Co-funded by the European Union

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EXPERTISE FRANCE

VINAMARINE

Rethinking Plastics
Circular Economy Solutions to Marine Litter

How to Improve the Management of Ship-Generated Waste and Cargo Residues in Vietnam

Policy Paper

Background

The maritime traffic has been increasing worldwide during the last 20 years. This has resulted in a much stronger focus on the environmental impact from Government and NGO´s, and lately also from the shipping industry. Illegal operational discharges of oily waste especially in coastal areas has drawn the attention the this, but especially the increasing volume of plastic found in the oceans of which a significant part derives from the maritime traffic is worrying. Internationally, the IMO Convention on Marine Pollution, MARPOL regulates the maritime traffic regarding the management of ship-generated waste and cargo residues and provides recommendations to ports on how to ensure sustainable collection of such waste without causing the ships any undue delays.

Maritime transport and seaport systems play a key role in the economy of Vietnam. The number of ships visiting seaports is increasing each year, which leads to potential risks of marine pollution, causing huge impacts on the marine ecosystem. Especially the increasing discharge of plastic products is concerning and could affect the biodiversity in the South China Sea (East Sea). As many other South East Asian countries to minimize the marine pollution risk, Vietnam has ratified all six waste-type annexes of MARPOL and transposed their provisions into national legislation. However, the gaps between marine anti-pollution and inland environmental protection regulations and understanding still exist, which pose a significant obstacle to effective implementation.

Historically, the waste collection from ships entering a port has taken place through direct contacts between shipping agents (on behalf of the ship) and waste operators/collectors operating in the nearby city. Often, this has happened without the knowledge of the port or port authorities and was not regulated, monitored, or controlled efficiently. This has led to a situation in many ports where the calling ships have been tempted to discharge their waste into the sea before arrival to save time and money, causing a significant negative impact on the marine environment. From the port side, this behavior has also unofficially been accepted as long as the waste discharge did not take place outside their port or anchorage area. Although the situation has been improving in Vietnam, Asian ports are still facing such challenges.

IMO Convention:

International Convention for the Prevention of Pollution from Ships (MARPOL) 73/78.

The International Convention for the Prevention of Pollution from Ships (MARPOL) is the main international convention covering the prevention of pollution of the marine environment by ships from operational or accidental causes. The Convention includes regulations aimed at preventing and minimizing pollution from ships – and currently includes six technical Annexes.

As one of the major IMO compulsory instruments, MARPOL 73/78 shall be transposed into national legislation. Member states will have the enforcement power.

www.imo.org

Problem Analysis

If ships calling at Vietnamese ports cannot deliver their waste at port reception facilities or other collection systems, they are indirectly forced to dump it illegally into the sea. Especially oily waste, garbage/plastic, sewage, and specific hazardous waste, among others, have a huge negative impact on the marine environment, fishing, and tourism industry.

The key question in many countries is who has the overall responsibility to ensure efficient waste collection from ships. Ratification of MARPOL is done by the Government and the compliance with the provisions of MARPOL is normally delegated to the Ministry of Transport and further to Port Authorities and Port Management. However, international ports – private or federal, besides operating terminals often also act as a landlord for many other international terminal operators, who run their own businesses. IMO has no legal power to enforce and control waste deliveries in ports and this has in many countries created a situation where there is no overall coordination of the waste collection and therefore insufficient monitoring and control of such waste management activities. Stakeholders involved in the waste collection process often do not see any benefits in coordinating the process and are thus reluctant to play a direct or indirect role.

In Europe, the situation became worrying in the late nineties with an increasing number of illegal waste discharges from ships. The implementation of the Baltic Sea Strategy (see below) and after the first EU Directive came into force, started focusing on the use of "indirect waste fees" (payment regardless of waste delivery also called "No Special Fees"). Introduction fully or partly of such indirect waste fees has contributed to increasing delivery of waste to EU port reception facilities. A more widespread introduction of indirect fees will without doubt also have a significant positive environmental impact in South East Asia. However, many authorities and ports are reluctant to introduce this approach.

