



PORT
d'EHOALA
MADAGASCAR

Management Plan for Waste from Ships (MPWS)

Version 2 – 08/2026



Record of amendments:

Date	Versions	Sections	Details	Amended/Drafted by
06/2026	1	All	All sections	APMF/PdE
08/2026	2	1.5.9; 2 (Executive Summary)	Clarified that the MPWS serves as a roadmap towards full compliance with MARPOL and the London Protocol; added phased implementation milestones and revised conclusion to reflect transitional PRF status.	APMF/PdE

Port d'Ehoala Management Plan for Waste from Ships (MPWS)

Version: 2026.2

Approving Authority: Agence Portuaire, Maritime et Fluviale (APMF)

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1 GENERAL INFORMATION

1.1 LEGAL STATUS, AUTHORITY, AND CONCESSION FRAMEWORK

Port d’Ehoala operates under a public-private partnership and is regulated by the *Agence Portuaire, Maritime et Fluviale* (APMF) in coordination with the Ministry of Transport and Meteorology.

Decree No. 2006-262 of April 11, 2006 established the port as a national interest port (non-autonomous category). A July 2007 Council of Government decree fixed the concession boundary at 442 hectares. Day-to-day management is handled by Port d’Ehoala S.A., a subsidiary of QIT Minerals Madagascar (QMM).

The creation of the APMF as the national maritime authority separated regulatory oversight from commercial operations, placing environmental and safety compliance under public authority while leaving terminal logistics to the port operator.

1.2 BUSINESS AND OPERATIONAL PROFILE

Port d’Ehoala S.A. operates the port as a multi-category industrial and logistics hub in southern Madagascar. Key activities include:

- Merchant Shipping: Cargo handling for bulk carriers, general cargo, and multi-purpose vessels.
- Petroleum Terminal Operations: Tanker operations using dedicated containment equipment.
- Passenger and Cruise Services: Cruise liner calls during the tourism season.
- Domestic Cabotage: Coastal supply and cabotage traffic within the Fort Dauphin and Ehoala sectors.

The port's objective is to maintain operational and commercial efficiency while upholding a zero-tolerance policy on illegal sea discharges.

1.3 CORE PORT ADMINISTRATIVE DATA

To ensure administrative transparency for ship masters, local agents, and port state control inspectors, the identity and contact profiles for the maritime interface are formalized below:

Administrative Metric	Official Port Profile Data
Official Port Name	Port d’Ehoala
UN/Locode	MGEHL
Geographic Location	City of Tôlanaro / Fort Dauphin, Madagascar
Geographic Coordinates	Latitude: 25°02'S Longitude: 46°59'E

Physical Address	Bureau Administratif, Port d'Ehoala, Fort-Dauphin 0614, Madagascar
Official Contact Email	contact@ehoalaport.com
Primary Emergency Tel	+261 (0)34 65 054 15 (Port Control Center - PCC)

1.4 PORT INFRASTRUCTURE AND TECHNICAL SPECIFICATIONS

To ensure the operational adequacy targets established in this Plan are met without disrupting commercial traffic, the port's reception services are supported by the following infrastructure:

- Deep-Sea Access: Deep-water access with quayside draught from 8 to 15.75 metres, suitable for large international vessels.
- Berthing Infrastructure: Three berths serving all vessel types:
 - Main Quay: 275 meters in length, serving cargo and cruise vessels.
 - Secondary Quay: 150 meters in length.
 - Coaster/Service Quay: 75 meters in length, for domestic cabotage and small service vessels.
- Maritime Protection: A 625-metre breakwater protecting inner basins and berths from open-ocean swells.
- Onshore Storage and Logistics:
 - Cargo Yards: 19,000 m² of open storage for containers and break-bulk cargo, with capacity for future expansion.
 - Warehousing: Three warehouses, two of which are dedicated general cargo units of 1,000 m² each (Total warehouse capacity: 6,000 m³).
 - Cold Chain Support: Reefer stations for refrigerated containers.

These facilities enable the PRF contractor to size collection assets appropriately for the different vessel types and stay durations calling at the port.

1.5 CURRENT PORT PLAN & ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

Port activities, particularly the handling of hydrocarbon and receiving different types of wastes from the ship at the port could potentially lead to contamination of marine flora and fauna. The discharge of untreated ballast water and sludges, as well as accidental spills of polluting substances and hydrocarbons, could also contribute to the contamination of marine plant and fauna species. Poor management of organic waste at the port may alter water quality and lead to eutrophication of the environment as an impact of high significance.

The risk of proliferation of invasive plant species unintentionally introduced by vessels may also occur through biological organisms attached to ship hulls and anchors, as well as

through ballast water. Indeed, ballast water pumped by ships at the port of origin may contain aquatic species ranging from bacteria and other microorganisms to microalgae and plant and animal species at various stages of development. Upon arrival at the receiving port, these organisms may establish and spread if no ballast water and sludges, different types of wastes from ships management measures are implemented with high impact with regard to the proliferation of invasive algal species.

The Ehoala Port ESMP (2024–2028) was developed taking into account commitments at both the corporate level and in line with internationally accepted practices in environmental and social management. Consequently, it provides a working framework or environmental and social management plan that enables Ehoala Port stakeholders to ensure that identified issues and key concerns related to receiving wastes from the ship in the Port, as well as port area operations, are considered in the implementation of daily activities (monitoring).

Furthermore, the measures adopted to eliminate, mitigate, or offset the potential impacts of activities will cover the entire life cycle of on both the natural and social environments, including their transport and storage within the port sector.

To meet its obligations and uphold its commitments, Ehoala Port bases this new ESMP on company policies, in particular the following guidelines:

Comply with national regulations such as in accordance with Law No. 99-021 of 19/08/99 on the policy for the management and control of industrial pollution, as stipulated in:

- Articles 24–27: Management of liquid effluents
- Articles 28–33: Management of solid waste
- Articles 34–36: Management of atmospheric pollution

and international conventions of MARPOL, ISPS, ISO14001, MECIE...; Locations Quay 1 and 2 shown in the photo below are identified for Port Reception Facility which is liable to change depending on the need and the evolution of the activities within the Ehoala Port in the future



1.5.1 Plan Objectives

As Ehoala Port is part of sensitive environment receptor:

- Ensure efficient, safe, and compliant management of waste generated by ships.
- Prevent pollution of the marine, terrestrial, and atmospheric environments.
- Comply with national regulations and international conventions of MARPOL.
- Ensure traceability of waste from ships to its final disposal.

