

THE GREEN SQUID GAMES FOR AUTONOMOUS SHIPPING

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Literature Review: 6th International Conference on MASS, 2024

- ‘Steering towards sustainability: the impact of autonomous shipping on achieving sustainable development goals’ concludes that the MASS sub-industry’s optimistic ambitions must be checked and balanced with social, economic, and environmental consequences, via regulation. A Tsvetkova, K Wróbel, et al, *Steering towards sustainability...*, 2024, Journal of Physics: Conference Series 2867.
- ‘A novel method for evaluating ship concept performance in transport systems’ reflects on the unclear quantification of MASS emissions. Although the paper aims to answer the very pertinent question of ‘what are the impacts that need to be quantified to provide proof of the economic and environmental benefits of autonomy in a specific shipping application?’, the conclusion shies away from expressing a clear answer. H Nordahl, E J Tangstad, et al 2024 ‘A novel method for evaluating ship...’ Journal of Physics: Conference Series 2867
- ‘An emerging market? The European Maritime Industry’s View on Autonomous Maritime Systems: A Survey’ notes that manufacturers of MASS related technology are the driving force behind the sub-industry in Europe. H Burmeister, J Weisheit, et al 2024 ‘An emerging market? The European...’ Journal of Physics: Conference Series 2867
- ‘Impact of automation and zero-emission propulsion on design of small inland cargo vessels’ shows that zero-emission goals in the specific use area of small inland waterways remain difficult when considered from a holistic operational perspective. I Bačkalov, H Burmeister, et al 2024 ‘Impact of automation and zero-emission...’ Journal of Physics: Conference Series 2867
- In comparing mobile phones to ships, the authors of ‘Harmonizing Maritime Innovation: Enhancing International and National Standardization in Intelligent Ship Transport Systems’ state that while 8.4 billion mobile phones run on 2 platforms, 105 thousand ships run on 105 thousand platforms. That paper concludes by stating that harmonized standardisation in digitalisation and automation are prerequisites to a decarbonized shipping sector. K Y Koo, Ø JRødseth, et al 2024 ‘Harmonizing Maritime Innovation...’ Journal of Physics: Conference Series 2867
- ‘The economic and environmental viability of green and autonomous ships in inland shipping ecosystems’ emphasises that better economy and environment results can be achieved basis ecosystem-thinking because of the longer time durations and larger capacities involved in shipping when compared to road transport. The paper compares road transport to traditional diesel and electrical autonomous shipping on the Rotterdam-Ghent route. K Kloch and J N Kristiansen, 2024 ‘The economic and environmental viability...’ Journal of Physics: Conference Series 2867

CAN A SHIP SAIL IN THE DESERT?

