SURFRIDER
FOUNDATION EUROPE

CONTAINERS OVERBOARD! 10 PROPOSALS TO PREVENT CONTAINER LOSSES

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SURFRIDER EUROPE, A KEY PLAYER IN THE REQUIRED ECOLOGICAL TRANSITION OF MARITIME TRANSPORT

Surfrider Foundation Europe is a not-for-profit association (under the French 1901 law), whose mission is "defending, saving, promoting and sustainably managing the ocean, coastline, waves, and the people who enjoy them". It was created in 1990, in Europe (Biarritz), by surfers to bring together a network of 13,000 members, some forty local chapters and more than 150,000 supporters across Europe. The movement first began in 1984, in Malibu, California but today, the Surfrider Foundation is a global network of regional associations and local chapters present on all continents (America, Europe, Japan and Australia, etc.).

The Surfrider Foundation Europe Association is 29 years old and focuses on combatting marine pollution. As an ardent campaigner for protecting the marine environment, the NGO has developed expertise in maritime transport, especially on the issue of pollution by ships. Surfrider Europe has subsequently become a whistleblower and specialist in environmental impacts of shipping, such as atmospheric pollution, hydrocarbon contamination and waste management.
As such, Surfrider Europe, either alone or together, has fostered the development of measures in various decision-making bodies..

On the international stage, it has advocated for, and successfully secured, measures from authorities such as the United Nations, the COP Climate Change Conferences or the International Maritime Organisation. These include **cut atmospheric sulphur emissions, the need for a roadmap to reduce shipping-related CO2 emissions, a ban on the use of heavy fuel oil in polar regions or waste reduction measures at source.** It is co-founder and maritime transport advocacy coordinator of the Ocean and Climate Platform and a member of two alliances, the Clean Fuel Shipping Coalition and the Heavy Fuel Oil-Free Arctic.

Leading a constructive dialogue with decision-making bodies

In Europe, its expertise has been repeatedly acknowledged in relation to negotiating texts such as the **Erika III package,** followed by its audit, as well as other legislation such as the **MRV System (Monitoring Registration and Verification)** for atmospheric emissions, or identifying safe havens in the event of damage to ships. As such, it has been a member of the **European Sustainable Shipping Forum since 2014.**

As a whistleblower, Surfrider has spearheaded various publications, such as a white paper[1] containing 45 proposals on maritime transport. Surfrider Vice-President, Jacques BEALL, was also behind a report on the challenges facing the ecological transition of ships[2]. This was unanimously approved by the French Economic, Social and Environmental Council which has a global reach

In France, it is involved in applying these standards, or adopting even more stringent criteria. In addition, Surfrider also **acts as a civil plaintiff in France to bring about criminal proceedings for any breach, such as illegal oil discharges, atmospheric pollution or water ballast mismanagement.** Drawing on this experience, it can conduct a critical and constructive dialogue with professionals working in the sector and their logistic chains.

While the ecological transition process has become a stand-out subject for the Surfrider Europe Foundation over the years, a recent consultation also revealed that European citizens are concerned by this issue.

1. A White Paper for maritime safety https://fr.calameo
2. Beall Jacques, La politique europeenne de transport maritime au regard des enjeux de développement durable et des engagements climat : https://www.lecese.fr

THE ECOLOGICAL TRANSITION IN MARITIME TRANSPORT: A CITIZEN-BACKED PRIORITY

Prior to the European elections, Surfrider launched a major European citizen consultation exercise from 1 June 2018 to 20 January 2019, called **"Voice for the Ocean".**

The simple aim was to understand European citizens' priorities for protecting the ocean. The consultation addressed 8 key topics: offshore installations, marine renewable energy, water quality, micro-plastic pollution, climate change, sharing knowledge about the ocean (Ocean Literacy), sustainable tourism and finally, maritime transport.

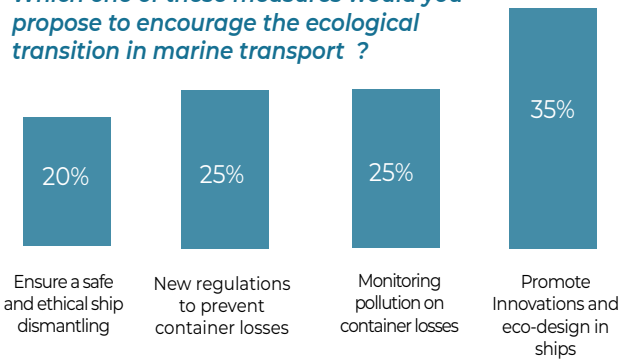
When responding to the consultation, each citizen had the chance to say something about a tangible action that they expected from the EU on each of the topics.

98% of the citizens that answered the consultation would be ready to change their shopping habits if an "Eco-responsible transport" label was displayed on products.

