



PHILIPPINE MARINE ENVIRONMENT PROTECTION

SITUATION
REPORT
2022



CONTENTS

1	INTRODUCTION	1
2	OBJECTIVES OF THE SITUATION REPORT	2
3	COMPLIANCE OF THE PHILIPPINES TO IMO CONVENTIONS	2
4	MEASURES TO ENHANCE AND FACILITATE THE IMPLEMENTATION OF RATIFIED CONVENTIONS	3
5	LEGAL BASIS	6
6	MARITIME ACCIDENTS / INCIDENTS	7
7	EFFORTS OF THE MARINA TO ENHANCE MARINE ENVIRONMENT PROTECTION	9
8	CONCLUSION	18
9	RECOMMENDATIONS	19
10	BIBLIOGRAPHY	20

INTRODUCTION

Despite of covering 71 percent of the Earth's surface which is serving as a source of food; oxygen and jobs, the oceans are probably considered as the most undervalued, least understood and most biologically diverse out of all ecosystems. (UNEP, n.d.)

Marine ecosystems contain a diverse array of living organisms and abiotic processes. Since all lives in the ocean is interconnected¹, it is very crucial for the people to be well-informed on its current situation as well as the other bodies of water, which may contribute in developing and improving the maritime industry particularly marine environment protection.

Different industries including the maritime sector are still facing the threat of climate change. In fact, the World Meteorological Organization (WMO) stated that the increase on impacts of extreme weather and climate change in Asia were recorded, which ricocheted between droughts and floods in 2022². In regard to maritime industry, more than 90 percent of the goods traded internationally are shipped by sea, with maritime trade volumes set to triple by 2050 based on the records of the Organization for Economic Co-operation and Development³. However, climate change has led to more frequent extreme weather events, which threaten livelihoods particularly in vulnerable communities. In this case, the maritime sector needs to be aware of increased risks to shipping and ports from more intense storms. (Brown, 2022)

Even though the climate change is a natural phenomenon, it is important to take note that the shipping industry is also responsible in the ongoing problem of climate change that the world is facing. (Oceana, n.d.) According to Sinay Maritime Data Solution, a tech start-up composed of a young and dynamic international team with a strong interest in technological innovation, international shipping accounted almost 3 percent of the greenhouse gas emissions globally in the year 2022. It was also stated that the transportation sector, including shipping, is responsible for about 20.2 percent of the total CO₂ emissions worldwide, making it the second-largest contributor to global carbon pollution⁴. In this regard, it is very significant to highlight the importance of marine environment protection in order to prevent or at least reduce the severe effects of climate change. Through the enhancement of marine environment protection in the country, concerned government agencies and private maritime stakeholders may address the various negative impacts on marine environment such as but not limited to greenhouse gas emissions; marine litter; releases of ballast water containing aquatic invasive species; use on anti-foulants; oil and chemical spills among others.

In addition, it is also important to take care of the marine environment to ensure the continuous contribution of the maritime industry to global economy. In Philippines, the ocean economy

¹ Marine Ecosystems <https://education.nationalgeographic.org/resource/resource-library-marine-ecosystems/>

² State of the Climate in Asia 2022 <https://public-old.wmo.int/en/our-mandate/climate/wmo-statement-state-of-global-climate/Asia-2022>

³ How climate change is impacting shipping and maritime trade <https://www.wartsila.com/insights/article/how-climate-change-is-impacting-shipping-and-maritime-trade>

⁴ How much does the shipping industry contribute to global CO₂ emissions? <https://sinay.ai/en/how-much-does-the-shipping-industry-contribute-to-global-co2-emissions/#:~:text=In%202022%2C%20international%20shipping%20alone,contributor%20to%20global%20carbon%20pollution.>

grew by 21.1 percent in year 2022, tallying a gross value added of PHP 857.74 billion from PHP 708.10 billion in 2021. The Philippine Statistics Authority (PSA) stated that the percent share of ocean-based industries to the Philippine Gross Domestic Product (GDP) was recorded at 3.9 percent in 2022; 3.6 percent in 2021 and 3.7 percent in 2020 respectively.

OBJECTIVES OF THE SITUATION REPORT

The **Philippine Marine Environment Protection Situation Report 2022** aims to determine the current situation of the maritime industry in the country particularly marine environment protection. It includes the issues, concerns, corresponding actions and recommendations to enhance marine environment protection in the Philippines, as well as the updates on the **Maritime Industry Development Plan (MIDP) 2028** which covers the Program on Promotion of Environmentally Sustainable Maritime Industry.

In addition, the Maritime Industry Authority (MARINA) through its Shipyards Regulation Service (SRS) and the new internally created Marine Environment Protection Development Service (MEPDS) in coordination with the MARINA Regional Offices (MROs) provided the updates on its respective efforts to ensure the effective and efficient implementation of policies related to marine environment protection.

COMPLIANCE OF THE PHILIPPINES TO IMO CONVENTIONS

Based on the updated version of the Maritime Industry Development Plan (MIDP) 2028 as of December 2023, the Philippines is considered as a global center for marine biodiversity. Located within the Coral Triangle, there is a higher concentration of species per unit area in the Philippines than anywhere in neighboring archipelagic territories such as Indonesia and Wallacea⁵. It has 3,212 fish species, 731 of which are considered commercially important.

