken the position that depending on the scale and consequences, non-destructive and non-injurious cyber operations that have

³⁸¹ For a summary of these different views, please see Pobjie (n 365), 149 – 150. Buchan and Tsagourias (n 356), 32 – 33.

³⁸² Pobjie, *ibid*, 158.

³⁸³ *Nicaragua v USA* (n 294), paras. 195 and 231.

³⁸⁴ Zemanek (n 371), para. 8.

³⁸⁵ Buchan and Tsagourias (n 356), 46.

³⁸⁶ Tallinn Manual 2.0, commentary to rule 71, para. 5.

³⁸⁷ In the *Oil Platforms Case*, the ICJ found that a series of attacks allegedly committed by Iran against either US-flagged vessels, US military vessels, or US-owned vessels (if indeed the acts were attributable to Iran), even taking accumulatively, do not constitute an armed attack that qualifies as a most grave form of the use of force, but it did not exclude the possibility that the mining of a single military vessel might be sufficient to bring into play the inherent right of self-defense, or the possibility that a series of minor attacks could constitute an armed attack: *Case Concerning Oil Platforms* (Islamic Republic of Iran v. United States of America), Judgment, ICJ Rep 2003, p. 161, paras. 64 and 72. While the accumulation of events doctrine was previously controversial, in recent years, several states have appeared to accept it: See discussion in Buchan and Tsagourias (n 391), 47 – 48; ILA Committee on the Use of Force, “Final Report on Aggression and the Use of Force (2018) (n 356), 7.

³⁸⁸ Ian Brownlie, *International Law and the Use of Force by States* (Clarendon Press 1963), 362; Yoram Dinstein, *War, Aggression and Self-Defense* (CUP 2017), 90; Buchan and Tsagourias (n 356), 21.

economic consequences could amount to an armed attack.³⁸⁹ Guilfoyle et al have argued that depending on the circumstances, that severing submarine cables “is potentially catastrophic, affecting almost all aspects of national life, including, economic activity, education, political activities, the provision of government services and much else besides” and it is “difficult to characterize the intentional severing of a submarine cables as anything other than an armed attack.”³⁹⁰ Shepard has made similar arguments.³⁹¹ Azaria and Ulfstein also acknowledge that a quantitative (scale) and qualitative (effects) argument could be made in relation to the attacks against the Nord Stream pipelines taken individually or cumulatively within less than two days so as to meet the gravity requirement in view of the fact that four pipelines were specifically targeted (although they highlight other limitations).³⁹² There are also issues of the requisite causal link between the act of damage to submarine cables and pipelines (discussed above in paragraph 150) and whether there needs to be a direct causal connection between the acts of damage to submarine cables and pipelines and the consequences.

155. For armed attacks, the ICJ has also imposed a requirement of a deliberate and intentional attack on the target State and indiscriminate attacks without any specific target would appear to rule out the designation of an “armed attack.”³⁹³ Depending on the means used, it may be more difficult to establish that a State was deliberately targeted if anchors or other equipment were used and it may require evidence of actual knowledge of which State would be impacted by acts of damage to submarine cables and pipelines.

3. Identifying the victim state

156. Determining which State is the victim State of acts of damage to submarine cables and pipelines that are a prohibited use of force under Article 2 (4) or armed attack under Article 51 of the UN Charter is not straightforward, because submarine cables and pipelines are not flagged in any State (unlike vessels); serve the telecommunication, power and energy needs of several States; are not owned and operated primarily by States but by private corporations or State-owned entities or consortiums of private-owned or state-owned entities incorporated in different jurisdictions; and cross the maritime zones of several States, some of which are transit States not served by that cable or pipeline. The Report sets out some examples of potential “victim States” and examines the extent to which they may be “victim States” that fall within the prohibited use of force under Article 2 (4) or armed attack under Article 51.

a) Coastal States

157. The ICJ observed in the *Wall Advisory Opinion* that the concept of an armed attack only applies to attacks from outside a State’s territory that are imputable to another State, and this applies equally to prohibited uses of force.³⁹⁴ In *Nicaragua v. United States of America*, the ICJ found that the United States involvement in blowing up of underwater pipelines, laying of mines, and attacks against ports and oil installations in internal and territorial waters “not only amount to an unlawful use of force, but also constitute infringements of the territorial sovereignty of Nicaragua and incursions into its territorial and internal waters.”³⁹⁵ If acts of damage to submarine cables and pipelines occur in the territorial sea of a coastal State, or in the archipelagic waters of an archipelagic State, the coastal State or archipelagic State may be a victim State of a prohibited use of force or armed attack (if all other elements are met). This would be considered a use of force against the sovereignty, territorial integrity or political independence of any State under Article 2 (4) of the UN Charter, and LOSC Articles 19 (2) (a), 39 (9) (1) (b), and 54.
158. If damage is inflicted on submarine cables or pipelines that are transiting the coastal State or archipelagic State’s EEZ or continental shelf without making landfall, the situation is more complex. Coastal States enjoy sovereign rights over resources in their EEZs and continental shelves, and jurisdiction over artificial islands, installations and structures, the marine environment and marine scientific research.³⁹⁶ These submarine cables and pipelines are

³⁸⁹ Azaria & Ulfstein, *Sabotage of Pipelines*; Tallinn Manual 2.0 (n 176), 342; Kress (n 359); Michael Schmitt, “France’s Major Statement on International and Cyber: An Assessment,” *Just Security*, 16 September 2019.

³⁹⁰ Guilfoyle et al (n 17), 679.

³⁹¹ Shepard (n 17), 210 – 215.

³⁹² Azaria and Ulfstein (n 39).

³⁹³ *Oil Platforms Case* (n 387), paras. 64, 191-192. However, note that the requirement for a deliberate and intentional attack on the target state has been criticized by States and scholars.