The last question in the "Voice of the Ocean" was pivotal as it invited participants to choose which of the 8 given priorities was the most pressing.
Almost 7,000 European citizens in 22 different European countries had their say on the online platform http://surfrider.eu/vfto thanks to support from more than 40 French, European and international multi-stakeholder partners who help publicise the campaign.

The findings show that European citizens **place maritime transport among the top 3 concerns that should be prioritised in European policies on the Oceans Agenda**. This sends out a strong message to all stakeholders promoting ecological transition in marine transport.

Which one of these measures would you propose to encourage the ecological transition in marine transport ?



CONTAINER TRANSPORT AND LOSSES: CHALLENGES AND QUANTIFIED FEEDBACK

The container: a key player in globalisation

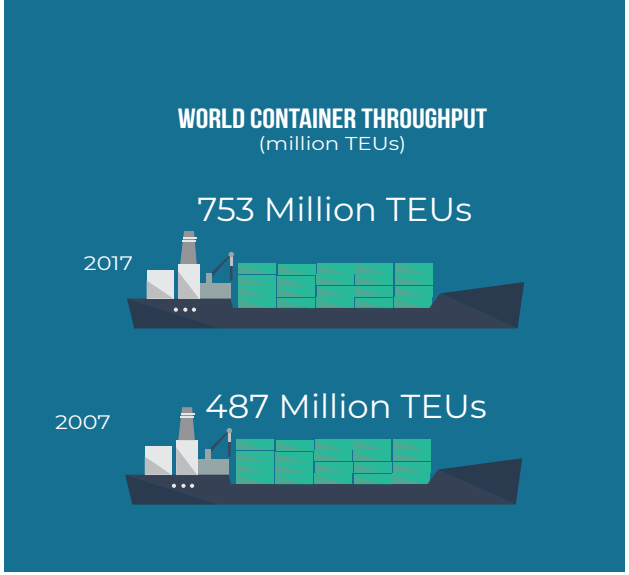
Container traffic now accounts for **80% of the flow of goods transported by ships**, making it an essential vehicle for globalisation. Manufactured products, raw materials, and and all kinds of goods criss-cross the globe in different sized 'boxes' of various kinds. **Every year, the container sector becomes more competitive to meet consumer demand and the rise in worldwide imports and exports. Freight costs are falling[4] while vessel capacity appears to be rising relentlessly.**

These giants of the seas can transport more than 20,000 containers[5] , while shaping ports and their hinterlands, resulting in improved connections and intermodal goods delivery. **Container traffic rose by 6% from 2016 to 2017, which is considered to be the biggest rise in the last 5 years** [6].

Putting a number to container losses: a complex and fragmented investigative approach

The loss of containers from ships can arise from incidents at sea, accidents or from major safety failures. Other losses, perhaps minor in terms of quantities yet all too frequent, are "operational" losses connected with loading procedures or the dilapidated state of containers.

To date, it remains difficult to put an accurate number on the scale of these losses. Countries have no common international method to monitor container losses, which constitutes an obstacle to the inter-operability of fragmented databases worldwide. This applies to measurements (TEU and container numbers) as well as data-gathering procedures.



Data is consequently scattered with various bodies that have specific territorial jurisdictions. Furthermore, it appears that those working in the industry (insurers, service providers, etc.) have no detailed data on cases of container losses.

Clearly, some have comprehensive information to varying degrees. This is frequently compartmentalised and customer-specific but they seem reluctant to divulge it. In the EU, the European Maritime Safety Agency (EMSA-EMCIP) has been tasked to address this situation since 2011 for the European maritime area, but it keeps its data confidential.

4. Source : United Nations
5. Le Marin «21 413 EVP pour le OOCL Hong Kong»
6. Source : United Nations https://unctad.org/en/PublicationChapters/tdstat43_FS15_en.pdf

QUANTIFIED RECORDS AND DATA

Several organisations, including Surfrider Foundation Europe, have introduced tallying systems to gather data on container losses.

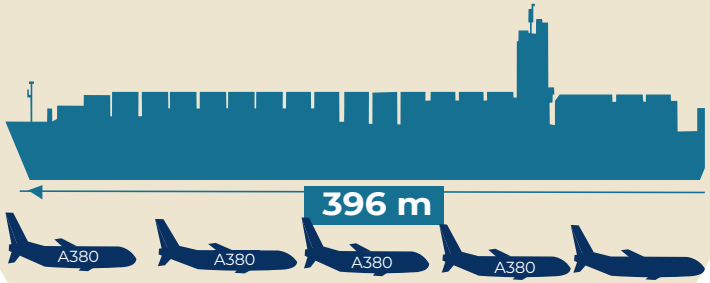
Surfrider Foundation Europe has been conducting studies on losses since 2014 to quantify and pinpoint their causes and effects.

The first of these studies, carried out in 2014, helped record, count and trace 13,441 containers lost at sea between 1994 and 2013.

The new survey conducted by Surfrider Foundation Europe for the period 2015 to 2018 identified and traced the loss of an additional 2,563 containers, due to incidents at sea, i.e. a total in excess of 16,000 containers.