It was also stated in the MIDP 2028 particularly the Overriding Program on the Promotion of Environmentally Sustainable Maritime Industry that the Philippines is a signatory to the International Maritime Organization (IMO) conventions which pertain to marine environment protection such as the following:

1. The International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978, or "MARPOL 73/78" including the following Annexes:
 - Annex I: Regulations for the Prevention of Pollution by Oil (entered into force 2 October 1983)
 - Annex II: Regulations for the Control of Pollution by Noxious Liquid Substances in Bulk (entered into force 2 October 1983)
 - Annex III: Prevention of Pollution by Harmful Substances Carried by Sea in Packaged Form (entered into force 1 July 1992)
 - Annex IV: Prevention of Pollution by Sewage from Ships (entered into force 27 September 2003)

⁵ Convention on Biological Diversity, 2009

- Annex V: Prevention of Pollution by Garbage from Ships (entered into force 31 December 1988)
 - Annex VI: Prevention of Air Pollution from Ships (entered into force 19 May 2005)
2. The International Convention for the Control and Management of Ships' Ballast Water and Sediments (BWM Convention), 2004
 3. The International Convention on the Control of Harmful Anti-fouling Systems in Ships (AFS Convention), 2001
 4. Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Convention), 1972, as amended
 5. 1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972
 6. International Convention on Oil Pollution Preparedness, Response and Cooperation (OPRC Convention), 1990
 7. International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (Fund Convention), 1992
 8. International Convention on Civil Liability for Oil Pollution Damage (CLC Convention), 1992

Moreover, the Philippines is a member of the United Nations Law of the Sea (UNCLOS), Convention on Biological Diversity, United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol. The Philippines also ratified the Paris Agreement on Climate Change on April 25, 2016 and Basel Convention on the Control of Transboundary Movements of Hazardous and their Disposal (Basel Convention) in 1993.

MEASURES TO ENHANCE AND FACILITATE THE IMPLEMENTATION OF RATIFIED CONVENTIONS

The Government of the Philippines through the Maritime Industry Authority (MARINA) and other concerned government agencies adopted measures in order to enhance and facilitate the implementation of ratified conventions and international instruments, which the Philippines is one of the signatories:

1. Formulation of the **Philippine Biodiversity Strategy and Action Plan (PBSAP)**⁶ as a strategic instrument that envisions that by 2028, biodiversity is restored and rehabilitated, valued, effectively managed and secured, maintaining ecosystem services to sustain healthy, resilient Filipino communities and delivering benefits to all. The PBSAP integrates and mainstreams the Convention on Biological Diversity (CBD) objectives into the national development and sectoral planning framework that includes measurable targets for CBD commitments. These objectives are: a) Conservation of biological diversity; b) Sustainable use of its components; and, c) Fair and equitable sharing of benefits arising out of the utilization of genetic resources.

⁶ Department of Environment and Natural Resources - Biodiversity Management Bureau (2015); The Philippine Biodiversity Strategy and Action Plan (PBSAP)

2. Enactment of **Republic Act No. 9729 or the Climate Change Act** which provides the policy framework to systematically address the growing threats of climate change on community life and its impact on the environment. The national climate change framework strategy was translated into a **National Climate Change Action Plan (NCCAP)**⁷, which prioritizes food security, water sufficiency, ecological and environmental stability, human security, climate-smart industries and services, sustainable energy, and knowledge and capacity development as the strategic direction for 2011 to 2028.

The NCCAP strategic directions that cover the maritime industry is the Strategy on Climate- friendly Industries and Services which prioritizes the creation of green and eco-jobs and sustainable consumption and production, and focuses on the development of sustainable cities and municipalities. In addition, the strategy on Sustainable Energy is relevant to the maritime sector. It prioritizes the promotion and expansion of energy efficiency and conservation, the development of sustainable and renewable energy, environmentally sustainable transport, and climate-proofing and rehabilitation of energy systems infrastructures, which is also relevant to the maritime sector.

3. Filing of House Bill No. 735 entitled “An Act Providing for the Full and Effective Implementation and Enforcement of International Maritime Instruments to which the Philippines is a State Party” in the 19th session of Congress.
4. Completed the drafting of the Implementing Rules and Regulations for the BWM and AFS Conventions which are currently undergoing legal review and updating pending the enactment of House Bill No. 735.
5. Issuance of the following MARINA rules and regulations to implement the BWM and the AFS conventions:
 - a. **MARINA Memorandum Circular No. SR 2020-04** to ensure that all marine/ antifouling paints entering/ manufactured in the Philippines are compliant with the international standards. MARINA is closely coordinating implementation of the circular with the Bureau of Philippine Standards (BPS) under the Department of Trade and Industry (DTI).
 - b. **MARINA Memorandum Circular No. SR 2020-05** provides rules for the implementation of the BWM Convention and covers all Philippine registered ships engaged in international trade. Currently, MARINA, PCG, and PPA, with DOST and the University of the Philippines (UP), are conducting a port micro-biological baseline survey which will serve as scientific basis for determining the need to implement the circular in the domestic shipping sector. MARINA and the Department of Science and Technology (DOST) are making steps to develop a low cost BWM treatment system.

⁷ Climate Change Commission (2011); National Climate Change Action Plan 2011-2028