³⁹⁴ *Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory Advisory Opinion*, 9th July 2004, ICJ Rep 2004, 136, para. 139; Dorr (n 379), para. 22.

³⁹⁵ *Nicaragua v. USA* (n 294), para. 251.

³⁹⁶ LOSC, arts 56, 60, 77, 80.

not the infrastructure of the coastal State *per se* in that they are laid and operated by third States or their entities pursuant to the freedom to lay submarine cables and pipelines.³⁹⁷ Thus, as observed by Azaria and Ulfstein, “in light of the limited jurisdiction that coastal States have in the [continental shelf and EEZ], whether an armed attack against such State took place by targeting a commercial pipeline located in its [continental shelf/EEZ] is highly debatable.”³⁹⁸ It is pertinent that both Danish and Swedish officials opined that they did not consider the attacks against the Nord Stream pipelines to be attacks against Denmark or Sweden.³⁹⁹

b) *States connected to submarine cable and pipelines*

159. While the use of force and armed attack must usually be directed against the territory of another State, Article 2 (4) of the UN Charter (and the equivalent provisions in the LOSC) requires Member States to “refrain in their international relations from the threat or use of force...in any other manner inconsistent with the Purposes of the United Nations,”⁴⁰⁰ suggesting that the prohibition on the use of force is not limited to acts against the territorial integrity or political independence of any State.⁴⁰¹
160. For armed attacks, which should apply equally to prohibited uses of force not amounting to an armed attack, it is generally accepted that flag States of military vessels can be victims of an armed attack if military vessels are attacked, no matter where the attack occurred, on the basis that military vessels are expressions of the sovereignty of the flag State.⁴⁰² With regard to privately-owned merchant vessels, the 1974 General Assembly Resolution on the definition of aggression defined an act of aggression as “an attack by armed forces of a State in the land, sea or air forces, or marine and air fleets of another State.”⁴⁰³ Similarly, the ICJ accepted that that an attack by Iran on a Kuwaiti-owned but US-registered vessel could amount to an armed attack upon the United States,⁴⁰⁴ although an attack against a vessel that was owned by a US company but flagged in Panama could not be equated to an attack on the US as it was not flying a US flag.⁴⁰⁵ While the ICJ did not elaborate on why an armed attack (or use of force) against merchant ships flagged in that State is considered an attack against that State,⁴⁰⁶ some possible justifications include that it is specifically provided for in UN Charter Article 51;⁴⁰⁷ flag States have a genuine link with the ship;⁴⁰⁸ flag States have exclusive jurisdiction over their vessels;⁴⁰⁹ flag States can exercise diplomatic protection over their vessels;⁴¹⁰ the registration of ships establishes the flag State’s sovereign interest in the ship;⁴¹¹ or merchant vessels represent the interests of flag States in maritime trade and navigation.⁴¹² However, it also warrants note that there are divergent State and scholarly views on whether a State can invoke the right of self-defence in response to armed attacks against merchant vessels flagged in that State.⁴¹³ For uses of force against oil and gas platforms in the EEZ and continental shelf of a coastal State, it appears to be uncontroversial that the coastal State is the victim State, arguably based on the fact that coastal States have exclusive jurisdiction over such platforms and they are used in the exercise of its sovereign rights over the EEZ and continental shelf.⁴¹⁴ These

³⁹⁷ LOSC, arts 58, 79, 87 and 112.

³⁹⁸ Azaria and Ulfstein (n 39).

³⁹⁹ “Denmark, Sweden view Nord Stream leaks as ‘sabotage,’” DW, 27 Sept 2022 available at <https://www.dw.com/en/denmark-sweden-view-nord-stream-pipeline-leaks-as-deliberate-actions/a-63251217>.

⁴⁰⁰ This phrase was included to ensure that there were no loopholes in the prohibition rather than to create exceptions to it: Buchan and Tsagourias (n 356), 29.

⁴⁰¹ Pobjie (n 365), 91 – 92.

⁴⁰² *Oil Platforms Case* (n 387), paras. 64 and 72.

⁴⁰³ General Assembly Resolution 3314 (XXIX), 14 December 1974, art 3 (d). The definition of aggression has been used as a guide in determining what constitutes an armed attack under UNC Article 51: See Tom Ruys, *Armed Attack and Article 51 of the UN Charter: Evolutions in Customary Law and Practice* (CUP 2010), 208.

⁴⁰⁴ *Oil Platforms Case* (n 387), para. 64.

⁴⁰⁵ *Ibid*, para. 64.

⁴⁰⁶ For a discussion on this, see A.V. Lowe, “Self-Defence at Sea,” in W.E. Butler, *The Non-Use of Force in International Law* (Kluwer Academic Publishing, 1989), 185 – 202.

⁴⁰⁷ *Ibid*, 193.

⁴⁰⁸ LOSC, art 91 (1).

⁴⁰⁹ LOSC, art 92; also note ITLOS’ finding that “the ship, everything on it, and every person involved or interested in its operations are treated as an entity linked to the flag State.” *M/V Saiga* (n 111), para. 106.

⁴¹⁰ Lowe (n 406), 191 – 192.

⁴¹¹ *Ibid*, 193 – 194.

⁴¹² See, for example, Security Council Resolution 2722, 10 January 2024 in response to the attacks against shipping in the Red Sea, taking note “of the rights of Member States, in accordance with international law, to defend their vessels from attacks, including those that undermine navigational rights and freedoms.

⁴¹³ See footnote 135.

