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The Implementation of Sovereign Immunity of Warships to Unmanned Underwater Vehicles (UUV)
Under Law of the Sea

Naomi Catherine Felencia,^{*} R. Achmad Gusman Catur Siswandi,^{**} Imam Mulyana,^{***}

ABSTRACT

Along with the times, there has been development in marine technology which include Unmanned Underwater Vehicles (UUV). Several States have started using UUVs for both commercial and military marine activities since UUVs have several advantages that are beneficial than ordinary ships. However, the development and application of UUVs for marine purposes raised numerous problems since there is no clear regulation regarding UUV. Current legal instruments only explain the definition of ship without classifying the type of ship. Consequently, unclear legal regulations will lead to different interpretations between States and the determination of legal rules for UUV. One incident related to UUV technology can be seen from the Bowditch incident which led to different interpretation regarding the classification of UUV between America and Tiongkok. Other incidents also can be seen from the entry of foreign UUVs that are alleged for military research purposes into Indonesia territorial waters. From several incidents, there are main issues to the classification of UUVs that are connected to their legal status. The classification of UUVs as merchant ships or warships are necessary considering that the rights of immunity owned by warships will affect the legal status of UUVs and their activities. Regulations that are still ambiguous will affect coastal State's actions if there are foreign UUVs entering their sea areas, especially if the UUVs are intended for military purposes. Therefore, there is a necessity concerning clear regulations of UUVs including their classification and its utilization for marine activities.

Keywords: *Law of the Sea, Sovereign Immunity of Warships, Warship, Underwater Unmanned Vehicles (UUV).*

A. INTRODUCTION

Nowadays, the development of marine technology requires any mankind and its

law to continue to follow technological developments so that there can be compatibility between applicable laws and ongoing technological development. One

^{*} Research Assistant at Indonesian Center for the Law of the Sea (ICLOS), Universitas Padjadjaran, Jalan Dipati Ukur No. 35, Bandung, naomi17001@mail.unpad.ac.id.

^{**} Director of Indonesian Center for Internasional Law of the Sea, Lecturer at International Law Department Faculty of Law, Jalan Raya Bandung-Sumedang KM 21, Sumedang, ahmad.gusman@unpad.ac.id.

^{***} Lecturer at International Law Department Faculty of Law, Jalan Imam Bonjol No. 21, Bandung, imam.mulyana@unpad.ac.id.

example of the developments in marine technology is the manufacture of Unmanned Underwater Vehicles (UUV). UUV can be defined as a vessel that is self-propelled or remotely navigated by a human controller or operator which can normally designed to function in the sea or operate on the surface.¹ The utilization of UUVs has not been regulated by the federal government due to a combination of the novelty of the technology, difficulties with classification and the unwillingness of the general body to assume additional responsibilities. The UUV itself is divided into several types, initially only consisting of Autonomous Underwater Vehicles (AUV) and Remotely Operated Vehicles (ROV). However, along the way, the type of UUVs is expanding.

In its evolution, UUV also began to operate for military purposes, including for search and rescue at sea, supervision of sea shipping, measurement and monitoring of marine data and meteorological services.² UUV has several advantages compared to ordinary ships. One of the advantages is that no crew needed in its application and UUV can be controlled remotely so it will not threaten the safety of the crew in carrying out dangerous missions. UUVs also could gather information and are smaller in size beside ordinary ships.³ Furthermore, UUVs are also considered more efficient than ordinary ships since they cost less than ordinary ship or submarines. The advantages of UUV can be used by coastal State for military purposes because of its ability to carry out dangerous missions and its ability to gather information.

The development and application of UUV technology for marine purposes raises several problems. There are no international conventions that provide the status of UUVs and no further explanation regarding the classification of UUVs as ships or not ships. Until now, the existing legal instruments only explain the meaning of ships without classifying the type of ship. For example, international legal instruments distinguish the use of terms 'vessel' and 'ships' but there is no further explanation about the classification of the two terms. In several existing international conventions, the definition of UUV is still general and broad. The unclear understanding of the terms 'vessel' and 'ships' can lead to different interpretations between coastal State since the use of these terms will determine the legal rules that can be applied to UUV. Other problems are also found in the classification of UUVs, whether they are included as a ship or not. This classification is needed, especially if the UUVs will not only be used for commercial purposes in the future.

The indecipherable concerning the definition of ships becomes an issue in applying the legal status of UUV. This affects legal arrangements related to UUV since there are different legal rules between ordinary ships for commercial purposes and warships used for government purposes. Furthermore, the available conventions also do not apply to warships and only explain that warships will have their rights of immunity. The classification of UUVs as ordinary ships or warships is fundamental, considering the immunity status of warships

¹ McKenzie, Simon. "When Is a Ship a Ship? Use by State Armed Forces of Un-crewed Maritime Vehicles and the United Nations Convention on the Law of the Sea", *Law and the Future of War Research Paper*, No. 3, 2020, p. 6.

² Chang, Yen-Chiang, (et. al.) "The International Legal Status of the Unmanned Maritime Vehicles", *Marine Policy*, Vol. 113, 2020, p. 1.

³ Heo, Jinyeon, (et. al.) "Technology Development of Unmanned Underwater Vehicles (UUVs)", *Journal of Computer and Communications*, Vol. 5, 2017, p. 29.

will affect the legal status of UUVs to carry out activities at sea.

The absence of regulations regarding UUV has caused controversy, as seen in the Bowditch incident. In 2016, Tiongkok captured and confiscated UUVs launched by the United States military forces, USNS Bowditch, in the Philippines' Exclusive Economic Zone (EEZ) located in the South China Sea.⁴ The type of UUV is a *Glider* which is part of the Littoral Battlespace Sensing system and used to collect oceanographic data, such as temperature, speed of sound, ocean depth, and water salinity.⁵ United States stated that this UUV could not be confiscated since it has sovereign immunity rights from its launching ship and should be allowed to pass through the South China Sea area.⁶ United States claimed that Tiongkok stole the UUV and its actions violate international law since the UUV used by the United States at that time was carrying out a military mission.⁷ In international conventions such as UNCLOS 1982, there is no regulation concerning military activities carried out in the EEZ, and raised debate about the unilateral actions of States which conduct military activities without notification.⁸

Another example of the illegal launch of UUVs can be seen in Indonesia waters. There are three cases of UUVs belonging to foreign countries have been found; one UUVs with Sea Wing type is suspected of belonging to Tiongkok in 2020.⁹ The UUVs were launched for the purposes of marine research, including research related to the military, which the Tiongkok government had not previously notified.¹⁰ Tiongkok has made a Statement that the UUV is being used for oceanographic research with sensors capable of measuring the water temperature, salinity, turbidity, and oxygen levels.¹¹ The type of founded UUV is a glider-type drone that are often used for hydrography and assist in making underwater maps. Although the type of UUV is not sure yet, this type of information can be accurate maritime chart information for naval military operations as well as commercial and civil shipping.

