

# POSITIVE ATTITUDE STARTS AT MARITIME SCHOOL!

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BRIEFER 8

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# BRIEFER INTRODUCTION

Plastic pollution is one of the fastest growing environmental problems. To tackle this issue, the World Wide Fund for Nature (WWF) implemented the “**Clean Ports, Clean Oceans: Improving Port Waste Management in the Philippines**” project (hereinafter “the project”), in partnership with the Grieg Group, in three ports in the Philippines - Batangas, Cagayan de Oro and Manila North from 2020 to 2023. This project, funded by the Grieg Foundation, was developed under the No Plastic in Nature Initiative.

Baseline studies on the generation and management of waste in ports, conducted under the project, have revealed the crucial roles played by key entities within the maritime sector including the maritime higher education institutions and maritime training institutions.

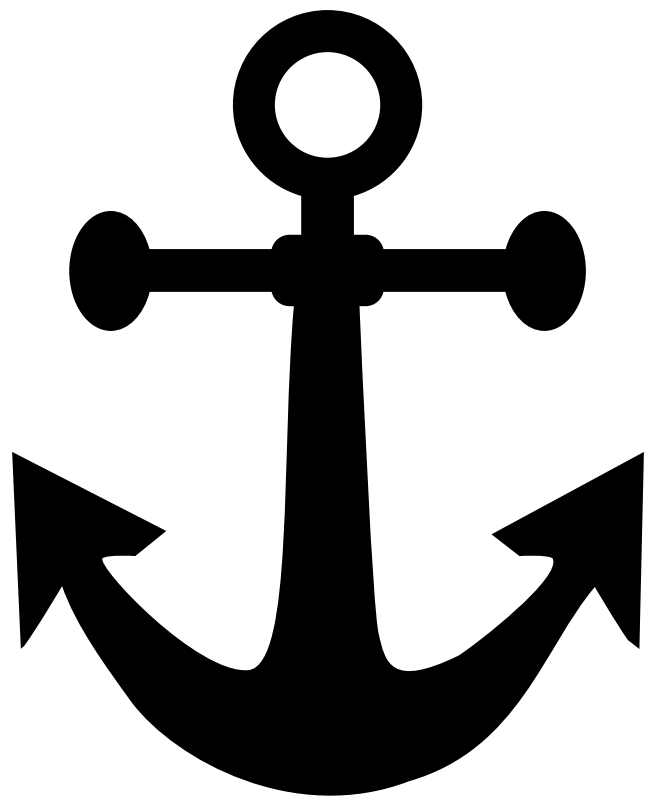
**Seafarers at the frontline of the implementation of policies and regulations related to environmental issues within the maritime industry.** They have a crucial role in protecting the marine environment and schools can act as catalysts to instill a sense of responsibility and stewardship for students. In the Philippines, the curriculum of maritime schools does not currently have any modules on the topic of plastic pollution. Seafarers are consequently not often aware of plastic pollution and how the maritime industry is contributing and is being affected by its impacts. This gap highlights the urgent need to develop a training module focused on the critical environmental issue of plastic pollution to prepare the next generation of seafarers to actively contribute to a cleaner and more sustainable maritime industry.

This brief, published by WWF-Philippines, aims to share the experience and lessons learned from WWF in promoting education and awareness on environmental matters and plastic pollution among future seafarers through the development of a module on this topic for maritime schools, MARINA, and other relevant stakeholders.

# BACKGROUND

In the Philippines, the maritime schools have been designated as one of the **key stakeholders in the Strategic Action Plan for Marine Plastic Litter**, particularly in the teaching of the modules that focus on the solid waste management and plastic waste management in the maritime industry. .

WWF worked with the Maritime Industry Authority (MARINA) to **improve the environmental aspects of the current curriculum of seafarers in maritime schools**, and especially the aspects of plastic pollution. The project worked on a module that MARINA will be piloting in a partner maritime school. This activity is part of MARINA's Strategic Action Plan on Marine Litter, which is a plan that falls under the National Plan of Action for the Prevention, Reduction and Management of Marine Litter (NPOA-ML).



# TARGET STAKEHOLDERS

To effectively address plastic pollution in the maritime sector, as well as to develop and implement the module geared towards environmental awareness in the maritime industry, it is essential to engage and collaborate with key stakeholders.

