

# Trends in Oil Spills from Tankers Over the Past Ten Years

## - Significant Reduction Observed -

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### Introduction

ITOPF maintains a database of recorded oil spills from tankers, combined carriers and barges. This contains information on accidental spillages since 1970, except those resulting from acts of war. Information is gathered from a wide variety of sources, including published material, such as the shipping press and other specialist publications, vessel owners and their insurers, and from ITOPF's own activities on site at incidents.

Whilst it is useful to observe the long term trends since 1970, it may also be beneficial to analyse more recent data for shorter term trends. We have analysed the period 2005 to 2014, making comparisons between the first five year period 2005-2009 and the second five year period 2010-2014.

This poster presents the results of an analysis of various aspects of incident information for tanker spills seven tonnes and over within the past ten years (2005-2014). Factors used to identify trends include:

- number of spills
- quantity of oil spilled
- types of oil spilled
- operations of tankers and causes of spills
- locations of spills

### Operations of Tankers and Causes of Spills

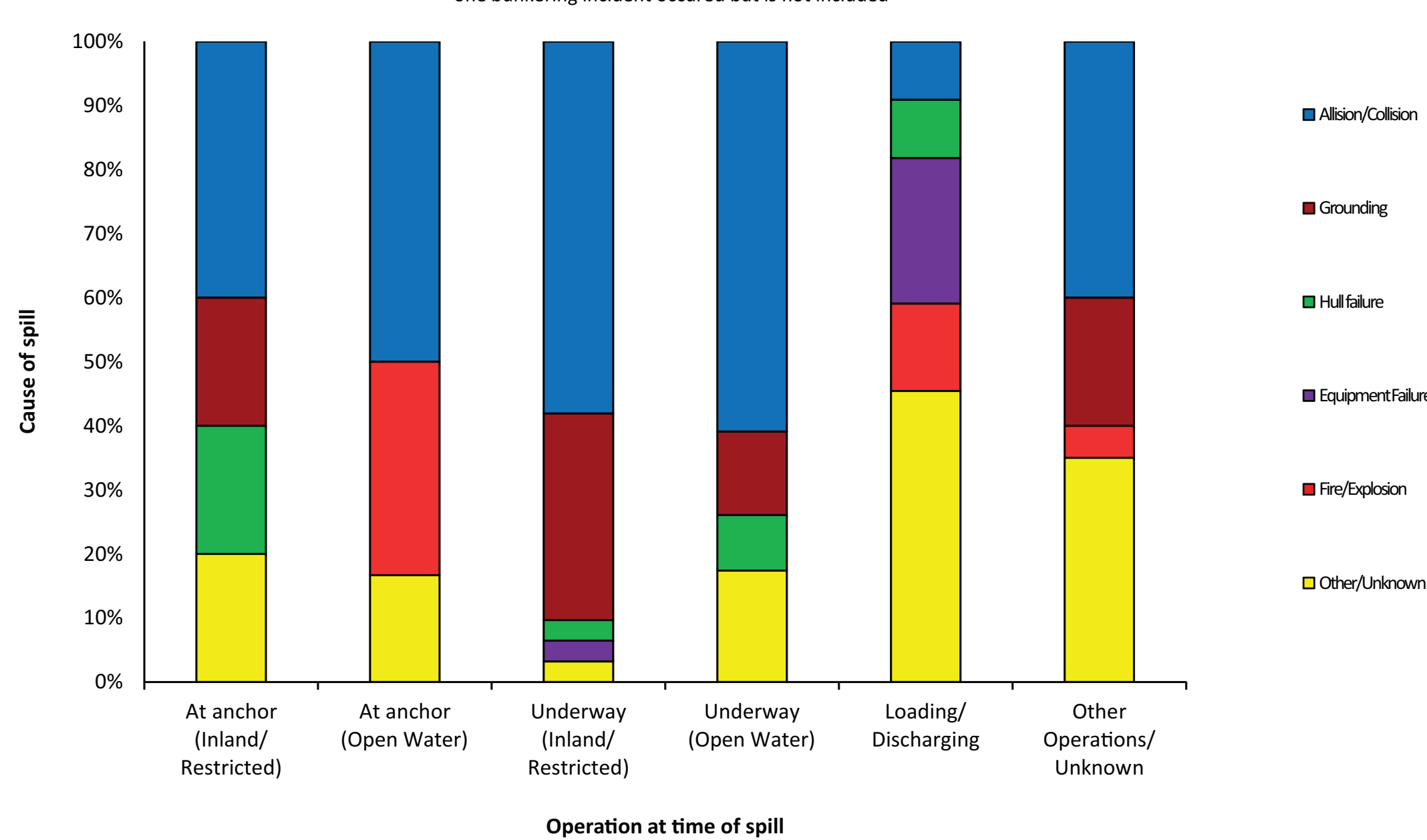
Over the past ten years, the majority of incidents occurred whilst vessels were underway in inland/restricted waters (29% or 31 incidents) and underway in open water (21% or 23 incidents). There is not a great change in the operations at the time the incident occurred comparing the two five year periods, however there is a 7% decrease in incidents occurring in inland or restricted waters, and an 8% increase of incidents occurring during loading and discharging operations.