There is uncertainty over the rules for using UUV related to military activities, especially for military research and survey purposes. In UNCLOS 1982, there is no precise regulation related to military research and surveys.¹² The implementation of UUV for military

⁴ Cronk, Terri Moon. "Chinese Seize U.S. Navy Underwater Drone in the South China Sea" *U.S. Department of Defense*, 16 December 2016, <https://www.defense.gov/Explore/News/Article/Article/1032823/chinese-seize-us-navy-underwater-drone-in-south-china-sea/>, accessed 23rd March 2021.

⁵ Fravel, Taylor. "The Implications of China's Seizure of a US Navy Drone", *Maritime Awareness Project Analysis*, 21 Desember 2016, <https://www.nbr.org/publication/theimplications-of-chinas-seizure-of-a-u-s-navy-drone/>, accessed 12th January 2022.

⁶ Schmitt, Michael N. and David S. Goddard, "International Law and the Military Use of Unmanned Maritime Systems", *International Review of the Red Cross*, Vol. 98, No. 2, 2016, p. 568.

⁷ Ryan, Missy and Dan Lamothe, "Pentagon: Chinese Naval Ship Seized An Unmanned US Underwater Vehicles in South China Sea". *Washington Post*, 17 December 2016. <https://www.washingtonpost.com/news/checkpoint/wp/2016/12/16/defense-officialchinese-naval-ship-seized-an-unmanned-u-s-ocean-glider/>, accessed 20th May 2020.

⁸ Geng, Jing. "The Legality of Foreign Military Activities in the Exclusive Economic Zone Under UNCLOS", *Utrecht Journal of International and European Law*, Vol. 28, 2012, p. 25.

⁹ BBC News Indonesia, "Seaglider tiga kali ditemukan di perairan Indonesia dalam dua tahun terakhir 'bukti intrusi kedaulatan dan ketiadaan alat deteksi'", *BBC News Indonesia*, 9 January 2021, <https://www.bbc.com/indonesia/indonesia-55559222>, accessed 24th March 2021.

¹⁰ CNN Indonesia, "Media Asing Soroti Seaglider di Laut RI Diduga Milik China". *CNN Indonesia*, 5 January 2021, <https://www.cnnindonesia.com/internasional/20210105101031-106-589547/media-asing-soroti-seaglider-di-laut-ri-diduga-milik-china>, accessed 24th March 2021.

¹¹ Sutton, H. I. "Chinese Submarine Drone Discovered Near Gateway To Indian Ocean", *Naval News*, 29 December 2020, <https://www.navalnews.com/naval-news/2020/12/chinese-submarine-drone-discovered-near-gateway-to-indian-ocean/>, accessed 7th February 2022.

¹² Bork, Katharina, (et. al.) "The Legal Regulation of Floats and Gliders—In Quest of a New Regime?", *Ocean Development & International Law*, Vol. 39, 2008, p. 305.

purposes can affect the sovereignty of coastal States and the immunity of the UUV. However, regulation of UUVs is still ambiguous and will affect State actions if there are foreign UUVs that enter their sea areas. The utilization of UUV without any regulations can be detrimental to other countries, particularly countries with inadequate technology for developing UUV. In this paper, the author will argue the legal status of UUV used for military purposes and measure UUVs immunity when crossing the territory of another country beside the intention and the purpose of it. Moreover, this paper will also discuss the application of UUV immunity which can affect the rights of coastal State. In the end of this paper, the author will also look at the actions that can be taken by the coastal State based on international law if there are foreign UUV that passes through their territorial waters, specifically in Indonesian waters.

B. LEGAL STATUS OF UUV

1. The Definition Of 'Ships' Or 'Vessel'

To determine the legal status related to UUV, it is perceivable in advance the requirements of the ship based on UNCLOS 1982. Although, UNCLOS 1982 itself does not elaborate further on the terms "ships" and "vessels," and there has never been a consensus on the definition of the ship. One of the definitions of ships can be seen in Article 2 of UNCCRS 1986 (United Convention on Conditions for Registration of Ships 1986), namely:¹³

"...ship means any self-propelled sea-going vessel used in international

seaborne trade for the transport of goods, passengers, or both except vessel of less than 500 gross registered tons."

Some of the States national laws also give different definitions of ship but are adapted to the UNCCRS 1986. The definition of a ship also can be seen from another legal instrument, namely the SUA Convention 1988 (Convention for the Suppression of Unlawful Acts of Violence Against the Safety of Maritime Navigation 1988), which stated:¹⁴

"...ships means a vessel of any type whatsoever not permanently attached to the sea-bed, including dynamically supported craft, submersibles, or any other floating craft."

The legal status related to UUV is still unclear in international law, where it is necessary to determine the rights and obligations possessed by UUV in operating at sea. In establishing the status of the UUV as "ships," there are legal consequences where any articles regarding rights and duties of ships are applicable, specifically navigational rights that are owned explicitly by ships.¹⁵ An unmanned vehicle will have an independent navigation right from the launching ship as long as the launch is carried out based on the navigation regime applicable in international law. This also applies to the UUV as an unmanned vehicle where the UUV is separate from its launcher unit. When launched, the UUV had its own navigation rights regardless of its aircraft carrier, whereas the UUV complied with the conditions in the navigation regime.¹⁶

¹³ Article 2, United Nations Convention on Conditions for Registration of Ships, Feb. 7, 1986 [UNCCRS 1986], online: https://unctad.org/system/files/official-document/tdrsconf23_en.pdf.

¹⁴ Article 1, Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation, March 10, 1988, (entered into force March 1, 1992) [SUA Convention 1988], online: <https://treaties.un.org/doc/db/terrorism/conv8-english.pdf>.

¹⁵ Veal, Robert, (et. al.) "Liability for operations in Unmanned Maritime Vehicles with Differing Levels of Autonomy", Final Report, 14.CAT.OP.065, University of Southampton, 2016, p. 17.

