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AUTONOMOUS SHIPPING- CULLING OUT TRADITIONAL SHIPPING LAW OR MERELY KEEPING MODERNITY IN PARIAH?

AUTHORED BY - AMOGH SAGAR¹

With all the issues typically arising in maritime law there is arrival of recent concept of Maritime Autonomous Surface Ships (MASSs) which does not rely on traditional definitions or criteria. It is a wholly new concept and plausibly supports an argument that revolves around the supporters of traditional understanding of technicalities and complexities of marine law. In this article, however, the convoluted concept has been contended to hold significant future prospect without blighting the ongoing nature of well settled law. This article also attempts to align the development with the settled position under legislations and case laws and along with that it highlights the necessity of coming up with additional changes wherever required just like acceptance of any concept would require. The article strictly conforms to current regime in every aspect without culling them out but at the same time not belabouring on any such point made to answer any issue expected to arise.

Keywords: Autonomous shipping, Surface vessels, Sea documents, response, Environment effects
Obstinate Present Legal Regime for Autonomous Shipping

Through the esteemed columns of this article it is to emphasise that where few countries which are unaware of marine trade law while certain thinkers of this department has shifted towards more than just advancement by involving autonomous shipping or what one would call unmanned vessel with use of Artificial Intelligence (AI) and technology. The conundrum lies in claim that legal personality be given to AI for its decision and consequences or not due to non-consciousness of AI itself.² International Maritime Organisation (IMO) has three distinct committees considering regulations for MASS namely Legal Committee (LEG), facilitation committee (FAC) and Maritime Safety Committee (MSC) where it agreed to jointly agreed to work on issues and progression of regulatory

¹ Final Year student in BBA LLB (H), Bennett University, Greater Noida, India

² Shengnan jia and Lijun Liz Zhao, Commercial and Maritime law in China and Europe 238 (1st ed., 2023)

issues in Joint MSC/LEG/FAC.³ It must clearly be stipulated that four degrees of autonomy is defined by IMO where it is further pertinent to note that more detailed description on the degrees are required.⁴ If the intricacies of MASS are kept aside then for sake of understanding “smart ships” can also be used interchangeably, in the sense that they operate at various degrees of autonomy and especially how this article focuses on aligning this concept within existing framework it is considered amenable but pointing towards one specific point that how economic pattern and business models must go through the change systematically.⁵ Undoubtedly, if such is the case then “digitally-abled” crew becomes utmost important and how shipping companies ought to run their working parallel to TVET (Technical and vocational Education and Training) academies and all related studies of such institutions.⁶ Today, it is considered that success of Maritime 4.0 being wholly the next phase for technical development is proportional to training of seafarers and encompassing the equipment to its optimum level.⁷ At this point it would be obvious to mention that safety of operational functions, crew safety and viability in commercial purposes would be the outcome. Now is the right time to mention that there was a posed challenge of ECDIS (a navigational chart system) and S-100 data (navigational-related decision making)- without going into any more technicality as it is not the focus of the article, it is pertinent to mention that arrival of Mayflower Autonomous Ship (MAS) project is one such example that has been built on these standards.⁸ The usefulness of data and statistics collected by the sail in 2022 is marks a positive response and keeping all the collective benefits it would be a discouraging step if industries do not focus in this particular direction but where the risk lies and it will eventually be mentioned. With this in line United Kingdom Marine Autonomous Systems Regulatory Working Group (MASRWG) paved a pathway for MASSs in form of ‘MASS UK Industry Conduct Principles and code of Practice’⁹. It is not an obligation within the country but whosoever is using this code shall hold responsibility of understanding and complying with laws, regulations policies relating to their activities. At this point it is important to understand the four degrees of autonomy that has been classified by IMO in its recent study.¹⁰ Degree one lays the

³ Liz Booth, Terminology Critical for autonomous ship rule development [2022] Maritime Risk International

