EMSA

MARITIME ACCIDENT REVIEW 2009




EUROPEAN MARITIME SAFETY AGENCY

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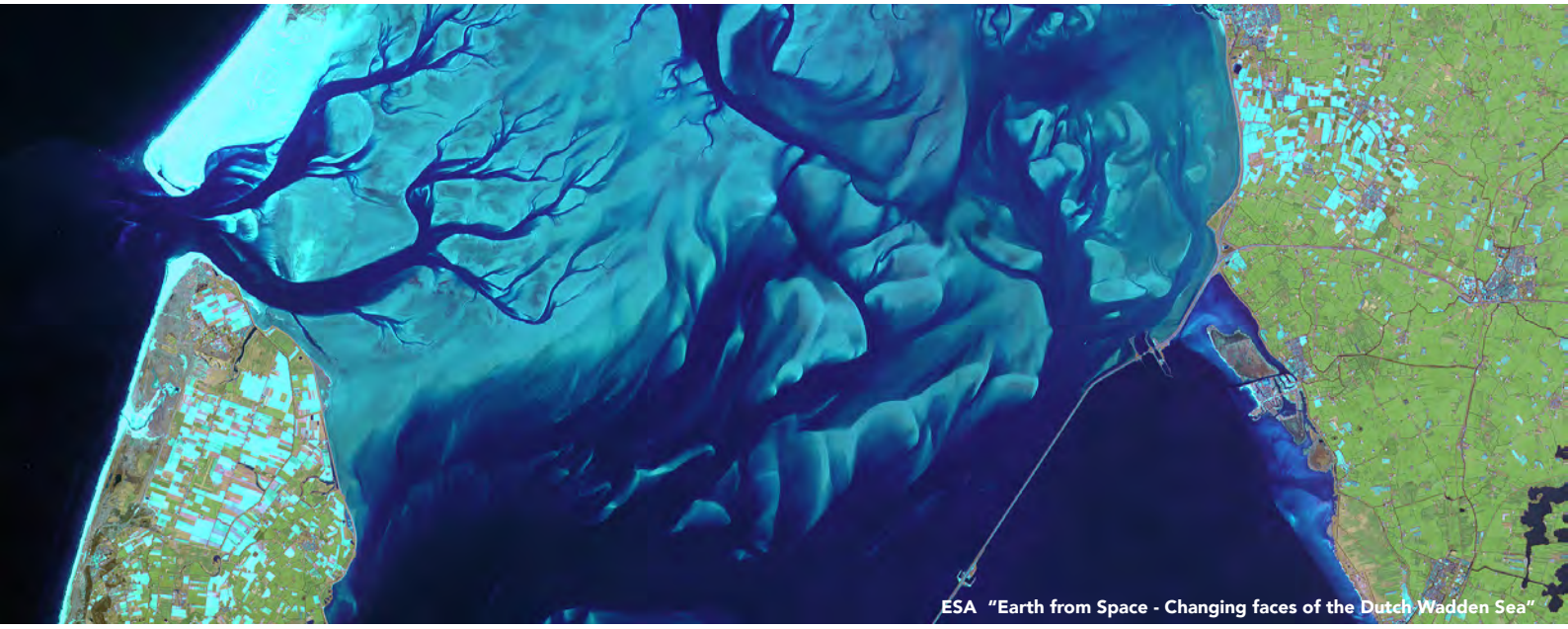

ESA "Earth from Space - Changing faces of the Dutch Wadden Sea"

1. SUMMARY OF THE RESULTS

1.1 OVERVIEW

This is the third in an annual series of reviews which began in 2007, and which provide selective and aggregated information on EU maritime accidents (the term EU includes Norway and Iceland for the purpose of this review).

The aim is to make both the EU maritime community and EU citizens aware of the accident situation in and around EU waters.

