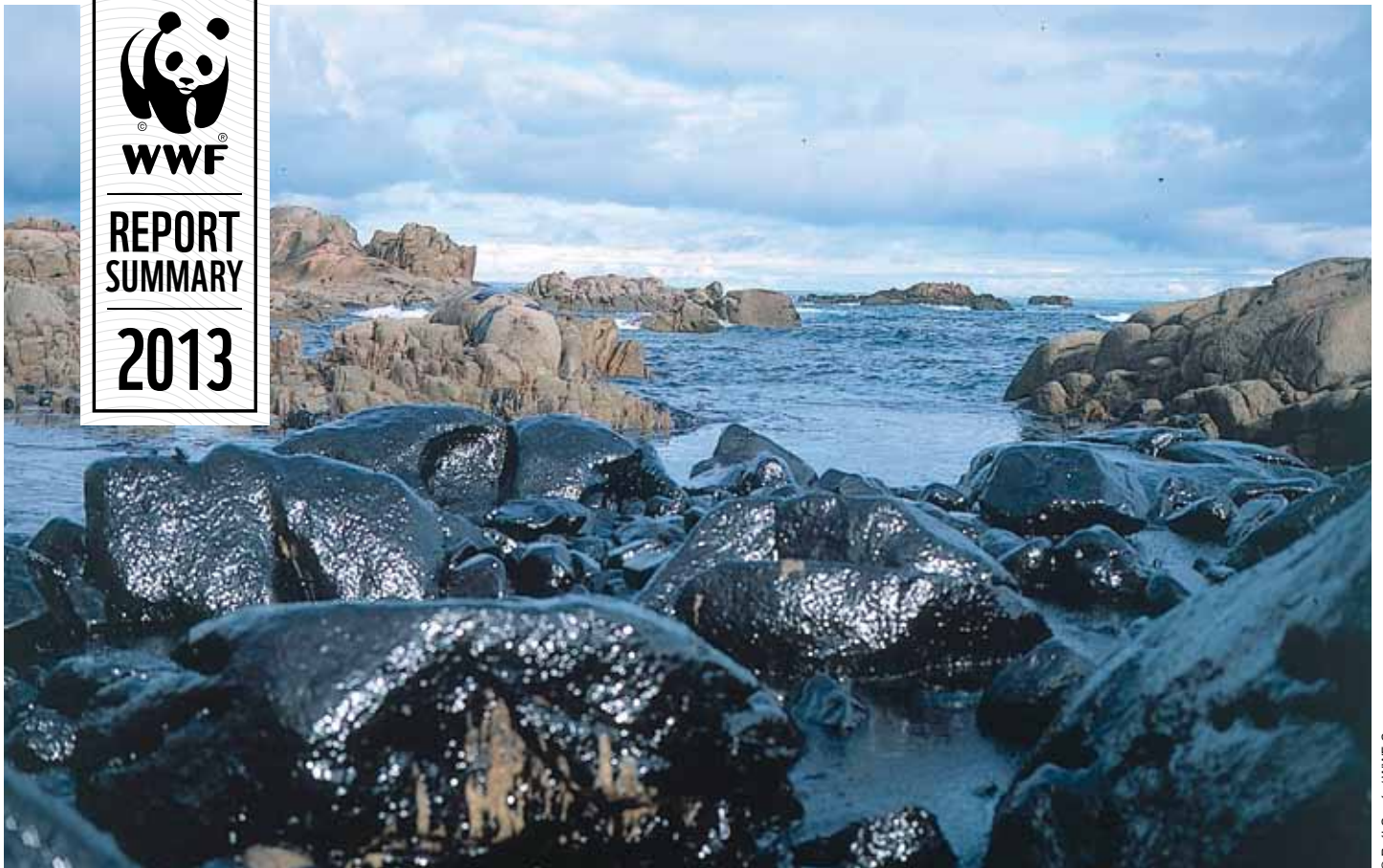




WWF

REPORT  
SUMMARY

2013



© Raúl García / WWF-Canon

# ACCIDENTS AT SEA

## INTRODUCTION

WWF has commissioned the first independent study looking at the collective data associated with shipping accidents in detail. It presents consolidated evidence of factors that have contributed to, or been associated with, shipping accidents over the last 15 years.

During this period a number of maritime disasters involving huge spills of mineral oil have occurred. Events like this have subsequently provoked changes in maritime regulations due to the severe nature of the associated environmental impact and the obvious links with poor vessel operation and maintenance.

Areas of concern and contributory factors to shipping accidents are highlighted along with the implications these incidents have on the marine environment. It focuses in particular on the issues surrounding the role of flag states and the extent of their responsibilities with respect to vessel safety and the implementation of international rules and regulations.

Environmental risk is directly linked to the type and amount of hazardous substances, including oil, being transported and the sensitivity of the marine area where any accident could occur.