⁴ MSC 100/20/Add. 1 Annex 2 at p.1 dated 12 December 2018

⁵ Professor Francis D Rose, Insuring smart vessels in a circular economy: An analysis from the perspective of potential change in Property Interest, LMCLQ at p.624, 625 (2022)

⁶ Liz Booth, Surfing the Digital Wave, MRI (2022)

⁷ Liz Booth, Skills anticipation critical to Maritime 4.0 success, MRI (2022)

⁸ Ibid

⁹ A voluntary code Version 6, November 2022

¹⁰ Prof. Baris Soyer and A. Tettenborn and G. Leloudas, Remote controlled and Autonomous Shipping: UK based case study 5 (January 2022), [\(PDF\) REMOTE CONTROLLED AND AUTONOMOUS SHIPPING: UK BASED CASE STUDY \(researchgate.net\)](#)

category where seafarers are on board and controls the functions where some functions could be automated. Second degree is the category where ship is being controlled and operated from another location however seafarers control and operate functions by being on board. Degree three includes human as well as system in monitoring but seafarers or operational crew would not be there on board. Lastly degree four lays that operating system of ship makes decision and determines actions all by itself. The degrees have been put in other words namely, autonomy assisted bridge (AAB), periodically unmanned bridge (PUB), periodically unmanned ship (PUS) and continuously unmanned ship (CUS) respectively.¹¹ This article focuses on challenges to legislations and concern that stubborn laws relating to maritime law but before that addressing the issue of security and answering the conflicting views is equally important.

Struggle Against Existing Conditions

A large section of interested readers would question the security and potential risks to public through misuse of MASSs and other issues like trade arise later which will be dealt here sequentially. It is argued that with due care the autonomous ships shall be safe and reliable mode and it does not treat current legislations as pariah. For such concerns of crime one might be interested to know that subjects such as Terrorism, Rescue, Navigation or criminal matters are dealt under Convention for the Suppression of Unlawful Acts against the safety of maritime navigation (SUA), 2005. It imposes high obligation on signatory states to prevent occurrence of criminal acts that threatens peace and security. The two major concerns arise regarding when these ships are used as weapon and situations where the ships transport illicit cargo. In 1988 the same legislation referred 'ship' as victim ship but after 2005 protocol the wide scope is evident which includes "*supported craft, submersibles, or any other floating craft*"¹². Hence it is safely concluded that remote controlled crafts are under ambit of 'ships' and any such exclusion would be contradictory to object and purpose of maritime security. Similarly, if there is a question of 'person' who are not on-board then the liability assessment is impossible then it is possible to answer in negation. The absence of offender ship and victim ship in case of *Achille Lauro* led to terrorists not liable under piracy acts and because of that SUA 2005 came up with Article 5bis that offenders can also perform criminal acts through dry land.¹³ Now the trifold risks: 'harm

¹¹ Paul Dean and Henry Clack, *Autonomous shipping and maritime law* 68, ed. Baris Soyer and Andrew Tettenborn, *New Technologies, Artificial Intelligence and Shipping Law in the 21st Century* (1st ed. 2020)

¹² *Suppression of Unlawful Acts*, Article 1 (1)(a), (2005)

¹³ Anna Petrig, *Autonomous offender ships and international maritime security law* 41, eds. Henrik Ringbom, Erik Rosaeg and Trond Solvang, *Autonomous ships and the law* (1st ed. 2021)

