



Mormugao Port

Port Waste Management Plan

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PREAMBLE

AIMS AND OBJECTIVES

The overall aim of this port waste management plan for the Mormugao port is to protect the marine environment by reducing discharges into the sea of ship generated wastes and cargo residues, to improve the availability and use of reception facilities and strengthen the enforcement regime.

Its objectives are

- To reduce illegal discharge of waste from vessels
- To fulfill legal duties with regard to waste management
- To consult with users, agents, operators, contractors and regulators in the development and implementation of waste management strategies and measures
- To minimize the production of waste wherever possible
- To re-use or recycle waste wherever possible
- To dispose of waste so as to minimize negative environmental effects

1. THE PORT

OVERVIEW OF PORT ACTIVITIES

Mormugao port is situated on the West Coast of India at latitude- 15 25' N and longitude- 73 47'E. The port is approximately 370 kms south of Mumbai. It is a natural harbour protected by a breakwater and also by a mole built eastwards from outer end of breakwater. The port is served by two major navigable rivers, the Zuari and the Mandovi which are also interconnected by the Cumbarjua canal. The harbour is protected by south west monsoon as it has been constructed on the leeward side of Mormugao headland.

Mormugao is one of the oldest port on the West Coast of India, enjoys an enviable position amongst the major ports of India as a premier iron ore exporting port, with an throughput of around 35.31 million tonnes of iron ore traffic for the year 2007-08 . Though ore is the predominant cargo, the port's efficient operations attracted steady increase in liquid bulk, general cargo and container traffic over the years.

Mormugao port has drawn up a plan for augmenting the capacity of the port cargo handling facilities. These include:

1. Construction of 4 lane road from Verna to Mormugao port.
2. Construction of additional 3 mooring dolphins.
3. Development of berth no. 7.
4. Augmentation of capacity of the existing mechanical ore handling plant.

2. DEFINITION OF WASTES

Definitions in MARPOL 73/78 Regulations.

2.1 MARPOL ANNEXES

Annex I Oily Wastes (bilges, sludge, ballast, slops)

Annex II Noxious Liquid Substances Carried in Bulk (dirty ballast, slops, tank washings)

Annex III Pollution by Harmful Substances Carried by Sea in Packaged Form

Annex IV Sewage

Annex V Garbage

.... which includes - hazardous waste, food waste, glass, metal, plastics, paper/cardboard, wood, paint tins, batteries

Annex VI Prevention of Air Pollution from Ships

SECTION I

3. PROCESS UNDERTAKEN BY THE MORMUGAO PORT TO ACHIEVE COMPLIANCE

3.1 CONSULTATION

Purpose

To ensure that the needs of potential users and waste regulators are taken into account when planning and operating port waste reception facilities; to ensure that all mariners are aware of the location, cost and procedures for using the facilities, and also of the consultation arrangements for the future development of adequate facilities within the port.

Objective

The Mormugao port has taken its obligations seriously and has engaged in a consultation exercise with all links in the waste management chain in order to discuss and explain the implications of the waste management requirements on a national and international level. The objective has been to affect an exchange of information and to gain an understanding of the perspective of other parts of the waste management chain in order to devise a flexible and workable system.

To ensure the adequacy of the process, the Mormugao Port has consulted

- ships' masters
- ships' agents
- waste contractors
- Central Government
- Goa State Pollution Control Board

4. ANALYSIS OF NEED FOR WASTE RECEPTION FACILITIES

4.1 Purpose

To assemble information to allow the port to assess what facilities should be provided.

4.2 Methodology

Reproduced below is the questionnaire used to gain information in order to analyze types and quantities of wastes landed during a sample period, issued through the ships' agents.

5 The Questionnaire

Ship Waste Assessment Form MARPOL 73/78

Appendix V

The data obtained by using this questions can be used to determine the type and capacity of reception facilities according to MARPOL 73/78.