6. Developed and implemented the **National Strategic Action Plan 2018-2022** during the IMO-MARINA MEPSEAS Project which serves as a roadmap in accelerating the Philippines' implementation of the BWM Convention.
7. Crafted the **Marine Environment Protection Strategy Green Maritime Philippines: Protect and Conserve** to further advance the full and effective implementation of relevant marine environment protection policies and standards in the country. This Strategy serves as the roadmap in the implementation of the marine environment protection conventions and the initiatives of the maritime industry.
8. Strengthened the collaboration of the MARINA with **DOST-Philippine Council for Industry, Energy and Emerging Research and Development (PCIEERD)** for the development and implementation of policies and programs, in the identification of same-risk areas, groups of fouling organisms as well as data analysis methods with respect to port biological baseline survey techniques under the PORTEC Project.
9. The MARINA issued **Memorandum Circular No. SR-2020-06 (Rules and Regulations on the Mandatory Use of 0.50% m/m Sulphur Limit on Fuel Oil for All Philippine-Registered Ships in Compliance to Annex VI of MARPOL 73/78, as amended)** to address issues and concerns relating to the emission of Sulfur Oxide (SO_x) from ships.
10. In 2021, MARINA issued **Memorandum Circular No. SR-2021-05 (Rules and Regulations on the Implementation of Ships' Energy Efficiency Management Plan (SEEMP) and Data Collection System (DCS) for Fuel Oil Consumption for all Philippine Registered Ships)**. The Circular aims to ensure that all Philippine registered ships shall comply with Part 1 and 2 of the SEEMP Regulation 22A of MARPOL 73/78 Annex VI to promote operational measures that establish a mechanism to improve a ship's energy efficiency in a cost-effective manner. It promotes the effective control of all sources of marine pollution and requires that all practicable steps to reduce air pollutions and greenhouse gases from ships be taken.
11. Conducted the **National Rapid Assessment on Biofouling Management** under the IMO-MARINA Biofouling Management Project in 2021.
12. Issuance by the **Philippine Ports Authority (PPA) of Administrative Order Nos. 01-2020 and 08-2021** – Provision of shore reception facilities which aims to comply with the requirements of MARPOL 73/78, on the provision of efficient and adequate port reception facilities for all type of wastes and quantities from ships without causing undue delay to the ships operations and prevent / reduce marine pollution by controlling or prohibiting illegal disposal of wastes from ships.
13. Issuance by the Philippine Ports Authority (PPA) of **Memorandum Circular No. 11-2021 entitled "Ban on the Use of Unnecessary Single- Use Plastic Products"**
14. The **Department of Environment & Natural Resources (DENR)** is spearheading a **National Plan of Action (NPOA)** to help prevent, reduce and manage marine litter in the

country. It also promotes shared responsibility, accountability and participatory governance in addressing Marine Litter.

15. Concluded a **Memorandum of Understanding on 23 September 2022 between the MARINA and the World Wildlife Fund (WWF) – Philippines** to work together in reducing plastic pollution by preventing plastic leakage into ports and the ocean. Consequent to this, the MARINA issued an advisory on May 10, 2023 requiring domestic passenger vessels to play the video on proper disposal of plastics onboard ships.

LEGAL BASIS

The main international convention which covers the prevention of pollution of the marine environment by ships from operational or accidental causes is known as the International Convention for the Prevention of Pollution from Ships (MARPOL). Back on 02 November 1973, the MARPOL Convention was adopted at the International Maritime Organization (IMO). In 1976 to 1977, a number of tanker accidents were recorded which led to the adoption of the Protocol of 1978. Since the 1973 MARPOL Convention had not yet entered into force that time, the 1978 MARPOL Protocol absorbed the said parent Convention, which eventually led to the combined instrument known as the MARPOL 73/78 that was entered into force on 02 October 1983.

The said Convention was amended in the year 1997 after the adoption of a Protocol and a new Annex VI was added which entered into force on 19 May 2005. Over the years, MARPOL has been updated by amendments⁸. According to IMO, the Convention includes regulations aimed at preventing and minimizing pollution from ships - both accidental pollution and that from routine operations - and currently includes six technical Annexes. Special Areas with strict controls on operational discharges are included in most Annexes. In line with this, the Annex VI: Prevention of Air Pollution from Ships of the MARPOL 73/78 sets limits on sulphur oxide and nitrogen oxide emissions from ship exhausts and prohibits deliberate emissions of ozone depleting substances; designated emission control areas set more stringent standards for SO_x, NO_x and particulate matter. A chapter adopted in 2011 covers mandatory technical and operational energy efficiency measures aimed at reducing greenhouse gas emissions from ships.

Meanwhile, based on the Presidential Decree No. 474, s. 1974, the Government of the Philippines declared the policy of the State to accelerate the integrated development of the maritime industry in the country to attain the following objectives:

- (a) To increase production and productivity in the various islands and regions of the archipelago through the provision of effective sea linkage;
- (b) To provide for the economical, safe, adequate and efficient shipment of raw materials, products, commodities and people;

⁸ International Convention for the Prevention of Pollution from Ships (MARPOL)
[https://www.imo.org/en/about/Conventions/Pages/International-Convention-for-the-Prevention-of-Pollution-from-Ships-\(MARPOL\).aspx](https://www.imo.org/en/about/Conventions/Pages/International-Convention-for-the-Prevention-of-Pollution-from-Ships-(MARPOL).aspx)

- (c) To enhance the competitive position of Philippine flag vessels in the carriage of foreign trade;
- (d) To strengthen the balance of payments position by minimizing the outflow of foreign exchange and increasing dollar earnings;
- (e) To generate new and more job opportunities.

In line with this, it was also stated in PD 474 that in order to attain the said objectives, the Government of the Philippines through the Maritime Industry Authority (MARINA) shall adopt and implement a practicable and coordinated Maritime Industry Development Program (MIDP) which shall include, among others, the early replacement of obsolescent and uneconomic vessels; modernization and expansion of the Philippine merchant fleet, enhancement of domestic capability for shipbuilding, repair and maintenance; and the development of reservoir of trained manpower.

As of 2023, the MARINA in coordination with the concerned government agencies and private maritime stakeholders has been spearheading the updating of the MIDP 2028 which also covers the Program on Promotion of Environmentally Sustainable Maritime Industry, which aims to establish a sustainable maritime industry and livable communities that will redound to the creation of green jobs⁹. The said overriding program includes projects such as the formulation of national policies and guidelines for the implementation of Annex I to VI of MARPOL 73/78 and its subsequent amendments.

In this regard, the Philippine Marine Environment Protection Situation Report 2022 is crucial in order to determine the updates related to marine environment protection in the country in accordance to its abovementioned legal basis.