1.5.2 Scope of Application

This plan applies to:

- All ships calling at the port (cargo vessels, bulk carriers, tankers, etc.).
- All port facilities are dedicated to waste reception.
- Port operators and contractors involved in waste management.

1.5.3 Types of Waste Concerned

Waste is classified in accordance with MARPOL:

Solid Waste

- Domestic waste
- Plastics
- Food waste
- Operational waste (rags, packaging)

Liquid Waste

- Bilge water
- Oil residues
- Wastewater (blackwater and greywater)

Hazardous Waste

- Chemicals
- Paints
- Used batteries
- Toxic residues

1.5.4 Organization and Responsibilities

Port Authority

- Provide waste reception facilities.
- Ensure control and regulatory compliance.

- Supervise service providers.

Shipowners / Captains

- Declare waste prior to arrival.
- Ensure waste segregation onboard.
- Deliver waste to authorized reception facilities.

Waste Collection Operators

- Collect, transport, and treat waste.
- Ensure traceability and reporting.

1.5.5 Waste Management Procedures at the Port

1.5.5.1 Advance Notification

- The ship submits a waste declaration before arrival.
- Specifies volume, type, and remaining storage capacity.

1.5.5.2 Waste Reception

- Organization of collection at berth or onboard.
- Availability of appropriate equipment (trucks, barges).

1.5.5.3 Transport and Treatment

- Transfer to licensed treatment facilities preferably outside of the Ehoala Port.
- Treatment according to waste type (recycling, treatment, disposal) by using incinerator in order to ensure avoiding atmospherically emissions such as dioxide of furane

1.5.5.4 Traceability

- Issuance of a waste tracking form.
- Data archiving for auditing and compliance.

1.5.6 PROCEDURE FOR WASTE COLLECTION ONBOARD

Onboard collection follows a structured process:

1.5.6.1 Before Collection

The ship:

- Segregates waste according to type.
- Stores waste in identified and secured containers.

Coordination between:

- Captain
- Shipping agent
- Collection operator

1.5.6.2 Organization of Collection

Two main configurations are identified:

♦ **Collection at Berth**

- Collection truck positioned on the quay.
- Connection for liquid waste (pumping).
- Handling of solid waste via cranes or personnel.

♦ **Collection by Barge (if ship at anchorage)**

- Specialized barge approaches the vessel.
- Safe transfer of waste (pumping or lifting)

1.5.6.3 Onboard Collection Procedure

Steps:

- **Preliminary Inspection**

- Verification of waste types and quantities.
- Check safety conditions (MSDS availability requirement of each types of hazardous wastes)

- **Securing the Area**

- Implementation of spill prevention measures.
- Use of personal protective equipment (PPE).

- **Waste Transfer**

- Liquid waste: pumping via sealed hoses direct to trucks.
- Solid waste: manual or mechanical transfer.

- **Simultaneous Monitoring**

- Monitoring leaks or incidents.
- Verification of compliance with procedures.

- **Completion of Operations**

- Cleaning and decontamination is required for the area.
- Signing of collection documents.

1.5.6.4 Documentation

- Waste delivery receipt.
- Updated ship waste record book.
- Collection report.

1.5.7 Safety and Environmental Measures

- Prevention of accidental spills.
- Rapid response in case of incidents with full availability of spill kits.
- Continuous staff training.
- Compliance with HSE standards (Health, Safety, Environment).

1.5.8 Monitoring and Improvement

- Regular audits.
- Performance indicators (quantities collected, incidents).
- Plan updates based on feedback and lessons learned.

1.5.9 Conclusion:

Port d'Ehoala currently operates without fully developed Port Reception Facilities (PRF) for ship-generated waste. In recognition of the obligations arising under MARPOL and the London Protocol, this Management Plan for Waste from Ships (MPWS) therefore functions both as a policy framework and as a roadmap towards full compliance.

Until certified ship waste reception and treatment facilities become available locally, the Port Authority will:

- prohibit the discharge of ship-generated waste, oily mixtures, sewage and cargo residues into port waters in accordance with MARPOL and national law;
- require all calling vessels to comply with the Advance Waste Notification (AWN) procedure and to demonstrate sufficient onboard storage capacity to retain waste between ports, unless interim reception arrangements have been explicitly confirmed by the Port Control Centre (PCC); and
- where practicable, make use of interim arrangements with licensed waste operators and/or nearby certified PRFs to receive priority waste streams (in particular MARPOL Annex I, IV and V wastes) without undue delay, as set out in Section 3.1.

By [DATE 2], interim reception facilities for at least Annex I (oily residues), Annex IV (sewage) and Annex V (garbage) will be operational under contract with a certified provider.

By [DATE 3], a fully integrated PRF system—covering all MARPOL annexes applicable to Port d'Ehoala's traffic profile—will be commissioned and this MPWS will be updated to reflect the transition from roadmap status to full operational implementation.

This phased approach is intended to ensure:

- progressive alignment with MARPOL and London Protocol requirements;
- protection of the marine and coastal environment as sensitive environmental receptors; and
- long-term sustainability of port operations through compliant and traceable management of ship-generated waste.

2 EXECUTIVE SUMMARY & ADMINISTRATIVE FRAMEWORK

2.1 AUTHORITY, ENFORCEABILITY, AND DEFINITIONS

This Management Plan for Waste from Ships (MPWS) sets out the legal and operational requirements for Port Reception Facilities (PRF) at Port d'Ehoala, and serves as a roadmap towards full compliance with MARPOL and the London Protocol during the staged development and commissioning of PRFs.

Developed under APMF oversight and in coordination with the Ministry of Transport and Meteorology, this plan is a legally binding instrument covering all waters and land interfaces within the port's jurisdiction, including cargo berths, the petroleum terminal, inner basins, and anchorage zones.

