

The Role of MARPOL in Protecting Belize's Marine Environment

Gavin Dakers

Belize High School

September 20, 2023

Word count: 1376

Introduction

Belize, known for its pristine waters and thriving marine ecosystems, confronts a daunting reality: a staggering 5.25 trillion fragments of plastic waste inundate the world's oceans, according to National Geographic (2022). This grim statistic is a stark reminder of the pressing necessity for international agreements like MARPOL (The International Convention for the Prevention of Pollution from Ships) to safeguard Belize's delicate marine environment.

MARPOL, established in 1973 and later modified by the 1978 Protocol, represents an extensive initiative by the International Maritime Organization (IMO), a specialized agency of the United Nations entrusted with regulating the maritime industry. This comprehensive framework, delineated into six distinct annexes, each addressing precise facets of ship-related pollution concerns, affords a nuanced and multi-pronged strategy for pollution. MARPOL covers oil spills (Annex I), noxious liquid substances (Annex II), hazardous substances in packaged form (Annex III), sewage discharge (Annex IV), garbage disposal (Annex V), and air pollution (Annex VI) (International Maritime Organization, 2019a). Therefore, MARPOL plays a crucial role in protecting Belize's marine environment and ensuring the preservation of its diverse ecosystems and the sustainability of this vital natural resource.

The Importance of Belize's Marine Life

Belize's marine life is an invaluable treasure that is essential for the nation and the entire world's ecosystem. The untouched coral reefs, bursting with diverse marine life, offer natural beauty and play a vital role in preserving ecological harmony. These reefs are essential homes for

numerous species, including economically valuable fish, while also playing a crucial part in capturing carbon and safeguarding coastlines against erosion. Consequently, MARPOL factors in safeguarding Belize's marine environment. MARPOL sets international standards for preventing pollution from ships and regulating the discharge of harmful substances like oil, chemicals, and sewage into the sea. By adhering to MARPOL's guidelines, Belize and the global maritime community contribute by preserving the country's rich marine biodiversity, ensuring that future generations can continue to benefit from its ecological and economic value.

Implementing MARPOL regulations: Annex I

Subsequently, following its ratification of MARPOL Annex I, Belize implemented systems aimed at mitigating oil pollution from ships. The Government of Belize enforces Annex 1 via the Environmental Protection Act Chapter 328. According to the Environmental Protection Act Chapter 328, it is prohibited for anyone to release toxic substances or hazardous waste, including petroleum oil, from a marine vessel into the harbors or sea of Belize (Department of the Environment, 2021). Those found liable may face conviction, with penalties including a fine not exceeding twenty-five thousand dollars or imprisonment for a term not less than six months and not exceeding five years, or both such fine and imprisonment (Department of the Environment, 2021). Hence, these stringent measures demonstrate Belize's commitment to enforce Annex 1 and safeguard its precious coastal and marine ecosystems from the harmful effects of oil pollution.

Furthermore, MARPOL Annex I has in place preventative and proactive strategies. For example, Regulation 37 of MARPOL Annex I mandates that vessels with a gross tonnage of 150 or more

for oil tankers and 400 or more for all other ships must possess an authorized Shipboard Oil Pollution Emergency Plan (SOPEP) to contribute to a noticeable reduction in oil spills along Belize's coast (International Maritime Organization, 2019b). These emergency plans include detailed procedures for responding to oil spill incidents promptly and effectively, underscoring the importance of preparedness and responsible environmental stewardship within Belize. Moreover, Annex I also encompasses regulations that go beyond emergency response planning. It stipulates that marine vessels must have oil filtering equipment, a crude oil washing system (if fitted), and other specific conditions that minimize the risk of oil pollution (Mattson, 2006). All in all, these cooperative efforts enhance the effectiveness of oil pollution control and underline Belize's dedication to maintaining the ecological balance of its coastal and marine environments.

Implementing MARPOL regulations: Annex IV

Moreover, the Belizean Government has made implementations to regulate MARPOL Annex IV, which emphasizes the prevention of pollution from sewage discharged by ships into the marine environment. As of October 2017, Belize had 987 active registered vessels (Belize Port Authority, 2017). Due to Belize's sustained growth and progress in the maritime sector, this figure will probably rise by the end of 2023. Additionally, the Belize Tourism Board (2022) reports that "there are approximately 333 cruise calls to Belize annually" (para. 5). As a popular tourist destination, Belize finds Annex IV particularly relevant. Specifically for marine vessels, the Environmental Protection Act Chapter 328 enforces against polluting the ocean with sewage. Like the penalties for oil pollution, they remain the same for sewage pollution: a fine of up to twenty-five thousand dollars, a prison sentence ranging from six months to five years, or a

combination of both penalties (Department of the Environment, 2021). Hence, Annex IV ensures that all marine vessels entering Belizean waters implement proper sewage treatment.

Furthermore, the Belizean government collaborates with various organizations to implement and uphold the conditions outlined in Annex IV for sewage maintenance and pollution control. For instance, Belize Water Services ensures the treatment of sewage from Belmopan, Belize City, and San Pedro Town, managing and monitoring wastewater treatment to ensure that contaminants are removed before any discharge occurs (Belize Water Services, n.d.). This commitment to responsible sewage management contributes to the well-being of the local communities, who rely on tourism and sea access for their livelihoods. In essence, the government and organizations within Belize reflect the nation's dedication to preserving its pristine coastal and marine landscapes while sustaining its vital tourism industry.