MARITIME ACCIDENTS / INCIDENTS

The promotion and enhancement of marine environment protection in the country especially in the vulnerable communities will not only protect the livelihoods but it will also help in reducing maritime accidents / incidents that continue to happen. Based on their 2022 Annual Statistical Report, the MARINA investigated a total of 115 maritime accidents / incidents in the Philippines, which is equivalent to 54.5-percent decrease from the records last 2021¹⁰.

Table 1: Maritime Accidents / Incidents CY 2022 by Area of Jurisdiction

Area of Jurisdiction	Number of Maritime Accidents / Incidents
MRO NCR	4
MRO I & II	6
MRO IV	35
MRO V	3
MRO VI	14
MRO VII	18

⁹ MIDP 2028 Overriding Program 2

<https://drive.google.com/file/d/1pVhBRf7GHoqWQ2a52t6ginx4gdfQzAhC/view>

¹⁰ MIDP 2028 Overriding Program 1

https://drive.google.com/file/d/14_JwvjzzZaRc_11bUCElSSdcVRhCz0Q/view

MRO VIII	6
MRO IX	13
MRO X	6
MRO XI	1
MRO XII	0
MRO XIII	9
TOTAL	115

Source: 2022 MARINA Annual Statistical Report

Table 1 shows the number of maritime accidents/ incidents in 2022 by area of jurisdiction, which were investigated by the MARINA. The highest number of maritime accidents / incidents that year were under the jurisdiction of MRO IV which was tallied at 35; followed by MRO VII with 18 and MRO VI with 14 respectively.

Some of the maritime accidents/ incidents may result to oil spill which could lead to severe effects in the maritime industry. For the year 2022, the Philippine Coast Guard (PCG) tallied a total of 10 oil spill incidents in Luzon, Visayas and Mindanao as reflected in Table No. 2:

Table 2: Oil Spill Incidents for the Year 2022

Type of Accident	Date of Incident	Location of Incident	Spill Category and Approximately Amount
OIL SPILL	JANUARY 14, 2022	PANGLOA ISLAND, BOHOL	TIER 1
OIL SPILL	FEBRUARY 11, 2022	MOVENPICK, MACTAN, CEBU	TIER 1
OIL SPILL	FEBRUARY 12, 2022	BRGY. IBO, LAPU-LAPU CITY, CEBU	TIER 1
OIL SPILL	MARCH 20, 2022	SEAOIL GENSAN BULK TERMINAL, BRGY. BAWING, GENSAN CITY	TIER 1
OIL SPILL	APRIL 25, 2022	MACO PORT, BRGY. SAN ROQUE, MACO, DAVAO DE ORO	TIER 1
OIL SPILL	SEPTEMBER 09, 2022	ISABEL LEYTE	TIER 1
OIL SPILL	OCTOBER 20, 2022	BRGY. BULACAN MABINI BATANGAS	TIER 1
OIL SPILL	OCTOBER 20, 2022	BRGY. SALONG, CALACA BATANGAS	TIER 1
OIL SPILL	OCTOBER 20, 2022	PUROK 3 BRGY BANGAN, BOTOLAN ZAMBALES	TIER 1
OIL SPILL	OCTOBER 23, 2022	MUELLE LONEY AROYO BRIDGE LAPUZ ILO-ILO CITY	TIER 1

Source: Deputy Chief of Coast Guard Staff for Marine Environmental Protection CG-9, PCG

Considering the vast waters of the Philippines, the country remains vulnerable from incidents of oil spills. In this regard, as stated in the December 2023 version of the MIDP 2028, the MARINA in collaboration with the Philippine Coast Guard (PCG) persists in its efforts to prevent and address oil spills by undertaking the following:

- Strict implementation of MARINA Memorandum Circular No. 2015-11 which requires a Safety Management System (SMS) for all domestic ships. The SMS covers “instructions and procedures to ensure safe operations of ships and protection of the environment in compliance with relevant international and flag state legislation.
- Checking of vessel compliance to sewage and oil pollution prevention policies.
- Strict implementation of MARINA Memorandum Circular No. SR-2020-02 (Rules and Regulations on the Construction of Tank and Installation of Equipment to Collect, Store and Treat Sewage from Ships in Compliance to Annex IV of MARPOL 73/78, As Amended).
- Checking of ships’ compliance with the Garbage Management Plan, in which proper disposal of garbage generated onboard is carried out.
- Participation in coastal cleanup drives initiated by the PCG along coasts and shorelines.
- Strict implementation of MARINA Memorandum Circular No. 2010-01 which requires tankers in the domestic trade to comply with the regulation provided under the Circular to ensure safety and the protection of the marine environment.

EFFORTS OF THE MARINA TO ENHANCE MARINE ENVIRONMENT PROTECTION

Aside from the issuance of policies related to marine environment protection in the past years, the MARINA has been also conducting other activities in collaboration with partner agencies and relevant maritime stakeholders. The following are the efforts of the MARINA to enhance marine environment protection in the country for the year 2022:

1. MARINA Advisory No. 2022-31 on Mandatory Submission of Certification from the Local Community Environment and Natural Resources Office (CENRO) or Concerned Office/ Unit of the Department of Environment and Natural Resources (DENR) on Compliance to Tree and/or Mangrove Planting for All MARINA-Registered Shipyards Per Executive Order No. 26, Series Of 2011: In support to the implementation of Executive Order No. 26 series of 2011, Interdepartmental Convergence Initiative for National Greening Program, this Advisory was drafted to require MARINA-registered shipyard to participate in the mentioned program through mandatory tree/ mangrove planting activity.