The following definitions apply throughout this MPWS:

2.1.1 Operational & Regulatory Terminology

- **Advance Waste Notification (AWN):** The mandatory declaration submitted by the Ship Master or shipping agent before port entry, in the format prescribed by IMO MEPC.1/Circ.834/Rev.1.
- **Identification Form:** The tracking document issued by the PRF provider to the Ship Master after each waste collection, in compliance with MEPC.1/Circ.834/Rev.1.
- **Waste Delivery Receipt (WDR):** The receipt issued by the PRF operator recording the types and quantities of waste delivered ashore by a vessel, in compliance with MEPC.1/Circ.834/Rev.1.
- **MARPOL:** The International Convention for the Prevention of Pollution from Ships, including all current annexes and amendments as ratified and implemented domestically.
- **Port Authority:** The entity responsible for managing and operating Port d'Ehoala (Port d'Ehoala S.A.).
- **Port Reception Facility (PRF):** Any fixed, floating, or mobile facility certified to receive ship-generated waste or cargo residues ashore.
- **Normal Working Hours:** The standard operational window for baseline PRF collection routines, defined as Monday through Friday, from 06:00 to 22:00. For vessel arrivals outside normal working hours or on weekends and public holidays, the PRF contractor shall provide an on-call contact number and guarantee a response within 24 hours of notification via the PCC. Emergency collections may attract a surcharge as published in the port tariff schedule
- **Sufficient Storage Capacity:** Sufficient onboard capacity to hold all accumulated waste from departure at the previous port through to the next port of call, accounting for projected generation during the voyage.

2.1.2 Stream & Classification Definitions

In order to eliminate operational ambiguity, mitigate risk, and prevent misinterpretation regarding the environmental elements of this plan, the following standardized statutory definitions shall apply to all waste streams arriving at the Port d'Ehoala:

- **Waste from Ships:** All forms of waste, including cargo residues, which are actively generated during the service, propulsion, and maintenance of a vessel, or during loading, unloading, and tank-cleaning operations, falling strictly within the regulatory scopes of Annexes I, II, IV, V, and VI to the MARPOL Convention.
- **Ship's Garbage (MARPOL Annex V):** All types of domestic and operational wastes, all marine plastics, cooking oils, synthetic fishing gear, and animal carcasses generated during the routine, normal operations of a ship and which must be permanently or periodically removed. This definition strictly excludes cargo residues, waste insulation containing asbestos, toxic wastes originating from onboard fumigation, or any chemical substances regulated under alternative MARPOL Annexes.
- **Sewage (MARPOL Annex IV):** Drainage and other wastes from any form of toilets, urinals, and WC scuppers; drainage from medical premises (dispensary, sick bay, etc.) via wash basins, wash tubs, and scuppers located in such premises; drainage from spaces containing living animals; or other waste waters when mixed with the drainages defined above. This includes blackwater, graywater, and sanitation treatment system residues that must be securely contained for shoreside delivery.
- **Oily Waste (MARPOL Annex I):** Engine room sludges, heavy fuel oil residues, oily bilge water, contaminated ballast water, and oily washing waters originating from the physical cleaning of cargo holds, slop tanks, and fuel reservoirs.
- **Noxious Liquid Substances / NLS Residues (MARPOL Annex II):** Liquid chemical residues or tank washings derived from bulk liquid chemical cargoes categorized under MARPOL Annex II that cannot be discharged into the marine environment under international criteria. Vessels carrying NLS cargo remnants must declare these streams explicitly on the Advance Waste Notification (AWN) to coordinate certified reception with the PRF contractor prior to berthing.
- **Cargo Residues:** The remaining remnants of any specific cargo material onboard which remain trapped on the open decks, within structures, or inside cargo holds and tanks following the completion of standard loading and unloading procedures. This includes loading/unloading excess, structural spillage, and cargo remnants entrained in wash waters (whether wet or dry), but excludes fine cargo dust remaining on open decks after sweeping or settling on external vessel surfaces.

2.1.3 Vessel Type & Shipping Patterns

- **Seagoing Vessel:** Any commercial, public, or private vessel operating in the marine environment, including cargo ships, bulk carriers, tankers, cruise ships, fishing vessels, recreational craft, and floating industrial structures.
- **Passenger / Cruise Ship:** A seagoing vessel carrying passengers commercially, typically generating large volumes of domestic waste and subject to strict biosecurity requirements for catering waste.
- **Fishing Vessel:** A vessel used commercially to catch, harvest, or process fish or other marine resources.

- **Recreational Craft:** A vessel of 2.5 metres or more used exclusively for sport, leisure, or private recreation, with no commercial or cargo function.
- **Frequent Port Calls:** Regular visits to Port d'Ehoala by a vessel at intervals of 14 days or less. This threshold determines eligibility for AWN and PRF exemptions.
- **Shipping Agent:** The local representative authorized to act on behalf of the shipowner, shipping line, or Ship Master for port compliance, clearances, and waste transactions.

2.2 JURISDICTIONAL BOUNDARIES AND FLEET SCOPE

This MPWS applies to all vessels operating within the 442-hectare port concession, covering cargo berths, the petroleum terminal, inner basins, and anchorage zones. It covers the following sectors:

- Merchant Shipping: Bulk carriers, general cargo, and multi-purpose logistics vessels.
- Passenger Fleet: International cruise liners.
- International Shipping: Foreign-flagged and ocean-going industrial fleets.
- Domestic Cabotage: Coastal supply vessels and localized traffic operating within the Fort Dauphin and Ehoala cabotage sectors.

Within this area, APMF exercises statutory control at the ship-shore interface, while the certified waste contractor bears independent civil and environmental liability for landward operations.

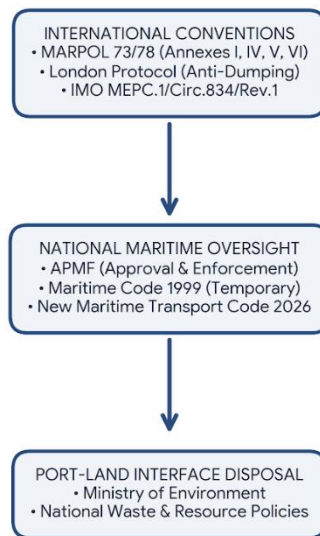
2.3 CORE OBJECTIVES

- Environmental Protection: Eliminate illegal sea discharges of ship-generated waste, oily mixtures, toxic residues, and marine plastic within Malagasy territorial waters.
- Operational Adequacy: Maintain certified PRF capacity sized to serve all vessel types without causing turnaround delays or commercial disruption.
- Regulatory Compliance: Integrate international maritime environmental conventions with national waste disposal and handling requirements.