¹⁶ Norris, Andrew. "Legal Issues Relating to Unmanned Maritime Systems Monograph", *International Law Department*, US Naval War College, 2013, p. 23. <https://www.iqpc.com/media/1002182/50661.pdf>

As stated in UNCLOS 1982, there is also no classification of ships that are still ambiguous and general, one of which can be seen in Article 94 Paragraph 4 (b) of UNCLOS 1982, namely:

"...that each ship is in charge of a master and officers who possess appropriate qualifications, in particular in seamanship, navigation, communications, and marine engineering, and that the crew is appropriate in qualification and numbers for the type, size, machinery, and equipment of the ship."

It can be argued that a ship must have a crew member who has met the qualifications and has knowledge of the ship. Nonetheless, in UNCLOS 1982, it is not explained further about the position of the crew where the UUV does not have a master or crew member who is on board, but the operation of the UUV can be carried out remotely. UNCLOS 1982 does not explain how unmanned aircraft carriers on board can provide physical assistance.¹⁷

While the requirement of a ship is arguably enforceable in the case of remotely operated ships, it can be argued that UUVs or unmanned vehicles cannot meet these requirements. The reason is that unmanned vehicles often involve different levels of automation, depending on the sea area, traffic density, etc., such that further clarification regarding these rules may be necessary, at least at the level of generally accepted international regulations or practices as adjusted in UNCLOS 1982. Article 98 Paragraph 1 of UNCLOS 1982 explains that every ship must

have a crew member to be responsible for the ship and provide assistance to people who are found at sea and experience urgent circumstances.¹⁸ If this rule is applied, it cannot apply to unmanned vehicles because they do not have a captain or crew. However, to classify UUV as a ship based on the ship's crew is not the right thing because, until now, the existing UUV is a UUV with a small size and does not have a crew specifically onboard crew. Looking at the size of the current UUV, it is not in accordance with the size of ordinary ships considering that the existing UUV size is only a UUV that is below 20 m. The current rules also do not elaborate if the requirements of a ship will be met if the crew communicates by radio and is not on board the vessel directly.

Other treaties and conventions mainly State that the definition of a ship does not depend on the presence or absence of a crew as an essential part of a ship.¹⁹ To determine UUVs legal status as a ship, the crew concept should be expanded. The UUV also cannot be classified as a ship since the existing crew of the ship controls the UUV remotely, and UNCLOS 1982 only States that a vehicle which can be referred to as a ship is a ship that has a crew. It can be concluded that the application of UNCLOS to the UUV is definitively premature.²⁰

Additionally, in Article 5 of the COLREGS 1972, it is explained that²¹

"...every vessel shall at all times maintain a proper look-out by sight and hearing as well as by all available means appropriate in the prevailing circumstances and conditions so as to

¹⁷ Veal, Robert and Henrik Ringbom. "Unmanned Ships and The International Regulatory Framework," *Journal of International Maritime Law*, Vol. 23 (2), 2017, p. 106.

¹⁸ Article 98 (1), Convention on the Law of the Sea, Dec. 10, 1982, 1833 U.N.T.S. 397. (Entered into force Nov. 1, 1994) [UNCLOS 1982]

¹⁹ Hooydonk, Eric Van. "The Law of Unmanned Merchant Shipping-An Exploration", *Journal of International Maritime Law*, Vol. 20, 2014, p. 409

²⁰ Schmitt, Michael N. and David S. Goddard, "International Law and the Military Use of Unmanned Maritime Systems", *International Review of the Red Cross*, Vol. 98, 2016, p. 577.

²¹ Article 5, Convention on the International Regulation for Preventing Collisions at Sea, Oct. 20, 1972 (entered into force July 15, 1977), online: <https://www.imo.org/en/About/Conventions/Pages/COLREG.aspx>.

make a full appraisal of the situation and of the risk of collision."

As mentioned above, a person who has the obligation to monitor in the form of vision and hearing is a crew member with appropriate experience based on the decision of the United States Court in the case of *Rosado v. Pilot Boat*.²² This definition of 'a person who has vision and hearing' indicates that every ship needs human perception, where most UUVs today use remotely controlled control algorithms so that they do not match the existing classification of ships. Oliver Daum also supports this that ships should have transportation features and should be able to transport certain goods from one place to another.²³ According to Craig H. Allen, the definition of a ship is transportation with a functional value. The functionality will include ships carrying other equipment with navigational rights to improve the capabilities of its users.²⁴ It can be interpreted that UUV has not fulfilled the classification as a ship since UUV is not transportation and does not have features of carrying cargo or people. In spite of that, it is better to apply the status of the UUV at sea to be adjusted to the sea area where the UUV was launched since coastal States have its own sovereignty and jurisdiction in their territory.

As water transportation, a ship must have a storage area or at least be able to transport goods or people on it from one place to another.²⁵ While for UUVs, usually has a hollow body that allows to transport

of small yet doubtful goods for use with the purpose of being a means of transportation. This is also explained in a ruling in the United States Supreme Court in the case of *Stewart v. Dutra Construction Company*, where the Supreme Court held that a watercraft is a vehicle capable of being used as a means of transportation regardless of its main function or transit status.²⁶ If this understanding is connected with the legal status of the UUV then it is not appropriate to say that it is a ship where currently, the current UUV is only used for the purpose of collecting data from the sea which has never even been used for the purpose of additional as a means of transportation.

2. UUV Compared to The Classification of Warships

In the law of the sea, the status of warships has a fundamental value where this status is only given to ships that have full rights to fight at sea. Meanwhile, other ships that are included in the naval auxiliary ships have more limited rights to engage in war. This is influential because warships have immunity that ordinary ships do not have. Warships are immune from arrest and confiscation in both national and international waters, free from foreign taxes and regulations, and have exclusive control over all passengers and crew in connection with actions carried out on board.²⁷ Warships are defined as a form of sovereignty of a coastal State on sea whose flag is on the ship, and any action that prevents a warship from act its missions by

²² Yen-Chiang Chang, *supra* note 2 at 5.

²³ Daum, Oliver. 'The Implications of International Law on Unmanned Naval Craft', *Journal of Maritime Law and Commerce*, Vol. 49 (1), 2018, p. 82.

²⁴ Allen, Craig H. "Determining the Legal Status of Unmanned Maritime Vehicles: Formalism vs Functionalism" *Journal of Maritime Law & Commerce*, Vol. 49 (4), 2018, p. 494.