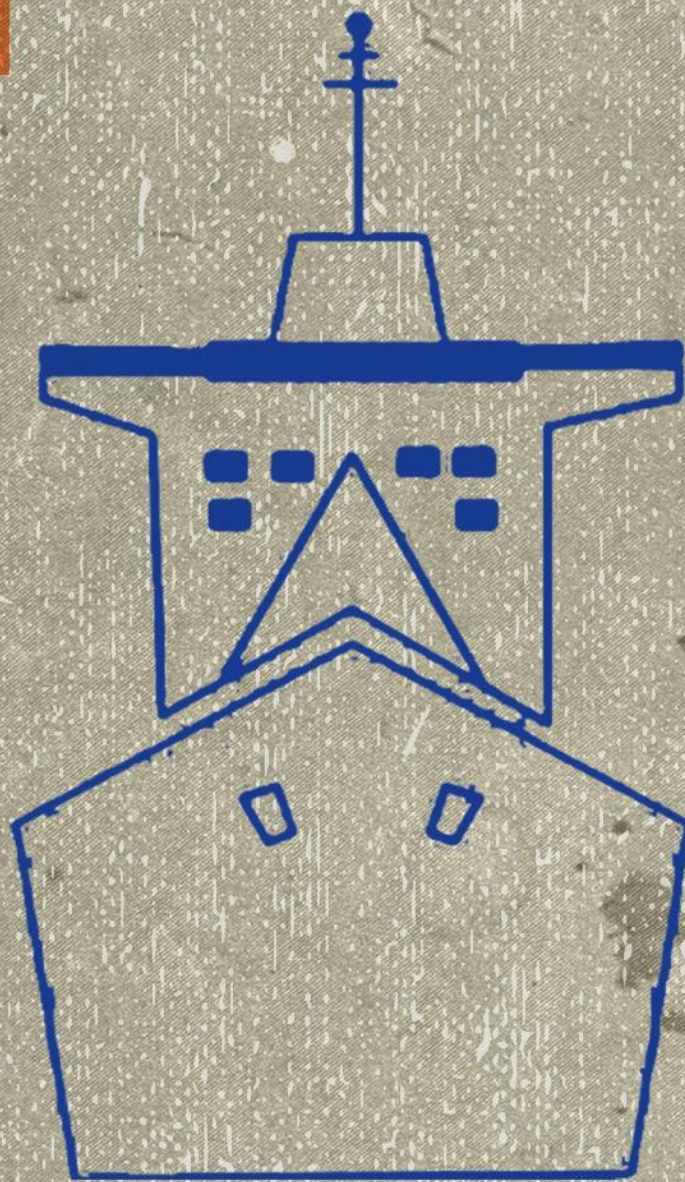


Philosophical underpinning for a Green MASS Sub-industry

- ‘the interconnectedness of all life called for a modest, gentle and cautious attitude toward nature, rather than the arrogant, aggressive and intrepid route taken by synthetic chemistry and its products. R Guha, Environmentalism, 97
- This is what a difference in approach, and based on background, can do to the idea of development: ‘the population in these societies had for the most part been adequately housed, clothed, and fed, now they expressed a desire for ‘more elegant cars, more exotic food, more erotic clothing, more elaborate entertainment’. Galbraith was expounding on the ‘preoccupation with productivity and production’ that followed World War II. John Kenneth Galbraith as quoted in R Guha, Environmentalism, 87.
- EF Schumacher, a German, and Lewis Mumford, an American, may also be taken to state the reproachment that ‘power, prestige and profit’ must kneel in front of ‘love’ for earth and life on earth to be safe again. R Guha, Environmentalism, 91.
- Another Gandhi contemporary, Madeleine Slade, or Mira Behn, had this to say about humanity’s technological ambitions, ‘by his science and machinery, he may get huge return for a time, but ultimately will come desolation’. R Guha, Environmentalism, 91.