2.4 LEGAL AND REGULATORY FRAMEWORK

The operational integrity of the port-land waste interface is governed by a dual-layered legal hierarchy:

Port d'Ehoala MPWS — Dual-Layered Legal Hierarchy



2.4.1 International Conventions

The port operates in compliance with the **International Convention for the Prevention of Pollution from Ships (MARPOL 73/78)**, covering the following annexes:

- Annex I (Oily Waste): Bilge water, sludge, dirty ballast, and oily tank washings.
- Annex IV (Sewage): Blackwater, greywater, and sanitation treatment system residues.
- Annex V (Garbage): Solid operational waste, domestic waste, food wastes, and marine plastics.
- Annex VI (Air Pollution Waste): Exhaust gas cleaning residues (scrubbers) and ozone-depleting substances.

The London Protocol (1996 Protocol to the London Convention 1972): Applied alongside local port reception rules, the London Protocol prohibits the deliberate dumping or incineration of ship-generated waste, cargo residues, or dredged material in Malagasy waters. All vessels must use shoreside PRF for any streams not explicitly permitted under international guidelines, supporting the transition to an indirect fee model.

Operational procedures follow IMO MEPC.1/Circ.834/Rev.1 (*Consolidated Guidance for PRF Providers and Users*) and MEPC.295(71) (*Guidelines for the Implementation of MARPOL Annex V*).

2.4.2 National Legislation

- Primary Maritime Jurisdiction: the Maritime Transport Code governs port obligations relating to shipping and safety under APMF jurisdiction.
- Terrestrial Environmental Interface: Once waste crosses the ship's rail, segregation, transport, and final disposal are regulated by the Ministry of Environment to ensure environmentally sound management and resource recovery.

All requirements and penalty provisions in this MPWS are aligned with the pollution prevention and anti-dumping standards of the 2026 Maritime Transport Code.

3 DATA-DRIVEN PORT TRAFFIC PROFILE & NEEDS ASSESSMENT

3.1 HISTORICAL BASELINE & PRF STATUS

Port records covering 112 vessel movements show zero shoreside waste deliveries recorded for any call. This confirms that Port d'Ehoala has operated without a formal, logged PRF system up to this point.

To address this gap, the Port Authority will launch a competitive tender by [DATE] with the objective of having a certified PRF contractor in place no later than [DATE]. During the interim period, the Port Authority will designate [named interim arrangement — e.g. a licensed waste transporter, or an agreement with the nearest operational PRF] to receive waste from calling vessels. Masters wishing to deliver waste prior to contractor appointment must notify the PCC at least 48 hours in advance to arrange reception.

Audited 3-Year Traffic Matrix

Capacity planning for the PRF contractor is based on verified historical call data:¹

Vessel Category	2023 Calls	2024 Calls	2025 Calls	3-Year Total Calls	3-Year Avg / Year	Primary Profiles	MARPOL	Target
Cargo	60	60	62	182	60.7	High-volume operational solid waste (Annex V); bilge water (Annex I).		
Tanker	16	13	11	40	13.3	Engine room sludges; specialized hazardous tank residues (Annex I).		
Passenger	6	6	8	20	6.7	High-volume domestic plastics; high-risk biosecurity catering waste (Annex V).		
Service Vessel	1	0	0	1	0.3	Minor, localized operational scrap.		
Total Annual Calls	83	79	81	243	81.0	Consolidated Port Traffic Baseline.		

Estimated Generation Rates : In the absence of historical delivery data, capacity planning uses the indicative generation benchmarks from IMO MEPC.1/Circ.834/Rev.1 Annex guidance and regional port comparators:

- cargo vessels — approximately 0.8–1.2 m³ Annex V waste per port call;
- tankers — approximately 2–5 m³ oily sludge per call depending on engine room size;
- passenger/cruise vessels — approximately 0.5–1.0 kg solid waste per passenger per day.

¹ The traffic data and stay-duration figures are drawn from port logs for 2023–2025. As waste volumes were not previously recorded, these figures indicate traffic frequency only and are not a forecast of waste generation. The PRF contractor is responsible for scaling resources to handle volumes exceeding these averages.

These benchmarks will be replaced with empirical port-specific data once the PRF contractor has completed twelve months of operation and submitted quarterly waste logs to the Port Authority.

3.2 PORT STAY WINDOWS AND OPERATIONAL ADEQUACY TARGET

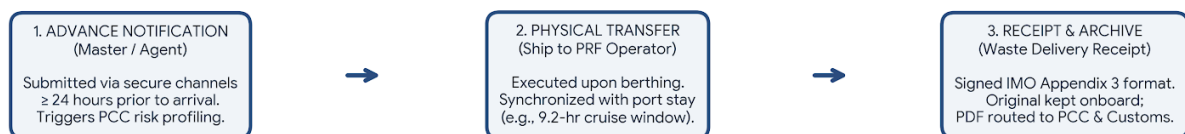
To avoid delays for visiting vessels, the PRF contractor must complete waste transfers within the following windows:

- Passenger Vessels: Average stay of 9.2 hours. Collection must begin immediately on berthing via direct barge-to-ship or truck-to-ship connections, prioritising Annex V streams.
- Tanker Fleet: Average stay of 22.7 hours. Collection must use spark-proof, closed containment systems in line with petroleum terminal safety standards.
- General Cargo and Bulk Carrier Fleets: General cargo vessels average 63.0 hours and bulk carriers 101.1 hours (around 4.2 days). These extended windows give the contractor flexibility to schedule bilge and solid waste extractions around cargo operations without affecting departure times.
- Fishing vessels and recreational craft: Should such vessels begin calling, PRF arrangements will be reviewed and updated accordingly

4 SHIP-TO-SHORE DELIVERY PROCEDURES

All waste handling is managed through a standard reporting sequence:

Port d'Ehoala MPWS — Ship-to-Shore Reporting & Delivery Sequence



4.1 ADVANCE WASTE NOTIFICATION (AWN)

- Submission Timeline: The Master of any vessel bound for Port d'Ehoala must submit an electronic AWN using the format in Appendix 2 of IMO MEPC.1/Circ.834/Rev.1 at least 24 hours before arrival, or immediately on departure from the previous port if the transit is under 24 hours.
- Enforcement: AWNs are submitted to the Port Control Centre (PCC). Failure to submit an accurate AWN will result in the vessel being flagged for targeted safety and environmental inspection by APMF inspectors.