MARPOL provisions concern the collection phase i.e., the collection of waste over the ship side to the port area. However, although a marine pollution problem has been addressed it has been replaced by a land-based problem. It is therefore vital that the waste collected from ships is managed properly on land and to the extent possible merged into the municipality waste streams according to national regulations regarding further treatment and final disposal. All steps from collection to treatment and final disposal have to be addressed efficiently.

Key challenges

- Lack of economic incentives to avoid illegal waste discharges from ships
- Regulatory gaps and insufficient implementation of marine and land-based waste management
- None or only voluntary Waste Notification procedures in ports
- Ambiguity regarding responsibilities for Ship Waste Management in ports
- Insufficient monitoring and control of ships in ports regarding waste delivery
- Insufficient focus on processing of the waste after collection (further treatment and final disposal)

The European Approach

Up to the year 2000, Europe experienced an increasing number of illegal ship waste discharges. Especially the Baltic Sea area and the English canal suffered from such discharges. The countries surrounding the Baltic Sea decided already in the mid/late nineties to deal with the situation. This was done on a regional basis through HELCOM (Helsinki Commission) as it was realized that marine pollution and ship traffic were a cross-border issue that could only be solved through regional cooperation. Nine countries surrounding the Baltic Sea agreed on the "Baltic Sea Strategy" in 1996, in which several recommendations were discussed and agreed upon between the countries for later implementation into national legislation. The most important recommendations concentrated on "Cost Recovery" issues (indirect waste fees – payment regardless of waste delivery) and "Waste Notification" before the arrival of the ship. The Baltic Sea Strategy led to a significant decrease in the number of illegal waste discharges in the area.

Parallel with the implementation of the Baltic Sea Strategy, the European Commission drafted the first directive addressing ship waste management. The Directive 59/2000 EC on Port Reception Facilities came into force in the year 2000 and the resulting in a significant increase in waste deliveries from ships to ports. This Directive has now been replaced by Directive 2019/883 on Port Reception Facilities amending Directive 2010/65/EU and repealing Directive 2000/59/EC.

The Directive addresses a number of requirements that EU ports shall comply with of which the most important are:

1. Cost Recovery

A significant part of the total cost for waste delivery shall be based on the indirect fee principles (payment regardless of delivery) to eliminate the economic incentive for illegal discharges.

2. Advanced mandatory Waste Notification

All ships must notify waste type and volume to be discharged at the port to the port/or relevant division responsible for ship waste management.

3. A clarification of the role and responsibilities of stakeholders involved in ship waste management in a port.

Historically and before the Directive came into force (and often seen in Asia) the overall responsibility for ship waste management has not be been clearly designated as the collection services often took place without the knowledge of the port/port authorities.

4. Increased awareness of ship waste management in EU ports

According to the Directive, all ports shall prepare a "Port Waste Management Plan" according to an Annex of the Directive. Such a plan is often also called "A Ship Waste Management Manual" because it addresses more operational activities. The manual provides relevant information on all aspects of ship waste management regarding e.g., all procedures, cost recovery, and prices, waste notification requirements, list of relevant contacts, and any other legal requirements.

The EU Directive 2019/883 amending Directive 2010/65/EU and repealing Directive 2000/59/EC.

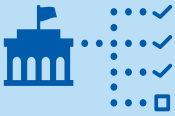
The first EU Directive 2000/59 on Port Reception Facilities addresses several discrepancies regarding the management of waste from ships and came in the year 2000. The Directive 2019/883 strengthens to provisions of the first Directive and has a closer alignment with MARPOL. The key focus areas of the Directives include a stronger emphasis on the use of indirect fees (payment regardless of waste delivery), mandatory waste notification and preparation of a Port Waste Management Plan (Ship Waste Management Manual).

General Approach for the Implementation of an Efficient Ship Waste Management System in Ports based on EU Experience

Roadmap for establishing efficient ship waste handling and MARPOL compliance in 7 steps

1 

Assessment of the existing ship waste handling system in the port - traffic and waste analysis and all procedures.