⁴¹⁴ The ICJ did not question that Iran had standing to bring claims against the United States for attacks against its oil platforms located in its continental shelf: *Oil Platforms Case* (n 387), para. 79.

examples illustrate that there must be a sufficient nexus between the object or target of the use of force and the victim State.⁴¹⁵

161. While cross-border submarine cables and pipelines are not under the exclusive jurisdiction of any State, and analogies to vessels and offshore infrastructure have limitations, there is a sufficient nexus to the connected State for it to be considered a target of a use of force. As recognized by the General Assembly, such submarine cables and pipelines are critical underwater infrastructure serving that State and “vitally important to the global economy and national security of all States.” Acts of damage to submarine cables and pipelines located in the EEZ and continental shelf of the connected State, or in the EEZ and continental shelf of another State, or in the high seas, may also constitute a use force or armed attack against the State that is connected to that submarine cable or pipeline (subject to the requisite gravity requirements).⁴¹⁶ This infrastructure is serving the critical needs of the State and it should not make a difference that such infrastructure is located outside the territory of the State.

c) *States of nationality of the owner or operator of submarine cable or pipeline*

162. While States may directly own and operate submarine cables and pipelines, the owners or operators are for the most part not States and are usually private corporations or state-owned entities or consortiums of private-owned or State-owned entities incorporated in different jurisdictions. It is not clear whether the fact that the target of attack is the property of a State’s nationals located outside its territory is a sufficient nexus to the State to render the State of nationality of the owner or operator of submarine cables or pipelines a victim State. As mentioned above, in the *Oil Platforms Case*, the Court noted that an attack against a vessel that was owned by a U.S. company but flagged in Panama could not be equated to an attack on the US as it was not flying a United States flag.⁴¹⁷ This would suggest that the States of nationality of the owner or operator of submarine cables and pipelines would not be considered as a victim of an armed attack. Azaria and Ulfstein note that in the context of the attacks against Nord Stream pipelines, there was “no State practice that would support the proposition that the State of incorporation of the pipeline company would be a victim of ‘an armed attack’ of a pipeline in the maritime zone within or outside a State’s jurisdiction.”⁴¹⁸

4. Attribution

163. It must be demonstrated that the conduct that resulted in acts of damage to submarine cables and pipelines are legally attributable to the State, *prima facie* governed by the rules of attribution under State responsibility discussed in paragraphs 124 – 128 above. If State vessels and associated apparatus are used to commit such acts, then such acts are “acts of state” committed by an organ of the State that is legally attributable to the flag State.⁴¹⁹

164. States that employ non-State actors to commit acts of damage to submarine cables and pipelines will be responsible for such acts if it can be established that acts are attributable to the State under one of the rules of attribution (by one of its *de facto* or *de jure* organs; by persons or organs empowered to exercise governmental authority; by persons or groups acting under its instruction, direction or control; and where the State adopts conduct as its own).⁴²⁰ The fact that non-State actors committed the acts of damage does not preclude it from being an armed attack.⁴²¹

165. As explained in paragraphs 128 – 129, acts of damage to submarine cables and pipelines by private vessels and apparatus is not necessarily attributable to the flag State – there will need be evidence of government authority or instructions, direction or control, which amounts to effective control over the act itself. Some scholars have argued that the rules of attribution under State responsibility, which require “effective control” over the specific conduct of non-State actors, imposes an “exceptionally high” degree of control over the conduct of private actors which is

⁴¹⁵ Pobjie (n 365), 90.

⁴¹⁶ Guilfoyle et al (n 17), 679; Shepard (n 17), 211 – 215.

⁴¹⁷ *Oil Platforms Case* (n 387), para. 64.

⁴¹⁸ Azaria & Ulfstein (n 39).

⁴¹⁹ ASR (n 147), art 4, 40.

⁴²⁰ ASR, *ibid*, arts 4 – 8.

⁴²¹ *Nicaragua v. USA* (n 294), para. 103. There is debate on whether the ‘sending’ of non-State actors relates to a rule of attribution or is a primary rule. The “sending” of non-State actors on behalf of a State would meet the requirements in Articles 4 and 8 of the ASR i.e. either as a *de facto* organ or by giving the non-State actor instructions or by exercising direction or control over them. It could also be seen as a primary rule on the use of force for which the State is directly responsible: Marko Milanovic, “Special Rules of Attribution of Conduct in International Law,” 96 *International Law Studies* 295 (2020), 295, 333 – 334. Also see Tom Ruys, *Armed Attack and Article 51 of the UN Charter* (CUP 2011), 388.

unsuitable in the modern context “where States tend to collaborate with private actors such as terrorist or cyber groups rather than subjecting them to their control.”⁴²² Thus, it has been argued that the *jus ad bellum* rules have developed its own rules on attribution which is distinct from the rules of State responsibility, or in other words *lex specialis* under Article 55 of the ASR.⁴²³ In particular, it is said that a State may still be an author of an armed attack committed by a non-State actor based on its “substantial involvement” in that activity endorsed by the ICJ in *Nicaragua v. USA* as well as in the *Armed Activities* case.⁴²⁴ However, this also imposes a high threshold and it is not clear what substantial involvement is necessary before it constitutes an armed attack.⁴²⁵ The ICJ has found that provisions of weapons or logistical or other support is not sufficient to constitute substantial involvement in an armed attack, although it may constitute a violation of the prohibition of the use of force in Article 2 (4) of the UN Charter.⁴²⁶ The fact that a vessel is flagged in a State and used to commit acts of damage to submarine cables and pipelines will not necessarily meet the substantial involvement test and more evidence is needed to show substantial involvement.