The main causes of spills over the past ten years have been allisions and collisions (47 incidents or 44%), with groundings accounting for 17% (18 incidents). This trend does not differ greatly between the two periods, however there is a relative decrease in allisions and collisions of 10%, from 47% in 2005-2009, to 37% in 2010-2014.

Combining the operations at the time of the spill and the primary cause shows that in the past ten years the majority of incidents occurring inland or in restricted waters have been caused by allisions, collisions and groundings; of these, 90% occurred whilst the vessel was underway in inland waters.

The causes of incidents during loading and discharging are varied but nearly a quarter were caused by equipment failure and 14% by fire and explosion. It should be noted that nearly a third of the causes could not be ascertained.

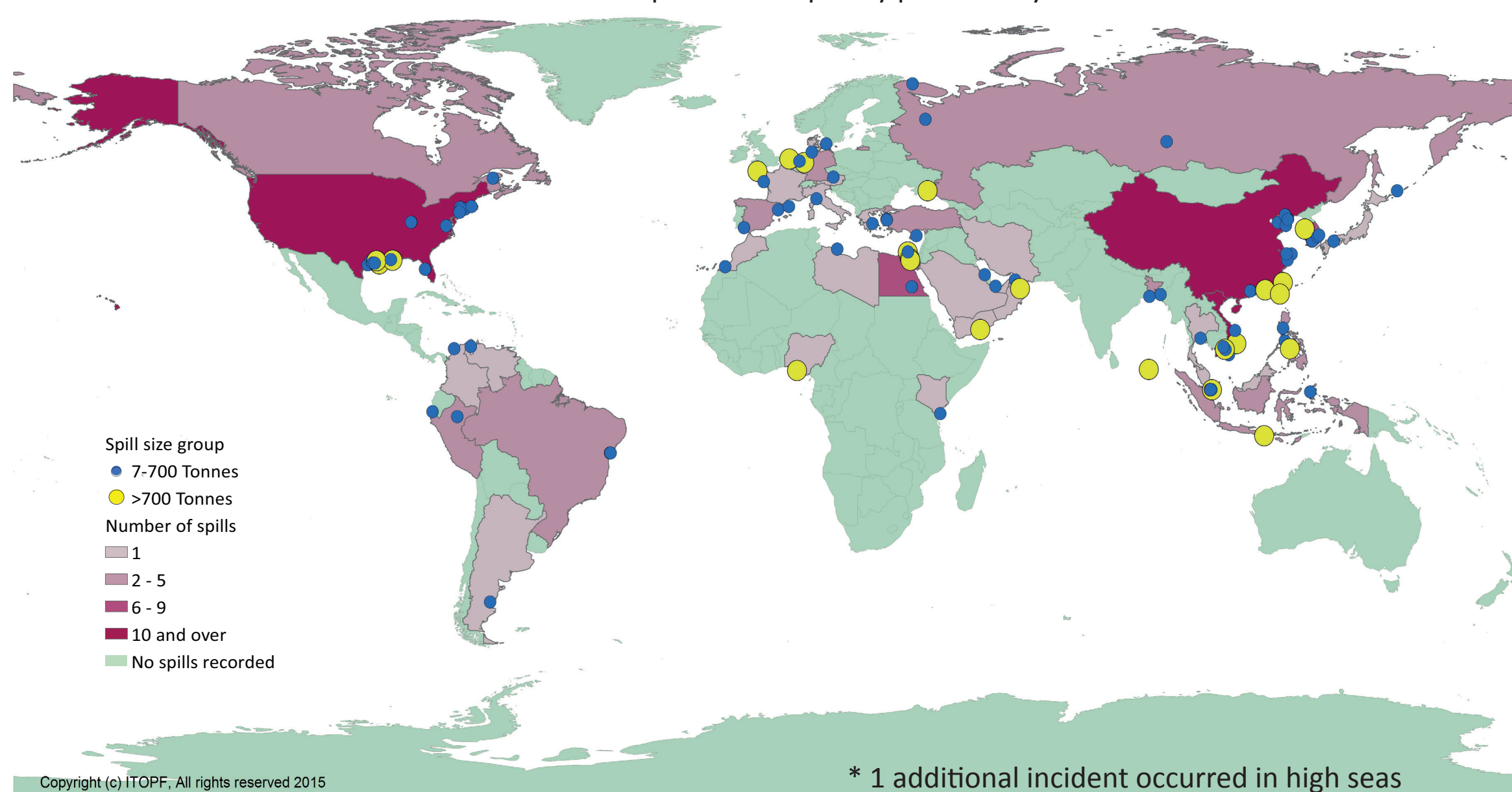
Incidence of spills, seven tonnes and over, by operation at time of incident and primary cause of spill (2005-2014)  
 \*one bunkering incident occurred but is not included