2. MARINA Advisory No. 2022-33 on the Regulations on Energy Efficiency for Ships (Energy Efficiency Existing Ship Index (EEXI) and Carbon Intensity Indicator (CII) and IMO’s Strategy in Reducing Greenhouse Gases (GHG) Emission: This Advisory informs the concerned stakeholders that the amendments to Annex VI of the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) introducing the mandatory measures to reduce emissions of greenhouse gases (GHGs) from international shipping was adopted by the IMO 76th Session of the Marine Environment Protection Committee (MEPC 76). These are the technical requirement to reduce carbon intensity, based on a new Energy Efficiency Existing Ship Index (EEXI); and the operational carbon intensity reduction requirements, based on a new operational Carbon Intensity Indicator (CII).

3. 11th IMO Inter-Sessional Working Group on Greenhouse Gas (ISWG-GHG 11), 14-18 March 2022, virtually hosted by IMO: The IMO ISWG-GHG discussed the following items: (a). Development of draft lifecycle GHG and carbon intensity guidelines for maritime fuels (draft LCA guidelines); (b). Further consideration of concrete proposals on how to keep the impacts of the short-term measure under review; (c). Lessons-learned exercise of the comprehensive impact assessment of the short-term measure; (d). Consideration of proposals for the revision of the ship fuel oil consumption Data Collection System (DCS), among other.

The EEXI is a framework for determining the energy efficiency and CO₂ emissions of in-service vessels over 400 GT. Adapted from the Energy Efficiency Design Index (EEDI) for newbuilds, the EEXI requires ship owners to assess and measure their ships' CO₂ emissions by design against specific emission reduction factors for each vessel type. Owners can then implement technical measures to adjust their vessels' emissions to the required level.

The CII requires in-service ships of over 5,000 GT to quantify and report on carbon emissions from ongoing operations. The CII provides ship operators with the factor by which they must reduce carbon emissions annually to comply with regulations and ensure continuous improvement. Vessels will be rated on a five-tiered scale (from A to E) for performance. For ships that achieve a D rating for three consecutive years or an E rating in a single year, a corrective action plan needs to be developed as part of the SEEMP and approved.

4. 9th Session of the Sub-Committee on Pollution Prevention and Response (PPR9), 04-08 April 2022 virtually hosted by IMO: The IMO Sub-Committee on Pollution Prevention and Response (PPR9) discussed the following agenda: (a). Reduction of the impact on the Arctic of Black Carbon emissions from international shipping; (b). Standards for shipboard gasification of waste system and associated amendments to regulation 16 of MARPOL ANNEX VI; (c). Evaluation and harmonization of rules and guidance on the discharge of discharge water from exhaust gas cleaning systems (ECGS) into the aquatic environment, including conditions and areas; (d). Development of amendments to MARPOL ANNEX VI and the NO_x Technical Code on the use of multiple engine operational profiles for a marine diesel engine; (e). Unified interpretation to provisions of IMO environment-related conventions (proposed unified interpretations of provisions in MARPOL Annex VI and the NO_x Technical Code 2008); (f). Proposal for a new output on matters related to SCR, Systems Control of Volatile Organic Compound (VOC) emissions, proposed methods for monitoring the compliance of the fuel oil Sulphur limit.

5. The 2nd Marine Environment Protection Forum (MEPF2): In celebration of the Maritime and Archipelagic Nation Awareness Month (MANA MO), the MARINA in collaboration with the World-Wide Fund for Nature (WWF) – Philippines conducted the 2nd Marine Environment Protection Forum (MEPF2). With the theme “Clean Ports and Ships, Clean Oceans,” the said activity was held in three (3) parts including a.) webinar series on marine litter; b.) pre-forum workshop via webinar; and c.) the forum proper:



- **Three-part Internal Webisode was conducted by the MARINA and WWF-Philippines on 04, 05 and 12 August 2022** in preparation for the MEPF2 Pre-Forum and Forum Proper. One of the main objectives of the internal webinar series is to provide updates on the current international and local policies regarding ship-and port-waste management. It also aims to discuss marine plastic litter, its impact, and some solutions to address this environmental issue for relevant government agencies such as the MARINA, Philippine Ports Authority (PPA), Philippine Coast Guard (PCG) among others with the WWF – Philippines.

- **MEP Pre-forum was conducted via virtual platform on 09 September 2022** in anticipation for the MEPF2. The overall goal of the pre-forum is to draft an integrated plan of action to address marine litter. Specifically, the forum aims to achieve the following, such as the: (1) Alignment of relevant port authorities and government agencies on the science of marine plastic litter and its impact; (2) Consolidation of summary of the policies and programs of relevant port authorities and government agencies, as presented in the internal webinar series; (3) Raising of awareness on the policies and programs implemented by the Department of Science and Technology (DOST), Cebu Ports Authority (CPA), and Philippine Fisheries Development Authority on marine plastic litter; and, (4) Discussion and finalization of the action plan on marine plastic litter. The pre-forum was attended by various government agencies and private sector including maritime stakeholders.



- **The 2nd Marine Environment Protection Forum (MEPF2) Proper on 23 September 2022:** The MEPF2 Proper intends to facilitate knowledge exchange and capacity building across maritime agencies and other concerned stakeholders about marine environment

protection that specifically aims to express views on different marine environmental issues and concerns; to agree on addressing the issues and its causes to protect and improve the state of the marine environment of the country; to establish a unified goal among the government and the private sector for the development and subsequent implementation of the marine environment strategy of the Philippines; and, to make firm commitments to support the plans and programs for the protection and conservation of the marine environment of the country. The outputs of the forum are the following:

- Adoption of the National Strategic Action Plan on Marine Plastic Litter
- Launching of Communication Materials for Ships and Ports;
- Statement of Commitment by Lead Concerned Agencies; and,
- Ceremonial Signing of the Memorandum of Understanding (MOU) between MARINA and WWF – Philippines



6. Collaboration Meeting and Field Visit to Shipyards in Navotas City between MARINA, WWF- Philippines and WWF-Norway on 11 October 2022: This collaboration meeting and shipyard visit in Navotas City were among the significant factors in strengthening the partnership between the MARINA and the WWF-PH as part of the MOU that was signed during the 2nd Marine Environment Protection Forum (MEPF2) last September 2022. The topics discussed during the meeting revolved around



the expansion of partnership between the two parties on ship and port waste management to different shipyards in the Philippines. After the said meeting, Shipyards Regulation Service (SRS) designated personnel accompanied the WWF-PH and WWF-Norway delegates to Josefa Slipways Inc. and Nautilus Shipyards and Repair Inc. in Navotas City to learn more about the shipyards and their challenges relating to the solid waste management.