1. SHIP CHARACTERISTICS	
Tonnage	:-----
Number of crew/passengers	:-----
Last port of call	:-----
Time spent in Special Area	
During last voyage (days)	:-----
Next port of call	:-----
Type port of call	:-----
Type of propulsion/Incl	:-----
Year of construction	:-----
Ship Type	:
	<input type="checkbox"/> Tanker
	<input type="checkbox"/> Container ship
	<input type="checkbox"/> Dry cargo
	<input type="checkbox"/> Passenger/cruise ship
	<input type="checkbox"/> Naval ship
	<input type="checkbox"/> Other, i.e. _____
2. CARGO INFORMATION/OPERATIONS IN PORT	
<input type="checkbox"/>	Loading cargo
<input type="checkbox"/>	Unloading cargo
<input type="checkbox"/>	Tank washing
<input type="checkbox"/>	Bunkering
<input type="checkbox"/>	Deballasting
<input type="checkbox"/>	Other, i.e. _____
Describe cargo/products on board subject to the provisions of :	
<input type="checkbox"/>	Annex I:----- -----
<input type="checkbox"/>	Annex II:-----

3. WASTE HANDLING OPERATIONS AND FACILITIES

ANNEX I - ONLY WASTES (bilges, sludge, ballast, slops)

Describe on board facilities for storage and processing of oily wastes (type and capacity of separators, volume of waste storage tanks, etcetera)

.....
.....

Describe quantities of waste currently on board (in m³ or tons):

Dirty ballast :-----Bilges :-----
Slops :-----Sludges:-----
Tank washings :----- Others :-----

Describe quantities of waste that have been discharged during last voyage (in m³ or tons):

.....
.....

Estimate quantities of waste that will be generated on board while in the port (tank washings, bilges, etc. in m³ or tons):

.....
.....

ANNEX II- NOXIOUS LIQUID SUBSTANCES CARRIED IN BULK

Describe on board facilities for storage of chemical wastes (volume of storage tanks in m³):

.....
.....

Describe quantities and types of waste currently on board (in m³ or tons):

.....
.....

Describe quantities and types of waste that have been discharged during Last voyage (in m³ or tons):

.....
.....

Estimate quantities and types of waste that will be generated while Staying in the port (tank washings, etc. in m³ or tons):

.....
.....

ANNEX IV - SEWAGE

Describe on board facilities for treatment and storage of sewage (type, Capacity, volume of storage tanks, etc.):

.....
.....

Describe quantities of sewage currently on board (in m³ or tons):

.....
.....

Estimate quantity of sewage generated per day (in m³ or tons):

.....
.....

Describe quantities of garbage currently on board (in m³ or tons):

ANNEX V - GARBAGE

Domestic waste Cargo associated waste
Maintenance waste Others

Describe quantities and type of garbage which have been discharged during last voyage (in m³ or tons):

.....
.....

4. ADDITIONAL REMARKS

.....
.....
.....

SECTION II

6. THE PORT WASTE MANAGEMENT SYSTEM

6.1 INTRODUCTION

A system, as described in the following sections, has been put in place.

The Harbour Master will be responsible for the implementation of the Port Waste Management Plan.

7. PROCEDURES FOR THE USE OF THE PORT WASTE RECEPTION FACILITIES

7.1. Annex I Oily Wastes (*bilges, sludge, ballast, slops*)

- a. Dumb Barge of 50 cu.m. capacity capable of receiving oily wastes/slops.

To be paid for by Ship's Agents as per "Scale of Rates".

- b. Shore based tank of 5 cu.m. capacity for collection of oily bilge water from barges

and other small crafts. This service is free of cost.

- c. By tanker lorries, arranged by licensed private contractor. The addresses/contact no. of the contractor is as follows:

Sr.No	Name of the firm	Address	Phone No
1	Shiva Petro-synth Specialties Ltd. PIC: Shri Sajan Pillai	Karma Plaza, Shop No.11 Vasco da Gama, Goa 403802	Phone: 0832-2500846 Mobile: 9822122409 Fax: 0832-2501018
2	Industrial Esters & Chemicals Pvt. Ltd. Ghatkopar(E), Mumbai - 400 077	<i>Authorised Agent in Goa</i> Shri. Nafis A. Khan, M/s. Goa Enterprises, House No.346, Assai Dongri, Airport Road, Dabolim, Goa.	0832-2541422 Mobile: 9823189473 Fax: 0832-2511070
3	M/s. Spear Petroleum Pvt. Ltd. PIC: Shri. Durgesh Mathur	Plot No.33, Kundaim Industrial Estate, Kundaim, Ponda, Goa	Tele Fax: 0832 2395911

Agents are requested to impress upon Masters to refrain from disposing off oily wastes to any other Company/persons other than those mentioned above, as it is likely to have severe legal implications.