- Register: The PCC shall maintain a Port Waste Management Register recording all AWN submissions, waste deliveries, WDR references, and any non-compliance notices issued. This register shall be retained for a minimum of two years and made available to APMF inspectors on request.

4.2 VESSEL DELIVERY, PACKING, AND SEGREGATION STANDARDS

4.2.1 Mandatory Segregation and Condition of Waste

All vessels delivering waste at Port d'Ehoala must sort it by MARPOL Annexes I, II, IV, V, and VI as applicable to the cargo carried and equipment fitted, and further into the sub-streams specified by the PRF contractor, and further into the sub-streams specified by the PRF contractor (e.g. plastics, food waste, glass, metals).

- Packaging Integrity: All solid waste must be packed in heavy-duty, leak-proof bags or closed containers. Liquid waste and sludges (Annex I/IV) must be delivered via standard coupling interfaces.
- Prohibited Mixed Items: Hazardous items—including expired pyrotechnics, medical waste, fluorescent tubes, batteries, and bulk chemicals—must not be mixed into general Annex V waste. They must be declared separately on the AWN and packed in labelled, internationally approved hazardous material packaging.

4.2.2 Right of Refusal and Non-Compliance Protocol

The PRF contractor may refuse any waste that is unsegregated, leaking, incorrectly declared, or poses a biosecurity or safety risk to shore personnel.

- If collection is refused, the Port Control Centre (PCC) will issue a formal non-compliance notice to the vessel.
- The vessel must either retain the waste on board or bear the full cost of emergency sorting and repackaging by a specialist shore team before delivery can proceed.

4.3 REGULATORY EXEMPTIONS FOR FREQUENT CALLERS

Vessels on scheduled high-frequency domestic routes, regional cabotage, or short-sea supply runs may apply to the APMF for exemption from mandatory AWN submissions and standard waste delivery rounds. Exemptions are granted only where the shipowner can demonstrate a certified alternative waste delivery arrangement at their home port or base terminal.

Applications must be submitted in writing to the APMF at international.affairs@apmf.mg by the shipowner or their agent, accompanied by documentary proof of the alternative certified waste arrangement. Exemptions are valid for a maximum of 12 months and subject to annual renewal. The APMF may withdraw an exemption at any time if the alternative arrangement lapses or if the vessel generates a non-compliance record. A register of active exemptions is maintained by the APMF and shared with the Port Authority quarterly.

4.4 WASTE DELIVERY RECEIPT (WDR)

- Execution: After each waste transfer, the PRF contractor must issue a WDR in the format prescribed by IMO Appendix 3.
- Distribution Routing:

1. Original: Retained by the Ship Master and filed in the vessel's Garbage or Oil Record Book.
2. Contractor copy: Filed for accounting and disposal audit purposes.
3. Digital copy: Sent by email to the shipping agent and the PCC for statistical tracking and customs coordination.

5 COST RECOVERY AND SUSTAINABLE FINANCING

5.1 FINANCIAL ARCHITECTURE

- Direct Fee Model: The port uses a direct fee model. Vessels pay the PRF operator directly based on waste volume (m³) and hazard classification.
- Indirect Fee Transition Strategy: The Port Authority is working towards an indirect fee model for Annex V waste, incorporating a flat environmental charge into standard port dues. This would give all vessels a baseline right of delivery and reduce the financial incentive for illegal dumping at sea.

The current PRF tariff schedule is published by the Port Authority and available from the Port Control Centre or the Port Authority website at <https://www.ehoalaport.com>. Tariffs are reviewed annually by the Stakeholder Forum and any changes are notified to the shipping community at least 60 days before taking effect

5.2 "GREEN SHIP" REDUCED TARIFF CRITERIA

Port d'Ehoala offers reduced waste tariffs to vessels that demonstrate good onboard waste management practices, assessed against the following criteria:

- Advanced Onboard Segregation: Multi-stream separation of plastics, metals, glass, and paper in line with IMO Resolution MEPC.295(71).
- Sustainable Procurement: Demonstrated reduction of single-use plastics and bulk packaging on board.
- Total Source Containment: Retaining all bilge water and treated blackwater on board for shore delivery, with no sea discharges during transit.

Vessels wishing to claim the reduced tariff must submit supporting documentation (e.g. current Garbage Management Plan, MARPOL record books, or equivalent certification) to the PRF contractor at the time of AWN submission. Eligibility is confirmed by the PRF contractor in consultation with the PCC and reflected on the WDR and associated invoice.