2 

Strategic decisions taken by port management and/or government
- Involvement of stakeholders
- Ownership/operation
- Cost recovery principle
- Waste type/volume acceptance

3 

Mandatory online Waste Notification system design and implementation

4 

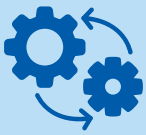
Incentivizing Cost Recovery system design based on fully/partly indirect fees

5 

Establishment of a ship waste handling organization in the port/port authorities

6 

Preparation of an operational Ship Waste Management Manual distributed to stakeholders describing all procedures and requirements

7 

Implementation and follow up

Ship Waste Management in Vietnam

In Vietnam, ships can deliver their waste to facilities in some ports. However, many ports are facing several implementation challenges, compounded by economic globalization and increased maritime traffic. Vietnamese ports need to undertake assessments on what is required to upgrade their existing waste reception facilities/systems, to meet the demand for collection, treatment, and final disposal of ship-generated waste, to reduce the pollution at the seaports, and more generally to protect the marine environment.

Many Vietnamese seaports (except ports in Ho Chi Minh City, Vung Tau Province, Da Nang City, Hai Phong City) are not equipped with adequate reception facilities/systems for the management of ship wastes, although the national government has developed regulations to encourage the expansion and presence of waste reception facilities at the ports (e.g., Circular 41/2017/TT-BGTVT of the Ministry of Transport dated 14/11/2017). Most ports do not invest in build their own infrastructure (i.e., temporary waste storage and waste separation) for ship wastes. Most ship waste collections are done by third parties (waste operators) with only limited control. Direct contact between the ship and waste operator for waste delivery is the norm al situation, especially at anchorage areas.

Waste Management Control in Vietnam is under the Ministry of Natural Resource and Environment (MONRE), with some shared role in specific sectors with the Ministry of Transport in the Maritime Environment.

The Vietnamese Ministry of Transport (MOT) is responsible for MARPOL compliance and has an important stake in most ports in Vietnam through The Maritime Administration (VINAMARINE). VINAMARINE is the main public authority which, among various specialized supervision functions over maritime sector, is in charge of maritime activities at the ports in Vietnam. VINAMARINE has been working on MARPOL implementation for several years and also prepared documents that highlight its plans for sustainable port development including better waste management. Vietnam has not yet completed the legal framework to fully implement waste reception facilities to meet the provisions of MARPOL for ships wanting to dispose of their wastes.

Important Vietnamese Regulations addressing Ship Waste Management and Reception Facilities

I. Law level:

1. Vietnam Maritime Code 2015

This is the highest level of national law regulating the maritime fields such as shipping, port activities, maritime safety and environmental protection. The law contains clauses relating to waste management by ships and sea ports in accordance with MARPOL 73/78 Convention, which are interpreted additionally in details by the Decree No. 58/2017/ND-CP and Circular 41/2017/TT-BGTVT). I.e.:

Article 128: "Seaports must have plans and measures to receive and treat wastes from ships according to national regulations and international treaties of which Vietnam is a party".

2. Law on Environmental Protection 2020

This is the highest-level national law regulating environmental protection in general. The law contains clauses relating to waste management, which are interpreted additionally in details by the Decree No. 08/2022/NĐ-CP and Circular No. 02/2022/TT-BTNMT. I.e.:

Article 73:

1. Entities shall reduce, classify and dispose of waste that is single-use plastic products and non-biodegradable plastic packaging according to regulations; not discharge plastic waste directly into the systems for drainage of water to rivers, ponds, lakes, channels and oceans.

2. Plastic waste generated from marine tourism and services, maritime economy, extraction of oil and gas and marine mineral resources, aquaculture and commercial fishing must be collected, stored and transferred to facilities licensed for recycling and treatment.

3. Environmentally-friendly products, single-use plastic alternatives and non-biodegradable plastic packaging alternatives that have been certified are entitled to incentives and assistance as prescribed by law.

4. Plastic waste must be collected and classified for reuse, recycling or treatment purpose as prescribed by law. Unrecyclable plastic waste must be transferred to licensed facilities for treatment as prescribed. Plastic waste generated from economic activities at sea must be collected for reuse, recycling or treatment and must not be discharged into the sea.

5. The State shall encourage the reuse and recycling of plastic waste in service of production of goods and building materials and construction of traffic works; encourage the research and development of systems for collecting and treating plastic waste floating at sea and in the ocean; introduce policies to promote reuse and recycling of plastic waste.

