

## **UNCLOS: Fit for purpose in the 21st century?** **22 October 2021**

### **Executive summary:**

In response to the International Relations and Defence Committee inquiry on 'UNCLOS: fit for purpose in the 21st century?' I provide evidence and policy recommendations in relation to the following questions:

- Question 6: What are the main challenges facing the effective implementation of UNCLOS in 2021? Focusing on: *Autonomous maritime vehicles (both commercial and military), cybersecurity, and other new technologies.*
- Question 7: In light of these challenges, is UNCLOS still fit for purpose? Can or should UNCLOS be renegotiated to better address these challenges?

Policy recommendations are:

- UNCLOS should not be renegotiated on account of *autonomous maritime vehicles (both commercial and military), cybersecurity, (and other new technologies).*
- UNCLOS to receive a functional interpretation in the construction and application of its provisions in line with the goal-based standards approach, and the traditional legal position of the UK Government in relation to UNCLOS but also with the current and future interests of developing, using, and assuring safe and secure autonomous maritime vehicles technology.

### **Response author:**

**Dr Alexandros X.M. Ntovas**, Associate Professor (Reader) in Maritime Law, and the Director of the Institute of Maritime Law (February 2020–2023), University of Southampton Law School. Dr Ntovas belongs to the new generation of international maritime lawyers, who are competent to perceive, appreciate and undertake the challenging task of addressing a ship as one single economic, social, commercial and – at times when the flag State extends diplomatic protection to her in international proceedings – sovereign entity. He has practiced in the areas of public and administrative law, and acted on numerous occasions as an invited expert advocate and policy advisor to governments, including the European Union, the public sector and the shipping industry. His background amalgamates the broader legal disciplines of international and European Union law, at both public and private level, with political analysis and international relations, as these find a common expression in the context of maritime law, naval practices, the law of the sea and oceanic policy. Read more [here](#).

On the question of UNCLOS, and autonomous maritime vehicles, Dr Ntovas' most recent work includes:

- Ntovas, A., (2022, *forthcoming*). "Autonomous Navigation and the United Nations Convention on the Law of the Sea". In Kraska, J., Kil-Park Y. (Eds.) *Emerging Technology and the Law of the Sea*. Cambridge: Cambridge University Press.
- Ntovas, A., (2020). "Autonomous Commercial Ships and Smart Ports - The Challenges for UNCLOS and the Development of a Future Regulatory Regime". Paper presented at *The Emerging Technology and the Law of the Sea* research workshop organised jointly by the Stockton Center of the US Naval War College and the Korea Maritime Institute (virtually hosted by the IMO World Maritime University, in Sweden, Malmö) on 10–11 December 2020.
- Ntovas, A., (2020). *Halsbury's Laws on Prize: The law and the exercise of prize jurisdiction*. (5th ed.) (Halsbury's Laws). Lexis Nexis.
- Ntovas, A. (2019). "Unmanned Maritime Systems in the Law of Naval Warfare: Belligerent operational rights in neutral exclusive economic zones". Paper presented at the *Consultative Meeting for the Revision of the San Remo Manual on International Law Applicable to Conflicts at Sea*, United States Naval War College, Newport, Rhode Island, United States.
- Ntovas, A., Attard, D.J., & Fitzmaurice, M. (Eds.) (2018). *The IMLI Treatise on Global Ocean Governance: UN Specialized Agencies and Global Ocean Governance*. Oxford: Oxford University Press.
- Ntovas, A., Tsimplis, M.N., Veal, R., Quinn, S., & Serdy, A. (2016). *Liability for operations in unmanned maritime vehicles with differing levels of autonomy*. Institute of Maritime Law. (Project Report conducted for the European Defence Agency).

The response is provided with the kind administrative support of Dr Wassim Dbouk, Marine and Maritime Policy Research Fellow, Southampton Marine and Maritime Institute, University of Southampton. Read more [here](#).