against ship' offences, terrorist encapsulating ship-as-weapon and 'illicit transfer from autonomous vessels' could be put to rest.¹⁴ Thus, there is no reason why an offence committed from shore can be a threat or perhaps a caveat to secured autonomous vessels. Only 40 states have ratified the convention which could be a concern but this is not different from other underlying problems in international law and cannot solely be a ground to dissuade MASSs. A balanced suggestion could be ratification of SUA 2005 or incorporating the pattern of legislation if countries are interested in modern trade and strict compliance with the punishment part. An important concern of public international law is discussed but next it is plausible to put forward the conventions that is at question of getting affected. For example, traditional ships assume presence of human element in navigational decisions on ship under COLREGs under rule 2 and 5.¹⁵ Thus, such uncertainties will hamper integration of MASSs and its arrival will be questionable and thus the following is an explanation on how these IMO conventions would in a sense be compliant for autonomous vessels. Before moving further, it is emphasised by the author that the discussed conventions and analysis is not a critique or loopholes to the well settled law but encouraging the arrival of autonomous shipping/ MASSs. In 1977 when Convention on International Regulations for Preventing Collisions at Sea (COLREGs) entered into force traffic separation scheme was focused upon but now it has shifted, among other things, to lacunae such as MASS navigation, terminologies, light or shape or sound signals, radio communications and role and responsibilities of remote operators.¹⁶ Concerns are raised whether shore-based controller can be brought under ambit of 'due regards' and responsibility of vessels, owners, masters and crew and whether in presence of controllers MASS is truly autonomous.¹⁷ Concerns are also raised in reference to 'sight and hearing' requirements of crew, requirements to avoid collision, traffic separation schemes, narrow channels.¹⁸ All the elements that are specified find its place in regulations that are connected with a specific involvement of presence of crew. However, a recent case of *Evergreen Marine (UK) Ltd Vs Nautical Challenge Ltd*¹⁹ has discussed to some length what is remarkable. Great abatement in collision is found out with advent of radar, ARPA (Automatic Radar Plotting Aid) and AIS (Automatic Identification System) when fitted for navigation in

¹⁴ Ibid, at p.40

¹⁵ Ibid, Henrik Ringbom, Developments, challenges and prospects at the IMO 56-68, at p.64

¹⁶ Gaps in regulations and standards for autonomous ships 205, John Erik Hagen, Sustainable power, Autonomous Ships and Cleaner Energy for Shipping (2022)

¹⁷ COLREG, Rule 2

¹⁸ COLREG, Rule 5,8,10 and 15

¹⁹ [2021] UKSC 6

vessels.²⁰ As ARPA is based on radar information good use in avoiding collision can be made possible by targeting on particular vessel and similarly as AIS relies on GPS and during operation it could provide necessary details like vessel's course and speed, closest point of approach and other related details.²¹ Although the case deals with primary issue of dispute between applicability of Narrow channel rules (rule 9) and Crossing situation (rule 15) of COLREGs the judgement has be based on passages received from Nautical assessors on visual observation of approaching vessel as key in these situations but as a matter of fact the collision has occurred between two vessels.²² The point asserted here is that nevertheless the collision has occurred but in any way if it makes sense that reliance on visual observation could have prevented the collision in question then the situation would never have arisen. The underlying object of such ships would be providing safety to people associated with such shipping and that can also be retained. The attention would be drawn here on definition of vessels because the root problem in different conventions arise out of the question that whether the definition of word 'vessel' is wide enough to include MASSs. Let us start by looking at an example of a floating object. In order to be a vessel purposive construction under the definition and specific consideration needs to be given every time. A houseboat cannot be considered as a vessel because it does not connote that is designed to carry person and/or goods nor is it navigable and merely because it is moored it cannot fall under ambit of 'vessel'.²³ The definition that is discussed here is important and immediately made after discussion of COLREGs because the least problematic definition of vessel has been understood under this convention under rule 3(a). Even under such wide definition there is an understanding that has developed by the time as is evident. Another pertinent and related convention is Salvage Convention 1989 which defines vessel as ship or craft that is capable of navigation as per Article 1(b). Similarly, once the understanding of vessel has been inculcated now the raft of timber can be held that it is neither a ship nor a sea-going vessel and structure like gas cylinder that functions as navigation beacon having lost its moorings are not to be considered as subject of salvage as they are not capable of navigation and the whole purpose of this convention is to bring an operation that assist a vessel or property in danger.²⁴ There is no reason why autonomous ships whether wholly or partially could not be subjected to salvation because they certainly has property/cargo loaded or at times certain operators who control it through a remote. Additionally the