### Locations of Tanker Spills

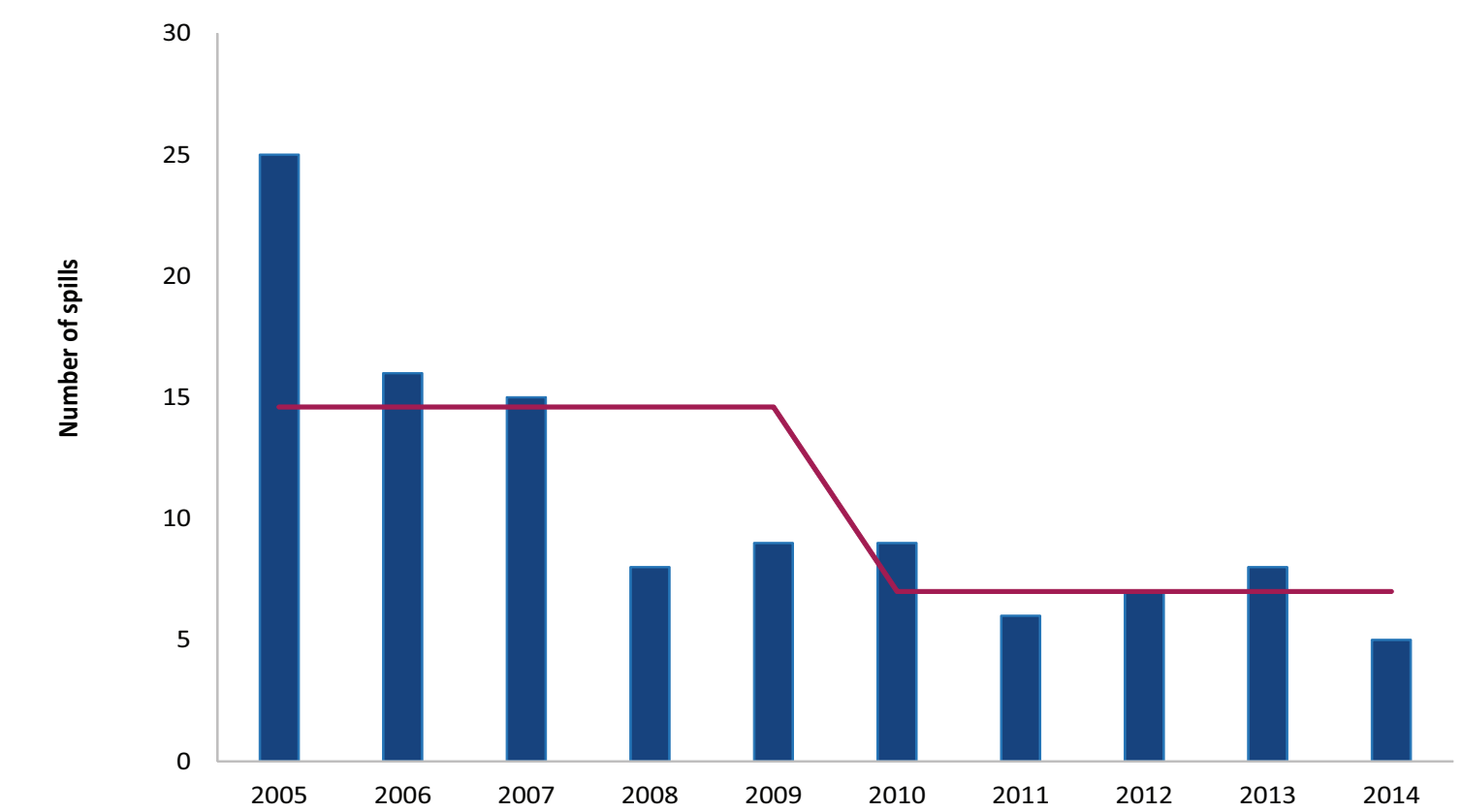
We have recorded 107\* spills, seven tonnes and over, from tankers in 39 countries between 2005 and 2014. The number of spills per country ranges from 1 to 18. The countries experiencing the highest number of spills (10 and over) in this ten year period are China, USA and Vietnam. However, a large proportion of these occurred before 2010 and since then, the number of spills in these countries has reduced by at least half.