### **Citation:**

Alexandros X.M. Ntovas (2021) *A Response to, UNCLOS: fit for purpose in the 21st century? – A call for evidence from the International Relations and Defence Committee. Focusing on: Autonomous maritime vehicles (both commercial and military), cybersecurity, and other new technologies.*

## **Response to Question 6: *What are the main challenges facing the effective implementation of UNCLOS in 2021?***

1. Autonomous maritime vehicles (both commercial and military), cybersecurity, and other new technologies: Autonomous maritime vehicles (AMV) have been already in use for non-commercial purposes, such as for naval activities and marine scientific research, and are expected in the future to be commissioned in international short-distant/coastal and/or linear commercial shipping. Currently, crafts under the regulatory threshold for most International Maritime Organization (IMO) specialised instruments are being validated through technical projects that could scale up to full-size commercially operated ships.
2. The development of AMV technology is one area in which the UK Government should place among its priorities. The ASV *C-Worker 7*, a below 5 tons deadweight craft engaging in geographically restricted operations for subsea positioning, surveying and environmental monitoring is the first autonomous ship that was signed in the UK Ship Register. The UK led (with Australia, Canada, Denmark, Estonia, Finland, Japan, the Netherlands, Norway, Singapore, Sweden, and the USA) the proposal to include AMVs in the agenda of the IMO.<sup>1</sup> The IMO is engaged in a project to assess the required regulatory framework for Maritime Autonomous Surface Ships (MASS).<sup>2</sup> The MASS regulatory scoping exercise (RSE) is proceeding but not without delays.
3. Two main legal issues are posing the key challenges. First the definition of the term 'ship', and second the 'requirement of manning of ships' in article 94 of the UN Convention on the Law of the Sea (UNCLOS) and IMO instruments, poses the most challenging legal issue for plans on extensively using AMV technology
4. The definition of the term 'ship' in my view should remain generic in the conventional language as it has not been predicated on the presence of human element onboard. In consequence, rather than renegotiating UNCLOS, I propose that UK Government shall favour a construction of article 94 that functionally qualifies the requirement of manning. The legal rationale underlying my policy recommendation in favour of functional flexibility is compatible with the first findings of the ongoing MASS RSE and with the emerging new regulatory approach of setting Goal-Based Standards (GBS) for the introduction of new technologies.

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<sup>1</sup> IMO Maritime Safety Committee Session 98 (2017).

<sup>2</sup> IMO Assembly Res. 1110/30, *Strategic Plan for the Organization for the Period 2018–2023*, §§17–19 (2017).

5. Shifting the regulatory approach in the direction of the GBS approach will be essential to accommodate efficiently novel technologies and effectively address the associated safety risks, including maritime security threats. Many of these are now gradually transforming into critical menaces on the cyber domain, where commercial shipping interests can be targeted within a spectrum of activities ranging in their nature from the instalment of malicious software, and fraud, to geopolitical hybrid conflicts.
  
6. In response, a GBS approach has been set already firmly in the *Guidelines on Maritime Cyber Risk Management* (2017) aiming to safeguard shipping from emerging cyber threats and related vulnerabilities by recommending functional elements to support effective risk management. These received the form of high-level recommendations as to facilitate their flexible incorporation into the existing risk management processes that are complementary to the safety and security management practices under the IMO treaty regime, and especially the *International Safety and Management Code* of SOLAS (ISM).<sup>3</sup> In this framework, the IMO Maritime Safety Committee reaffirmed that an approved safety management system should take into account cyber risks in accordance with the objectives and functional requirements of the ISM Code, and to this end encouraged their domestic implementation as to ensure that cyber risks are appropriately addressed from January 1, 2021 onwards.
  
7. Even more important questions are bound to feature in the context of AMVs given the increasing reliance of their shipboard information/operational technology systems on digitization, automation, and integration within a highly interactive cyber domain. It must so be expected that a GBS approach will apply considerably on AMVs for matters requiring functional flexibility in terms of regulation to achieve the material objective of safety at sea. In particular, for safety aspects in which a holistic perspective is essential, characteristically such as this of assuring cyber resilience, the existing treaty regime applicable to commercial shipping has been thoroughly imbued in the goal-based regulatory philosophy. In furtherance of the regime, industry-leading technical stakeholders have opted for the development of requirements within a goal-based framework to guide the implementation of remotely controlled and autonomous functions; in the UK the GBS approach has received already the widespread support in Lloyd's Register, *Code for Unmanned Marine Systems* (2017).

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<sup>3</sup> International Management Code for the Safe Operation of Ships and for Pollution Prevention (ISM Code), adopted by means of IMO Assembly Res.741/18 (1993).