6 ONSHORE WASTE MANAGEMENT & CIRCULAR ECONOMY INTEGRATION

6.1 ONSHORE SEGREGATION INFRASTRUCTURE & CONTRACTOR LIABILITY

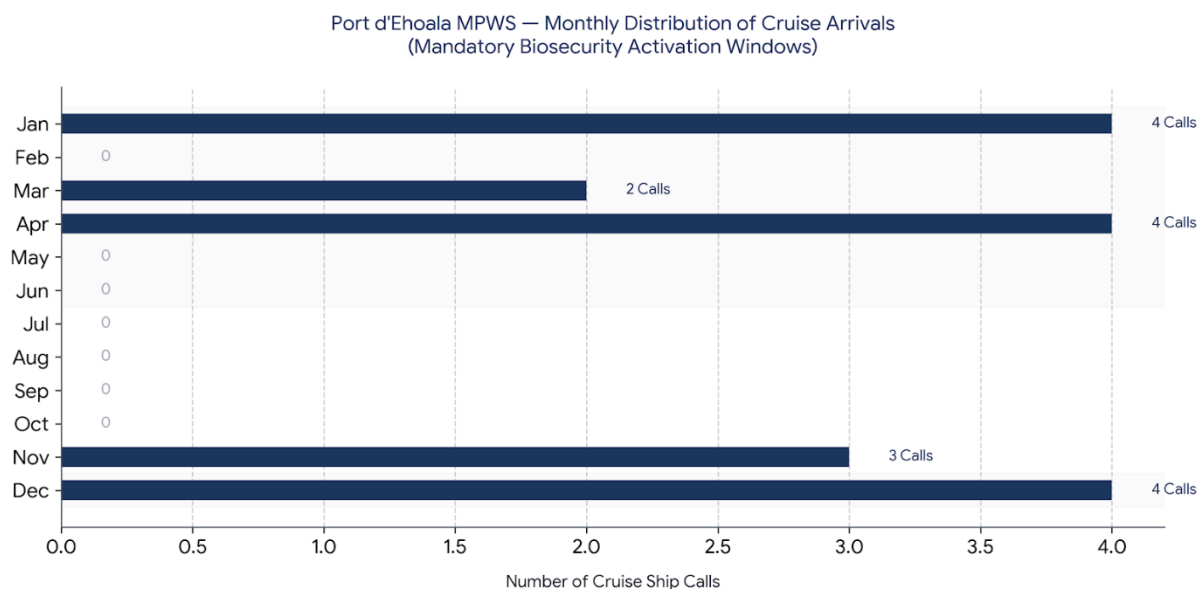
The PRF provider must operate segregated reception facilities at the port-land interface to support material recovery and prevent landfill disposal:

- **Plastic Waste Upcycling:** Marine plastic fractions (PET, PP, HDPE) must be sorted and routed to local grinding and granulation facilities. Non-recyclable mixed plastics are to be assessed for waste-to-energy processing rather than municipal disposal.
- **Hazardous Streams (Annex I & VI):** Oily sludges and bilge water must be transferred via sealed vacuum systems to oil-water separation units for recovery of base industrial oils. Exhaust gas cleaning system (scrubber) residues and washwater concentrates must be declared on the AWN and received via dedicated sealed tanker units. The port does not permit open-loop scrubber discharge within the port basin. Vessels with open-loop scrubbers must switch to closed-loop mode upon entering the port approach and arrange shore reception of accumulated washwater concentrate with the PRF contractor.
- **Sewage (Annex IV):** The PRF contractor shall provide or arrange access to a sewage pump-out service capable of receiving blackwater and greywater from vessels unable to discharge at sea under Annex IV criteria. Capacity and connection specifications shall be published in the port information circular and confirmed in the contractor's operational procedures.

The Port Authority and APMF authorize and oversee PRF arrangements but do not carry out waste handling directly. The contractor is an independent entity and bears sole civil, criminal, and environmental liability for all waste once it has crossed the ship's rail. The Port Authority accepts no liability for contamination, non-compliance, or damage occurring landward of the ship-shore interface.

6.2 CRUISE SEASONALITY & QUARANTINE MANAGEMENT

Historical data shows passenger vessel calls are concentrated in a defined seasonal window:



- **Biosecurity Mandate:** International catering and food waste carries a high risk of introducing animal and plant pathogens. All organic waste from cruise ships between November and April must be collected in sealed, leak-proof containment and sent directly to high-temperature incinerators or regulated deep-burial sites, not to standard landfill.

- **Contractor Operational Readiness:** The contractor must have this biosecurity framework in place by 1 November and maintain it through 30 April. During the off-season (May to October), these specialist resources may be stood down.

7 INSTITUTIONAL GOVERNANCE & ENFORCEMENT

7.1 STAKEHOLDER CONSULTATION FORUM

The Port Authority holds an annual stakeholder forum bringing together port administration, the APMF, terminal operators, shipping agents, and waste contractors. The forum reviews monthly collection metrics, audits fee structures, and adjusts operational thresholds to maintain standard alignment.

The forum meets every six months, convened by the Port Authority. Minutes are recorded and circulated to all participants within 30 days. Recommendations requiring changes to this MPWS are referred to the APMF for formal approval. A quorum requires the presence of the Port Authority, APMF, and at least one certified waste contractor representative.

7.2 REPORTING INADEQUACIES OF PORT RECEPTION FACILITIES

If a vessel experiences inadequate PRF services—including unreasonable delays, insufficient capacity, or excessive charges—the Master may file a formal complaint:

- **Protocol:** The Master completes the standardized inadequacy report in the format set out in Appendix 1 of IMO MEPC.1/Circ.834/Rev.1.
- **Filing Route:** The report is submitted to the vessel's Flag State Administration, with a copy sent to the Port Authority and the APMF to initiate a compliance review.

7.3 ENFORCEMENT AND RECORD RETENTION

- **Data Preservation:** AWN forms, WDR receipts, and inadequacy reports must be archived digitally for a minimum of two years to support regional maritime audits.
- **Jurisdictional Roles:**
 - **Vessel Oversight:** Enforced by APMF Port State Control (PSC) and State Shipping Inspectors.
 - **Terrestrial Disposal Operations:** Audited and monitored by the Ministry of Environment and internal port compliance officers.
- **Penalties:** Non-compliance with AWN requirements, waste delivery obligations, or segregation standards may result in detention of the vessel, refusal of port clearance, and referral to the APMF for prosecution under the 2026 Maritime Transport Code. Persistent non-compliance will be reported to the vessel's Flag State Administration.

7.4 PLAN REVIEW

This MPWS shall be reviewed by the Port Authority and APMF at least once every three years from the date of approval, or earlier in the event of: a change in port traffic exceeding 20% of the baseline figures in §3.1; a change in applicable MARPOL regulations; appointment of a new PRF contractor; or a recommendation from the annual Stakeholder Forum. Revised

versions shall be submitted to APMF for approval and notified to port users via the Port Information Circular.