A clear link can be made between environmental protection and shipping safety, with shipping accidents, often the subject of dramatic media coverage, provoking a strong response from civil society and politicians.

Badly maintained and operated vessels have a higher probability of causing loss of human life, loss of vessels and of impacting the marine and coastal environment.

The flag state is the country the ship is registered to and that has the authority and responsibility to enforce regulations over that vessels.



**GENERAL CARGO  
VESSELS ACCOUNT  
FOR NEARLY 50% OF  
ALL VESSEL TYPES  
LOST AT SEA**

Recent shipping incidents such as the Hebei Spirit and MV. Rena, and the sinking of the Prestige in 2002 highlight the need to identify and understand the factors contributing to shipping accidents.

These incidents, among others, put the spotlight back on the main factors associated with and causing shipping accidents, including the role played by irresponsible flag states. As the global fleet continues to expand rapidly and begins to operate routinely in more risky areas the probability of accidents and likely severity of impacts will again increase unless precautionary measures are put in place to address identifiable risk factors.

Even small scale accidents in very sensitive environments, like the Great Barrier Reef, can have profound environmental consequences. Climate change models show increased storm surge, changing wind and wave patterns and extreme weather events. These weather factors are likely to exacerbate the risks of foundering, defined as *sinking due to rough weather, leaks, or damage not due to collision*. Furthermore, there is a danger of complacency in the absence of a recent 'major' accident and whilst much can be inferred from the reported accident statistics, such data do not cover all kinds of near misses fully.

## THE RISK FACTORS

Tackling the associated underlying causes of accidents and reducing the frequency of such incidents further is of paramount importance. This is particularly pertinent not only during a time of economic downturn when there might be a temptation for owners and operators to cut corners but also as the global fleet size is predicted to increase significantly over coming decades.

This implies there will be more ships operating in high risk areas and in areas where potential new shipping routes may be established, such as the Arctic and resource rich areas like the west coast of Canada. It is important that proactive consideration of these high risk areas is taken to minimise the chances of shipping accidents in the future.

Whilst the data shows that poorly performing flag states are still an associated factor, insofar as they do not adhere to basic international regulation, there are other criteria that also strongly contribute to accidents.

The greatest probability of a shipping accident occurring is when all of the following factors act together:

- Key hotspot locations - Southeast Asia, particularly the Coral Triangle, the east Mediterranean and Black Sea, North Sea and British Isles
- Vessels over 10 years old
- Poorly performing flag states
- Being a general cargo or fishing vessel

Behind these criteria there are layers of administrative complexities within the shipping industry which are connected to port and flag state control, flag registration and ratification of International Maritime Organization (IMO) conventions. Poor performing flag states tend not to want regulation so they do not become party to conventions, which has the effect of slowing down global implementation of such improving standards.

Economic factors also have an impact on shipping safety, such as the race to minimise turn-around times in ports and the use of a minimum number of officers and crew required to handle a vessel which often has safety implications such as staff working whilst fatigued.



**THE SOUTH CHINA  
SEA HAD THE MOST  
NUMBER OF SHIPPING  
ACCIDENTS OVER THE  
LAST DECADE**

Some flag states are still not behaving responsibly. This can be evidenced by certain flag states experiencing higher than normal incidents rates and registering older vessels.

However, this point raises questions. Are these flag states being remiss in their duty of safety at sea or is it because they register older vessels which are more frequently involved in incidents or is it because they preferentially attract irresponsible owners?

## DUTY OF CARE

---

General cargo vessels account for 42 per cent of all vessel types lost at sea over the research timeframe. These types of vessels are often operating short shipping routes, associated with the tramp trading where vessels don't have a set trade route and pick up opportunistic trade, particularly in Southeast Asia, which involves frequent port calls and navigating congested coastal areas with the risk of hydrographic uncertainties such as submerged reefs and rocks.

Such vessels are often older, over 10 years, making it attractive for owners to register them with less reputable flags states in order to continue trading. This can establish a downward cycle of potentially lowering standards and cutting corners on safety. Southeast Asia, where the majority of these incidences occur, includes the Coral Triangle, the South China Sea and the Korea and Japan seas. These areas are particularly rich in biodiversity and therefore especially vulnerable to the impacts of shipping accidents.

Fishing vessels are also involved in a high number of shipping incidents, amounting to 24 per cent of accidents for the entire global fleet. This number could be potentially higher given that accidents involving fishing vessels are often not reported.

Nearly 50 per cent of all global shipping accidents fall into the foundered category, which is strongly linked to location and to the type and age of vessels operating there. This is also strongly associated with human factors, particularly related to sleep deprivation and shift work, which can lead to errors of judgment when handling a ship.

Some International Association of Classification Societies (IACS) members will not class sea-going vessels over 20 years old thus effectively pushing older and potentially more vulnerable vessels to less rigorous classification societies. There are still a number of significantly badly performing flag states that negatively impact the reputation of the shipping industry as a whole.