Locations of tanker spills and frequency per country



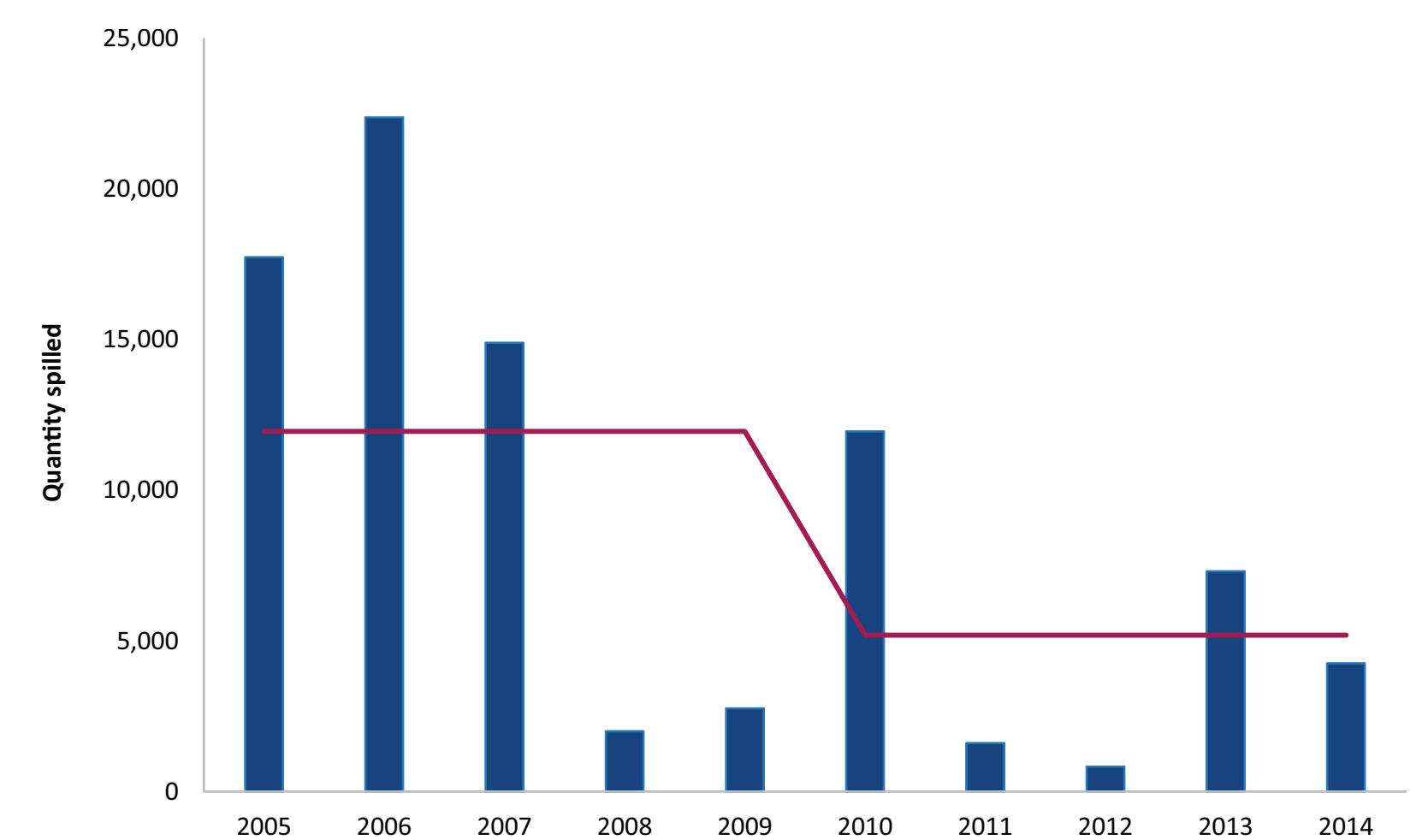
### Number of Tanker Spills Reduced

ITOPF has recorded a total of 108 spills of oil, seven tonnes and over, from tankers between 2005 and 2014. From 2008 the number of recorded spills has reduced to single figures, ranging between nine and five. It is encouraging to observe when comparing the five year periods 2005-2009 and 2010-2014, the average number of spills has more than halved in this ten year period.



### Quantity of Oil Spilled from Tankers Reduced

ITOPF has recorded a total of ~86,000 tonnes of oil spilled between 2005 and 2014. The yearly average volume of oil spilled between 2005 and 2009 was ~12,000 tonnes, whereas between 2010 and 2014 this average had reduced to ~5,000 tonnes. In line with the reduction in the number of oil spills, the average volume of oil spilled has more than halved when comparing the five year periods 2005-2009 and 2010-2014. However, it should be noted that the quantity of oil spilled in a single year ranged between ~22,000 and 800 tonnes in this ten year period.