²⁵ Hofmann, Tobias, (et al.) "The Operation of Gliders Under the International Law of the Sea," *Ocean Development & International Law*, 2015, p. 177.

²⁶ *Stewart v. Dutra Construction Company*, United States Reports, Vol. 543 (2004), p. 496.

²⁷ Thomas, A. R. and James C. Duncan, *Annotated Supplement to the Commander's Handbook on the Law of Naval Operations*, 1999, Naval War College, p. 110.

force is a source of conflict that can endanger relations between countries.²⁸

Essentially, UNCLOS 1982 did not provide any further explanation regarding the definition of the ship. However, this convention clarifies the definition of a warship. This is explained in Article 29 of UNCLOS 1982 which stated the definition of a warship, namely:

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

UUVs classification as a warship raised questions about its ability to qualify as a ship. One of the issues to determine whether a UUV is a warship or not is to see whether the UUV is under naval orders and is manned by personnel under the command of the regular armed forces. The concept of a ship being "under command" was also found in the 1972 COLREGS analysis, where "command" could be directed at the safety of navigation and interaction with other ships.²⁹ Basically, the concept that explains warships are classified under the command of military forces is an overly general and multifaceted concept. This concept is more about responsibility and capacity to act than just physical presence. In the Bowditch incident, the UUV launched by the United States Navy via the USNS Bowditch was declared part of a military ship and was conducting military oceanographic survey operations in

the South China Sea. To determine the status of UUV as an auxiliary unit and part of a warship, there are conditions that must be fulfilled.

Looking at the concept of a warship, UUV is not appropriate to be classified as a warship. The reason is the emphasis on warships commanded and manned by registered military personnel allows that the status of ordinary ships or merchant ships can become ships and personnel with full belligerent rights. It is also inappropriate to refer UUV as an auxiliary unit which is part of government vessels other than warships. Essentially, an auxiliary unit is a naval ship designed to support combatant ships and other naval operations.³⁰ Auxiliary ships are not the main combatant ships, and apart from that they also have a limited combat capacity intended for self-defense. Based on UNCLOS 1982, the auxiliary unit does not have a definite definition but is included in the definition of government vessels operated for non-commercial purposes.

The San Remo Manual defines an auxiliary as a ship other than a warship owned by or under the exclusive control of the armed forces of a country and used temporarily for government non-commercial purposes.³¹ Until now, there are no clear rules regarding auxiliary units even though auxiliary units are classified as military objects and can be attacked as if they were warships without having full rights as warships. If it is related to the Bowditch incident, UUV is not appropriate to be called an auxiliary unit that helps the United States naval activities at sea. This is because in this incident, the UUV launched was a glider type and was used to collect

²⁸ Dimri, B. M. "The Arrest of Argentine Warship 'ARA Libertad': Revisiting International Law Governing Warships, Sovereign Immunity, and Naval Diplomatic Roles," *Journal of Defence Studies*, Vol. 7, 2013, p. 115.

²⁹ Thomas, A. R. and James C. Duncan, *supra* note 35 at 724.

³⁰ Cutler, Deborah W and Thomas J. Cutler, *Dictionary of Naval Terms* (6th ed.), 2005, Naval Institute Press, p. 16.

³¹ San Remo Manual on International law Applicable to Armed Conflicts at Sea, International Review of the Red Cross, No. 309 (1995), rule 13, online: <https://www.icrc.org/en/doc/resources/documents/article/other/57jmsu.htm>.

oceanographic data. UUV also does not fit the classification as an auxiliary considering its size is not as large as ordinary warships used by military forces. In addition, UUV also has a small size so that it should not be considered as government vessels that have the same immunity status as ordinary warships. Warships also have belligerent rights, which means warships have the right to fire assisted by other ships during armed conflict.³² Basically, UUVs do not have to comply with COLREGS 1972 as written, therefore UUVs should hold different standards of navigation rules because of their different technology and autonomy from ships or other tools.³³

UUV also does not qualify as a warship and even though it is launched from a military ship, it does not necessarily mean that UUV also has the right to immunity. Moreover, UUV also does not qualify as an auxiliary unit or additional unit of a warship, so that it does not have the immunity rights contained in ordinary warships and does not have the rights as possessed by ordinary ships. This result is significant considering that several countries have invested in developing UUVs that are clearly designed for attack, one of which is the Seahunter, a UUV designed for hunting and shooting submarines, and also UUV proposals made by the United States military forces.³⁴ Therefore, it can be seen that UUV is not included as a warship or auxiliary unit that has full sovereignty over the right of immunity.

3. States' Sovereignty Over Foreign UUV and Military Activities

As seen in the Bowditch incident, the United States launched the UUV of its military vessels in the South China Sea, which is the EEZ (Economic Exclusive Zone) of the Philippines. The coastal State itself has sovereign rights to regulate the territory of the EEZ but does not have full sovereignty. However, sovereign rights are exclusive to coastal States, and third parties have the rights to access the resources in EEZ with the consent of coastal States.³⁵

In contrast to the territorial sea, a coastal State can take enforcement action against a vessel suspected of violating the law if there is a clear reason to believe the vessel has committed a violation. Meanwhile, in the EEZ area, the power of the coastal States to detain or arrest only follows from clear objective evidence when a ship has committed an offense resulting in great damage.³⁶ Pursuant to Article 24 of UNCLOS 1982, coastal States could implement necessary measures to regulate the innocent passage of their territorial sea.³⁷ coastal State also has the right to temporarily suspend the right of innocent passage in their territory if it is needed for security.³⁸

In the territorial sea area, coastal States' has full sovereign rights over their territory. The author looks further based on the incident of the entry of the UUV into foreign territories, where arrangements are needed for the two regions. Other incidents

³² Heintschel von Heinegg, Wolff. "Warships", in Rüdiger Wolfrum, *Max Planck Encyclopedia of Public International Law*, Oxford University Press, 2015.

³³ Vallejo, D. "Electric Currents: Programming Legal Status into Autonomous Unmanned Maritime Vehicles", *Case Western Reserve Journal of International Law*, Vol. 47, No. 1, 2015, p. 407.

³⁴ Chadwick, Kara. "Unmanned Maritime Systems Will Shape the Future of Naval Operations: Is International Law Ready?" in Malcolm D. Evans and S. Galani, *Maritime Security and the Law of the Sea: Help or Hindrance?*, Edward Elgar Publishing, 2020, p. 146.