5. State responses to prohibited uses of force and an armed attack

a) Prohibited Use of Force

166. A breach of the prohibition on the use of force will not entitle the targeted State to exercise the right of self-defense but will render the attacking State responsible for its breach of both its conventional obligations under Article 2 (4) of the UN Charter, LOSC obligations and customary international law obligations. To the extent that breaches can be framed as disputes relating to the interpretation or application of the LOSC, States may be able to use the Part XV dispute settlement mechanisms discussed in Part III (4) (f) above.⁴²⁷ States may also be able to use countermeasures (see paragraphs 130 – 131).

b) Armed attack

167. If an act of damage to submarine cables and pipelines constitutes an armed attack, the victim State may exercise the right of self-defense subject to the obligation that any response pursuant to the exercise of the right of self-defense is necessary and proportional (which require a legitimate end), and that the target of its response is a legitimate military target.⁴²⁸ This would give States the right to halt and repel an ongoing armed attack, and as observed by the ILA Committee on the Use of Force, it may include “the need to defend the State from the continuation of attacks, and not only repel the attack of the moment.”⁴²⁹ There is recognition (albeit contested) that anticipatory self-defense can be invoked by victim States to thwart an “imminent” or “ongoing” armed attack on the basis that such threats are “instant, overwhelming, leaving no choice of means, and no moment for deliberation.”⁴³⁰ However, given difficulties in determining at that moment whether the act was intentional or accidental, and the fact that the gravity of the effects of an act of damage to submarine cables and pipelines (which would characterize it as an armed attack) may only occur much later, caution on the use of self-defense as a response to intentional acts of damage to submarine cables and pipelines should be exercised.

B. Submarine cables and pipelines connected to offshore infrastructure

168. The same considerations discussed in relation to cross-border submarine cables and pipelines above apply also to acts of damage aimed at submarine cables and pipelines connected to offshore infrastructure i.e., the tests for whether an act amounts to a prohibited use of force or armed attack; attribution; identification of a victim State, and State response to an armed attack. Acts of damage on submarine cables and pipelines connected to offshore infrastructure will have different effects depending on the purpose of the offshore infrastructure and will need to meet the requisite scale and effects test. If acts of damage are aimed at submarine cables or pipelines connected

⁴²² Buchan and Tsagourias (n 387), 54 – 55.

⁴²³ Buchan and Tsagourias, *ibid*, 53 – 58. Also see discussion in Milanovic (n 421), 295 – 393.

⁴²⁴ *Nicaragua v. USA* (n 294), para. 195; *Armed Activities Case* (n 391), para. 146.

⁴²⁵ Erika de Wet, “The Invocation of the Right of Self-Defence in Response to Armed Attacks Conducted by Armed Groups: Implications for Attribution,” (2019) 32 *Leiden Journal of International Law* 91, 93.

⁴²⁶ *Nicaragua v USA* (n 294), para. 195.

⁴²⁷ LOSC courts and tribunals can consider the UN Charter or customary international law under LOSC Article 293.

⁴²⁸ *Oil Platforms Case* (n 387), para. 51.

⁴²⁹ ILA Committee on the Use of Force, “Final Report on Aggression and the Use of Force (2018) (n 356), 30.

⁴³⁰ The “Caroline” formula set out in the Letter of US Secretary of State Daniel Webster dated 24 April 1841 in *Caroline Case* (1841) 29 British and Foreign State papers 1137 – 1138.

to offshore infrastructure in the territorial sea, EEZ and continental shelf, the coastal State will be considered the victim or target State.

V. INTERNATIONAL INSTRUMENTS ADDRESSING TERRORISM

169. There is no explicit mention of submarine cables and pipelines in the nineteen legal instruments dealing with terrorism.⁴³¹ However, some conventions may be interpreted to apply to certain acts of damage to cross-border submarine cables and pipelines and expressly apply to submarine cables and pipelines connected to offshore infrastructure. The advantages of terrorism conventions are that they oblige States to adopt relevant offences in their national laws, provides for mutual cooperation and legal assistance and contains “prosecute or extradite” obligations.

A. 1997 International Convention for the Suppression of Terrorist Bombings

170. The 1997 International Convention for the Suppression of Terrorist Bombings (1997 Terrorist Bombing Convention) may apply to the use of explosives to damage cross-border submarine cables and pipelines and submarine cables and pipelines connected to offshore infrastructure (but not to the cutting of cables and pipelines by other means).⁴³²
171. Article 2 includes as an offence when “a person unlawfully and intentionally delivers, places, discharges or detonates an explosive or other lethal device in, into or against a place of public use, a State or government facility, a public transportation system or an infrastructure facility” with the intent to cause death or serious bodily injury (Article 2(1)(a)) or to cause extensive destruction of such a place, facility or system, where such destruction results in or is likely to result in major economic loss (Article 2)(1)(b)), or attempts to do the above (Article 2(2)). Article 1 (3) defines an “explosive or lethal device” as “an explosive or incendiary weapon or device that is designed, or has the capability, to cause death, serious bodily injury or substantial material damage.” An “infrastructure facility” means “any publicly or privately owned facility providing or distributing services” for the benefit of the public, such as water, sewage, energy, fuel or communications.⁴³³ A cross-border submarine cable and pipeline or submarine cable or pipeline connected to offshore infrastructure would fall within an infrastructure facility and the placement of explosives will cause extensive destruction likely to result in major economic loss.
172. The 1997 Terrorist Bombing Convention obliges States Parties to take such measures as may be necessary to establish its jurisdiction over offences in Article 2 when (a) the offence is committed in the territory of that State; or (b) the offence is committed on board a vessel flying the flag of that State or an aircraft which is registered under the law so the State at the time the offence is committed; or (c) the offence is committed by a national of that State.⁴³⁴ This would appear to suggest that States will have jurisdiction over acts of damage to cross-border submarine cables and pipelines or submarine cables and pipelines connected to offshore infrastructure *in the territorial sea* committed by any person who is present in its territory; and acts of damage to both categories of submarine cables and pipelines that are providing energy and communication *outside its territorial sea* committed by its nationals. It is not clear whether the flag State of the vessel that is used to place the explosives at the submarine cable or pipeline would be obliged to establish its jurisdiction as the offence is committed *by* the vessel rather than *on board* a vessel. The 1997 Terrorist Bombing Convention also gives States the option to establish jurisdiction over offences committed against a national of that State and it is debatable whether this would include the State of nationality of the owner or operator of the submarine cable or pipeline on the basis that acts of damage to submarine cables and pipelines are offences against their property.⁴³⁵

B. Terrorism offences related to vessels and fixed platforms

173. The 1988 Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation and its 2005 Protocol (1988 SUA Convention and 2005 SUA Protocol),⁴³⁶ may apply to vessels that are used to place explosives

⁴³¹ See UN Office of Counter-Terrorism Website at <https://www.un.org/counterterrorism/international-legal-instruments>.