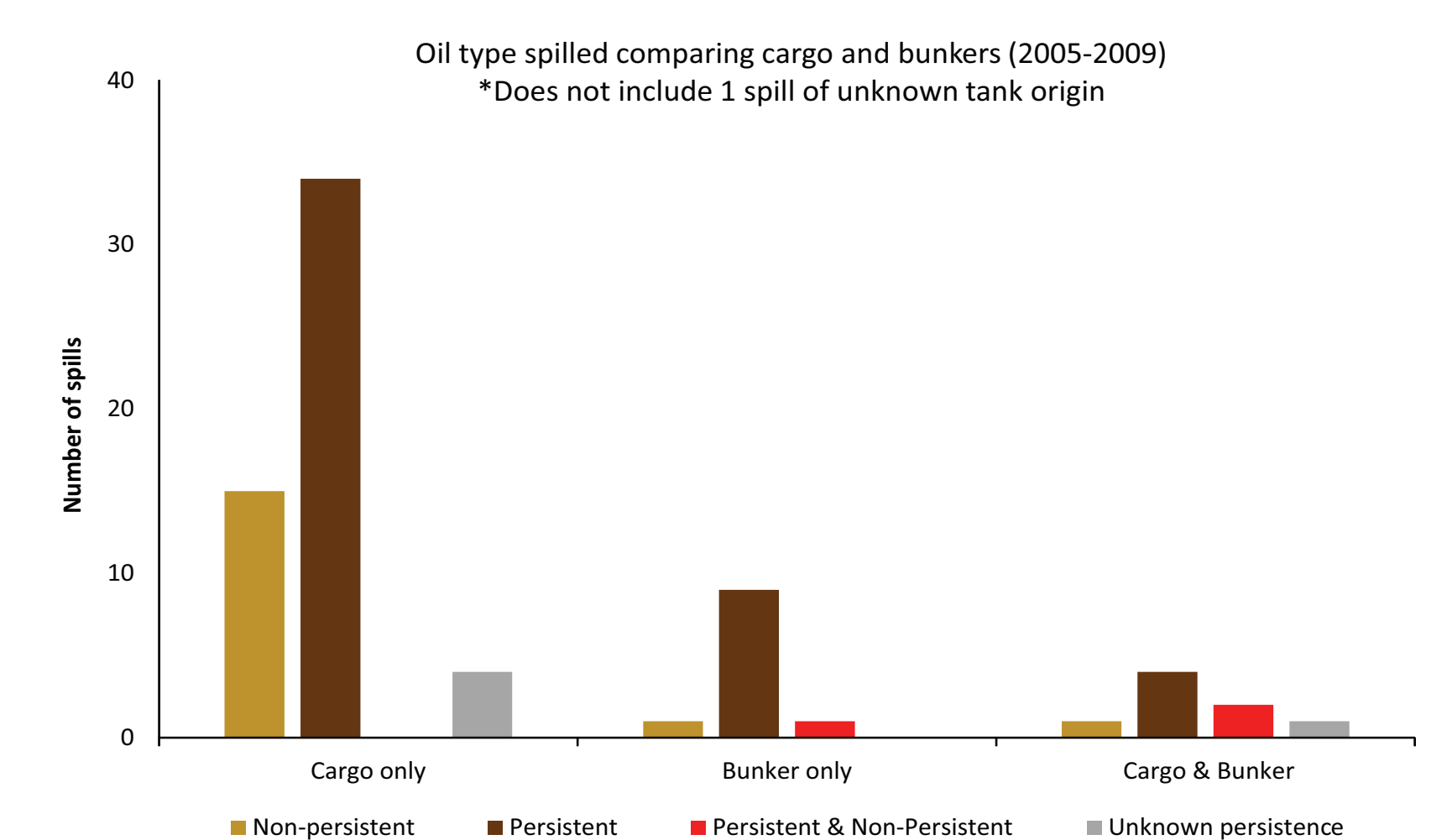


### Types of Oil Spilled from Tankers

In both periods the number of cargo spills is higher than bunker spills (almost five times more in 2005-2009 and close to three times more in 2010-2014).

#### Cargo Spills Only

When comparing the time periods 2005-2009 and 2010-2014, the number of incidents involving spills of oil cargoes only has reduced by over half, from 55 spills to 25. However, the percentage of persistent to non-persistent oil spills of cargo has remained more or less the same between the two periods. In the period 2005-2009, of the 55 cargo spills, 65% involved persistent oil. Similarly, in the period 2010-2014, of the 25 cargo spills, 60% involved persistent oil.