## WHERE TO NEXT?

---

**90%**  
**SHIPPING DELIVERS**  
**90% OF ALL**  
**WORLD TRADE**

There is a need for the shipping industry to promote greater owner and operator responsibility and registration with better flags, particularly by promoting those flag registries that make the effort to significantly clean up their act. Long term, this provides more business and improves the reputation of responsible flag states.

Additionally there is also a need to highlight irresponsible and badly performing flags in order to motivate them to significantly increase their standards. If they don't reach a minimum acceptable standard of safety over a given period of time then their practices should be scrutinized publicly with an expected loss of business for the flag state's vessel registry.

As part of the rationalization around safety and environment, all states should be openly encouraged and supported to become party to and implement IMO conventions and regulations. In addition to other international instruments such as the

United Nations Convention on the Law of the Sea (UNCLOS), Convention of Biological Diversity (CBD) and others that create obligations concerning marine environmental protection, behavior and operations whilst at sea, and require monitoring of shipping performance.

This is basic compliance and, without adherence to an agreed set of standards based on the provisions of relevant international agreements, there will never be a level playing field. It is also important that this information is made publicly available so business choices can be made in an informed and transparent way.

The fact that some international conventions and regulations have not entered into force for decades or that certain countries have never become party to them means a realistic baseline has not been established in terms of global regulation and performance. While some countries continue to improve in this regard, others get worse – the opposite of a level playing field.

The standardization of recorded data and its collection and reporting is paramount in order to gain a true picture of the state and performance of world shipping. Genuinely global standardized information regimes do not yet exist in this context which can cause confusion, misinterpretation of data and allow potentially poorly performing flags to slip through the net. This becomes more problematic when set against a growing global fleet and congested shipping in hotspot areas which increase the probability of accidents. Future focus on this area of flag state responsibility in being party to relevant agreements is a key recommendation of this report.

It is suggested that the time may be ripe to revisit the issue of which states can offer nationality to ships as this has implications with regard to jurisdiction and control of these ships. The continued absence of performance standards and eligibility criteria for flag states calls into question the wisdom of the international community in allowing some vessel registries to continue to operate.

## FLYING THE FLAG

---

Greater focus needs to be directed to whether flag states are exercising effective jurisdiction and control over vessels that fly their flags. This would respect the law that allows any state to operate a vessel registry but make such operation conditional upon effective exercise of jurisdiction and control over all vessels to which they grant nationality and over the owners of such ships.

The International Transport Worker's Federation are clear in their identification of the UNCLOS obligation that, *'there should be a "genuine link" between the real owner of the vessel and the flag the vessel flies.'*

Flag states that are consistently irresponsible in failing to meet their obligations under international law to *"effectively exercise its jurisdiction and control in administrative, technical and social matters over ships flying its flag"* should be targeted to ensure they clean up their act or cease flagging vessels involved in international voyages beyond home waters over which the flag state exercises sole jurisdiction.

If flag states are not already members of Port State Control Agreements they could be encouraged to participate in their regional agreement and take advantage of the technical support facilitated by the IMO to improve their ability to exercise effective jurisdiction and control.

Greater cooperation between countries should be encouraged particularly in the areas highlighted as hotspots of substandard shipping.

The use of incentive schemes, such as the United States `Qualship 21` should also be encouraged because they inspect the level of compliance with international standards by vessels using United States ports. Schemes such as this may also have an impact on flag state compliance, it may be considered bad for business if ships flying your flag are black-listed and targeted for more intense inspection by port authorities.

## WHAT WWF IS DOING

Through various means, including our Shipshape project we are highlighting good and bad performing flag states and asking the bad ones to `shape up or ship out`.

We are working with the shipping industry and encouraging improvements, initially focusing on encouraging states to become party to relevant international conventions and regulations so that these can be universally implemented and so apply to all vessels at sea, thus delivering a level playing field and improving standards – to the benefit of responsible operators.

We are highlighting impacts of shipping on sensitive areas such as the Great Barrier Reef and outlining specific ways to reduce risks in sensitive areas.

In particular, in the hotspot areas we have highlighted, we are working on cooperation between all marine stakeholders so that the planning of coastal developments and the conduct of maritime activities can be made more sustainable.

More specifically, on shipping, we are reinforcing the importance of ensuring that vessels are built, maintained and operated to a high standard so as to lower the risk of accidents. The authorities globally should work on standardising relevant data so that bad performance doesn`t go unnoticed due to not being able to fairly compare performance in different parts of the world.

We are working with the Sustainable Shipping Initiative on sustainability ratings schemes so that good performance may be incentivised and so drive continual improvement.

### Contact details

Dr. Simon Walmsley, Marine Manager WWF-International  
swalmsley@wwf.org.uk

**Acknowledgement:** Southampton Solent University research group.



#### Why we are here.

To stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature.

[www.panda.org/markets](http://www.panda.org/markets)