6. Provincial People's Committees shall organize the collection and treatment of plastic waste within their provinces; encourage the reduction of non-biodegradable plastic packaging and single-use plastic products; disseminate information about harmful effects of dumping of fishing gear into the sea and plastic waste on the ecosystem.

7. The Government shall introduce a roadmap for reducing production and import of single-use plastic products, non-biodegradable plastic packaging and products and goods containing microplastics.

II. Decree Level:

1. Decree No. 58/2017/ND-CP adopted by the Government interpreting a number of articles of the Vietnam Maritime Code 2015, including Port Reception Facilities. I.e.:

Article 117:

Port enterprises must arrange facilities to receive garbage, dirty water, water mixed with oil and other hazardous liquids from ships for further treatment/ or provide a list of enterprises collecting and treating waste and dirty water, water mixed with oil and other hazardous liquids as prescribed by law during port operation (list of waste operators available.

2. Decree No. 08/2022/NĐ-CP adopted by the Government interpreting a number of articles of the Law on Environmental Protection. I.e.:

Article 160: Responsibilities of ministries and ministerial-level agencies in performing the task of state management on environmental protection.

2. Specific responsibilities for state management of environmental protection of a number of ministries and ministerial-level agencies:

d) The Ministry of Transport shall elaborate and promulgate national technical regulations on quality, technical safety and environmental protection for means of transport in accordance with law; direct and organize the implementation of dredging activities in seaport waters and inland waterway waters in accordance with law; promulgate or submit to competent authorities for promulgation and organize the implementation of mechanisms and policies on conversion and elimination of fossil fuel-using means of transport, and means of transport that cause environmental pollution; organize the implementation of environmental protection, response to climate change, protection of the ozone layer in maritime and aviation activities in accordance with international treaties to which Vietnam is a member and other fields under its management;

III. Circular Level:

1. Circular No. 41/2017/TT-BGTVT in effect from January 1, 2018 and issued by the Minister of Transport, provides provisions for the management and collection of waste from ships at sea and in seaports.

The content of this Circular stipulates the responsibility of managing the collection and treatment of wastes from ships at seaports.

2. Circular No. 02/2022/TT-BTNMT adopted by the Ministry of Natural Resources and Environment interpreting a number of articles of the Law on Environmental Protection, guiding the domestic, industrial and hazardous waste management.

Some obstacles in the Vietnamese ship waste management system to ensure efficient ship waste management in ports have been identified by the "Rethinking Plastics - Circular Economy Solutions to Marine Litter" project (see page 10). These are the same as identified in other major ports worldwide and also in Europe, before the named Directives came into force. The challenges are both legal and operational: Legal challenges include the need for more precise and prescriptive regulations and the operational challenges concern clear and efficient procedures. Generally speaking, the system lacks incentives to motivate ships to deliver their waste. Such incentives include efficient Online Waste Notification and a Cost Recovery System build on indirect fees, that will incentivize waste delivery in ports and reduce illegal discharges.

To make Vietnamese ports more competitive and greener in the future, a digitalization of procedures such as waste management is needed.

Identified Key Legal and Operational needs:

Legal:

1. Circular No. 41/2017/TT-BGTVT and Decree No. 58/2017/ND-CP:

- Introduction of more informative Online and Mandatory Advanced Waste Notification System and revised Form (IMO Standard Form) and providing more clear guidance on using "at least 24h before arrival notice" and modification of the "Waste Receipt" form.

2. Circular No. 41/2017/TT-BGTVT:

- Updates regarding the definition of Garbage, taking into account the latest amendments of MARPOL Annex V, in order to make better alignment between international and national terms and actions thereof.
- Clarify the responsibility of Ports/ local Port Authorities. Provide the information regarding available RF´s e.g. a list of service providers, the contact details, the type and volume of waste that can be collected in the port for further processing and the tariffs for waste operations. Such information shall be provided in Vietnamese and English by electronic means (Websites, Portales, Facebook...) and also made available in a "Ship Waste Management Manual".