By including recent accidents from early 2019 (MSC Zoé, Grande America), in all, 16,635 containers have been lost.

16 000 containers represents the freight of the world's largest container ship which is almost 400 meters long.



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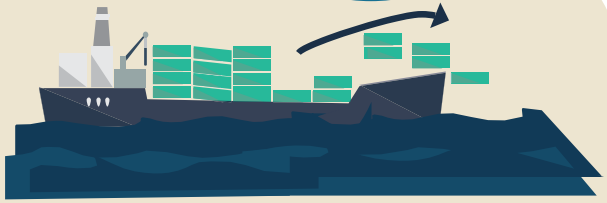


It's the average number of containers lost each year at sea between 2014, 2015 and 2016

750 ship accidents

1994 — **2019**

2,6%

of lost containers are recovered each year according estimations

Among the 16,635 containers lost at sea, only 432 of them were recovered, i.e. just 2.6%. Recovery operations are costly, running into tens or hundreds of thousands of euros based on the facilities employed.

A SOURCE OF POLLUTION POORLY ACCOUNTED FOR BY THE REGULATORY FRAMEWORK

A source of pollution poorly accounted for by the regulatory framework.

Although container losses at sea are less familiar than oil discharges, **they represent a highly diverse source of pollution that doesn't fit into any adequate regulatory framework.** Nevertheless, this phenomenon **has a serious impact on the environment,** especially when goods spill into the sea or wash up on beaches. Indeed, once in the sea, containers become waste and become a threat for ecology and navigation.

Containers also spill **raw materials into the sea, such as cocoa, milk powder and grain, which subject to the type of coating, can also have various harmful effects on the environment.**

In 1994, the Cypriot-registered WEISSHORN lost 6,200 tonnes of rice overboard, creating potentially harmful substances for the environment. A further illustration is the MSC Zoé which lost around 270 containers off the Wadden Island, in the North Sea during the night of 1/2 January 2019.

Among the goods lost overboard were :

- **food products and their packaging**
- **toys**
- **footwear**
- **medical supplies (drips, bottles)**
- **vehicles**
- **inflammable and hazardous substances (sulphuric and nitric acid)**
- **explosive or radioactive substances**
- **billions of plastic pellets**

When it washing up on the coast, this waste adds to the quantities of solid waste collected on the beaches each year.

Despite these cases, pollution from container losses is still difficult to measure. To date, we can estimate the effects of container losses in terms of pollution, but given the lack of data on losses and loads, it is difficult to conduct impact studies on their contents. Overall European and international standards must be urgently adopted to prevent and report losses.

According to a study by the Cargo Incident Notification System initiative created in 2015 by the world's five largest shipping lines:

32% of container incidents are due to erroneous declarations

27% to poor stowage and packing (including the state of containers)

17% from incorrect packaging

These incidents can lead to mistakes in load planning and stacking containers, thereby heightening risks at sea.

LOSSES AT SEA: LITTLE PROGRESS IN DEFINING STANDARDS

Partial, mainly prevention-based legislative solutions

Container losses and their related dangers is not a new phenomenon and is **still subject to partial and segmented standards.**

The International Maritime Organisation (IMO) amended the **SOLAS Convention (Safety of Life at Sea)** in November 2014, **making it mandatory to weigh containers before loading them onto ships.** The IMO, the International Labour Organization (ILO) and the United National Economic Commission for Europe (ECE) have jointly developed **a code of good practice for cargo loading**. This code provides recommendations for containers to ensure their safe loading and stowage. **Finally, the International Standards Organisation (ISO) has reviewed its standards for securing and stowing containers**.

It is clear that these measures are still insufficient to stem the flow of container losses as they only partially address a prevention objective. In fact, container losses do not seem to be falling and all these rules are having little if no effect. It is also difficult to consider them as constituting a specific solution to this pollution risk.

The need to establish a common and binding framework

The problem with losses at sea is currently being addressed by countries in a unilateral way. **In France, for example, there is no specific legal basis for the loss of containers to be treated as a criminal matter.**

While there are recommendations to prevent container losses at sea, **the matter must be addressed by the IMO and by regional decision-making bodies so that a common and binding framework can be established.**

The first aspect to be addressed is transparency regarding container loss data. There is currently no adequately detailed overall data on container losses and goods identification. This is why establishing a system to report container losses should the the first measure adopted.

Container losses at sea occur occasionally and randomly. There are several causes that, given the their effects on the environment and navigation, require the shipping industry to have a better understanding and be more accountable.

In this position paper, Surfrider sets out measures that could help regulate a proportion of container traffic, thereby cutting the number of annual container losses. While sticking to a target of reducing the effects of maritime transport on the environment and seabed, Surfrider Foundation Europe deems it to be both urgent and necessary to adopt a certain number of measures on a European and international level to resolve such losses, which are costly and a source of pollution.