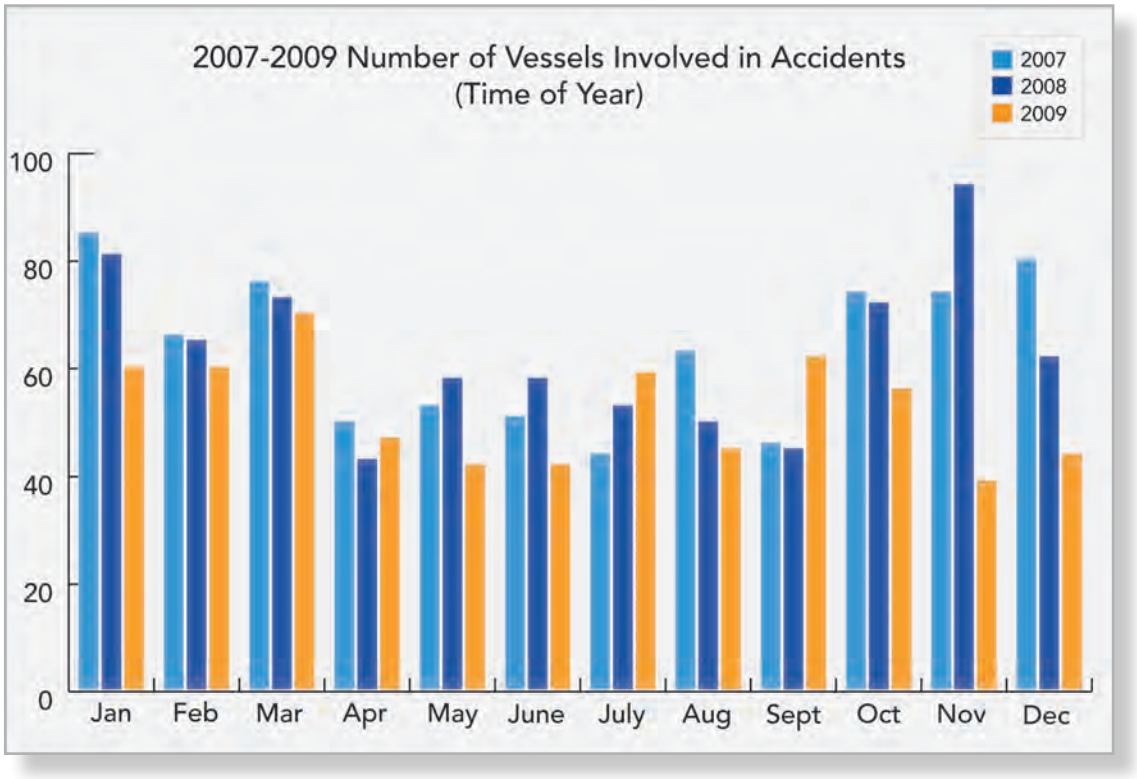
The 2009 figures show that the total number of ships involved in accidents, and also loss of life (see section 3.1), were substantially down in comparison to the market boom years of 2007/2008, although the number of accidents was still significantly higher than in 2006.

Also, although accidental pollution was already at historically low levels, 2009 proved to be the lowest since EMSA began recording comparable data four years ago. With respect to deliberate pollution, the number of potential incidents spotted by the CleanSeaNet system was down significantly, as were the number of oil spills confirmed (see section 3.2).

However, despite these reductions, there were still hundreds of accidents and oil spills in and around EU waters, so there remains significant room for improvement.

Given that accident numbers fell off significantly from late 2008, it appears that there is a distinct correlation with the global financial crisis and the associated slump in shipping requirements. At the same time, it is also possible that heightened activity by the EU and Member States to counter accidents and pollution my have had some effect.

Accidents often happen when ships and seafarers are being worked harder, and during the shipping boom times in 2007 and 2008, accidents were substantially on the increase, while since then, the opposite has been the case. Supply overcapacity, high levels of ship scrapping, lower operating speeds and generally less pressure to meet tight deadlines in the economic downturn are seen to be the main reasons for the significant reduction in overall accident numbers. However, slow steaming is predicted to result in increasing numbers of engine failures, and deferred maintenance and repairs due to decreases in the income of ship owners and operators may also cause problems. Therefore, developments in these areas must be watched closely.



Looking forward, given the relatively low accident numbers towards the end of 2009, if the trend continues, 2010 could also be another year with lower accident figures, although an early look at the January 2010 figures suggests that this is unlikely to be the case. They show that the presently stuttering economic upturn, potentially led by the domestic Chinese economy and the country's demand for raw materials, may already be contributing to an increase in accident numbers.

What is clear is that any relaxation of standards that results from an improved accident situation in 2009 could lead to greater problems when traffic volumes return to, or exceed, the levels in the recent past. Consequently, it is very important that the maritime community continues to pursue initiatives aimed at improving ship/cargo/pollution monitoring, accident response and maritime safety in general.

When looking at the month-by-month picture, a number of interesting points can be noted. When looking at the winter months, it can be seen that, as reported in the 2008 review, following the accident high point in November 2008, the two following months (December 2008 and January 2009) saw a significant reduction in the number of vessels involved in accidents in comparison to the previous two years. However, the numbers for November and December 2009 saw a far greater decrease, to the extent the numbers almost halved in comparison to the corresponding months in 2008. As mentioned previously, an early look at the January 2010 figures shows that this downward trend is showing definite signs of reversing.

The figures for September 2009 showed a significant increase over those for September 2008, with the main increases associated with general cargo ship collisions and contacts. However, following an in-depth analysis, no clear pointers emerged as to the reason for the increase, and there was no significant regional bias. April and July 2009 also bucked the prevalent downward trend for the year by recording small increases over 2008.