³⁵ Kwiatkowska, B. *The 200 Mile Exclusive Economic Zone*, 1989, Nijhoff Publishers, p. 15.

³⁶ Klein, Natalie, (et. al.) "Maritime Autonomous Vehicles: New Frontiers in the Law of the Sea", *International and Comparative Law Quarterly*, Vol. 69, 2020, p. 730.

³⁷ Article 24, UNCLOS 1982.

³⁸ Churchill, R. R. and A. V. Lowe. *The Law of the Sea*, Manchester University Press, 1999, p. 73-74.

are occurred in Indonesian territory which UUVs suspected to belong to China entered Indonesian waters. From these two incidents, the use of UUV is currently only for marine scientific research or military activities in the form of military surveys. There is no further explanation in UNCLOS 1982 regarding marine scientific research or military surveys. Marine scientific research can generally be defined as scientific studies or experiments related to the marine environment as its object and designed to increase knowledge about the oceans.³⁹ Marine scientific research is different from exploration since exploration is data-collecting research that is carried out for economic and exploiting purposes.⁴⁰

Meanwhile, military surveys are a marine activity that involves collecting marine data for both military purposes.⁴¹ Military surveys consist of hydrographic surveys. The use of data collected by hydrographic surveys is for compiling marine maps and other documents to facilitate and ensure safe navigation and protecting the marine environment.⁴² The right of innocent passage does not apply to activities which are detrimental to peace and security at sea, including scientific research or surveys and the use of military means that may threaten the sovereignty and security of coastal State. In defined any activities that may threaten marine security is enacted in Article 19 (2) UNCLOS 1982 consisting of military activity, weapons-shooting, any use of force that has a clearly military feature which can only be done by warships.

C. THE IMPLEMENTATION OF SOVEREIGN IMMUNITY OF WARSHIPS TO UUV

Determining the status of UUV as a ship will affect its rights and obligations to engage in activities at sea, including its immunity rights. The reason is sovereign immunity or immunity rights only applicable to military ships or government-owned ships. Under UNCLOS 1982, the right of immunity only applies to warships (Articles 32, 95, 236), naval assistants (Article 236), non-commercial government ships (Articles 32, 96, 236), and ships authorized by the flag State which clearly marked and identifiable as government service vessels.⁴³ Vessels that have the rights of immunity are required to comply with the rules in UNCLOS 1982 including the rules of the coastal State when entering its maritime zone as well as the EEZ area and not take any action that threatens the security of the country.⁴⁴

UUVs are used by the national navy for various naval operations where the freedom of navigation of naval UUVs will also depend on their status as ships. Therefore, the consideration of UUV as "ships" also applies. In UNCLOS 1982, it is clearly explained the definition of warship or government ship as seen on Article 29 and it is stated the Convention is not applicable to warships due to their

³⁹ Treves, T. 'Marine Research', in R. Bernhardt, *Encyclopedia of Public International Law*, Elsevier Science Publisher, 1997, p. 295.

⁴⁰ Soons, Alfred H. A. "Marine Scientific Research Provisions in the Convention on the Law of the Sea: Issues of Interpretation" in E. D. Brown and R. R. Churchill, *The UN Convention on the Law of the Sea: Impact and Implementation*, 1987 (eds.), Law of the Sea Institute, p. 367.

⁴¹ J. A., Roach and Smith R.W., 1994, *Excessive Maritime Claims*, International Law Studies, Vol. 66, Newport, RI: Naval War College.

⁴² International Hydrographic Organization, "Importance of Hydrography", <https://iho.int/en/importance-of-hydrography>, accessed on 18 May 2022.

⁴³ Mangapul, Joy Henri, (et. al.) "Sovereign Immunity of Non-Commercial Government Vessels and Due Regard: China Coast Guard In the Natunas", *Indonesian Journal of International Law*, Vol. 18 No. 2, p. 232-233.

⁴⁴ *Ibid.*, at. 234.

immunity rights.⁴⁵ Sovereign immunity itself is an immunity possessed by warships or government ships which is operated for non-commercial activities so that the jurisdiction of other countries will not apply to this ship. The right of immunity or sovereign immunity is divided into immunity from enforcement actions contained in Articles 95, 96, and 58(2) of UNCLOS 1982, as well as immunity from exercise of ownership, dominion, or control.

Foreign ships have navigational rights, where it consisted of rights of innocent passage, transit (transit passage), and archipelagic sea lane passage. Although these three rights have different functions, it aimed to provide freedom for ships to traverse sea areas belonging to other countries without the need to seek approval or give notification to the coastal State in advance and become the main limitation on the sovereignty of the coastal State.⁴⁶ Every vehicle enjoyed this freedom including UUV when crossing the territorial sea. However, the State can exclude UUV from its territory and regulate it into its own national rules as stated by Finland in the Memorial to the International Court of Justice (ICJ), namely: "...international law never restricts the right of innocent passage in the territorial sea and straits only to the beneficiary of both vehicles which are defined as "ships," "vessels," or otherwise but the rights of the passage should be understood in a functional sense in accordance with the

navigational rights for all ships sailing at sea."⁴⁷

Any watercraft involved in the right of innocent passage may not launch, land, or pick up any military equipment, which also includes UUV. Supervision by UUV, whether underwater, or on the surface of the water, would constitute a violation of the right of innocent passage since the absence of a commander or crew on board makes no difference in assessing the activities of a ship and whether such activity is detrimental to the peace, order, or security of the coastal State.⁴⁸ Above all, the exercise of this navigation right is intended for maritime activities for peaceful and security purposes, as explained in Article 19 of UNCLOS 1982.⁴⁹ The launch of UUVs also must be seen from the intention whether the country is only passing through or has the purpose of transiting. States with ships wishing to launch UUVs have an obligation to seek permission from the coastal or port States before exercising their navigational rights.

As seen in the Bowditch incident, the activities carried out by the UUV launched by the United States Navy are military activities. It can be concluded that United States' actions are not in accordance with the provisions of international law. It should be emphasized that UNCLOS itself does not regulate further regarding military activities or the navigational rights of ships crossing the sea areas of other countries. Article 56 of UNCLOS 1982 regulates that coastal State

⁴⁵ Article 32, UNCLOS 1982 stated: "Immunities of warships and other government ships operated for non-commercial purposes with such exceptions as are contained in subsection A and in articles 30 and 31, nothing in this Convention affects the immunities of warships and other government ships operated for non-commercial purposes."