7.5 ROLE OF THE HARBOUR MASTER'S OFFICE & OPERATIONAL SAFETY

The Harbour Master's Office is responsible for the day-to-day execution of this Plan. Operating under APMF oversight, its key duties regarding waste, security, and environmental compliance include:

- **Supervision of Maritime Traffic:** Overseeing the safe entry, movement, and departure of all vessels within the 442-hectare concession.
- **Berth Allocation:** Allocating berths and mooring positions for cargo, tanker, and cruise vessels.
- **Enforcement of Port Regulations:** Enforcing vessel compliance with local regulations, security requirements, and the waste delivery procedures set out in the *Management Plan for Waste from Ships*.
- **Environmental Protection:** Monitoring and managing environmental risks, including marine pollution, illegal dumping, and ballast/bilge discharge compliance.
- **Emergency Management:** Coordinating emergency responses to maritime accidents, fires, or hydrocarbon spills.
- **Stakeholder Coordination:** Coordinating between shipping agents, Port State Control inspectors, and the waste contractor.

For operational queries, emergencies, or berth waste reception coordination, the Port Captainty office can be reached at:

- | |
|--|
| <ul style="list-style-type: none">• Official Title: Port Officer (<i>Officier du Port</i>)• Contact Telephone: +261 34 49 045 00• Direct Administrative Email: rabarisolo.hery@riotinto.com |
|--|

8 ANNEX INDEX

- Annex 1: Standard Format of the Advance Notification Form (ANF) for Waste Delivery (*IMO MEPC.1/Circ.834/Rev.1, Appendix 2*).
- Annex 2: Standard Format for the Waste Delivery Receipt (WDR) (*IMO MEPC.1/Circ.834/Rev.1, Appendix 3*).
- Annex 3: Format for Reporting Alleged Inadequacies of Port Reception Facilities (*IMO MEPC.1/Circ.834/Rev.1, Appendix 1*).

ANNEX 1: STANDARD FORMAT OF THE ADVANCE NOTIFICATION FORM FOR WASTE DELIVERY TO PORT RECEPTION FACILITIES

STANDARD FORMAT OF THE ADVANCE NOTIFICATION FORM FOR WASTE DELIVERY TO PORT RECEPTION FACILITIES

Notification of the Delivery of Wastes/Residues to: (enter name of port or terminal)
 The master of a ship should forward the information below to the designated authority at least 24 hours in advance of arrival or upon departure of the previous port if the voyage is less than 24 hours.
 This form should be retained on board the ship along with the appropriate Oil Record Book, Cargo Record Book or Garbage Record Book.

DELIVERY FROM SHIPS (ANF)

1. SHIP PARTICULARS

1.1 Name of ship:	1.5 Owner or operator:
1.2 IMO number:	1.6 Distinctive number or letters:
1.3 Gross tonnage:	1.7 Flag State:
1.4 Type of ship: ☐ Oil tanker ☐ Chemical tanker ☐ Bulk carrier ☐ Container ☐ Other cargo ship ☐ Passenger ship ☐ Ro-ro ☐ Other (specify)	

2. PORT AND VOYAGE PARTICULARS

2.1 Location/Terminal name and POC:	2.6 Last Port where wastes/residues were delivered:
2.2 Arrival Date and Time:	2.7 Date of Last Delivery:
2.3 Departure Date and Time:	2.8 Next Port of Delivery (if known):
2.4 Last Port and Country:	2.9 Person submitting this form is (if other than the master):
2.5 Next Port and Country (if known):	

3. TYPE AND AMOUNT OF WASTES/RESIDUES FOR DISCHARGE TO FACILITY

MARPOL Annex I – Oil	Quantity (m ³)	MARPOL Annex V – Garbage	Quantity (m ³)
Oily bilge water		A. Plastics	
Oily residues (sludge)		B. Food wastes	
Oily tank washings		C. Domestic wastes	
Dirty ballast water		D. Cooking oil	
Scale and sludge from tank cleaning		E. Incinerator ashes	
Other (please specify)		F. Operational wastes	
MARPOL Annex II – NLS	Quantity (m³) /Name¹	G. Animal carcasses	
Category X substance		H. Fishing gear	
Category Y substance		I. E-waste	
Category Z substance		J. Cargo residues (non-HME) ²	
OS – other substances		K. Cargo residues (HME) ²	
MARPOL Annex IV – Sewage	Quantity (m³)	MARPOL Annex VI – Air pollution	Quantity (m³)
		Ozone-depleting substances and equipment containing such substances	
		Exhaust gas-cleaning residues	

¹ Indicate the proper shipping name of the NLS involved.

² Indicate the proper shipping name of the dry cargo.

Port d'Ehoala - Management Plan for Waste from Ships (MPWS)

Name of ship:	IMO Number:
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Please state below the approximate amount of wastes/residues remaining on board and the percentage of maximum storage capacity. If delivering all wastes/residues on board at this port please strike through this table and tick the box below. If delivering some or no waste/residue, please complete all columns.

I confirm that I am delivering all the wastes/residues held on board this vessel (as shown on page 1) at this port

Type	Maximum dedicated storage capacity (m ³)	Amount of wastes/residues retained on board (m ³)	Port at which remaining wastes/residues will be delivered (if known)	Estimate amount of wastes/residues to be generated between notification and next port of call (m ³)
MARPOL Annex I – Oil				
Oily bilge water				
Oily residues (sludge)				
Oily tank washings				
Dirty ballast water				
Scale and sludge from tank cleaning				
Other (please specify)				
MARPOL Annex II – NLS³				
Category X substance				
Category Y substance				
Category Z substance				
OS – other substances				
MARPOL Annex IV – Sewage				
Sewage				
MARPOL Annex V – Garbage				
A. Plastics				
B. Food wastes				
C. Domestic wastes				
D. Cooking oil				
E. Incinerator ashes				
F. Operational wastes				
G. Animal carcasses				
H. Fishing gear				
I. E-waste				
J. Cargo residues (non-HME) ⁴				
K. Cargo residues (HME) ⁴				
MARPOL Annex VI – Air pollution				
Ozone-depleting substances and equipment containing such substances				
Exhaust gas-cleaning residues				

Date: Name and Position:
Time: Signature:

³ Indicate the proper shipping name of the NLS involved.

⁴ Indicate the proper shipping name of the dry cargo.