7.2 Annex II Noxious Liquid Substances Carried in Bulk (dirty ballast, slops, tank washings)

Receivers of chemicals which come under the category of NLS will provide earmarked tankage for the reception of NLS waste from vessels.

7.3. Annex IV Sewage

Sewage reception facility is available only at berths. The Mormugao Municipal Council has a 3,000 ltrs. sewage truck with a 36 m. hose and suction/discharge pump. Ships can avail this facility at a nominal cost payable by Agents. A notice of 24 hrs. would be required by the M.M.C. However, if the sewage truck is idle, it can be sent to the vessel on a shorter notice.

Sewage collection from vessels to be carried out exclusively by Garbage Contractors licensed by the Port.

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7.4. Annex V Garbage

.... which includes - hazardous waste, food waste, glass, metal, plastics, paper/cardboard, wood, paint tins, batteries

Ship's Agents may provide garbage collection service through private contractors licensed by the Port. The addresses/contact nos. of the contractors are as follows:

Sr.No.	Name of the firm	Address	Phone No
1	Sea Star Enterprises	Shop No.D1, Valmik Business Centre, Baina, Vasco da Gama, Goa	
2	M/s. George & Sons Marine Suppliers	"Georgemar" Shop No.4, Near Veg. Market, Vasco da Gama	0832-2518144
3	M/s. Paul Dias & Sons	10, Khalap Mansion, Vasco da Gama	0832-2512296
4	M/s.Goa Enterprises	H.No. 346, Assoi Dongri, , Airport Road, Vasco da Gama	0832-2541422
5.	M/s. Kamyab Ship Chandlers	Shop No.28, Ground floor, Apna Bazar, Vasco da Gama, Goa.	0832-2500827
6.	M/s. Daniel Engineering works & Ship repairs	1st floor, F.X. towers, Opp. MPT Institute, Vasco	0832-2519200

THE MORMUGAO PORT

7.5 Mandatory Provision

The Mormugao port has made available the system of port reception facilities for ship generated wastes. The Harbour Master is the person responsible for the implementation of this Plan.

7.6 Mandatory Discharge

All vessels MUST discharge ship-generated waste before leaving the Mormugao Port unless it can be demonstrated that storage space for such waste is sufficient. If retaining waste on board, a legitimate reason for not using the port reception facilities must be given.

7.7 Notification Requirement

The following information is required from ALL vessels prior to arrival

- Name/call sign/IMO number
- Flag state
- ETA/ETD
- Previous/next port of call
- Last port and date when ship generated wastes was delivered
- Whether delivering all/some/none of ship generated wastes into facilities
- Type and amount of waste to be delivered/stored on board plus maximum storage capacity
- The unit of measurement is cu m/kg

Agents are requested to impress upon Masters to fill up the notification form 24 hrs prior arrival. A format of the notification form is attached.

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Type	Waste to be delivered	Max Storage	Waste to be retained on board / % of max storage	Port where remaining waste will be delivered	Estimated waste between notification and next port	Last port & date where ship generated waste delivered	Delivering	All Some None	√
Food Waste m3									
Plastic m3									
General m3									
Sludge m3									
Bilge Water m3									
Other Oils (Specify) m3									

7.8 Notification Mechanism

The checklist is to be completed by the Master and submitted to The Mormugao port via the ship's agent at least 24 hours prior to arrival. Transmission should preferably be by electronic means (e mail or fax). The Port will retain ALL notification records for 3 years. Failure to submit a checklist MAY result in delay in entry.

7.9 Cargo Waste

It will be the responsibility of both the ship and the stevedore/cargo receiver to collect and dispose of all waste accumulated from the loading/discharge of cargo.