⁴⁶ Beckman, Robert. "Archipelagic Sea Lanes Passage in Southeast Asia" in Chong Guan Kwa and John Kristen Skogan, *Maritime Security in Southeast Asia*, Routledge, 2007, p. 119.

⁴⁷ Memorial of the Government of the Republic of Finland, Case Concerning Passage Through the Great Belt (Finland v. Denmark), [1992] I.C.J. Rep., at 406.

⁴⁸ Klein, Natalie. "Maritime Autonomous Vehicles within the International Law Framework to Enhance Maritime Security", *International Law Studies*, Vol. 95, 2019, p. 269.

⁴⁹ Article 19, UNCLOS 1982 stated that:

"passage is innocent so long as it is no prejudicial to the peace, good order or security of the coastal State, such passage shall take place in conformity with this Convention and with other rules of international law."

has jurisdiction in the EEZ for marine scientific research, however, coastal State is not permitted to regulate hydrographic surveys or military surveys in the EEZ since the two activities are different and separated from ordinary marine scientific research. This also applies to ships carrying out surveys or research activities during transit, where these activities are prohibited if there is no approval from the coastal State or coastal State.⁵⁰ Furthermore, Article 301 of UNCLOS 1982 explains that:⁵¹ "In exercising their rights and performing their duties under this Convention, States Parties shall refrain from any threat or use of force against the territorial integrity or political independence of any State or in any other manner inconsistent with the principles of international law embodied in the Charter of the United Nations." The Statement in Article 301 of UNCLOS 1982 is adapted to the United Nations Charter Article 2 (4), which does not justify the use of force or the threat of weapons.⁵² The use of force against a foreign States' military equipment in the form of a foreign warship in a situation or manner not permitted by the UN Charter with itself is a violation of the UN Charter and UNCLOS 1982, even if the aim is to deal with violations of the UN Charter and UNCLOS 1982. Aforesaid, the United States' actions can be interpreted as an act that violates UNCLOS 1982 even though the activities carried out are activities that are accompanied by the right of immunity from warships United States of America. The United States' actions can be seen as actions that do not have good faith and violate the obligations of "due regard"

as a country that crossed the South China Sea area.

The launch of UUV did not depend on its mother ship, and UUV must glide on the surface to get its right of peaceful passage. Coastal State has the authority to order warships and military UUVs to leave the territorial sea, as well as violating the right of innocent passage. Any vehicles which operated and owned by warships while threatening security or did a hostile act by its action can lose its immunity.⁵³ Previously, it must be seen in advance regarding the classification of UUV as part of a warship or fulfilling the requirements of a warship. Accordingly, UUV does not meet the classification as a warship, and the rights of UUVs depend on the purpose of launching UUV. Moreover, UUVs are also not properly classified as ships, so UUV do not have full rights as ships.

Warships are prohibited from carrying out navigational actions that do not show the obligation of "due regard" to the country they pass through, including not asking permission from the coastal state with jurisdiction and sovereignty. This UUV-related incident can also be linked to the discovery of UUV in Indonesian waters, where this UUV belongs to Tiongkok. Additionally, the purpose of this UUV being launched across Indonesian waters is to form a hydrographic survey, but this activity can produce useful information for naval military operations. From this incident, it also can be seen that Tiongkok's actions were not in accordance with the good faith principle and breached Indonesia's territorial waters since the UUV crossed the territorial area, which is the full sovereignty

⁵⁰ Oxman, Bernard H. "The Regime of Warships Under the United Nations Convention on the Law of the Sea," *Virginia Journal of International Law*, Vol. 24, No. 4, 1984, p. 809, 846.

⁵¹ Article 301, UNCLOS 1982.

⁵² Article 2 (4), Charter of the United Nations, Oct. 24, 1945, 1 U.N.T.S. XVI (entered into force 24 Oct 1945) [UN Charter] stated: "All Members shall refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any state, or in any other manner inconsistent with the Purposes of the United Nations."

⁵³ Kari Hakapää, "Innocent Passage", in Rüdiger Wolfrum, *supra* note 40 at 9.

of Indonesia and Tiongkok did not ask for consent beforehand so that its UUV could traverse Indonesian waters.

Military activities carried out by the United States in the Bowditch incident and by Tiongkok in Indonesia's territory were activities that were claimed to be military survey activities. This is also supported by the opinion of Kraska and Pedrozo in the Bowditch incident where both argued that the USNS Bowditch and its UUV were involved in military activities when China confiscated the UUV.⁵⁴ The USNS Bowditch was part of the Special Mission Program of the Military Sealift Command where ships in it provides an operating platform and services for military missions including oceanographic and hydrographic surveys, underwater surveillance, collection and tracking of missile flight data as well as providing many other military needs regarding information about the marine environment.⁵⁵ The data collected helps to improve technology in warfare at sea and the detection of ships and submarines.

UNCLOS 1982 does not regulate military surveys and distinguish them from marine scientific research. The military survey is a term that is often used by the United States and Britain with another term, namely 'military data gathering', where these two terms are not specifically discussed in UNCLOS.⁵⁶ Some scientific information and data obtained from military surveys can have benefits for commercial exploitation. and to achieve military objectives.⁵⁷ Sam Bateman gave an

opinion by considering that the purposes of data collection, types of surveys such as marine scientific research (MSR), hydrographic research, and military research often cannot be distinguished clearly and unequivocally and overlap. UNCLOS 1982 only regulated concerning marine scientific research. Although military surveys are included in military activity, it does not mean that UUVs can be launched freely by the United States without permission. Any data collected in military surveys is not open to the military unless the data are not confidential in nature, for example, data collected from the high seas.⁵⁸

The United States and Britain argue that military surveys can be carried out outside the territorial sea and archipelagic waters of an area country without prior permission from the coastal State. This is because UNCLOS does not clearly stipulate that the coastal State can regulate these activities outside the territorial sea and archipelagic waters, and 'requesting the permission of the coastal State' is a limitation on the mobility and flexibility of military survey operations. United States also thought that this activity is related to the freedoms of navigation and overflight in the EEZ, which is not under the coastal state's jurisdiction.⁵⁹ However, it can be said that the actions of the United States ships based on freedom of navigation are not entirely in accordance with the concept of the right of innocent passage. The United States has carried out operations in the

⁵⁴ Kraska, James, and Raul "Pete" Pedrozo, "China's Capture of U.S. Underwater Drone Violates Law of the Sea," *Lawfare*, 16 December 2016, <https://www.lawfareblog.com/chinas-capture-us-underwater-drone-violates-law-sea>, accessed 15th April 2022.