ANNEX 2: STANDARD FORMAT FOR THE WASTE DELIVERY RECEIPT

STANDARD FORMAT FOR THE WASTE DELIVERY RECEIPT

The designated representative of the reception facility provider should provide the following form to the master of a ship that has just delivered wastes/residues.

This form shall be retained on board the ship along with the appropriate Oil Record Book, Cargo Record Book or Garbage Record Book.

1. RECEPTION FACILITY AND PORT PARTICULARS

1.1 Location/Terminal name:
1.2 Reception facility provider(s)
1.3 Treatment facility provider(s) – if different from above:
1.4 Waste/residue Discharge Date and Time from: _____ to _____

2. SHIP PARTICULARS

2.1 Name of ship:	2.5 Owner or operator:
2.2 IMO number:	2.6 Distinctive number or letters:
2.3 Gross tonnage:	2.7 Flag State:
2.4 Type of ship: ☐ Oil tanker ☐ Chemical tanker ☐ Bulk carrier ☐ Container ☐ Other cargo ship ☐ Passenger ship ☐ Ro-ro ☐ Other (specify)	

3. TYPE AND AMOUNT OF WASTES/RESIDUES RECEIVED

MARPOL Annex I – Oil	Quantity (m ³)	MARPOL Annex V – Garbage	Quantity (m ³)
Oily bilge water		A. Plastics	
Oily residues (sludge)		B. Food wastes	
Oily tank washings		C. Domestic wastes	
Dirty ballast water		D. Cooking oil	
Scale and sludge from tank cleaning		E. Incinerator ashes	
Other (please specify)		F. Operational wastes	
MARPOL Annex II – NLS	Quantity (m³)/Name¹	G. Animal carcasses	
Category X substance		H. Fishing gear	
Category Y substance		I. E-waste	
Category Z substance		J. Cargo residues (non-HME) ²	
OS – other substance		K. Cargo residues (HME) ²	
MARPOL Annex IV – Sewage	Quantity (m³)	MARPOL Annex VI – related	Quantity (m³)
		Ozone-depleting substances and equipment containing such substances	
		Exhaust gas-cleaning residues	

On behalf of the port facility I confirm that the above wastes/residues were delivered.

Signature: Full Name and Company Stamp:

¹ Indicate the proper shipping name of the NLS involved.

² Indicate the proper shipping name of the dry cargo.

ANNEX 3: FORMAT FOR REPORTING ALLEGED INADEQUACIES OF PORT RECEPTION FACILITIES

FORMAT FOR REPORTING ALLEGED INADEQUACIES OF PORT RECEPTION FACILITIES¹

The master of a ship having encountered difficulties in discharging waste to reception facilities should forward the information below, together with any supporting documentation, to the Administration of the flag State and, if possible, to the competent Authorities in the port State. The flag State shall notify IMO and the port State of the occurrence. The port State should consider the report and respond appropriately informing IMO and the reporting flag State of the outcome of its investigation.

1 SHIP'S PARTICULARS

- 1.1 Name of ship: _____
- 1.2 Owner or operator: _____
- 1.3 Distinctive number or letters: _____
- 1.4 IMO Number²: _____
- 1.5 Gross tonnage: _____
- 1.6 Port of registry: _____
- 1.7 Flag State³: _____
- 1.8 Type of ship:
- | | | |
|---|--|--|
| ☐ Oil tanker | ☐ Chemical tanker | ☐ Bulk carrier |
| ☐ Other cargo ship | ☐ Passenger ship | ☐ Other (specify) _____ |

2 PORT PARTICULARS

- 2.1 Country: _____
- 2.2 Name of port or area: _____
- 2.3 Location/terminal name: _____
(e.g. berth/terminal/jetty)
- 2.4 Name of company operating the reception facility (if applicable): _____
- 2.5 Type of port operation:
- | | | |
|--|---------------------------------------|-----------------------------------|
| ☐ Unloading port | ☐ Loading port | ☐ Shipyard |
| ☐ Other (specify) _____ | | |
- 2.6 Date of arrival: ____/____/____ (dd/mm/yyyy)
- 2.7 Date of occurrence: ____/____/____ (dd/mm/yyyy)
- 2.8 Date of departure: ____/____/____ (dd/mm/yyyy)

¹ This format was approved by MEPC 53.

² In accordance with the *IMO ship identification number scheme*, adopted by the Organization by Assembly resolution A.1117(30).

³ The name of the State whose flag the ship is entitled to fly.

3 INADEQUACY OF FACILITIES

3.1 Type and amount of wastes/residues for which the port reception facility was inadequate and nature of problems encountered

Type of wastes/residues	Amount for discharge (m³)	Amount <u>not</u> accepted (m³)	Problems encountered Indicate the problems encountered by using one or more of the following code letters, as appropriate. A No facility available B Undue delay C Use of facility technically not possible D Inconvenient location E Ships had to shift berth involving delay/cost F Unreasonable charges for use of facilities G Other (please specify in paragraph 3.2)
MARPOL Annex I - related			
Oily bilge water			
Oily residues (sludge)			
Oily tank washings (slops)			
Dirty ballast water			
Scale and sludge from tank cleaning			
Other (please specify)			
MARPOL Annex II - related			
Category of NLS ⁴ residue/water mixture for discharge to facility from tank washings:			
Category X substance			
Category Y substance			
Category Z substance			
MARPOL Annex IV - related			
Sewage			
MARPOL Annex V - related			
A. Plastics			
B. Food wastes			
C. Domestic wastes			
D. Cooking oil			
E. Incinerator ashes			
F. Operational wastes			
G. Animal carcasses			
H. Fishing gear			
I. E-waste			
J. Cargo residues (non-HME) ⁵			
K. Cargo residues (HME) ⁵			
MARPOL Annex VI - related			
Ozone-depleting substances and equipment containing such substances			
Exhaust gas-cleaning residues			

⁴ Indicate, in paragraph 3.2, the proper shipping name of the NLS involved and whether the substance is designated as "solidifying" or "high viscosity" as per MARPOL Annex II, regulation 1, paragraphs 15.1 and 17.1 respectively.

⁵ Indicate the proper shipping name of the dry cargo.