FOR

1



INNOVATION

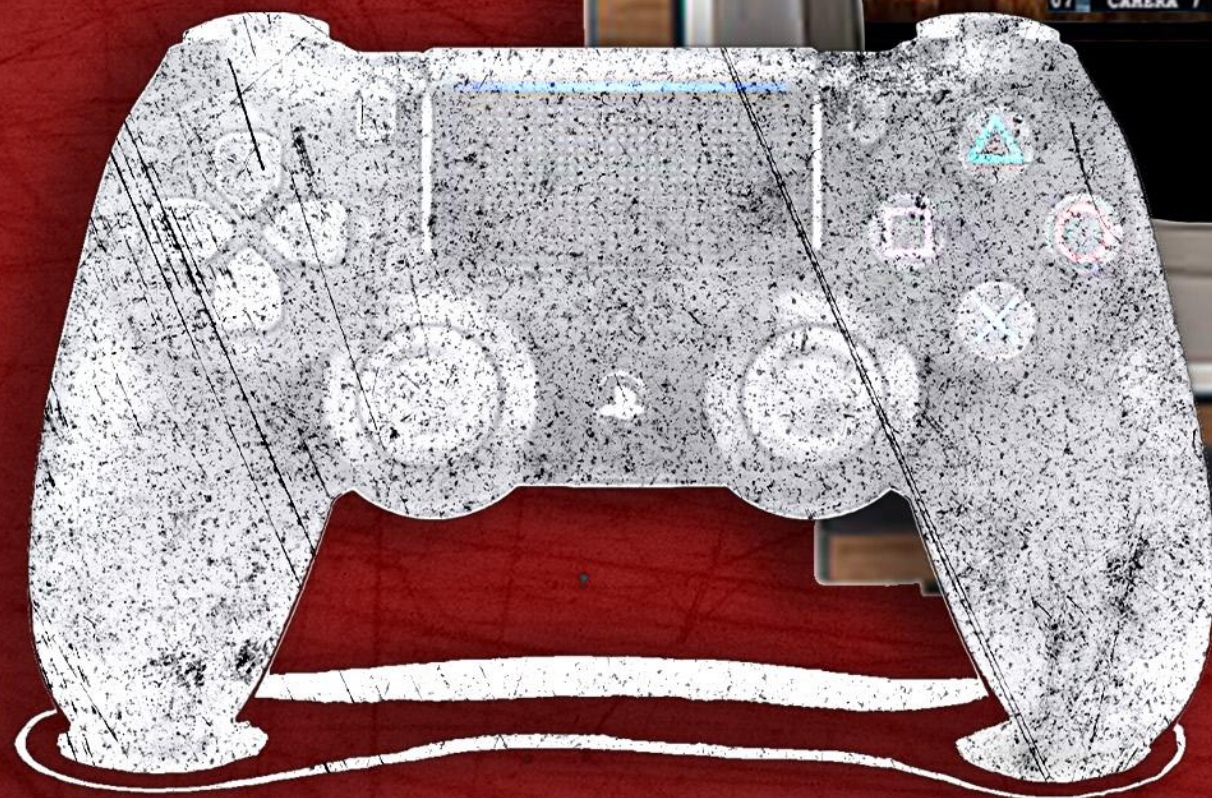


WHOM

Eco-centric or earth requirement (the climate change discussions)

- Industrial age innovations, like aviation and shipping, at least in their mechanised large logistics chain forms, came from anthropocentric demands, of a few, and not eco-centric needs of all.
- The current trajectory of global human development vis-à-vis Earth requires that we not only question development of the capitalist kind but also consider ways of employing it in ways that counter traditional ways.
- The Earth requires that we quickly and decisively reverse the climate harm that industrial societies have created in the past century or so.
- The increased temperatures result in global natural calamities. Those calamities do not see colour or religion or class or country. They treat the Earth as one and employ a retributive justice framework (storms, wildfires, earthquakes, tsunamis, droughts, etc) to call out human development.
- Innovation that tackles climate change must be situated in the Global South.
- Regardless of its origins, the use cases/employment/testing must be done in the areas of most “need”.
- The latest ships should be used to trade in places of least economic development.
- The idea is to reverse the perception of that society and its people that change cannot happen or will not happen.
- The idea is to change the perception that least economically developed means least deserving.