⁵⁵ U.S. Navy's Military Sealift Command, "Oceanographic Survey Ships", <https://www.msc.usff.navy.mil/Ships/Ship-Inventory/Oceanographic-Survey-Ship/>, accessed 24th April 2022.

⁵⁶ Bateman, Sam. "Hydrographic Surveying in Exclusive Economic Zones – Is It Marine Scientific Research?" in Myron Nordquist, *Freedom of Seas, Passage Rights and the 1982 Law of the Sea Convention*, 2009, Martinus Nijhoff Publishers, p. 115.

⁵⁷ *Ibid.*, at 127-128.

⁵⁸ Roach, J. Ashley. "Marine Data Collection: Methods and the Law", in Myron Nordquist, *supra* note 56 at 175.

⁵⁹ Bateman, Sam. "Hydrographic Surveying in EEZ: Differences and Overlaps with Marine Scientific Research", *Marine Policy*, Vol. 29, 2005, p. 115.

maritime territory of another country without prior notification or authorization of the transit of warships. Although every country has the freedom of navigation that applies in the EEZ, in some aspects, foreign ships can still be subject to the jurisdiction of the coastal State. Navigation through the EEZ for the purposes of exploration and exploitation still requires prior permission from the coastal State.

UNCLOS 1982 guarantees that warships have the same operational freedoms in the EEZ and the high seas, which were also explained in the negotiations at the time of the creation of UNCLOS if each coastal State has rights to resources in the EEZ and as long as these rights are not violated then other countries enjoy the freedom of navigation and communications.⁶⁰ The author recognizes that military surveys or other surveys that are included in military activities are not activities for peaceful purposes. Some surveys, including hydrographic surveys example, to support submarine operations or mine clearance, are also not peaceful activities and may imply a threat to the security of the coastal State. Suppose it is related to the Bowditch incident. In that case, any military activity, including military surveys conducted by the United States, is not with good intentions and can threaten the maritime security of China and the Philippines. In addition, in this incident, the United States also launched UUVs classified as foreign objects without permission into the South China Sea area. The United States' actions violate the rights of China and the Philippines to conduct peaceful maritime activities.

D. THE ROLE OF COASTAL STATES AGAINST FOREIGN UUV IN STATE WATERS

Heretofore, there has been no precise regulation on the use of UUVs at sea, even though the use of UUVs has been going on for a long time. One example can be seen in early 2020, and the United States Congress approved the purchase of two UUVs or unmanned probes as a step toward developing external missiles that could independently return to the United States to launch missiles and be deployed periodically.⁶¹ Historically, any technology in the form of an unmanned vehicle used before and during World War II is said to be the first utilization of unmanned aerial vehicle technology, but its first use was made in Iraqi Freedom Operation in 2003, where the technology was described as an undersea unmanned vehicle used to detect mines.⁶² The regulation of UUV is an important matter, so States that launch UUV for activities at sea can operate without harming the country whose sea area is crossed. Moreover, it is also necessary to ensure the safety of navigation in international sea areas. Every State has a vital role in monitoring and implementing international law and ensuring that using this UUV does not harm other countries. To overcome the legal vacuum due to the absence of regulation on UUV at sea, States must work together and act decisively so that this incident does not happen again in the future. One example is that States can make both multilateral and bilateral agreements that are approved by the countries.

⁶⁰ Wilson, Brian. "An Avoidable Maritime Conflict: Disputes Regarding Military Activities in the Exclusive Economic Zone," *Journal of Maritime Law & Commerce*, Vol. 41, No. 3, 2010, p. 433.

⁶¹ Larter, David B. "5 things you should know about the US Navy's plans for autonomous missile boats", *Defense News*, Jan 14, 2020. <https://www.defensenews.com/digital-show-dailies/surface-navyassociation/2020/01/13/heres-5-things-you-should-know-about-the-us-navys-plans-forbig-autonomous-missile-boats/>, accessed 12th April 2022.

⁶² United Nations Institute for Disarmament Research (UNIDIR), "The Weaponisation of Increasingly Autonomous Technologies in the Maritime Environment Testing the Waters", 2015, p. 3, <https://unidir.org/publication/weaponization-increasingly-autonomous-technologiesmaritime-environment-testing-waters>.

Looking at the current legal status of UUV, it is more appropriate if the rules on UUV are applied according to their function. Some commentators argue that small objects that float and are intended to collect data and are not subject to navigational regimes should be considered as equipment under the marine scientific research regime rather than as ships.⁶³ States also should make more transparent arrangements for the definition of "ships" in the sea area. This is pivotal since UUVs status as an ordinary ships or warship will affect law enforcement at sea. The status of the UUV as a ship or warship will also depend on the activities to be carried out and the purpose of launching through the aircraft carrier. Although UUV launched from its mother ship, the rights and obligations of UUVs did not attach to their mother ship. As mentioned above, states have the right to create safe sea lanes for ship travel and do not differentiate between ships. However, States can refuse the ship's right to transit and has the right to make stricter rules in their national regulations regarding UUV.

The potential use of UUVs for military activities at sea provides several advantages that ordinary war axes do not have, which UUVs can provide a 24/7 presence, reducing risks to human life threats and reducing future manpower shortages.⁶⁴ Furthermore, due to the size of UUVs, which is not as large as an ordinary warship, it is possible to carry out missions in environments that are not easily accessible and not easy to detect. Some of the advantages offered by UUVs make States use UUVs for military activities at sea and

are interested in providing immunity like ordinary warships. Thereby, a legal status for UUV is needed since it can clarify its rights and obligations as well as its legal immunity so as not to harm other countries in the future.