Amendment regarding a possible incentivizing Cost Recovery System for ship waste handling based or partly based on indirect fees

Operational:

1. Dissemination of regulations on management of waste from ships, strengthen responsibility for supervision of waste management activities e.g., through better communication, monitoring and inspection of ships.
2. Establish organizational structures of local maritime authorities and the port enterprises and ensure training on the national and MARPOL regulations and specific ship waste handling procedures to port enterprise, shipping agents and waste operator staff.

Steps towards an improved ship waste management in Vietnam - The "Rethinking Plastics – Circular Economy Solutions to Marine Litter" project

The "Rethinking Plastics" project, funded by the European Union and the German Government, supports Vietnam in reducing sea-based marine litter and improving port waste management structures. Initial discussions with MOT and VINAMARINE started in late 2019. It was agreed to look at "best practices" from European ports and see how such practices could be implemented in Vietnamese ports. In early 2020 a pilot project was designed and started in April 2020 to learn from concrete experiences and assessments. The project, "Ship Waste Management in Vietnamese ports", implemented in Cat Lai terminal (Saigon Newport) aims to reduce the illegal dumping of ship waste into the sea by implementing efficient ship waste management in Vietnamese ports. It recommends how best practices identified from Europe can be implemented in Vietnam.

At present, the pilot project in Cat Lai port has provided several recommendations based on:

- a technical assessment of the existing system,
- a national legal review and
- discussions of best practices from European ports.

The Recommendations concern both operational issues, as well as amendments to existing regulations and circulars. Based on these findings, the project is currently working on implementing an efficient online mandatory waste notification system that allows ships to notify in advance the waste type and volume to be delivered to the port reception facility. Furthermore, the project will design and recommend an incentivizing Cost Recovery System (waste fee) and prepare a description of exiting procedures (Ship Waste Management Manual - SWMM) agreed upon between relevant stakeholders e.g., Vinamarine, Port Authorities, and operators.

By implementing an online mandatory waste notification system and describe the existing system in an SWMM for the information to stakeholders, the port can in the future provide efficient waste handling services to ships and ease the administrative procedures for shipping agents. The introduction of an incentivizing Cost Recovery System will stimulate waste delivery. Furthermore, implementing the proposed activities will be beneficial not only to the shipping industry but also provide financial and administrative benefits to the port and its stakeholders.

This will not only make the port fully compliant with international conventions and national regulations but also serve as an example for other ports in The South China Sea (East Sea).

The project is managed by Expertise France and implemented in close cooperation with VINAMARINE, Hanoi, and HCMC and with the assistance of international and local maritime experts. It is expected to be finalized in 2022 with a dissemination of results and lessons learned to other Vietnamese ports.

The Cat Lai Port project

Phase 1:

- A Legal Review
- An Assessment of the existing Ship Waste Management system in Cat Lai port
- Legal and operational Recommendations

Phase 2:

- Development of the Mandatory Online Waste Notification System for HCMC Port Authorities
- Economic scenario and outline proposal for a Cost Recovery System based on indirect waste fees
- A "Ship Waste Management Manual" for Cat Lai Port
- Organisation of a technical workshop (training) to enhance the awareness of MARPOL waste requirements for stakeholders
- Organisation of a national workshop disseminating result to other Vietnamese ports

Expertise France / GIZ are responsible for the content of this publication.

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Design/ layout:
Golden Sky

Photo credits/ sources:
Shutterstock (Cover, inside cover, back cover, p.: 2, 3, 4), STComAsia (Cover, p.: 1,), Saigon Newport Corporation (p.: 2, 4, 6).

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As of March 2022

IMPRINT

This Policy Paper was prepared in the framework the pilot project "Ship Waste Management in Vietnamese ports" under the cooperation between the Ministry of Natural Resources and Environment (MONRE) and the project "Rethinking Plastics – Circular Economy Solutions to Marine Litter".

The "Rethinking Plastics" project is funded by the European Union and the German government through the German Federal Ministry for Economic Cooperation and Development (BMZ) and is implemented by Expertise France and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. The policy paper was developed with the kind technical support of Viet Nam maritime administration (Vinamarine) and Cat Lai terminal- Saigon Newport.