## 1 Government authorities

particularly its department that provides guidelines to maritime schools and educational institutions


## 2 Maritime schools

## 3 Experts in the subject matter

i.e., plastic pollution, maritime law, environmental engineers

In developing and advocating for a module on plastic pollution in the maritime industry, the project worked with the following key entities:

- **MARINA:** As the government agency responsible for regulating and supervising the maritime industry in the Philippines, MARINA plays a pivotal role in shaping industry standards and practices and ensuring that policy and legal frameworks incorporate guidelines for proper waste management.
- **Commission on Higher Education (CHED):** Recognizing the significance of educational institutions in shaping future seafarers, CHED's involvement is crucial especially in aligning curriculum with environmental awareness and waste management education.

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- **Maritime schools:** These institutions are the breeding grounds for the maritime workforce of the future. Engaging maritime schools in the initiative entails incorporating plastic pollution awareness and waste management modules into their curriculum. This equips students with the knowledge and mindset required to actively address plastic pollution as part of their professional responsibilities.
  - **Solid waste and plastic waste management experts:** Collaboration with experts in solid waste management adds a vital layer of credibility and effectiveness to the initiative. Their input ensures that educational content is accurate, up-to-date, and in line with industry best practices, thereby enhancing its impact and relevance.
  - **Student seafarers:** The primary beneficiaries of this initiative are the student seafarers themselves. Their active involvement in the educational process ensures that they grasp the importance of their role in combating plastic pollution. Equipped with the knowledge and understanding of environmental impacts, they are more likely to become advocates for sustainable practices once they enter the workforce.

## ASSESSMENT OF CURRENT CURRICULUM AND AVAILABLE MODULES

It is important to understand what is being taught in the maritime schools and training institutions. One must look at the prescribed curriculum to better understand the status of teaching about the environment to seafarers. From this assessment, we should be able to answer the following:

- Is the environment integrated in the curriculum? If yes, which part of the curriculum is being taught and at what level?
- How is the environment being taught in the curriculum?
- What are the environment-related topics in the curriculum?
- What are the environmental issues that are included in the curriculum?
- Are there learning outcomes related to environmental conservation or sustainability?

The project gathered its insights from its partnership with **Project Mariknows** [1], a local organization of driven seafarers that advocates for environmental stewardship and leadership in the maritime school curriculum, and the consultation meetings conducted for the module development.

It has been mentioned that marine plastic pollution is covered through lessons on MARPOL Annex V and VI wherein they emphasize that **waste should not be produced on-board ships**. They added that they complement lessons with community outreach programs including tree planting, waste segregation, coastal clean-ups, and other environment-related activities.

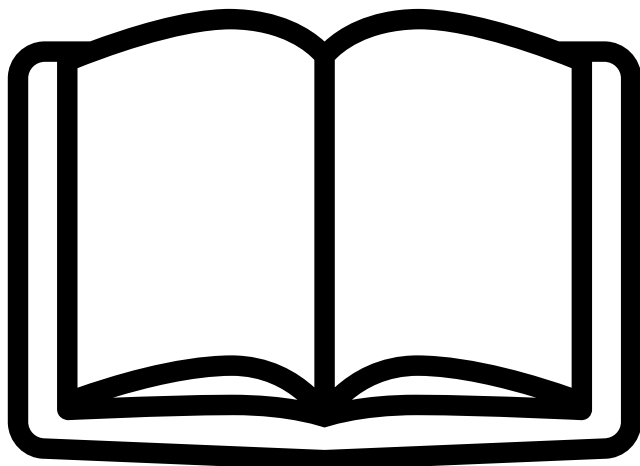
[1] [HTTPS://WWW.FACEBOOK.COM/MARIKNOWSPH](https://www.facebook.com/mariknowspH)

# DEVELOPMENT OF TRAINING MODULE


From the assessment, it is now time to develop the training module that would build on how the topic - plastic pollution in the maritime industry for this matter - is being taught.

The module should aim to **equip future seafarers with the knowledge and awareness required to address plastic pollution effectively**. Recommended topics for the module are as follows:

- **Topic 1 – Maritime Industry and Plastic Pollution:** this module emphasizes the maritime industry's role in combating plastic pollution and highlights the ongoing initiatives aimed at tackling this pressing issue.
- **Topic 2 – Introduction to Plastic Pollution:** this module offers a comprehensive overview of plastic pollution, including its various dimensions and the existing plastic waste management practices within the country.
- **Topic 3 – Global and National Regulatory Frameworks:** this module delves into different international and local policies and legislation pertaining to marine plastic litter. The discussion encompasses different regulatory aspects and even touches upon pertinent standards like ISO guidelines.
- **Topic 4 – Circular Economy and Influencing Sustainability:** this module discusses the concept of the circular economy, which strives to minimize residual waste and promote resource sustainability by untangling economic growth from resource consumption through a closed-loop resource flow approach.