1. Ensure and police "ship planning" vessel compliance
2. Ensure proper transparency on container losses
3. Facilitate container traceability and visibility to boost their recovery
4. Clarify the legal status of lost containers and related liabilities
5. Make several safety measures mandatory

5.1 The phasing out of sub-standard cargos

5.2 Give consideration to limiting deck-loaded cargo transport

5.3 Introduce a tolerance limit on container weight declarations

5.4 Adopting high standards for container quality and stowage systems

5.5 Promote unannounced inspections and checks on proper stowage measures and container condition

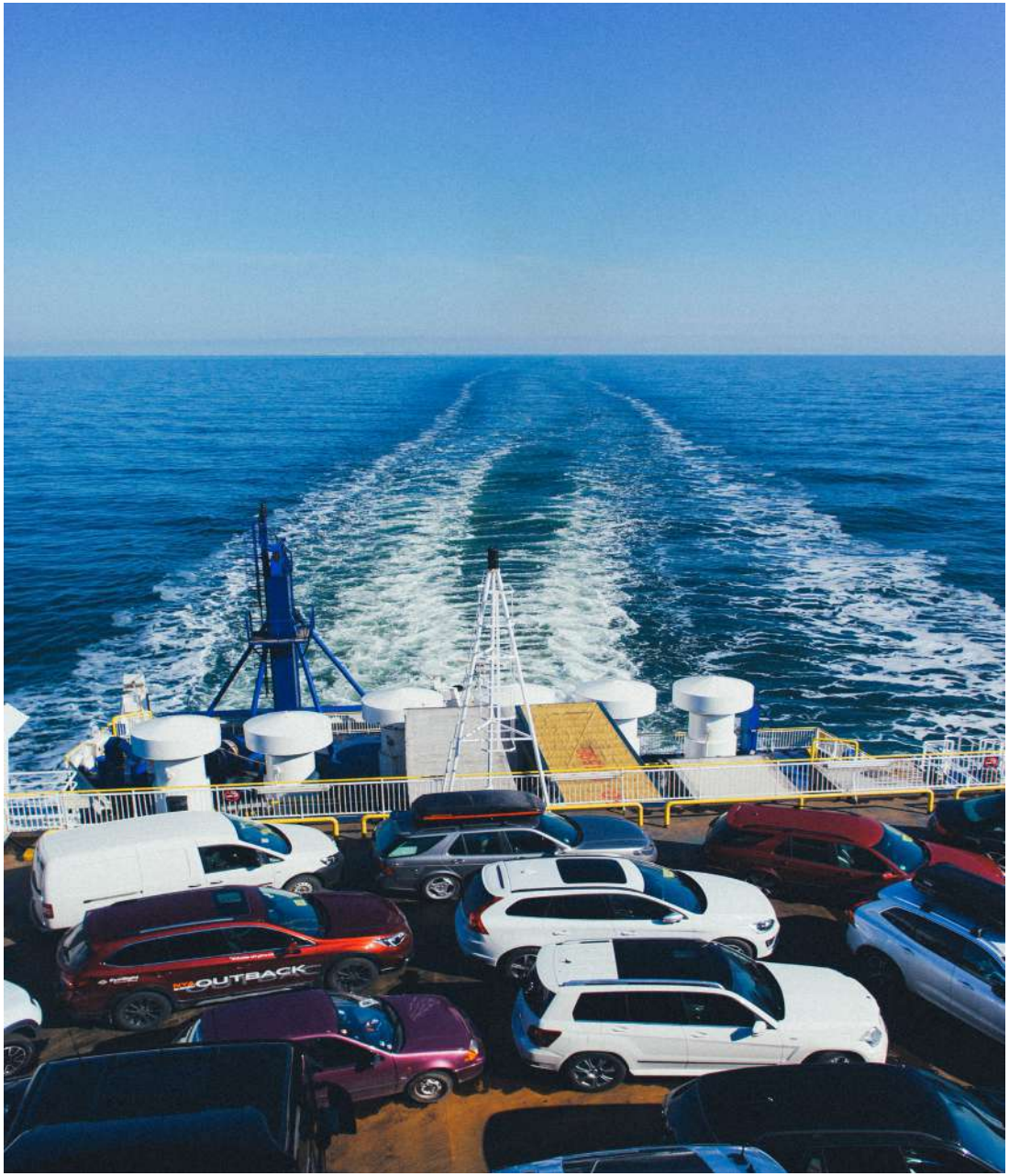
1

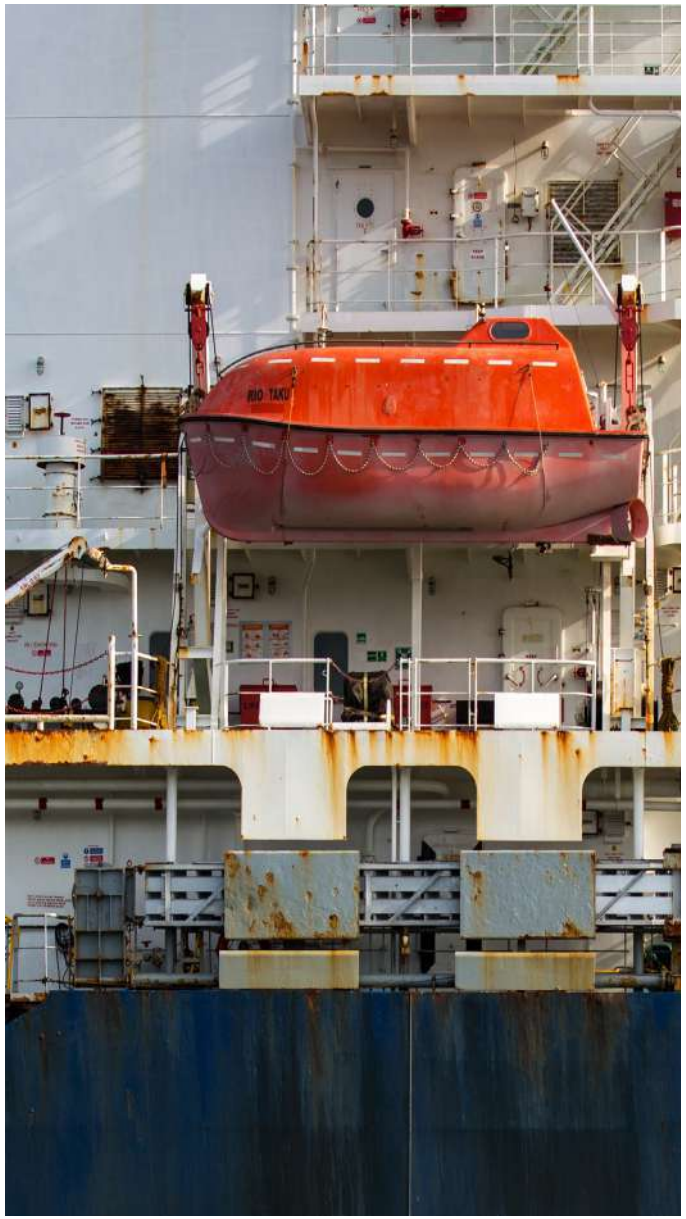
ENSURE AND POLICE "SHIP PLANNING" VESSEL COMPLIANCE

Load planning or cargo carriage (ship planning) is a requirement featured in the SOLAS Convention. The shipper must state the gross mass of the cargo items in a container so that the loading master can include it in the ship stowage plan.

Although it cautions against certain risks, this measure contains no penalties for incorrect declarations by the shipper. **If the declaration contains incorrect data it can, in fact, contribute to the loss of containers,** container stacks being unbalanced or placed near to hazardous or inflammable products. Such practices are the cause of numerous container incidents and losses as well as fires and physical damage .

Given these hazards pose a risk to the environment and to human life, Surfrider recommends that the "ship planning" process is fully transparent and compliant (declaration of container distribution on vessels). This is a starting-point that should be, according to Surfrider, policed and penalised.





2 ENSURE PROPER TRANSPARENCY ON CONTAINER LOSSES BY ESTABLISHING A REPORTING SYSTEM

To tackle container losses effectively, they must be identified and quantified. **The first measure to bring in to control the problem of container losses at sea and the resulting pollution would be to introduce a framework encouraging transparency of information.**