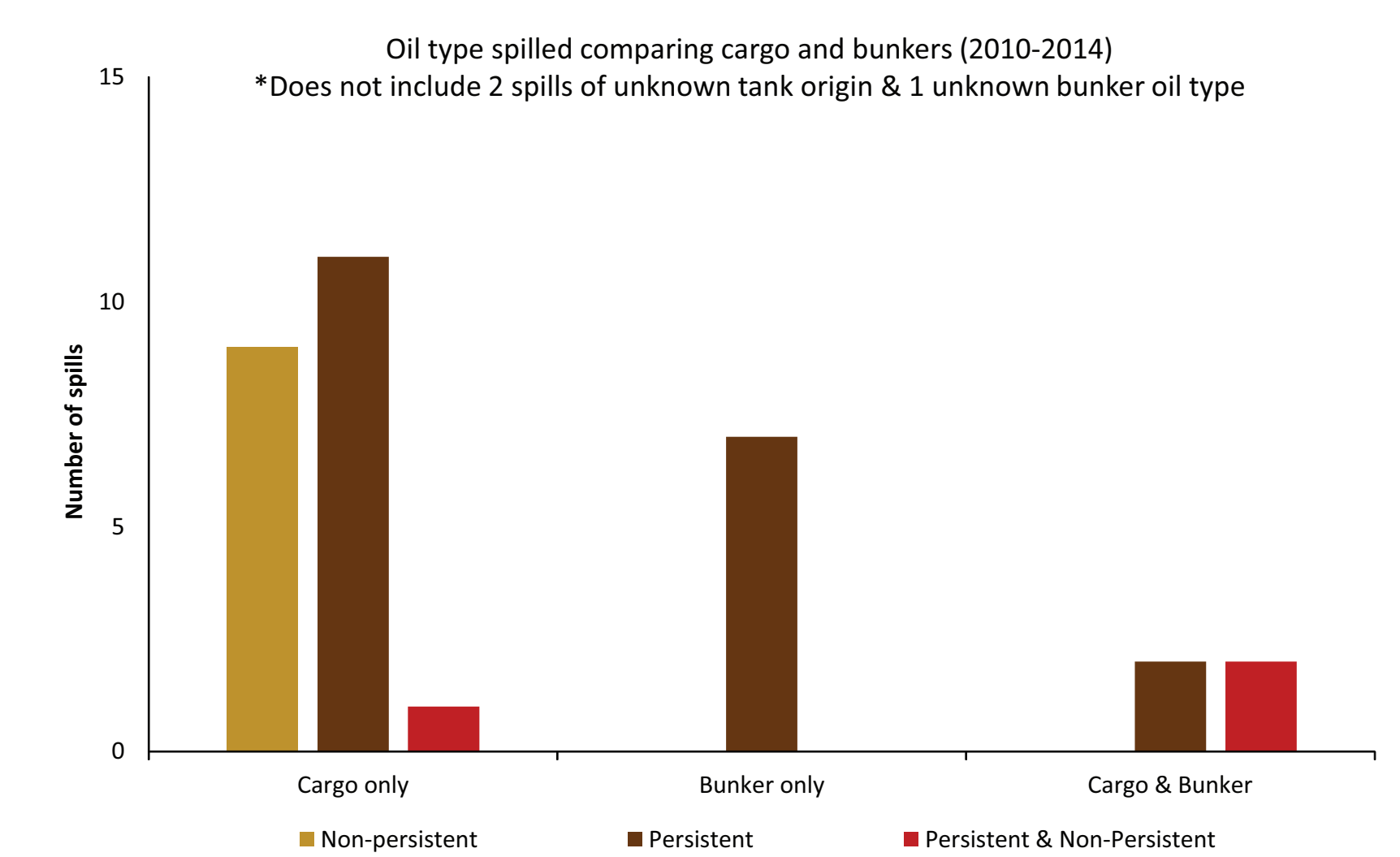


#### Bunker Spills Only

Unsurprisingly, the majority of bunker spills in the past ten years were of persistent oils, including heavy and intermediate fuel oils.

#### Cargo and Bunker Spills

In the past ten years ITOPF has recorded 12 spills where both cargo and bunkers have been spilled. Ten of these spills involved persistent oil. There were also four spills involving both persistent and non-persistent oil.



### Summary

- Notable trends can be seen when comparing data in the five year periods 2005-2009 and 2010-2014. We observed that the number of spills and the quantity spilled from oil tankers has more than halved in this ten year period.
- The majority of spills from tankers are of persistent oil cargo but the frequency of these spills has more than halved in this ten year period.
- The main causes of spills over the past ten years have been allisions, collisions and groundings. The majority of incidents occurred whilst vessels were underway.
- We have recorded 107 spills, seven tonnes and over, in 39 countries between 2005 and 2014. One additional incident occurred in high seas.
- The countries experiencing the highest number of spills (10 and over) in this ten year period are China, USA and Vietnam. However, a large proportion of these occurred before 2010 and since then, the number of spills in these countries has reduced by at least half.

The figures for the amount of oil spilt in an incident include all oil lost to the environment, including that which burnt or remained in a sunken vessel. There is considerable annual variation in both the incidence of oil spills and the amounts of oil lost. While we strive to maintain precise records for all spill information, we cannot guarantee that the information taken from the shipping press and other sources is complete or accurate. The number of incidents and volumes of oil spilt are based on the most up to date information. From time to time, data is received after publication and, in which case, adjustment to previous entries may be made. Consequently, figures should be viewed with an element of caution.

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