7. Baseline Survey on Marine Plastic Litter: This survey is part of the joint project of the World-Wide Fund for Nature (WWF) and Grieg Group, funded through the Grieg Foundation, that aims to reduce plastic pollution in the Philippine ships and ports. MARINA through the SRS assisted the WWF in this survey that aims to determine the level of awareness of the relevant populations on the role of the maritime sector in addressing plastic pollution in Philippine ports and ships and their level of awareness of solid waste management.

8. Incorporation of the Parts of MARINA's NSAP on Marine Plastic Litter to DENR-EMB's NPOA-ML:

The salient items of the National Strategic Action Plan (NSAP) on Marine Plastic Litter of MARINA were incorporated to the DENR – Environmental Management Bureau (EMB) National Plan of Action for the Prevention, Reduction, and Management of Marine Litter (NPOA - ML). The incorporation of the parts of MARINA's NSAP took place through a workshop entitled *DENR Inter-Agency Assessment and*



Programming of Activities for the Implementation of the Strategies in the National Plan of Action for the Prevention, Reduction, and Management of Marine Litter (NPOA-ML) for CY 2022 Onwards which was held in Quezon City on 29 - 30 September 2022. The salient items of the NSAP were included under Strategies 5, 6, 8 and 10 of NPOA - ML. In March 2023, the MARINA provided a copy of the Updates on the Ongoing Efforts to Address Marine Plastic Litter to DENR - EMB in order to complete the incorporation of the parts of the MARINA NSAP to the said strategies of NPOA – ML.

9. Attendance to National Meetings/ Conferences and Workshops:

- **Philippine Maritime and Energy Conference: Towards a New Treaty on Plastic Pollution: Perspective from Maritime Sector on 14 October 2022:** This conference aims to discuss challenges encountered by the maritime sector to address plastic pollution and how the new treaty could help in addressing these challenges.
- **DENR/ GIZ National Stakeholders Consultation Workshop on Circular Economy on 26-27 October 2022:** The workshop provides a venue for key stakeholders to share experiences and to elaborate on entrance points and opportunities towards marine litter reduction. Moreover, the event collects recommendations for the implementation of the legal framework and public-private initiatives that enable enhanced circular packaging value chains and likewise reduce environmental pollution. The project “Reduce, Reuse, Recycle to protect marine environments and coral reefs (3RproMar)” supports the transition towards a circular economy and sustainable production and consumption with focus on single-use plastic products (SUPs) and packaging in the various ASEAN members states. The project will provide various advisory services and conduct of pilot projects, e.g., to establish and showcase suitable role models in close cooperation with regional, national and local partners to contribute towards marine litter reduction, also thru the enhancement of land-based waste management systems.

10. Attendance to International Maritime Meetings/ Conferences/ Workshops:

- **Tokyo MOU-PSC Expert Mission Training (MEPSEAS) on 05-09 September 2022, virtually hosted by IMO:** MARINA as per Special Order No. 834-22 participated in the five (5)-day activity organized by the Philippine Coast Guard (PCG)

on Tokyo MOU Expert Mission with Integration of the Pilot Trial of the Implementation of Compliance Monitoring Enforcement (CME) procedures in selected key ports under the Marine Environment Protection of the South East Asian Seas (MEPSEAS). The activity focused on the two (2) identified priority Conventions of the Philippines on the marine environment: Convention on the Control of Anti-Fouling System on Ships (AFS); and the International Convention for the Control and Management of Ship's Ballast Water and Sediments (BWM).

- 3rd High-Level Regional Meeting on Marine Environment Protection of the Southeast Asian Seas (MEPSEAS) Project on 25-27 October 2022, hybrid virtual-face to face hosted by Viet Nam:** The Third High-Level Regional Meeting on the Marine Environment Protection of the Southeast Asian Seas (MEPSEAS) Project held on 25 to 27 October 2022 at Ha Long Bay, Viet Nam marks its end in December 2022. SRS Director II Engr. Ramon Hernandez is one of the Philippine Delegates who attended the meeting as per **Foreign Travel Authority No. 2022-202 dated 03 October 2022**. The Philippines, as one of the Lead Partnering Countries (LPCs), shared its accomplishments and the country's benefits and plans of sustaining the gains from the said project. The Philippines aims to mobilize a whole-of-nation approach cooperation in protecting, conserving, and managing the marine environment and natural resources for the present and future generation. The MEPSEAS Project is a 5-year project (2017-2022) of the IMO in cooperation with the Norwegian Agency for the Development (NORAD) provided technical assistance to East Asian countries in ratifying and implementing IMO Instruments for the protection of the marine environment.
- 2nd Regional Project Task Force Meeting on Glofouling Partnership on 23-25 November 2022, virtually hosted by Philippines:** As part of the implementation of the GEF/UNDP/IMO GloFouling Partnerships Project in the EAS region, the Second Regional Task Force (RTF) meeting was jointly organized by the Government of the Philippines through the Maritime Industry Authority (MARINA) as per **Special Order No. 1077-22** and Partnerships in Environmental Management for the Seas of East Asia (PEMSEA) on 23-25 November 2022 through a hybrid format, i.e., in-person meeting at New Coast Hotel in Manila, Philippines and virtually via Zoom.