⁴³² *1997 International Convention for the Suppression of Terrorist Bombings* (adopted 15 December 1997) 2149 UNTS 256, entered into force 23 May 2001.

⁴³³ *Ibid*, art 1 (2).

⁴³⁴ *Ibid*, art 6 (1).

⁴³⁵ *Ibid*, art 6 (2).

⁴³⁶ *1988 Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation*, adopted 10 March 1968, 1678 UNTS 221 (entered into force 1 March 1992) (1988 SUA Convention); Protocol of 2005 to the Convention for the Suppression of

at both categories of submarine cables and pipelines but would not apply to acts of damage to submarine cables and pipelines by cutting by anchors or underwater vehicles.

174. The 1998 SUA Convention defines an offence when a person unlawfully and intentionally “places or causes to be placed on a ship, by any means whatsoever, a device or substance which is likely to destroy that ship, or cause damage to that ship or its cargo which endangers or is likely to endanger the safe navigation of that ship.”⁴³⁷ The 1988 SUA Convention applies to acts occurring outside the territorial sea. It could be argued that the use of ships to transport the explosives to the targeted location of damage which are then placed by underwater vehicles or divers along the submarine cables and pipelines outside the territorial sea would fall within this offence, on the basis that it is likely to damage that ship or endanger the safe navigation of the ship, although it could also be argued that the mere transport of explosives does not endanger the safety of navigation of the ship.
175. The 2005 SUA Protocol adds the offence when persons unlawfully and intentionally “uses on a ship or discharges from a ship... any explosive material... in a manner that causes or is likely to cause serious injury or damage” or “uses a ship in a manner that causes death or serious injury or damage” when the purposes of the act is to intimidate a population, or to compel a government or international organization to do or abstain from doing any act.⁴³⁸ It is also an offence to transport on board a ship “any explosive or radioactive material, knowing that it is intended to be used to cause, or in a threat to cause, with or without a condition, as is provided for under national law, death or serious injury or damage for the purpose of intimidating a population, or compelling a government or an international organization to do or to abstain from doing any act.”⁴³⁹ “Serious bodily injury or damage” means “serious bodily injury; or extensive destruction of a place of public use, State or government facility, infrastructure facility, or public transportation system, resulting in major economic loss; or substantial damage to the environment, including air, soil, water, fauna, or flora.”⁴⁴⁰ The 2005 SUA Protocol also establishes offences for attempts, participation, organizing and otherwise supporting the commission of offences set out in the 2005 SUA Protocol.⁴⁴¹ Infrastructure facility means “any publicly or privately owned facility providing or distributing services” for the benefit of the public, such as water, sewage, energy, fuel or communications.⁴⁴² The offences under the 2005 SUA Protocol would conceivably cover the use of vessels to commit acts of damage to both categories of submarine cables and pipelines through placement of explosives in areas outside of the territorial sea. It also warrants note that the 2005 SUA Protocol includes boarding provisions which allows a State Party to request a flag State’s permission to board or rely on consent accorded in advance by notification to the IMO Secretary-General in relation to vessels flagged in another State Party and located beyond the territorial sea where there is a reasonable suspicion arising in relation to one of the maritime terrorism offences.⁴⁴³
176. The 1988 Protocol for the Suppression of Unlawful Acts against the Safety of Fixed Platforms located on the Continental Shelf (1988 SUA Fixed Platform Protocol) and its 2005 Protocol (2005 SUA Fixed Platform Protocol) are also relevant.⁴⁴⁴ These instruments apply to fixed platforms on the continental shelf which are defined as “an artificial island, installation or structure permanently attached to the sea-bed for the purpose of exploration or exploitation of resources or for other economic purposes.”⁴⁴⁵ They include as offences a person who (1) seizes or exercises control over a fixed platform by force or threat thereof or any other form of intimidation; (2) performs an act of violence against a person on board a fixed platform if that act is likely to endanger its safety; (3) destroys a fixed platform or causes damage to it which is likely to endanger its safety; (4) places or causes to be placed on a fixed platform, by any means whatsoever, a device or substance which is likely to destroy that fixed platform or likely to endanger its safety; (5) uses against or on a fixed platform or discharges from a fixed platform any explosive, radioactive material or BCN weapon in a manner that causes or is likely to cause death or serious injury or damage;

Unlawful Acts Against the Safety of Maritime Navigation, adopted 14 October 2005, IMO Doc Leg/Conf.15/21 (entered into force 28 July 2010) (2005 SUA Protocol).

⁴³⁷ 1988 SUA Convention, *ibid*, art 3 (1) (d).

⁴³⁸ 2005 SUA Protocol, *ibid*, art 4 (5) referring to art 3bis (1) (a) (i) and (ii).

⁴³⁹ 2005 SUA Protocol, *ibid*, art 4 (5) referring to art 3bis (1) (b).

⁴⁴⁰ 2005 SUA Protocol, *ibid*, art 2.

⁴⁴¹ 2005 SUA Protocol, *ibid*, art 3quater.