**CAN AUTONOMOUS SHIPPING BE
ENVIRONMENTALLY FRIENDLY!?**

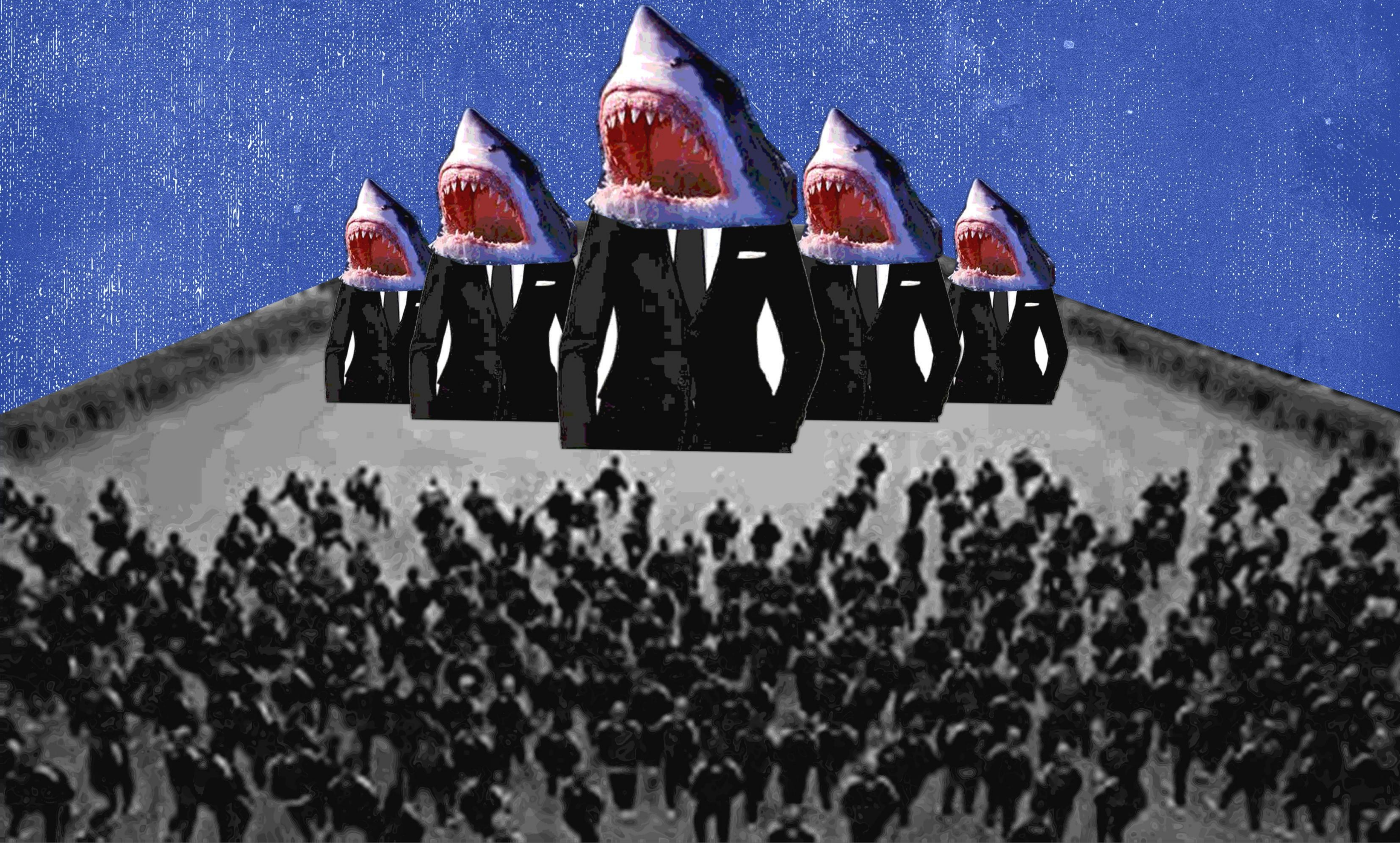


**CAN AUTONOMOUS SHIPPING BE
ENVIRONMENTALLY FRIENDLY!?**

The role of law in perpetuating disparities:
The Oxford Handbook of International Law and Development, 2023

- It states the objective of 'situating development in international law and international in the context of colonial and imperial history and the current climate crisis'. R Buchanan, L Eslava, and S Pahuja, 2023 'The Oxford Handbook of International Law and Development'
- Chapter titled 'Reinventing Sovereignty Removing Colonial Legacies, Opening Plurinational Futures' calls for a bottom-up approach where borders and nationalities are not used as a metric of exclusion. While focused on rights of indigenous people, it highlights that global solidarity and social mobilisation is required towards a post-extractivism economy.
- Importantly, development has been viewed as positing 'the 'present' of wealthy, northern states as the 'future' of the developing world'.
- Additionally, 'that development is a theory of social and economic change that masquerades as a universal history'.
- And finally, that the present form of international law and development result in 'profoundly unequal material conditions for both human and nonhuman life, threatening our future on the planet'.

COLLECTIVE INTERESTS MATTER.
WHOSE?



Lessons for the MASS sub-industry

- In its extractivist sense, the MASS industry presents a major problem to the likes of India and Phillipines, countries that supply a considerable number of seafarers to global shipping. Therefore, proliferation of MASS would not be seen positively by seafarer providing countries, many of whom have invested heavily in institutions of seafarer education, training, awareness and licensing.
- While on one hand providing seafarers, they also do not feature on the shipbuilding landscape as one would imagine they might. Thus, causing their predicament to be like that of the indigenous people in the Oxford paper, making them 'invisible' in the corporate and political sphere of MASS.
- It can be said that there is no need for autonomous shipping in terms of a transition from the traditional shipping industry.
- However, coincidentally and unsurprisingly, there is a well-known need for 'green shipping', if there is a real need for shipping at all.
- In a recent book on MASS by the IMO's World Maritime University, the author of the first chapter calls MASS a technology driven development, as opposed to a regulation driven development like decarbonisation. C Chae, R Baumler (eds), Maritime Autonomous Surface Ships (MASS) - Regulation, Technology, and Policy (2024)
- Henrique Marcos from Maastricht University, Netherlands, writes that technology alone is incapable of tackling 'the broader socioeconomic factors contributing to global ecological degradation' and how misplaced techno-optimism 'leads international law to undervalue the need for structural changes in our socioeconomic system'. Marcos, Henrique. 2025. "Tech Won't Save Us: Climate Crisis, Techno-Optimism, and International Law". Law, Technology and Humans 7 (1):22-46. <https://doi.org/10.5204/lthj.3816>.