²⁰ Ibid at para 71

²¹ Ibid

²² Ibid at para 74 and 145

²³ *The Environmental Agency Vs Gibbs* (2016) EWHC 843 (Admin) at paras 83,84 and 100

²⁴ Gotthard Mark Gauci, *Is It a Vessel, a Ship or a Boat, Is It Just a Craft, Or Is It Merely A Contrivance?*, *Journal of Maritime Law and Commerce*, Vol 47, No. 4, 479-499, at p.484 (2016)

point made by the author is that there is no reason why MASSs should be excluded from the purview of definition of ‘vessel’ when they carry person/goods and is much capable of navigation, in fact more focus is to be given on how smoothly and safely it navigates using technology. Ostensibly there is more inclination towards the traditional understanding but task to bring autonomous ships is only difficult and not impossible. Now we examine Convention on Safety of Life at Sea (SOLAS), 1974 having an object to set minimum standards for construction, equipment operation that makes ships focus on safety and ships sailing under the flag of member state has to comply strictly with the provisions. In my opinion MASSs are specifically brought in so as to reduce loss of lives and fulfil the trade without causing unforeseen damages to crew and goods but then arises the problem out of exception that regulations do not apply when ships are not propelled by mechanical means.²⁵ If put in another words the concern is that these category of ships are exempted under the guidelines because seafarers are not on board and it is controlled by an offshore Remote Control Centre but reply is in negation. Just like China developed harmonized solution by amending definitions, reconstructing regulations and separate mandatory/non-mandatory guidelines in consonance with International Safety Management (ISM) and just like Finland deemed the best way is to bring up new instrument.²⁶ It is urged that solutions exist but it would be time taking and could be controversial at international platforms. Structures of qualification standards for personnel like master, officers, watchkeepers onboard can be found under article STCW Convention (The convention on standards of certification, training and watch keeping). The wordings clearly say “...seafarers serving on board seagoing ships...”²⁷ that means MASSs could not find place under its ambit. A whole new training and qualification regime will be mandatory for operators based on shore for meeting safety object of the autonomous ships. A parallel convention to STCW is International Convention on Maritime Search and Rescue (SAR) mandates persons in distress at sea will be coordinated by organization from neighbouring countries and is led by France and Spain.²⁸ It is suggested that part dealing with role of masters need to be adjusted in welcoming the MASSs.²⁹ Thus, the discussion has been elaborated with respect to major conventions but the readers must understand that there are certain conventions also affected to some extent and need not be gone into length but plausible to mention some of them as follows: the UN Convention of law of the sea (UNCLOS), The limitation of liability for maritime

²⁵ SOLAS, Regulation 3(a)(iii), 1974

²⁶ Id note 16 at p.207-209

²⁷ STCW Convention, Art III

²⁸ Id note 16 at p.212

²⁹ Id

claims (LLMC), International Ship and Port Facility Security (ISPS), Load Lines Convention of 1966 (LLC), Tonnage measurement convention 1969 (TMC), Memorandum of understanding on port state control 1982 (Paris MOU), International Convention 1969/1973 incorporated in English law that includes seagoing vessels of 'any type whatsoever' making is sufficient to include MASS, International convention on civil liability for oil pollution damage 1992 and fund convention (CLC), International convention on liability and compensation for damage in connection with carriage of hazardous and noxious substances by sea 1996 (HNS), Bunker convention 2001, collision convention 1910, International convention relating to the arrest of seagoing ships 1952 (arrest convention), Maritime liens and mortgages convention.³⁰ For convenience it is urged that readers must go through the mentioned conventions in detail out of which few are expressly incorporated in English law while others are not but still are better for understanding on how autonomous shipping law can still coexist under their ambit while some of them would require a separate and new provisions. Other important aspect lies in an important arena of environment and MASSs.