This would avoid the risk of pollution or collisions with containers that have fallen into the sea. Surfrider Foundation Europe therefore recommends **introducing a standardised, mandatory reporting system for container losses:**

By virtue of IMO resolution A.851(20), reporting requirements for maritime incidents involving the loss of containers should be applied in a specific and supervised manner.

As a result, transparency regarding losses would be ensured by filing **a Captain's report (to the Coastguard and IMO) comprising:**

-the **number** of containers lost
-the **goods contained**
-the **time and location** of the loss
-the **ship's speed**
-**wind direction and wind speed**
- **sea conditions and swell**

A specific procedure could be provided for in maritime areas with fragile ecosystems, in particular protected marine areas or reserves. This also applies to containers transporting fragile or hazardous goods.

The various stakeholders must ensure data on lost containers is properly gathered and disseminated. Mandatory reports could be submitted using various pre-identified media for shared and inter-operable data (radio and internet, etc.) and eventually as part of the European CISE Programme. The report should first be sent to the Coastguard.

To ensure optimal data transparency and availability to all stakeholders, **Surfrider supports the creation of a database managed by the IMO and/or the European Maritime Safety Agency (EMSA). This open and universally accessible database will list container loss reports from coastal countries and help supplement information on these losses.**

3

FACILITATE CONTAINER TRACEABILITY AND VISIBILITY TO BOOST THEIR RECOVERY

Once container are lost, only a tiny percentage are recovered. This is because recovery operations are complex and costly, using considerable technical and human resources to map their locations on the seabed. In fact, once lost overboard, containers can, subject to weather conditions, drift making it difficult to locate them. Containers nevertheless represent an ecological threat and an accident risk when they are still floating on the surface.