The stevedore/receiver will, as soon as possible after completion of cargo loading/discharge, dispose of any cargo residues remaining on the berth, and any spillages between the berth and the warehouses. They shall leave the berth in the same condition as prior to discharge/loading.

Failure of the stevedores/receivers to properly remove and dispose of cargo residue will result in the Mormugao Port carrying out this duty and charging the vessel/stevedores/receivers for this work. A quantum of charge will be determined by the time taken and all disposal charges, including overheads.

8. Location and Ease of Use

Following completion of the pre arrival checklist, agent will notify the waste contractor. **The contractor will collect from the vessel in accordance with the type, amount and ease of access to the jetty** and it may be that waterborne collection will be used in the case of vessel being at anchorage, at dolphins or an inaccessible berth.

The Master will have a copy of the waste transfer documentation so that he proves discharge before sailing and at arrival at his next port of call.

Ships which wish to discharge oily wastes,

Such vessels will continue to make arrangements through their agents for such transfer and disposal of oily waste with specialist licensed private contractors.

8.1 Records

The pre-notification form contains the details of each category of waste to be disposed of. This form will be kept for three years as a record of the actual use of the port reception facilities. All ships will be required to submit this form even where a vessel does not intend to discharge waste. The form will then act as a record of the total amount of waste disposed of in the port. **The contractor will advise the port of the actual amount of waste removed from the port on monthly basis with details of quantities of each categories of garbage discharged with special reference to Plastics. Details may be provided latest by 5th of running month for the previous month.**

Failure to provide these details may lead to cancellation of license.

Details may be provided if the following tabular format:

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For Garbage:

SR.NO.	DATE	NAME OF SHIP/BERTH	PLASTICS(m3)	FOOD WASTE(m3)	PLASTIC ASH(m3)	OTHERS (DUNNAGE, GLASS, WOOD, PAPER ,METAL)(m3)
Total (m3)						

For Oil/Sludge:

<i>Sr.No.</i>	<i>Date</i>	<i>Vessel Name/Berth</i>	<i>Waste Oil quantity</i>	<i>Used Oil Quantity</i>	<i>Foreign/Coastal</i>	<i>Permission Date</i>	<i>Permission granted by</i>
Total (m3)							

9. Giving effective information to users

9.1 Purpose

As with the consultation exercise, to ensure that all mariners are aware of the location, cost and procedures for using the facilities, and also of the consultation arrangements for future development of adequate facilities within the port.

9.2 System

The proposed system incorporates a port waste management system and a ship based garbage information management system as already required by the International Maritime Organization (IMO). Each ship agent operating in the port, will be notified in writing of the facilities available, who will inform all vessels under their agency about the pre-arrival notification and the facilities available in the port. Each vessel will be required to complete the pre arrival notification form even when there is a nil return.

10. Emergency Response Plan

Response to any emergencies of oil/chemical spillage will be as per Mormugao port's "On Site emergency Action Plan(Section 9, OSEAP)."

11.0 Grievance Procedure

In the case of any problem or grievance, complaints should be made immediately a problem arises through the agent to the Mormugao Port. Such complaints may be made verbally or in writing, but, if the latter, should be supported by written documentation at the earliest possible opportunity to facilitate resolution. If the grievance cannot be resolved using this procedure, the IMO form for reporting alleged inadequacy of port reception facilities should be completed and forwarded.

12. Local Regulations

The regulation under which shore based Garbage is handled are governed by “Municipal Solid Wastes (Management and Handling) Rules, 2000.” They were published under the notification of the Government of India in the Ministry of Environment and Forests number S.O. 783(E), dated, the 27th September, 1999 in the Gazette of India.

For information on the regulations visit web site <http://env.for.nic.in> by Ministry of Environment and forest, Govt. of India.

13. Audit, Review and Training

13.1 Purpose

To ensure that port waste management facilities are relevant and are up to date, and that plans are implemented effectively. I

13.2 Audit

Internal audits would be carried out annually to ensure proper and effective implantation of the plan.

13.3 Review

The plan will be incorporated as an ISO document in July 2009 and the plan will be reviewed in the month of July every year.

13.4 Training

Training program would be conducted by Mormugao port for employees, port users, contractors and agents at the interval of every Six months to update and spread awareness regarding implementation of WMP.