Green contracting practices for MASS

- Non-punitive contractual clauses.
- Non-standard form contracts.
- Money-alternative remedies.
- Instilling trust: transparency: information symmetry.
- Offering remedial services: based on the law of specific relief.
- Relational contracts.
- Not using intermediaries like NVOCCs.
- Non-hegemonic 'law and arbitration' clauses.
- Using climate finance to hedge losses from breaches.





**JUST
NOT ENOUGH FOR
CREED**

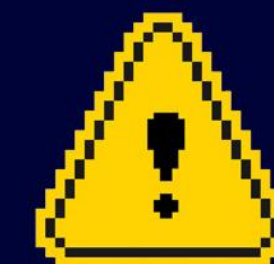
THE BALANCING ACT

START GAME

PLAYER 1

PLAYER 2

PLAYER 234 MILLION



Thank you!!

and see you at
autonomoushioplaw.com

HOME

X

WHO AM I

MARITIME LAW EXCERPTS

MARITIME LAW BOOKS

MARINE CYBER-INSURANCE

ADMIRALTY

SALVAGE

CARRIAGE OF GOODS BY SEA

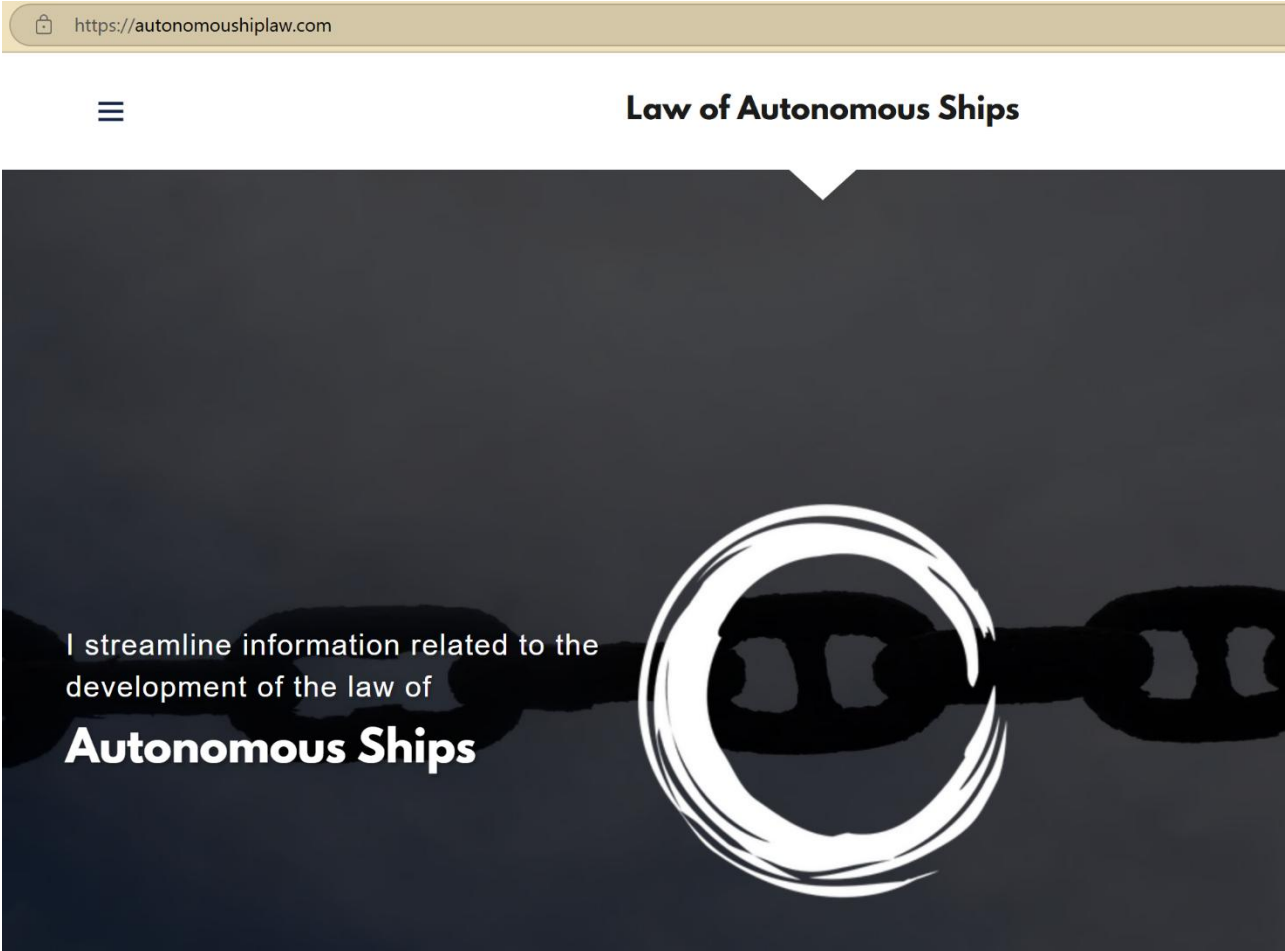
INLAND VESSELS

CHARTERPARTY CONTRACTS

INLAND WATERS: PICTURES

COASTAL WATERS: PICTURES

EMPIRICAL STUDIES



Maritime Lawyer | Consultant | Researcher

Mayank is a lawyer specializing in autonomous shipping operations. Dealing with socio-economic-ecological impact of laws is his favourite tangent of study. His research interest is supported by a keen curiosity for understanding etymological, philosophical, epistemological, and sociological underpinnings of different capitalist habits and society.

He has previously worked with law firms and practiced before various courts. When he is not teaching and writing, he consults for private clients as well as on multi-stakeholder projects. Mayank is regularly invited to give guest lectures at external institutions. Mayank also remains deeply involved with the idea of sharing knowledge and participates in national and international conferences. Having worked in 3 countries and several cities, Mayank brings a wealth of practical knowledge to his work.

Mayank is an avid traveller, concert goer, bibliophile, coffee and cocktail aficionado.

Explanations for the illustrations

1. The green colored squid games symbol on an overused picture of an autonomous ship. The black and white picture is to denote that the presentation is a futuristic insight into the idea of MASS.
2. This slide is to denote the irreversible damage and potential consequences of the shipping industry. It's also a metaphor for what will all the progress and development be worth if everyone around us is eventually going to be dead. The coke bottle is a symbol for heavy #consumerism that relies on the heavy industries and vice versa, creating a wicked cycle that induces vulnerability to climate change. Also, a take on how coke isn't good for resilience – for human body or nature