To remedy these situations, Surfrider recommends introducing proper container traceability measures throughout the logistics chain.

- **Containers could be fitted with a visual aid, such as reflective colours, to avoid collisions and make searches easier.**
-The mandatory reporting system for transporting hazardous materials that currently applies to various industry players, **could be supplemented with a system of eco-designed watertight and pressure-resistant beacons**.

These measures would boost container recovery by providing accurate data on container location and contents..

4

CLARIFY THE LEGAL STATUS OF LOST CONTAINERS AND RELATED LIABILITIES

The current legal status on containers is still too vague. While the container can be considered as a "write-off" when it starts to drift and cannot navigate a course, **what about its contents**? Can they be considered as waste while the goods have been spoiled or damaged to varying degrees? **How does allocating liability work?** Sometimes, recovery operation costs are covered by local authorities as the shipper cannot be found liable, which is, in itself, a concern.

Surfrider also considers it vital to clarify the legal status of containers lost overboard, as well as firming up rules to identify accountability.

Clarification would help standardise procedures, particularly when issuing a formal notice of responsibilities and allocating recovery costs. Costs incurred from recovering containers will be incumbent on the carriers.

5

MAKE SEVERAL SAFETY MEASURES MANDATORY TO PREVENT CONTAINER LOSSES AND CUT THE NUMBER OF ACCIDENTS

Several measures and standards can be adopted to prevent losses due to ship or cargo safety deficiencies. These measures can be whether ship-related or container related:

The biggest container losses often arise from a safety lapse or extreme weather conditions. **Restrictive measures and those seeking to adopt new standards, can be taken at European and international levels to boost ship safety and limit accident-related losses.**

• 5.1. THE PHASING OUT OF SUB-STANDARD CARGOS::

Entire or heavy losses are often traced back to cargo ships that were built more than 20 years ago. The state of these vessels, or their jumboisation, causes problems, with frequent sinkings as they are unseaworthy, or because the ship's structure has been weakened.

Based on this damning conclusion, **Surfrider is advocating for rules to be brought in to ban the use of vessels more than 20 years old from transporting containers. Surfrider also recommends that public sector decision-making bodies establish a phasing-out timetable for these vessels as soon as possible.**

Given recent incidents and the sinking of the Grande America (a 22-year old vessel) off the French coast, this measure should be discussed and considered with various industry players that have the capacity to mitigate the risks from these vessels.

• 5.2. GIVE CONSIDERATION TO LIMITING DECK-LOADED CARGO

Deck-stowed containers are especially prone to falling and are stowed on the deck and bow. Poor weather conditions (gales, swells and monsoon rains) accentuate vessel movements, while waves or pitching can easily cause containers to fall. Their stowage is subsequently more difficult in these cases.

Surfrider considers that **given recurring errors in stowage and the human factor at play in incidents, a strict limitation of transporting containers on deck would avoid the displacement of a certain number of containers**.

The loading capacity of container ships is steadily increasing at a considerable rate but **there is no research to make the link between deck cargo overloading and container losses. Establishing a working group on this subject could be the first step to bringing in this measure.**

• 5.3. INTRODUCE A TOLERANCE LIMIT ON CONTAINER WEIGHT DECLARATIONS

In 2002, the Scaletronic company stated that **18% of containers were overloaded** by more than 6 tonnes compared to their declared weight. The frequency of this practice has been confirmed by the Charge Incident Notification System body which found that **28% of the causes of maritime transport accidents (from 2011 to 2013) were due to inaccurate declarations of goods shipped.**

Currently, goods declarations are solely based on the exporter's goodwill. An inaccurate declaration does not have any consequences on the cargo being accepted, nor does it have any legal implications on liability.

To address the recurring risks stemming from this practice, Surfrider Foundation Europe recommends **setting a tolerance limit on total container weight :**