Is There A Detrimental Effect Of MASSs On Environment?

In the era of major downfall of environment health MASSs would have to abide by the principles of international law that has primary goal of sustainable development. Let us examine and assess if there are adverse effects of MASS. To begin with the much celebrated principle of international law it should be well known that whenever there is found any sort of breach of an international obligation the concerned state has to follow principle of reparation, i.e., to eliminate the consequences out any illegal act had it not been committed.³¹ Under International Convention for Prevention of Pollution from Ships (MARPOL) pollutants have been categorised as 'particularly dangerous substances' like highly radioactive wastes, list of wastes with 'considerable amount' of less harmful wastes (for example lead or copper) and lastly wastes other than previous two categories.³² IMO has classified operational and accidental factors clarified that pollutants release when ship is on voyage more than accidental factors such as activities like discharge of sewage, tank residues, bunker oil and garbage and other related emissions.³³ It is argued that prevention of accidents and environmental discharge

³⁰ Id note 11, at p.72-84

³¹ Chorzow Factory case (PCIJ Series A No. 9, 1927)

³² Agbor I. Bassey and Patrick Chukwunonso Aloamaka, Implementation of International laws on Marine Pollution: Challenges and prospects, Vol 8, Issue 5, 146-163, at p.149 (2022)

³³ U. Ozdemir, H. Yilmaz & E. Basar, Investigation of Marine Pollution caused by Ship Operations with DEMATEL Method, International Journal on Marine Navigation and Safety of sea transportation, Vol 10, No. 2, 315-320, at p. 316 (2016)

is possible through additional assistance in vessel's operation and at the same time safe distance from other vessels avoiding navigational risks can be made possible.³⁴ The proponents state that productivity and fuel efficiency can be achieved through continuous monitoring in these vessels in even trivial situations.³⁵ Another argument is that digital optimization helps in fetching data like connectivity with port and is there is congestion or not to help vessel arrival timings and queuing outside of ports reducing emissions in air and data also shows that fuel consumption abates by 2-3 per cent during docking times.³⁶ Well it is plausible to put an argument that radioactive signals and continuous involvement of AI (radar, ARPA etc) in sailing a vessel might lead to potential health hazards to people so closely connected with operating autonomous vessels and largely to marine life and can be termed electromagnetic pollution. It has been declared dangerous and causing various problems and diseases.³⁷ It is left to practitioners of this industry on what they depend on for furtherance of the trade and at the same time judiciary will play an important role in bringing out the true benefits and colours of MASSs. Without further ado, negating on the question if there is a detrimental effects of autonomous vessels the author would like to outweigh the benefits and environment friendliness of these vessels from little of harm accentuated from a particular group of practitioners and would term it peevish voice to be discouraged. The UK is all set with its latest version of principles and code of practice for MASSs where it is evident that 'prevention of pollution'³⁸ has been given specific place under the code and the author emphasises other countries to involve similar or partial principles to welcome the future of shipping.

Response Of Various Countries- Is It Really Positive?

It is not overrated to state that primary challenge at the beginning would be how the non-crew communicates to external sources, situational awareness, interaction with systems and maintenance. Based on the prevailing challenges it has been studies exhaustively and number of trials have taken place. When benefits were realised then carefully more trials were conducted. How experienced seafarers could easily prevent the collision at sea by understanding the navigation or autonomous

³⁴ Sean Pribyl, Autonomous vessels in the era of Global Environmental Change 172, eds. Johansson, Fernandez et al., Autonomous vessels in Maritime Affairs Laws and Governance Implications (1st ed. 2023)

³⁵ Ibid, at p.173

³⁶ Ibid

³⁷ Radiation: Radar, published on November 2, 2007 available at <https://www.who.int/news-room/questions-and-answers/item/radiation-radar> last accessed May 8, 2023