**Response to Question 7: In light of these challenges, is UNCLOS still fit for purpose? Can or should UNCLOS be renegotiated to better address these challenges?**

8. UNCLOS represents a monumental treaty that has emplaced the constitutional foundations of an international legal order for the oceans that emerged for humanity to uphold “peace, justice and progress” towards the “realization of a just and equitable international economic order.”<sup>4</sup> This social, economic, and political *public order* at sea was crafted to encompass the comprehensive restatement of the law, incorporating elements of codification and the progressive development of new law, while at the same time UNCLOS maintaining a fragile balance of competing interests.
9. As any other international treaty, UNCLOS can be renegotiated and amended. In general, treaty amendment provides States with an indispensable method for updating and harmonising, especially in maritime law, international rules with the rapidly evolving demands of the shipping industry, with those calling for changes of either a legal or purely technical nature. However, having recourse to the practice of amending an international treaty is considered a radical revisionist method, particularly for norm-creating instruments, with the overall process being cumbersome, if not at times unproductive.
10. While UNCLOS is not purported to be cast into stone, its amendment resides in a difficult set of provisions (articles 312 and 313), and this has been in my view a matter of expediency as to preserve the fundamental *public order*, which it has yielded for almost 40 years now. UNCLOS all these years has been considered a *living tree*, undergoing continuing development and flexible adaptation over time.<sup>5</sup>
11. The difficulty lies in the two paramount normative conditions which underlaid the negotiations at the Third UN Conference on the Law of the Sea (1973–1982). Namely, the “package deal” principle and the “theory of inter-relatedness” among the topics and respective agendas. These principles drove the procedural work of the Conference’s to adopt a single comprehensive text. In addition, the decision-making process was governed throughout the proceedings by a “gentlemen’s agreement” that required every effort to reach agreement on substantive matters by way of consensus. No votes were taken “until all efforts at consensus have been

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<sup>4</sup> UNCLOS, *Preamble*.

<sup>5</sup> Separate Opinion of Judge Lucky, *Request for Advisory Opinion submitted by the Sub-Regional Fisheries Commission, Advisory Opinion of April 2, 2015*, Case No. 21 §§ 9–11.

exhausted.”<sup>6</sup> The principles that governed the Third UN Conference persist, raising a high bar to amending UNCLOS. Therefore, I would recommend that the respected International Relations and Defence Committee be extremely cautious to calls for amending UNCLOS.

12. When it comes to AMVs an interpretative account that functionally constructs the requirement of manning in article 94 can effectively address the challenge of introducing new technologies within the scope of UNCLOS. That will preserve UNCLOS as a timeless constitution for the world’s oceans with textual integrity and coherence that should be protected against the ill-advised, if not entirely unrealistic, prospect of unwarranted amendments.
13. However, the possibility of modifications (article 311) ought not to be precluded with a view to facilitating the conduct of coastal operations within the national jurisdiction of interested States. The specialized international treaties under IMO will need to evolve but in a manner that maintains their symmetry as generally accepted international rules and standards, regulations, procedures and practices (GAIRS), with UNCLOS. While IMO is the competent international organization to regulate autonomous ships, it should avoid creating tension with the wording of article 94 UNCLOS.
14. Departments of the UK Government have developed promising initiatives towards the assumption of a leading, potentially, international role in the area of AMVs, but I believe that there need to be a focused policy and coherent legal approach that promotes arguments in favour of the functional interpretations to dispose questions pertaining to ship manning, which in this context arise from technical rules rather than originating internally to the whole UNCLOS normative dynamic.
15. In conclusion, I consider that technological progress and UK interests alike will be best promoted by viewing the manning requirement in the light of functional flexibility, and to this end the UK Government should intensify its efforts at the IMO, which must remain the principal forum for the regulation of AMV at the international level, within the boundaries of UNCLOS and through its remit to adopt consistent GAIRS. The UK Government position should be one of interpreting rather than amending UNCLOS. This position not only aligns with its traditional legal position in relation to UNCLOS but also with the current and future interests of developing, using, and assuring safe and secure AMV technology.

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<sup>6</sup> UN Doc. A/Conf.62/WP.2, Appendix to the Rules of Procedure, 13 International Legal Materials 1 (1974).