13.5 Compliance and Monitoring

Spot checks can be undertaken on vessel deemed unlikely to use facilities, Vessel logbooks of all waste generated during a voyage, plus disposal data, will form part of the inspection to ensure compliance and implementation.

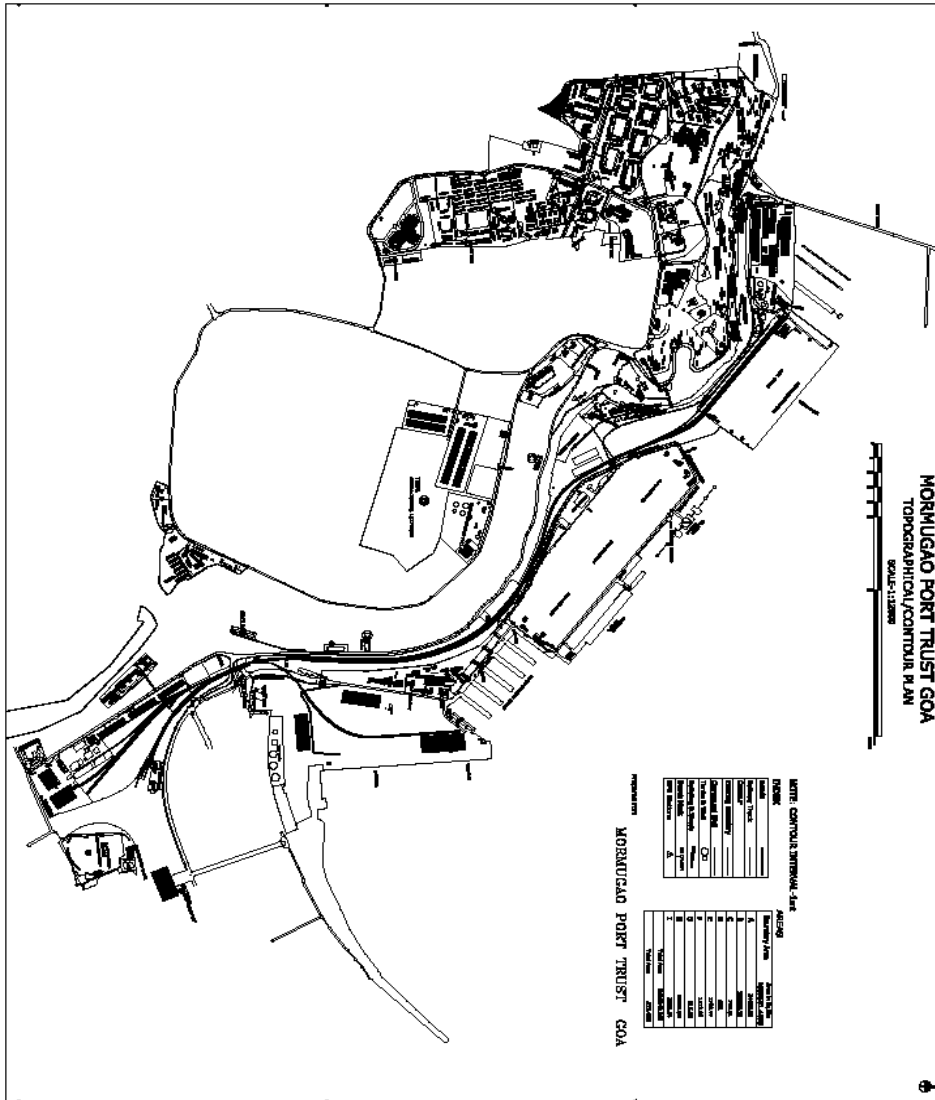
13.6 Consultation

Representatives from Port Agents, Port Users, Goa pollution Control Board and the approved Waste Contractor will be consulted on an annual basis in order to confirm the adequacy of the system.

CONTACT DIRECTORY

	Land line	Mobile
Deputy Conservator	+91 832 2521150 +91 832 2594801	+91 9822101844
Harbour Master	+91 832 2521152 +91 832 2594803	+91 9822101853
Signal Station	+91 832 2594807	+91 9822102653

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