³⁸ MASS UK Industry Conduct Principles and Code of Practice 2022 (V6): A voluntary code version 6, November 2022, part 2 code 18 Prevention of Pollution at p. 130

vessels would reduce operational costs and reduce CO₂ and NO_x emissions is intriguing.³⁹ With the study it was realised that traffic in South-East Asia is troublesome and for arrival of unmanned surface ships in this particular region: algorithm developed particularly for narrow channel including Traffic Separation Scheme is needed, steering aligned with weather conditions has to be inbuilt, surrounding awareness to avoid disturbing them like fishing vessel and their line and net, human resources that should be familiarised with the course, collaboration with European countries in development projects- these are given recommendations.⁴⁰ Example of South Korea sailed 38 meter vessel SAMSUNG T-8 controlled from Daejeon Marine Research centre almost 250 km away that analysed signals from tug's navigation and identifying obstacles using radar, GPS and AIS to avoid danger of collision and other parameters to enhance commercialisation of technology.⁴¹ The recommendations in mind Singapore's Smart Maritime Autonomous vessel (SMAV) was only one of its kind. Algorithms were found to especially developed for navigation and avoiding collision in crowded areas that is out of experiences of officers, seeing this Abu Dhabi ports in 2020 along with Canadian designer potentially aims for greater capability.⁴² Singaporean approach extended to health monitoring of shipboard, predictive diagnostics and condition-based maintenance. UK has been an inspiration for maritime laws and enacting laws or codes in this field. This includes designing, building, manufacturing, owning, operating or controlling MASSs and also updating systems when required both for autonomous as well as semiautonomous vessels. China came up with motive of setting world's largest offshore test site for unmanned surface vehicles including air-sea-submarine forces by developing testing fields, automatic mooring communications and network improvement.⁴³ It resulted in establishing test ground in 2019 and launching first autonomous cargo ship (Jin Dou Yun 0 Hao) as it completed voyage in Zhuhai to Hong Kong which is direct outcome of autonomous steering and avoiding obstacle been made possible.⁴⁴ Similar successful establishments are seen in Turku in Finland and Norway. It is possibly best to answer the point whether the outcome is positive or not in affirmation. No reason is understood why a country's approach would move towards testing

³⁹ Mou N, Ren H, Zheng Y, Chen J et al, Traffic Inequality and Relations in Maritime Silk Road: A network Flow Analysis, ISPRS International Journal of Geo-Information (2021), 10, 40 available at <https://doi.org/10.3390/ijgi10010040> 1-23

⁴⁰ Bornali Rahman, Analyzing appropriate autonomous vessel for South-East Asian route: from the view of seafarers (2022) Journal of Shipping and Trade 7, Article No. 21 available at <https://doi.org/10.1186/s41072-022-00122-9> , 1-19

⁴¹ Ibid note 16, at p.177

⁴² Ibid, at p.178

⁴³ Ibid, at p.180

⁴⁴ Insurance Marine News, China launches autonomous cargo ship on December 19, 2019 available at <https://insurancemarinenews.com/?s=China+launches+autonomous+cargo+ships> last accessed May 8, 2023

and improving autonomous ships by bringing in training, investing capital and time both if potential benefit is not what they expect. Nor is any reason to deny that the vessels if programmed and operated with due care an exorbitant rise in trade from MASSs would be visible. Hence, shifting from traditional mode of shipping is not actually harming but positive result is visible from the statistics.