3. This slide is based on Innovation for all v Innovation for one. When design draws inspiration from nature, it can be understood as communal, because nature itself is designed in a way to be adaptive and accommodate the community around it. In contrast to when design draws inspiration from something that stands as the peak symbol for capitalism – Burj Khalifa.
4. The siren is essentially to get people's attention and make it look alarming, also criminal. The TV shows how detached we are from the reality of climate change. The controller shows an intent of trying to control these disasters that may be an indirect result of the carbon footprint created by shipping, through autonomous shipping, and how everything is being observed. None of the parties involved are blind to the consequences.
5. The sharks are a metaphor not just for the Giants in an industry but also creatures that dictate the terms of the ocean/sea/marine territories. Hence when the sharks are deciding everything – it proposes a question of whose interests are being looked at?
6. The squid game, Gandhi reference. Also, the background of squid game had dry, almost malnourished fields behind this tree, but this collage has more green fields ready to be harvested. Depicts growth, fruition and production.
7. The idea of autonomous shipping balancing on a precarious pile of cash (the economy) which is further burdening the nature. The fickleness is depicted by how one flick can change things up.
8. The idea of maritime industry itself is based on shipping goods ie commodities ie commodification ie consumerism – all the roads lead to greed and basically the human need to need something at all times. The cargo is the root cause of all problems. It's disguised well in neatly painted containers.
9. 234 Million people come under marginalized communities that are most vulnerable to climate change. They indirectly carry the burden of the ship. If one were to look at this like a video game, they somehow keep getting all the bad drop downs (denoted by the fire, v little money, the caution symbol, the toxic barrel) while losing out on the better power ups such as nature (trees/cloud) and money (big pile of cash).