In carrying out the steps to determine the classification of UUV, one of them can consist of cooperation between countries that can be carried out by negotiating or making agreements. It is better to create international rules covering UUV and further explanation regarding the types of UUV that are included in the ship or not. This regulation can be a kind of derivative regulation that refers to UNCLOS 1982, considering that UNCLOS 1982 already regulates the meaning of "ships" but does not explain it further. By applying existing regulations in different marine areas, UUVs can be regulated and developed in an orderly manner based on the current legal framework. Until now, there are not adopted regulations concerning UUVs. However, International Maritime Organization (IMO) has carried out the agenda for scoping on the application of UUV for commercial activities in the 'Regulatory scoping exercise for the use of Maritime Autonomous Surface Ships (MASS)'.⁶⁵ Although proponents of the scoping agenda is highlighting the issue of safe and eco-friendly UUV operations, and this regulation was initially limited to legal instrument related to safety at sea.

With the legal status of the UUV that did not meet the classification as a ship, each country needs to make rules regarding UUV and its activities that are allowed at sea for the purpose of maritime security so that

⁶³ Katharina Bork, *supra* note 12 at 298.

⁶⁴ European Defence Agency, 'Best Practice Guide for Unmanned Maritime Systems Handling, Operations, Design and Regulations (Working Paper)', 2014, p. 12. See also Kara Chadwick, *supra* note 41 at 136.

⁶⁵ International Maritime Organization (IMO), Outcome of the Regulatory Scoping Exercise For The Use of Maritime Autonomous Surface Ships (MASS), MSC.1/Circ.1638, June 2021.

no State's rights are violated. In addition, even though the legal status of the UUV is separated from its mother ship, it must be noted that the type of carrier that launched the UUV must be considered. This also should apply to UUVs for the purpose of military activities. Regardless of the status of the launching ship, States that launched any UUV with military activity should have good faith in the country crossing its territory.

States also must make further rules regarding military surveys since in the Bowditch incident, the United States launched UUVs into the South China Sea in the context of military surveys. Indonesia also must act against foreign UUVs that enter its territory. From this case, security in Indonesia's territorial sea is still lack of law enforcement where this UUV case has happened more than once. In dealing with more incidents of this in the future, Indonesia must take firmer action against its maritime territory. Indonesia can also cooperate with other countries and take part in making more explicit rules for UUV activities at sea.

Indonesia can also make national regulations related to UUVs and apply rules regarding military survey procedures or marine scientific research in Indonesia. The regulations related to marine scientific surveys and research in Indonesia are not clear yet. With the existence of further regulations related to military surveys and marine scientific research, it is hoped that Indonesian waters will remain secure, and no foreign UUV intrudes into their territory. Indonesia must take firm steps to ensure security in its maritime territory so that it is not entered by foreign countries and used for military purposes.

Another action to anticipate UUVs illegally entering foreign territories is by applying technology to detect UUVs. These actions can be done by using technology in the form of sonar that can be used to detect the presence of UUVs that pass through the territorial sea and are on the seabed. With the development of technology in the ocean, including UUVs, it is necessary for the future to develop technology that can be used to detect each UUV so that it does not exist a UUV that crosses the territorial sea of another country's sea illegally. This technology is needed so that in the future, UUVs that pass illegally can be immediately followed up. In addition, strict action is required from the marine security agency regarding this UUV incident, and one of them can also be by having technology that can detect the presence of UUV.

It must be emphasized that if a country commits an act that violated international law, then the violation must be attributed to that state as a form of liability. Article 263 of UNCLOS 1982 explained the States' responsibilities related to marine scientific research activities.⁶⁶ Article 263 (1) of UNCLOS 1982 stipulates that States and international organizations are obliged to ensure that marine scientific research carried out by and on their behalf must comply with the rules in UNCLOS.⁶⁷ Furthermore, Article 263 (2) of UNCLOS 1982 regulates the accountability of coastal States or international organizations that arises if it violates marine scientific research activities carried out by other countries, foreign legal persons or entities, or international organizations and has an obligation to compensate for the losses that arise as a result of the violation.⁶⁸ Connected to the Bowditch incident, a State that launches UUV from a military aircraft

⁶⁶ Article 263, UNLCOS 1982.

⁶⁷ Article 263 (1), UNCLOS 1982.

⁶⁸ Article 263 (2), UNCLOS 1982.

carrier without permission to the country concerned or in the EEZ territory of another state conducting marine scientific research, then that state is responsible for the violation of international law it has committed.⁶⁹ States responsibility can arise when a State commits any act that violates its international obligations and the violations is attributable to that State.⁷⁰ Every survey activity by foreign ships carried out at sea is required to ask for permission from the coastal State first and can also be done by applying for a permit from a naval officer so that activities run legally.

E. CONCLUSION

As discussed above, it can be explained that UUV does not fulfilled the classification as ships and should not have the right of immunity from incidents related to UUV. This matter arises due to different interpretations between States regarding UUVs immunity and the classification of UUV into ships. Moreover, it can be concluded that UUV is not classified as ships and should not get the right of immunity regardless of its launcher. The military survey activities carried out by the United States in the Bowditch incident and from foreign UUVs founded in Indonesia's territory are illegal activities since they do not have consent from coastal States beforehand. These activities also violated the rights of coastal States whose sea areas are crossed. The Bowditch incident explained that the activity was carried out in the South China Sea, which is the Philippines' EEZ. However, United States' action violates international law because UUV does not get the right of immunity from its mother ship and does not have due regard in carrying out activities in other

states' territory. The incident of foreign UUVs in Indonesian territory also violates international law since the UUV traverses Indonesian waters without permission and conducts research without prior permission from Indonesia.

States have an essential role in monitoring and implementing international law and ensuring that the application of UUV does not harm other countries. To overcome the legal absence of regulation concerning UUV at sea, States must work together and act decisively so any incident will not happen again. Looking at the current legal status of UUV, it is better if the rules concerning UUV are applied according to their function. Although UUV has its mother ship, UUV has different rights and obligations from it. Furthermore, it can be concluded that it is better to make international instruments regarding UUV and further explanation concerning the types of UUV that are included as a ship or not. However, this regulation is recently being developed from the IMO Convention. Strict actions from marine security agencies and appropriate technology are needed. Regulations concerning UUV is an important matter so States can utilize the UUV for activities at sea without harming other State whose sea area is crossed. In addition, it is necessary to ensure the safety of navigation in international sea areas.

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⁶⁹ Joshi, Hrishikesh. "The Advent of Unmanned Underwater Vehicles and the Inadequacy of the Law of Man," *International Journal of Legal Developments and Allied Issues*, Vol. 4, 2018, p. 296-297

⁷⁰ Article 2, International Law Commission, Articles on State Responsibility for Internationally Wrongful Acts, UN Doc. A/RES/56/83, 2001.

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