⁴⁴² 1997 International Convention for the Suppression of Terrorist Bombings (n 466), art 1 (2).

⁴⁴³ 2005 SUA Protocol (n 472), art 8bis.

⁴⁴⁴ *1988 Protocol for the Suppression of Unlawful Acts against the Safety of Fixed Platforms Located on the Continental Shelf*, adopted 10 March 1988, 1678 UNTS 304 (entered into force 1 March 1992) (1988 SUA Fixed Platforms Protocol); *2005 Protocol to the 1988 Protocol for the Suppression of Unlawful Acts against the Safety of Fixed Platforms Located on the Continental Shelf*, adopted 14 October 2005, IMO LEG/CONF.15/22 (entered into force 28 July 2010) (2005 Fixed Platform Protocol).

⁴⁴⁵ 1988 Fixed Platforms Protocol, *ibid*, art 1.

or (6) discharges, from a fixed platform, oil, liquefied natural gas, or other hazardous or noxious substance, which is not covered by subparagraph (a), in such quantity or concentration that causes or is likely to cause death or serious injury or damage.⁴⁴⁶ The 2005 SUA Fixed Platform Protocol also establishes offences for attempts, participation, organizing and otherwise supporting the commission of offences.⁴⁴⁷ States Parties are obliged to establish jurisdiction over offences against or on board a fixed platform while it is located on the continental shelf of that State; or by a national of that State.⁴⁴⁸

177. It is reasonable to assume that although “fixed platforms” does not specifically mention submarine cables and pipelines connected to such fixed platforms, it extends to such submarine cables and pipelines which are essential for the fixed platform to serve its functions of exploration and exploitation of resources or other economic purposes, and hence, any offence against submarine cables and pipelines connected to fixed platforms is covered by these instruments. The 1998 SUA Fixed Platform Protocol and 2005 SUA Fixed Platform Protocol does not apply to fixed platforms in areas under sovereignty or in areas beyond national jurisdiction, and only applies to fixed platforms used for resource or economic purposes.
178. For cross-border submarine cables and pipelines, *prima facie*, the 1988 and 2005 Fixed Platform Protocols will not apply as they are not “artificial islands, installations and structures.” However, some Committee Members expressed the view that the Fixed Platform Protocols could be amended to include cross-border submarine cables and pipelines, or States Parties could adopt a unified interpretation that the Fixed Platform Protocols apply to cross-border submarine cables and pipelines.

C. Terrorism and critical infrastructure

179. The UN is cognizant of this risk of terrorist attacks against critical infrastructure although there is no specific international terrorism convention on critical infrastructure. In 2017, the Security Council called upon Member States to address the risk of terrorist attacks against critical infrastructure and called upon States to take a variety of measures including ensuring that “they have established criminal responsibility for terrorists attacks intended to destroy or disable critical infrastructure, as well as the planning of, training for, and financing of and logistical support for such attacks.”⁴⁴⁹ The UN Counter-Terrorism Committee Executive Directorate and Interpol have also produced *The Protection of Critical Infrastructure against Terrorist Attacks: Compendium of Good Practices*, updated in 2022, which sets out a range of good practices.⁴⁵⁰ This includes developing national strategies for developing critical infrastructure protection against terrorist attacks; establishing liability for terrorist offences by enhancing international cooperation and criminalizing acts against critical infrastructure; information-sharing; and ensuring inter-agency coordination.
180. The Security Council recognized that “each State determines what constitutes its critical infrastructure”⁴⁵¹ and countries are left with significant discretion in choosing the criteria which infrastructure operating in their territory satisfies the criteria of being “critical infrastructure.”⁴⁵² The Compendium of Good Practices notes that:

[Critical Infrastructures] can be defined, among others, by taking into account the role they play in the promotion and protection of human rights (for example, infrastructure that is vital for the functioning of healthcare delivery systems, emergency service systems, water and wastewater systems etc) as well as the human rights impact that the damaging, disruption or destruction of the infrastructure would likely result in (for example, the inability to deliver adequate or even life-saving health services, environmental damage that may result in loss of life, forced displacement having negative impact on the right to health, etc).⁴⁵³

181. These UN efforts in the context of counterterrorism have not explicitly mentioned submarine cables and pipelines as critical infrastructure, (although infrastructure related to energy supplies and telecommunications have been

⁴⁴⁶ 1988 Fixed Platforms Protocol, *ibid*, art 2; 2005 Fixed Platforms Protocol (n 482), art 3, art 4.

⁴⁴⁷ 2005 Fixed Platforms Protocol, *ibid*, art 4.

⁴⁴⁸ 2005 Fixed Platform Protocol, *ibid*, art 5.

⁴⁴⁹ Security Council Resolution, S/RES/2341 (2017), 13 February 2017.

⁴⁵⁰ Protection of Critical Infrastructure against Terrorist Attacks: Compendium of Good Practices, 2022 at https://www.un.org/counterterrorism/sites/www.un.org.counterterrorism/files/2225521_compendium_of_good_practice_web.pdf.

⁴⁵¹ Security Council Resolution, S/RES/2341 (2017), 13 February 2017.

⁴⁵² Protection of Critical Infrastructure against Terrorist Attacks: Compendium of Good Practices (n 450), 30.

⁴⁵³ *Ibid*, 31.

suggested), both submarine cables and pipelines have been recognized as critical infrastructure by the General Assembly and should be included in these initiatives. The Compendium of Good Practices provides valuable suggestions on measures that States can take in response to terrorist attacks against critical infrastructure, and such good practices are also relevant for terrorist attacks against both cross-border submarine cables and pipelines and submarine cables and pipelines connected to offshore infrastructure.