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It is essential for seafarers to learn about plastic pollution, its impacts, and their role in addressing it for several compelling reasons:

- **Environmental Compliance:** there are international and national maritime laws and regulations on the **proper disposal and prevention of pollution by garbage** including plastics from ships such as the International Convention for the Prevention of Pollution from Ships (MARPOL) Annex V. Knowledge of such regulations and other waste management practices enables seafarers to comply with international and national laws, reducing the risk of violations and penalties and preventing accidental plastic pollution causing contamination to oceans and seas.
- **Environmental Stewardship:** seafarers usually take long periods of time at sea and may witness firsthand the devastating effects of plastic pollution on marine ecosystems. Equipped with knowledge about plastic pollution's impacts, including its effects on human health, **seafarers can foster a sense of environmental stewardship**, encouraging seafarers to protect and conserve the oceans that sustain their livelihoods, and proactively adopt responsible waste management practices.
- **Environmental Influencers:** informed seafarers can become **influencers in their workplace, encouraging proper waste disposal** among their co-workers and passengers. Additionally, they can actively contribute to global efforts in combating plastic pollution, making a positive impact on a larger scale.



# CONSULTATION WITH KEY STAKEHOLDERS

A pivotal step in ensuring the module's relevance and efficacy is **engaging key stakeholders** through workshops and focused group discussions. Valuable insights are gathered from maritime schools and other key stakeholders. These discussions provide a platform to **gather feedback** on the modules, **suggestions** for additional topics to cover, and recommendations for **refining the content**.

It is important to have the government- mandated agency to spearhead the consultation as maritime schools and institutions would readily participate as they see this as an **opportunity to converse with maritime industry players**. Also, all government agencies that maritime schools are complying with for their curriculum should be in the consultation for lesser back-and-forth about the module content.

# PILOTING THE MODULE IN A MARITIME SCHOOL

Following the feedback and refinements, the module can be piloted in a maritime school for **further assessment and evaluation**. It is important to have a good partnership with the government-mandated agency for maritime schools' guidelines so they can be the one to select and co-pilot the module in a maritime school. This pilot may be coupled with instructor's training and demonstrations to align on the teaching approach for the said module. Having this pilot is a **vital stage in fine-tuning the module based on practical experiences and feedback from both the educators and students**.

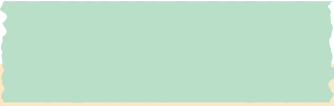
# ASSESSMENT AND EVALUATION OF CURRICULUM DURING PILOT

It is essential to conduct an evaluation and assessment of the curriculum following the pilot phase in order to make necessary improvements to the modules. The following key questions should be addressed:

- Did the pilot phase achieve its objectives?
- What feedback was received from students and educators during the pilot?
- What challenges and obstacles were encountered during the pilot?
- Were the learning objectives clearly defined and achieved?
- What adjustments or improvements are needed for the modules?
- What impact did the modules have on students' understanding and awareness of environmental issues?



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Working with MARINA showed the project team that the **dynamics of the government-mandated agencies** should be studied to **better understand how the module can be integrated in the school curriculum.** In the Philippines, for example, MARINA can only recommend the adoption of the module to maritime schools and institutions, but it is up to the Department of Education or the Commission on Higher Education if these will be mandated for the curriculum.

**Consultation meetings with the maritime schools** also showed how the involvement of maritime schools in discussions related to planning strategies for the maritime industry is helpful for them. This has been seen as a **potential entry point in encouraging them to adopt the module and develop environmental exposure trips** for their students.

# CONCLUSION

The maritime schools play a crucial role in advancing solid waste management practices within the maritime industry by instilling a strong sense of environmental responsibility in their students. In the process of implementing the strategic plan, WWF Philippines has collaborated with maritime schools, MARINA, and other key stakeholders. The result of this collaboration is the development of a comprehensive training module titled "Addressing Plastic Pollution in the Maritime Industry," which encompasses four key topics that offer a profound exploration of plastic pollution, including its underlying intricacies, the existing policies and frameworks governing solid and plastic waste management, the multifaceted initiatives and interventions designed to combat the issue, and the practical application of circular economy principles and sustainability strategies.

The driving ambition behind this module lies in the intention to produce future seafarers who are not only well-versed in the subject matter but also empowered to enact positive change in the realm of marine environment preservation.

In essence, the development of a training module represents a crucial step towards safeguarding our oceans from the menace of plastic pollution by equipping maritime professionals and students with the positive attitude, necessary knowledge, skills, and motivation. By integrating these into their educational experience, the foundation for future generations to prioritize sustainability and environmental consciousness is established.