Implementing MARPOL regulations: Annex V

In similar efforts, Belize remains steadfast in its commitment to safeguarding its coastal and marine ecosystems as it implements the regulations outlined in MARPOL Annex V. Annex V primarily focuses on preventing and reducing pollution by garbage from ships at sea. The government of Belize, recognizing the importance of this regulation, enforces Annex V through various mechanisms outlined in the Environmental Protection Act Chapter 328. This act prohibits marine vessels from disposing of garbage, including plastics, food waste, and other forms of pollutants, into Belizean waters (Department of the Environment, 2021). Those found violating these regulations face similar penalties for oil and sewage pollution – a fine not exceeding twenty-five thousand dollars, imprisonment ranging from six months to five years, or

a combination of both (Department of the Environment, 2021). This stern stance underscores Belize's unwavering dedication to preserving its precious marine environment and combating the scourge of marine litter.

Additionally, Belize takes proactive measures to ensure compliance with Annex V. The Belize Port Authority collaborates closely with maritime stakeholders to develop and implement waste management plans, emphasizing the proper handling and disposal of ship-generated garbage (Belize Port Authority, n.d.). These plans include procedures for segregating and storing garbage on board and provisions for disposing of it in designated port reception facilities. Belize's dedication to these proactive strategies demonstrates its commitment to minimizing the impact of marine litter and upholding the standards outlined in MARPOL Annex V. In summary, Belize's efforts to implement MARPOL regulations, including Annex V, underscore the nation's determination to protect its natural beauty and play a vital role in the global fight against marine pollution by enforcing strict penalties and responsible waste management.

Conclusion

Overall, the role of MARPOL in protecting Belize's marine environment is of utmost significance. As demonstrated throughout this discussion, the international agreement, with its six annexes addressing various forms of ship-related pollution, provides Belize with a robust framework to safeguard its delicate coastal and marine ecosystems. By implementing MARPOL regulations, such as Annex I for oil pollution, Annex IV for sewage discharge, and Annex V for garbage disposal, Belize displays an unwavering commitment to responsible environmental stewardship. The stringent penalties outlined in the Environmental Protection Act Chapter 328

serve as a potent deterrent against pollution. At the same time, proactive strategies, such as the progression of emergency response plans and waste management procedures, emphasize the nation's dedication to preserving pristine marine landscapes. By adhering to MARPOL, Belize not only protects biodiversity and the vital tourism industry but also contributes to the global effort to combat marine pollution and ensure the sustainability of oceans for future generations. In a world where the health of the oceans is more critical than ever, Belize's commitment to MARPOL stands as an exemplar of responsible environmental leadership.

References

- Belize Water Services. (n.d.). *Wastewater Treatment*. Retrieved September 19, 2023, from <https://www.bws.bz/wastewater-treatment.html#:~:text=Treatment%20is%20provided%20by%20a,hydraulic%20retention%20time%20in%20each.>
- Belize Port Authority. (2017). *Country Report on MARPOL Annex VI- Belize*. The University of Trinidad and Tobago. Retrieved September 19, 2023, from https://utt.edu.tt/uploads/Belize_-_Country_Presentation_on_Marpol_Annex_VI.pdf
- Belize Port Authority. (n.d.). *Maritime Safety*. Retrieved September 18, 2023, from <https://portauthority.bz/maritime-corner/maritime-safety/>
- Belize Tourism Board. (2022, July 5). *Cruise | BTB*. <https://www.belizetourismboard.org/licensing/cruise/>
- Department of the Environment. (2021). *Environmental Protection Act Chapter 328 of the Substantive Laws of Belize Revised Edition 2000*. Retrieved September 18, 2023, from <https://doe.gov.bz/legislation/>
- International Maritime Organization. (2019a). *International Convention for the Prevention of Pollution from Ships (MARPOL)*. Retrieved September 18, 2023, from [https://www.imo.org/en/about/Conventions/Pages/International-Convention-for-the-Prevention-of-Pollution-from-Ships-\(MARPOL\).aspx#:~:text=The%20International%20Convention%20for%20the,2%20November%201973%20at%20IMO.](https://www.imo.org/en/about/Conventions/Pages/International-Convention-for-the-Prevention-of-Pollution-from-Ships-(MARPOL).aspx#:~:text=The%20International%20Convention%20for%20the,2%20November%201973%20at%20IMO.)
- International Maritime Organization. (2019b). *Shipboard Marine Pollution Emergency Plans*. Retrieved September 19, 2023, from <https://www.imo.org/en/OurWork/Environment/Pages/Shipboard-Marine-Pollution-Emergency-Plans.aspx>

Mattson, G. (2006). MARPOL 73/78 and Annex I: an assessment of its effectiveness. *Journal of International Wildlife Law and Policy*, 9(2), 175-194.

National Geographic. (2022). *Ocean trash: 5.25 trillion pieces and counting, but big questions remain*. Retrieved September 18, 2023, from

<https://education.nationalgeographic.org/resource/ocean-trash-525-trillion-pieces-and-counting-big-questions-remain/>