The 2nd RTF meeting was a follow through to the 1st RTF meeting¹¹ that was convened in April 2022, which endorsed the establishment of a Regional Task Force and the development of a Regional Strategy on Biofouling Management in the East Asian Seas (EAS) region. Since then, a draft Regional Strategy on Biofouling Management has been prepared and circulated to the countries, nongovernment, academic and private sector partners for review. The 2nd RTF

meeting aims to further review the draft Regional Strategy and discuss its implementation, as well as to take into consideration the countries and private sectors' on-going programs or initiatives on biofouling and IAS management. A shipyard visit was conducted on 25 November 2022 to observe the hull cleaning process at Josefa Slipways in Navotas City.

- **13th Intersessional Working Group on Greenhouse Gas Meeting:** The IMO has adopted a series of guidelines to support implementation of regulations aimed at ensuring international shipping meets the 2030 carbon intensity reduction target set out in the IMO's Initial GHG Strategy. The following regulations entered into force on 01 November 2022, introducing the Energy Efficiency Existing Ship Index (EEXI); the annual operational carbon intensity indicator (CII) rating and an enhanced Ship Energy Efficiency Management Plan (SEEMP). EEXI and CII certification requirements which took effect on 01 January 2023.

The SRS participated to the 13th session of the Intersessional Working Group on Reduction of GHG Emissions from Ships (ISWG-GHG 13), from **05 to 09 December 2022** as per **Special Order No. 1134-22 dated 24 November 2022**. The ISWG-GHG 13 discussed the number of concrete proposals for mid-term measures and associated impact assessments *such as the guidelines to support implementation of carbon intensity measures and the "basket of candidate mid-term measures" including technical* (for example, a GHG fuel standard and/or enhancement of IMO's carbon intensity measures) *and carbon-pricing* (for example, through a market-based measure) *elements*.

11. Study on Improving Energy Efficiency and Environmental Footprints of Domestic Passenger Ships in the Philippines (ENV-P): This ENV study is a joint partnership between International Maritime Organization (IMO) and the World Bank Group in coordination with the Maritime Industry Authority (MARINA). The study aims to analyze

¹¹ Report of the First Regional Task Force Meeting can be accessed at: <https://pemsea.org/publications/meeting-documents/first-meeting-regional-task-force-rtf-biofouling-management-east>

the current state of the domestic passenger ship industry in the Philippines from the point of view of energy efficiency and environmental footprint, targeting to identify the most practical and cost-effective options to reduce the carbon footprint of this industry in the short term, and to propose a feasible roadmap for the medium- and long-terms. Based on the SRS 2022 Yearend Performance Report, the following activities were already completed relative to the conduct of the said study:



- a.) Gathering and Collation of relevant ENV data/ information;
- b.) Regular Meetings with National Focal Points, National Consultants, International Consultants from WMU and UoS, IMO and WBG;
- c.) Regular Steering Committee Meetings with International Consultants, IMO and WBG;
- d.) Regular Coordination Meeting with MARINA, PPA and PCG National Focal Points;
- e.) First ENV-P Field Visit to Philippines from **03 to 09 July 2022** as per **Special Order No. 564-22 dated 18 June 2022**; and,
- f.) Second ENV-P Field Visit to Philippines from **13 to 18 November 2022** as per **Special Order No. 1065-22 amending Special Order No. 992-22**.

As of November 2023, the **MARINA is still waiting for the Final Report of the IMO-WBG Project Study on Improving Energy Efficiency and Environmental Footprint of Domestic Passenger Ships in the Philippines (ENV-P)**, as well as the Final Report on Formal Safety Assessment for Enhancing Safety of Domestic Passenger Ships in the Philippines (FSA-P). It is important to take note that the experts are **still on process of consolidating the individual reports** prepared by the separate teams of consultants from the World



Maritime University (WMU) and the University of Strathclyde (UoS).

12. Other Initiatives related to Marine Environment Protection



- **Onboard Orientation on Marine Pollution to All Passenger Vessels plying Balingoan-Camiguin & Vice Versa and Ozamiz-Mukas, Lanao del Norte & Vice Versa Routes**

In celebration of the Maritime and Archipelagic Nation Awareness Month (MANA MO) 2022, the MARINA Regional Office X facilitated the onboard orientation on marine pollution through a film showing onboard vessels plying in the Balingoan-Camiguin & vice versa and Ozamiz-Mukas, Lanao del Norte & vice versa routes. The film showing was held on 01-30 September 2022.

This activity aims to raise awareness on the negative effects of marine pollution in the environment, the ways to prevent it and the protection of the marine environment.

- **Tree Planting, Coastal Clean-up**

The MARINA through its regional offices also conducted other activities related to marine environment protection such as tree planting and coastal clean-up. For the side of MARINA Regional Office X participated in the coastal cleanup in Coastal Road of Lapasan, Cagayan de Oro. Likewise, the MARINA Satellite Office in Tubod joined the cleanup activity in the shore area of Brgy. Poblacion, Kolambugan, Lanao del Norte.

For the side of MRO XI, a tree planting was facilitated on 22 June 2022 in collaboration with Mae Wess Co., Inc. The MRO XI also held a coastal clean-up in collaboration with maritime schools and other maritime stakeholders last September 2022 in line with the celebration of the 23rd National Maritime Week.

For the side of MRO XIII, a tree planting in Ipil Peak, Surigao City was conducted on 25 June 2022. The said activity was held in coordination with Royal Dragon Ocean Transport Inc. In addition, the “Plant a Tree Project” in Surigao City was conducted on 22 September 2022, which was followed by the “Street Clean-up Activity” on 23 September 2022.