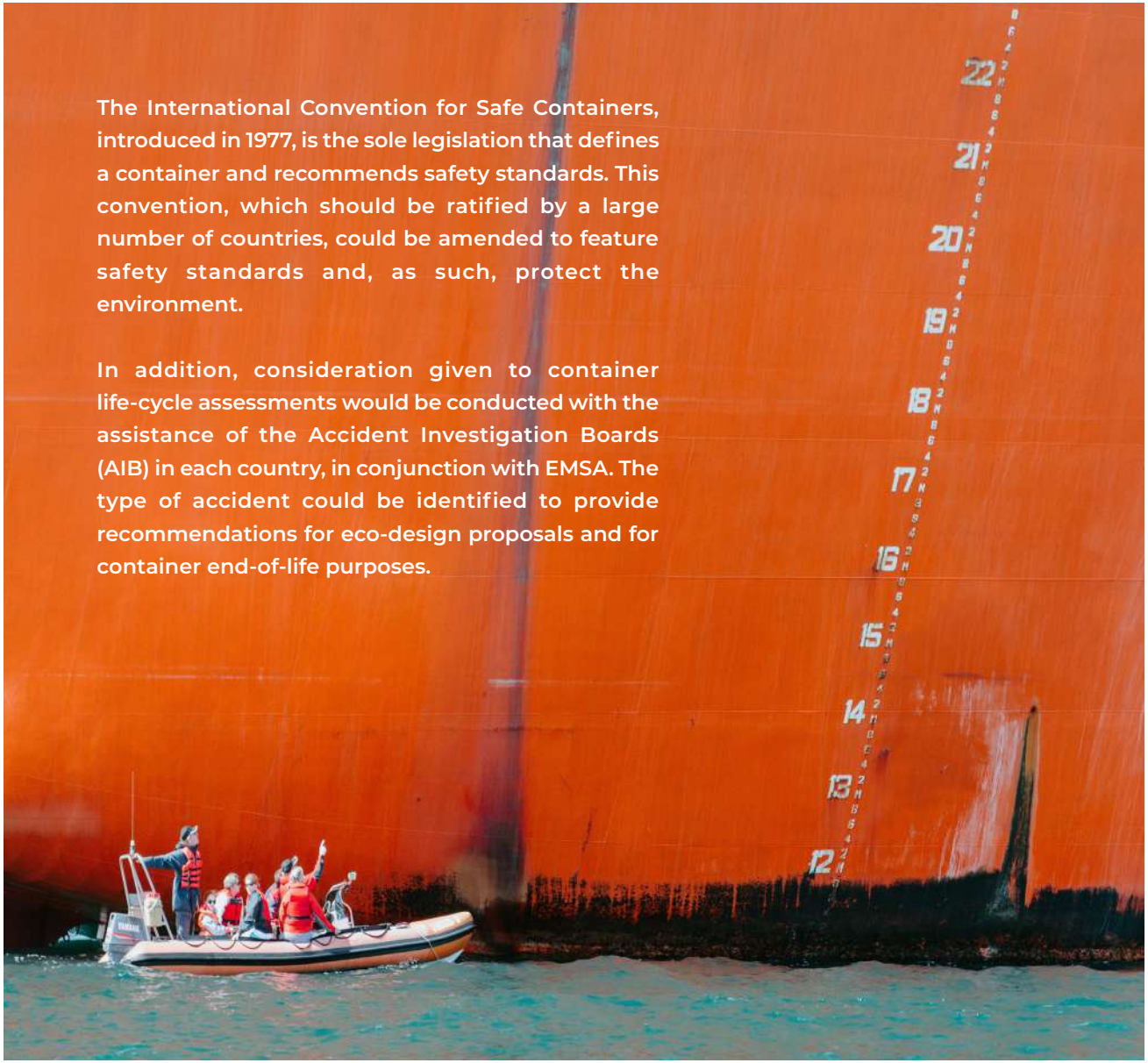
- Cargo weight tolerance should be capped at 2%.
- If a false declaration is made about the weight or contents, liability falls to the shipper.

• 5.4. ADOPTING HIGH STANDARDS FOR CONTAINER QUALITY AND STOWAGE SYSTEMS

Containers are often used continuously to meet the rising flow of trade. This means that they deteriorate more quickly, particularly in the top corners. Furthermore, if trade slows, containers left unused on the quayside for extended periods also deteriorate or get damaged.

This physical deterioration is a significant 'loss-risk' factor, so adopting preventive measures to address this would help cut accidents.

Surfrider supports **work to adopt high quality standards for containers, stacking and stowage systems.** Non-compliance with these standards should result in a ban on loading the container.



The International Convention for Safe Containers, introduced in 1977, is the sole legislation that defines a container and recommends safety standards. This convention, which should be ratified by a large number of countries, could be amended to feature safety standards and, as such, protect the environment.

In addition, consideration given to container life-cycle assessments would be conducted with the assistance of the Accident Investigation Boards (AIB) in each country, in conjunction with EMSA. The type of accident could be identified to provide recommendations for eco-design proposals and for container end-of-life purposes.

• 5.5. PROMOTE UNANNOUNCED INSPECTIONS AND CHECKS ON PROPER STOWAGE MEASURES AND CONTAINER CONDITION

A study conducted from 1996 to 2002 with IMO countries found that **out of the 19,704 containers inspected, 1,737 (i.e. 9%) did not meet the convention for safe container requirements** (CSC) due to structural deficiencies.