VI. PRELIMINARY CONCLUSIONS

182. The discussion above demonstrates that there are a range of measures that States can take in response to intentional damage to submarine cables and pipelines, subject to the caveat that the ambit of some of these measures are uncertain. The Report aimed to flesh out some of the legal questions that may arise in taking these measures. The Committee's preliminary conclusions are set out below:
183. Under the **LOSC**, the Report explored a range of measures that States Parties may take in response to intentional damage to cross-border submarine cables and pipelines, consisting of monitoring measures, enforcement and other prevention measures, prosecution of offences and the establishment of State responsibility:
- a. **Monitoring:** As discussed in Part III (1), monitoring of threats to submarine cables and pipelines involves different technology and equipment, including vessels, underwater vehicles, and submarine cables and pipelines themselves. In areas beyond national jurisdiction, all States can justify the monitoring of threats to submarine cables and pipelines under the freedom of navigation under LOSC Articles 87 (1) (a) and the freedom to lay submarine cables and pipelines under LOSC Articles 87 (1) (c) and 112 subject to due regard for the rights of other States in the exercise of high seas freedoms and with respect to activities in the Area. In areas beyond sovereignty but within national jurisdiction, the legal basis for monitoring of threats to submarine cables and pipelines may similarly be the freedom of navigation and the freedom to lay submarine cables and pipelines under LOSC Article 58. However, depending on the technology used, some coastal States may view the equipment and/or technology used for monitoring of threats to submarine cables and pipelines as military activities, intelligence collection, surveys or marine scientific research and may object to this activity on that basis. In areas under sovereignty, coastal States, strait States and archipelagic States have the exclusive competence to monitor threats to submarine cables and pipelines located in the territorial sea, SUIN and archipelagic waters and third States conducting monitoring of threats to submarine cables and pipelines are acting inconsistently with the respective passage regimes in these areas.
 - b. **Enforcement and Prevention Measures:** As discussed in Part III (2), in areas beyond sovereignty, flag States of vessels engaged in acts of damage to submarine cables and pipelines may undertake enforcement measures against their own vessels. For other States, including States that are connected to submarine cables and pipelines and States of nationality of the owners or operators of submarine cables and pipelines, there are limited grounds in the LOSC to undertake enforcement measures against private vessels suspected of committing acts of damage to submarine cables and pipelines in all maritime spaces. Possible grounds include Article X of the 1884 Convention which allow boarding of vessels suspected of willfully or by culpable negligence damaging submarine cables; and piracy under LOSC Articles 101 and 105 (although it is uncertain whether States will accept an interpretation of piracy that includes intentional damage to submarine cables and pipelines). There is arguably some legal basis for States that hold the freedom to lay submarine cables and pipelines to argue that this entitles them to take reasonable measures of prevention against vessels suspected of threatened or actual damage to submarine cables and pipelines to prevent interference with this freedom. However, the argument remains untested, the ambit of such prevention measures is unclear and may be open to contestation from other States. However, these States may base enforcement and other preventive measures against ships suspected of intentional acts of damage to submarine cables and pipelines on the ground of "necessity" under customary international law on the basis that it is the only way for that State to safeguard an essential interest against a grave and imminent peril.
 - c. Coastal States may rely on LOSC Article 221 to take measures against ships in areas beyond national jurisdiction suspected of threatened or actual damage to submarine cables and pipelines provided that such acts fall within the conditions in LOSC Article 221 or may argue necessity. In areas beyond sovereignty but within national jurisdiction, coastal States have the legal basis under the LOSC to take enforcement or other prevention measures against intentional damage to submarine cables and pipelines if it results in a violation of

its laws and regulations related to its sovereign rights over resources and jurisdiction in the EEZ and continental shelf adopted in conformity with the LOSC; if it relates to the prevention of interference with its sovereign rights; if it relates to its jurisdiction over the marine environment; and/or if it relates to reasonable measures for the prevention, reduction and control of pollution of the marine environment from pipelines. The evidential basis for any such enforcement or prevention measures will have to be substantiated. Coastal States, strait States and archipelagic States also have the authority to take enforcement measures against ships and associated apparatus suspected of actual or threatened intentional damage to submarine cables apparatus in the territorial sea, SUIN and archipelagic waters on the basis that such acts are contrary to the passage regimes in these maritime spaces; or the laws and regulations adopted by the coastal State on the protection of submarine cables and pipelines or the preservation of the marine environment.