CONCLUSION

The bodies of water are considered as a source of livelihood to millions of people globally. In this regard, it is important for the concerned government agencies and private maritime stakeholders to effectively implement policies related to the development and improvement of the current situation of the maritime industry particularly in marine environment protection.

The Philippine Marine Environment Protection Situation Report 2022 concludes that despite of the efforts taken by different countries in the past years, the maritime sector is still facing the threat of climate change, which may affect the lives of those who are working in the said industry and their respective families. Climate change may also cause a significant change on the contribution of the maritime industry to the global economy, and it could also compromise the marine environment which may result to maritime accidents / incidents. Based on the records of the Philippine Statistics Authority (PSA), about 3.9 percent of the Philippine Gross Domestic Product (GDP) for the year 2022 was contributed by the ocean-based industries. It is higher compared to the 3.6 percent and 3.7 percent share for the year 2021 and 2020 respectively. Meanwhile, the MARINA investigated a total of 115 maritime accidents / incidents in the Philippines in the year 2022, which is equivalent to 54.5-percent decrease from the records last 2021.

With that being said, it is important to take note that the Philippines is no exception in the severe impact of climate change. In line with this, The Maritime Industry Authority (MARINA) recognizes the importance of enhancing marine environment protection in the country. For the year 2022, the MARINA entered into collaboration with partner agencies and relevant maritime stakeholders; and also, participated in different meetings; conferences and workshops related to marine litter, energy efficiency, greenhouse gas emissions and other environmental issues.

In addition, the MARINA continuously monitors the developments related to marine environment protection relative to the effective implementation of the Maritime Industry Development Plan (MIDP) 2028 which is supported by Republic of the Philippines President Ferdinand Romualdez Marcos Jr. The MIDP 2028 which serves as the roadmap to accelerate the integrated development of the Philippine Maritime Industry includes the Overriding Program on Promotion of Environmentally Sustainable Maritime Industry.

RECOMMENDATIONS

The analysis of the data and information gathered for this situation report has led to the following recommendations:

- Effectively implement the programs and policies under the Maritime Industry Development Plan (MIDP) 2028 to address different environmental issues in the maritime industry. Also, it is recommended to pursue the key strategies under the MIDP Overriding Program on Promotion of Environmentally Sustainable Maritime Industry.
- Incorporate the Final Report on Study on Formal Safety Assessment (FSA-P) and Improving Energy Efficiency and Environmental Footprints of Domestic Ships in the Philippines (ENV-P) as vital inputs to the MIDP 2028.
- Hire more personnel to be included to the new internally created Marine Environment Protection Development Service (MEPDS) of the MARINA pursuant to Administrative Order No. 04-23. The hiring of full-time personnel at MEPDS in addition to the existing MARINA personnel who are assigned in a concurrent capacity pursuant to Special Order No. 1133-23 dated 14 September 2023 would be crucial in achieving the international and local commitments of the MARINA and more importantly to push forward the MEP-related projects.
- Draft a Memorandum of Understanding (MOU) between Maritime Industry Authority (MARINA) and Climate Change Commission (CCC) to address issues on climate change particularly decarbonization of ships.
- Pursue the proposed collaboration between MARINA and Jotun Philippines, Inc. through a Memorandum of Agreement (MOA) or Memorandum of Understanding (MOU) particularly in the development and improvement of the maritime industry especially marine environment protection.

BIBLIOGRAPHY

2022 MARINA Annual Statistical Report

PCG Statistical Records

Brown (2022). <https://www.wartsila.com/insights/article/how-climate-change-is-impacting-shipping-and-maritime-trade>

IMO (n.d.). International Convention for the Prevention of Pollution from Ships (MARPOL). [https://www.imo.org/en/about/Conventions/Pages/International-Convention-for-the-Prevention-of-Pollution-from-Ships-\(MARPOL\).aspx](https://www.imo.org/en/about/Conventions/Pages/International-Convention-for-the-Prevention-of-Pollution-from-Ships-(MARPOL).aspx)

National Geographic (n.d.). Marine Ecosystems. <https://education.nationalgeographic.org/resource/resource-library-marine-ecosystems/>

Oceana (n.d.). Shipping Pollution. <https://europe.oceana.org/shipping-pollution-1/#:~:text=The%20shipping%20industry%20is%20responsible,industry%20continues%20to%20grow%20rapidly.>

Presidential Decree No. 474, s. 1974. <https://www.officialgazette.gov.ph/1974/06/01/presidential-decree-no-474-s-1974/>

PSA (2023). Ocean-based industries grew by 21.1 Percent in 2022, Accounted for 3.9 Percent of GDP. <https://psa.gov.ph/statistics/ocean-economy>

Sinay Maritime Data Solutions (2023). How much does the shipping industry contribute to global CO2 emissions?. <https://sinay.ai/en/how-much-does-the-shipping-industry-contribute-to-global-co2-emissions/#:~:text=In%202022%2C%20international%20shipping%20alone,contributor%20to%20global%20carbon%20pollution.>

Updated MIDP 2028 OP2 (2023). <https://drive.google.com/file/d/1pVhBRf7GHoqWQ2a52t6ginx4gdfQzAhC/view>

Updated MIDP 2028 OP1 (2023). https://drive.google.com/file/d/14_JwvjzzZaRc_11bUCElSSdcVRhCz0Q/view

UN Environment Program (n.d.). The marine environment is an essential component of the global life-support system. <https://www.unep.org/news-and-stories/story/marine-environment-essential-component-global-life-support-system>

Wartsila (2022). How climate change is impacting shipping and maritime trade. <https://www.wartsila.com/insights/article/how-climate-change-is-impacting-shipping-and->

[maritime-trade](#)

WMO (n.d.). State of the Climate in Asia 2022. <https://public-old.wmo.int/en/our-mandate/climate/wmo-statement-state-of-global-climate/Asia-2022>