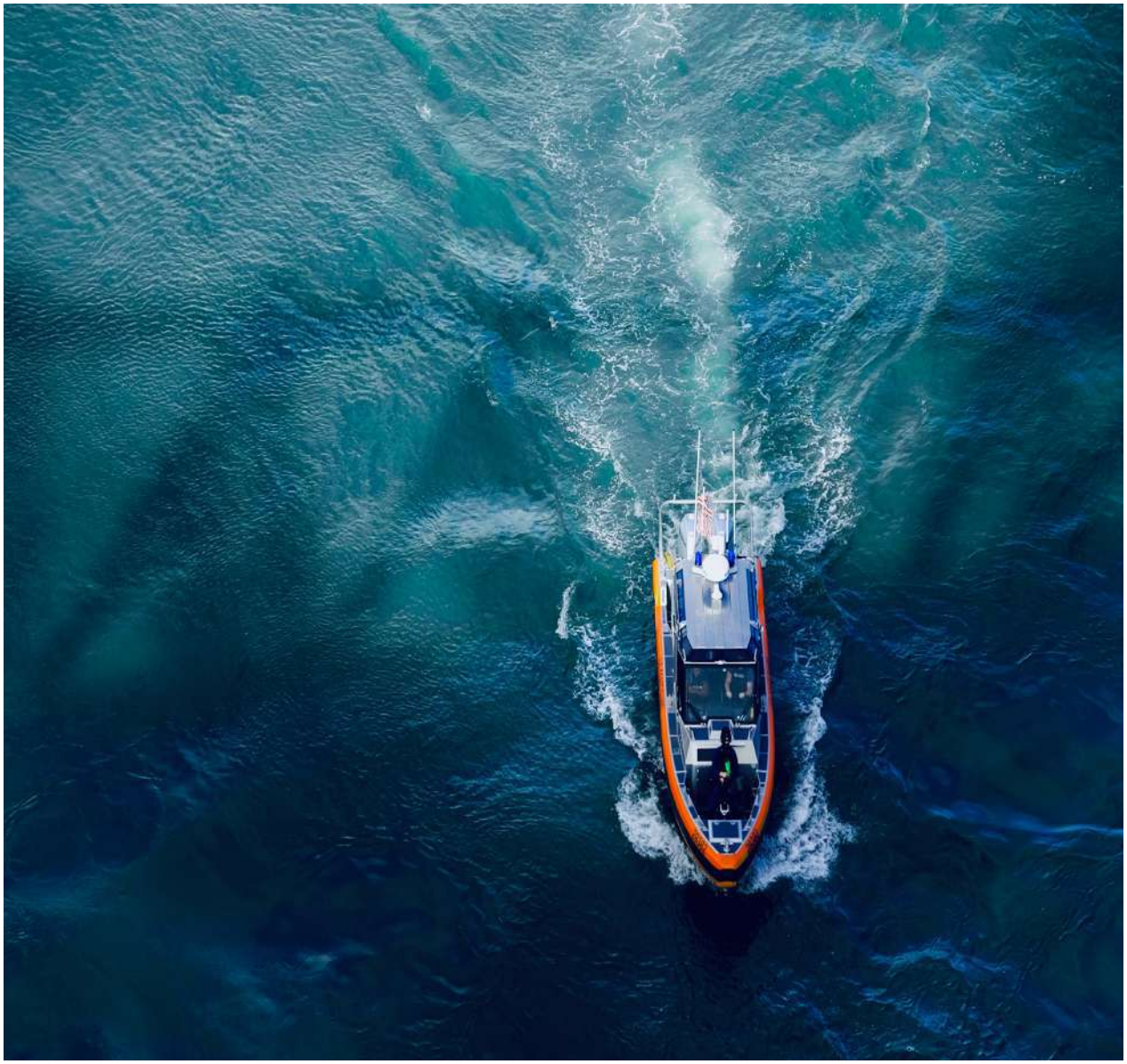
Given the lack of compliance and resulting accidents, Surfrider recommends that **a maritime specialist or port authority official carry out unannounced, random checks for each container shipment,** on the proper loading and stowage of onboard containers.

This measure would be based on:

- the need to check container weights, so that they could be properly distributed on the vessel.

- Ad hoc inspections of container use

- Damaged containers with faulty twist-lock systems being removed from the shipping loop.



CONCLUSION

Surfrider Foundation Europe will be looking very carefully to see that these measures and recommendations are adopted by individual countries, the European Union, the IMO and regionally too, to establish an overall regulatory framework and prevent new container losses. The emphasis must be on the loss reporting system, which is both a prerequisite and a priority. As such, Surfrider is continuing its efforts to have an impact at multiple levels, connecting with different links in the maritime governance chain.

Finally, Surfrider would like to recall the need to consider container losses as a form of maritime pollution in their own right. As such, Surfrider deems it necessary review legislation concerning maritime pollution, to include and enable sanctions to be brought against negligent shippers or those who fail to report losses. The matter will be discussed as part of inter-session considerations on shipping-related waste to be held on 13 to 19 May 2019 by the IMO MEPC Committee , as well as by the Marine Safety Committee, in June 2019.

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