Impact On Documents Involved in Marine Trade

The question now remains is determining positions where traditionally presentation of documents like Bill of lading results in exchange of goods or liability assessment under Insurance certificate but now when MASSs are involved. Carriage law aspects of manning includes- seaworthiness, care for the cargo and nautical fault exception. If one talks about seaworthiness then as per Hague-Visby Rules it is required to be 'properly manned' and it is possible that autonomous ships are covered under this provision when remotely they are controlled from shore.⁴⁵ When Bill of lading incorporates these rules then seaworthiness means that it should be well equipped for unforeseeable situations and what is required for fulfilment of this obligation is due diligence at beginning of voyage.⁴⁶ Even for fully autonomous vessels it is positive that it will be covered if due diligence has been exercised in selecting, installing and maintaining control system but liability of carrier is absolute that it will have to show what exactly happened and how the facts fit within exemption of any convention.⁴⁷ The recent case of *The CMA CGM Libra*⁴⁸ has clarified that unseaworthiness is a concept not subject to attributable threshold requiring that such attribute threatens safety of vessel or cargo but carrier has to exercise due diligence and such diligence is carried out in work of making vessel seaworthy regardless of whosoever carries out the task.⁴⁹ Carrier has even those responsibilities where the duty is of master or such defects that is reasonably discoverable once cargo is in his control.⁵⁰ Care of cargo is done by a sound system that is generally in practice in industry and monitoring can be done remotely like smart containers. For nautical fault exemption it is indeed required that software or system itself is developed.⁵¹ Regarding another important document, insurance document, the queries could be- are there attributes in MASSs that make them insurable, does these vessels need alteration of traditional principles and its doctrine, is structure of insurance market appropriate to cover such

⁴⁵ Hague-Visby Rules, Art.III 1(b) (1968)

⁴⁶ Ibid note 11, Dr. Frank Stevens, Carrier liability for unmanned ships: goodbye crew, hello liability?, at p.153

⁴⁷ Ibid, at p.155

⁴⁸ Alize 1954 and Anr Vs Allianz Elementar Versicherungs AG and others [2021] UKSC 51

⁴⁹ Ibid at para 145 (iii) and (vii)

⁵⁰ Ibid at para 145 (ix) and (x)

⁵¹ Id note 46 at p.161

vessels?- and the answer is in negative for number of reasons.⁵² All it is required for avoiding problems relating to insurance is development and acceptance of trade by these vessels. Further new risks like Design and programming errors, Dealing with RCCs and Cyber risks that have been discussed in previous part. Thus, it is contended that even under documents of marine trade there is no reason why there be confusion on nature of dispute and even if dispute arises due to newness of these vessels there is certainly no reason for subduing its arrival. For several issues and complex problems on insurance there are writings by proponents of this field but is not elaborated here as it is outside scope of this paper. The author grabs the essence by showing examples of bill of lading and similarly the ships fit under ambit of insurance.

Concluding Remarks

Initial points marked the basic understanding of surface vessels and how acceptance would pose convoluted problems at each step. Any arrival or development of Artificial intelligence and technologies would be claimed a blight on pre-existing position. However, the actual position of vessels are aligned by accommodating it under present conventions. It is pointed that there are lesser environmental repercussions that is sticking to objective ‘sustainable development’⁵³ of WTO looking at positive conclusion of countries. An extensive discussion on risks posed as an obstacle to arrival of autonomous vessels are also resolved with suggestions and ideas collected from the scholars of maritime trade. Last but not the least said vessels are also found to complying with erstwhile settled law on marine documents. It is also suggested that readers go through intricacies of insurance because this would be posed as a central issue when mishaps take place.⁵⁴ It is herculean suggestion of author to bring the arrival of ships into motion avoiding the kerfuffle and at last a request to critics not to put a wonderful development in a beleaguered state with obfuscating arguments because of which practitioners and developers and countries are left in agog on what lies is near future.

⁵² Baris Soyer, Insuring remote-controlled and autonomous shipping- A paradigm shift in law and insurance markets required? 22-40 ed. D. Rhidian Thomas, The Modern Law of Marine Insurance (Volume 5, 2023)

⁵³ World Trade report 2022, Climate change and international trade, available on: [wtr22_e.pdf \(wto.org\)](https://www.wto.org/wtr22_e.pdf) last accessed May 12, 2023

⁵⁴ Id at 52