- d. Prosecution of Offences: As discussed in Part III (3), under LOSC Article 113, (1) flag States of the ship and (2) States of persons “subject to its jurisdiction” who have engaged in wilful or culpably negligent conduct that has resulted or is likely to result in breaking or injury of submarine cables and pipelines in areas beyond national jurisdiction and areas beyond sovereignty and within national jurisdiction are obliged to adopt laws and regulations to provide that such breaking or injury is a punishable offence.
- e. States connected to the submarine cable or pipeline could assert extraterritorial prescriptive criminal jurisdiction based on the objective territoriality principle, effects doctrine, or protective principle. It is not clear whether the State of nationality of the owner of the cable or pipeline, or the State of shareholders of the owner of the cable or pipeline could also assert criminal jurisdiction over perpetrators of acts of damage to submarine cables and pipelines that take place outside their territory, although an arguable basis may be the passive personality principle.
- f. Coastal States can only exercise extraterritorial prescriptive criminal jurisdiction over acts of damage to submarine cables and pipelines that transit their EEZ and continental shelf without making landfall to the extent that it infringes its sovereign rights or jurisdiction recognized in these zones in the LOSC, including their jurisdiction over the marine environment.
- g. Coastal States have criminal jurisdiction in its territorial sea pursuant to its sovereignty and also have the authority to adopt laws and regulations relating to innocent passage to protect submarine cables and pipelines, and the preservation of the environment of the coastal State, which could include laws criminalizing intentional damage to submarine cables and pipelines or intentional harm or pollution to the marine environment. The same analysis applies to the criminalization of intentional damage to submarine cables and pipelines in archipelagic waters and SUIN.
- h. State Responsibility: As discussed in Part III (4) and (5), depending on the location, intentional acts of damage to submarine cables and pipelines may constitute breaches of the LOSC, including obligations not to interfere in the freedom to operate submarine cables and pipelines; obligations related to the protection of the marine environment; obligations not to interfere in the sovereign rights of the coastal State; and obligations to respect passage regimes as well as the sovereignty of coastal States in areas under sovereignty. The State which may invoke the responsibility of the State that has committed LOSC breaches related to intentional acts of damage to submarine cables and pipelines will depend on the nature of the LOSC obligations i.e., whether they are bilateral obligations, interdependent obligations or *erga omnes partes* obligations owed to all LOSC States Parties, which is a matter of treaty interpretation. The invoking State must establish that the acts of damage to submarine cables and pipelines can be attributed to States under the rules of State responsibility. If such acts of damage to submarine cables and pipelines were done by non-State actors without State involvement, the invoking State may also be able to argue that States may be held responsible for failure to exercise due diligence to prevent non-State actors from committing such acts. LOSC States Parties may utilize Part XV dispute settlement mechanisms to implement State responsibility or consider countermeasures subject to applicable limitations.
- i. Submarine Cables and Pipelines Connected to Offshore Infrastructure: As discussed in Part III (B), the Report suggested that for acts of damage to submarine cables and pipelines connected to offshore infrastructure in areas within national jurisdiction and under sovereignty, the coastal State has the authority to undertake

monitoring measures, enforcement and prevention measures, prosecution of offences and invoke State responsibility.

184. **The Use of Force:** As discussed in Part IV, there are uncertainties on whether such intentional acts of damage to cross-border submarine cables and pipelines acts will fall within a prohibited use of force or armed attack. These uncertainties include whether the scale and effects of such acts meet the requisite gravity; identification of the victim State or States given the multi-jurisdictional nature of submarine cables and pipelines; challenges in determining whether such acts are accidental or intentional and to the extent they are intentional, whether they are acts attributable to States. In light of this, while the Report does not preclude the possibility that intentional acts of damage to submarine cables and pipelines may constitute a prohibited use of force or armed attack in certain circumstances, especially when the effects of such damage meet the requisite scale and effects tests, caution should nonetheless therefore be exercised especially given the difficulties in determining the cause of damage and the importance of maintaining international peace and security.
185. **Terrorism Conventions:** As discussed in Part V, there is no explicit mention of submarine cables and pipelines in the nineteen legal instruments dealing with terrorism, however, some conventions may be interpreted to apply to certain acts of damage to cross-border submarine cables and pipelines and will apply to submarine cables and pipelines connected to offshore infrastructure. The advantages of terrorism conventions are that they oblige States to adopt relevant offences in their national laws, provides for mutual cooperation and legal assistance and contain “prosecute or extradite” obligations. Relevant conventions include the 1997 International Convention for the Suppression of Terrorist Bombings; the 1988 Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation and its 2005 Protocol; and 1988 Protocol for the Suppression of Unlawful Acts against the Safety of Fixed Platforms located on the Continental Shelf and its 2005 Protocol. The Report also highlighted UN initiatives on the protection of critical infrastructure from terrorist acts which is also relevant for submarine cables and pipelines.
186. The Committee reiterates the recommendations of the 2023 GA Resolution on submarine cables and pipelines highlighted in paragraphs 8 and 9 above, and highlights the following preliminary suggestions on measures that States can take to strengthen the legal framework for the protection of submarine cables and pipelines:
- a. Cooperation on Monitoring, Enforcement and Prevention Measures: Given that monitoring of threats, and enforcement and prevention measures vis-à-vis intentional damage to submarine cables and pipelines are the measures that may be open to the most contestation by States depending on the maritime space they take place in, States may wish to consider co-operative mechanisms on a regional basis that has the support and/or involvement of all relevant States and other stakeholders, including cable and pipeline owners and operators.
 - b. Cooperation on Information-Sharing and Investigations: Given the multi-jurisdictional nature of submarine cables and pipelines, investigation of acts of damage to submarine cables and pipelines may require the cooperation of several States, including States connected to submarine cables and pipelines, the State whose maritime zone the acts of damage occurred, as well as the owner/operator of the submarine cables and pipeline. For example, the owner/operator of the submarine cables and pipeline will have real-time information when an incident occurs but may need information from national authorities on vessels that were in the vicinity during the cable or pipeline break. States and cable/pipeline owners and operators should consider how best this information can be shared. There are several information sharing instruments or arrangements that have been adopted for various maritime security threats, which may provide useful precedents on information sharing on incidents involving submarine cables and pipelines.⁴⁵⁴
 - c. Strengthening National Legislation: All LOSC State Parties should implement their obligations under LOSC Article 113. In addition, States that are connected to submarine cables and pipelines should ensure that they have robust national legislation that criminalizes intentional acts of damage to submarine cables that occurs in areas under sovereignty, and in areas beyond sovereignty, which they can do on the basis of the objective territoriality principle, the effects doctrine or the protective principle of criminal jurisdiction. States may also wish to designate submarine cables and pipelines as critical infrastructure and ensure that they have suitable national

⁴⁵⁴ See, for example, the 2007 Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia, which established the Information Sharing Centre.

frameworks to protect such infrastructure. Coastal States and archipelagic States should also adopt national legislation criminalizing intentional damage to submarine cables and pipelines in areas under sovereignty. States may also wish to consider other cooperative mechanisms such as extradition and mutual legal assistance arrangements that may be used to facilitate prosecution of offences related to submarine cables and pipelines.