When looking at the 2009 within-year figures, in addition to September, the months of March and July also recorded relatively high numbers of accidents. With respect to March, the great majority of the increase related to collisions between smaller vessels, and in July, contacts and collisions between ferries was the main cause, but once again, no clear reasons have emerged to justify either increase. Another noteworthy finding was that the summer high for ship contacts with infrastructure witnessed in previous years, which is normally associated with increased ferry sailings in the tourist season, failed to materialise in 2009, with the month of August having a relatively low number reported.

Against a background of significantly reduced loss of life (see section 3.1), the worst months recorded were July (13), April and December (8 in each) and January and September (5 in each). With respect to accidental pollution, the year's biggest spills occurred in February, July and October (see section 3.2). Confirmed illegal discharges occurred several times a week, with almost certainly many more unconfirmed. However, the overall amount spilled is not known.

With respect to the cost of accidents, while the number of accidents is going down, some of the costs associated with serious accidents in previous years continue to filter through, so although the costs to insurers in 2009 showed improvements, they were by no means directly related to the number and severity of accidents that occurred in the year.

To give a little perspective to the accident picture, it should be borne in mind that 20,644 merchant vessels were recorded as calling at EU ports in 2009 (down almost 10% from 2008), and that these ships were involved in 593,207 port movements (down by almost 15% from 2008). This year, EMSA is also in a position to provide vessel and movement data by ship type and this can be seen in Section 1.3. Work is also being done on the provision of accurate information on transit traffic (i.e. ships not calling at EU ports but transiting European waters), but this is not yet available.

The 2009 review comes at an interesting time. The links between accident numbers, pollution, loss of life and economic activity have clearly shown themselves. Therefore, after the accident figures for 2006-2008 were about rapid increases, it will be interesting to watch the development in the accident figures for 2009-2011, in particular to see how closely they follow economic trends.

1.2 TOTAL NUMBERS FOR 2009

The 2009 analysis shows that 626 vessels were involved in 540 accidents (sinkings, collisions, groundings, fires/explosions and other significant accidents) in and around EU waters during the year. This compares with 754 in 670 accidents in 2008, 762/715 in 2007 and 535/505 during 2006. So, it can be seen that, although 2009 saw a significant reduction from the 2008 and 2007 figures, largely due to the global economic downturn, the number of vessels involved in accidents was still 17% higher than in 2006. The EMSA sources also reported that 52 seafarers lost their lives on ships operating in and around EU waters in 2009 (compared with 82 in both 2008 and 2007 and 76 in 2006).

With respect to accidental pollution, the estimate of the amount of oil spilled in reported accidents once again reduced, this time to 1500-2000 tonnes (in comparison with 2000-3000 tonnes in 2008 and 7000-8000 tonnes in 2007). Following surveillance by the EMSA CleanSeaNet satellite-based pollution monitoring system, the number of potential slick detections reduced from 3296 in 2008 to 2107 in 2009, and the number of pollution incidents confirmed after verifications by Member States was down from 232 in 2008 to 194 in 2009 (NB this is less than the real total for incidents, as most are not checked). However, it is not practical to provide an estimate for the total quantity of oil that was discharged illegally.

Most of the vessels in the EMSA 2009 review were involved in collisions and contacts (almost 47%, which is up from around 40% in the previous three years) and groundings (around 28%, as compared to 29% in 2008, 26% in 2007 and 22% in 2006), while sinkings accounted for only around 4% (compared with 7-8% in the previous three years) and fires and explosions for around 11% (as compared with 12% in 2008, 11% in 2007 and 9% in 2006). All other types of significant accidents combined represented around 10% of the total (compared with the same in 2008, 15% in 2007 and 20% in 2006). Of the 52 lives reported lost by the EMSA sources, almost 33% related to general cargo ships and almost 31% were lost in fishing vessel accidents (see section 3.1). With respect to accidental pollution, there were three cases where spills of several hundred tonnes were reported, and also several smaller spills (see section 3.2).

With respect to tonnage, around 42% of vessels involved in accidents were in the 500-5000 gt category (as in 2008, with most of these being general cargo ships), almost 36% were over 5000 gt (down from around 40% in 2008) and around

Poor weather can play a contributory role in accidents.

23% were under 500 gt (up from around 18% in 2008). Over 71% of the vessels which sank were under 500 gt (similar to the 72% in 2008), with 90% of these being fishing vessels (up from around 66% in 2008). Around 44% of lives lost were on vessels under 500 gt (up from around 40% in 2008), with the majority being on general cargo ships and fishing vessels. Although, again, the number of lives lost was much lower in 2009, the biggest proportional difference was recorded on ships from 500-5000 gt, which accounted for almost 35% (up from around 27% in 2008). By far the worst oil spill of the year, in terms of consequences, involved the 15,800 gt bulk carrier Full City, although the 65,000 gt container ship MSC Shenzhen is reported to have spilled a similar amount, and the 46,000 tonne Russian aircraft carrier Admiral Kuznetsov even more (see sub-section 3.2).

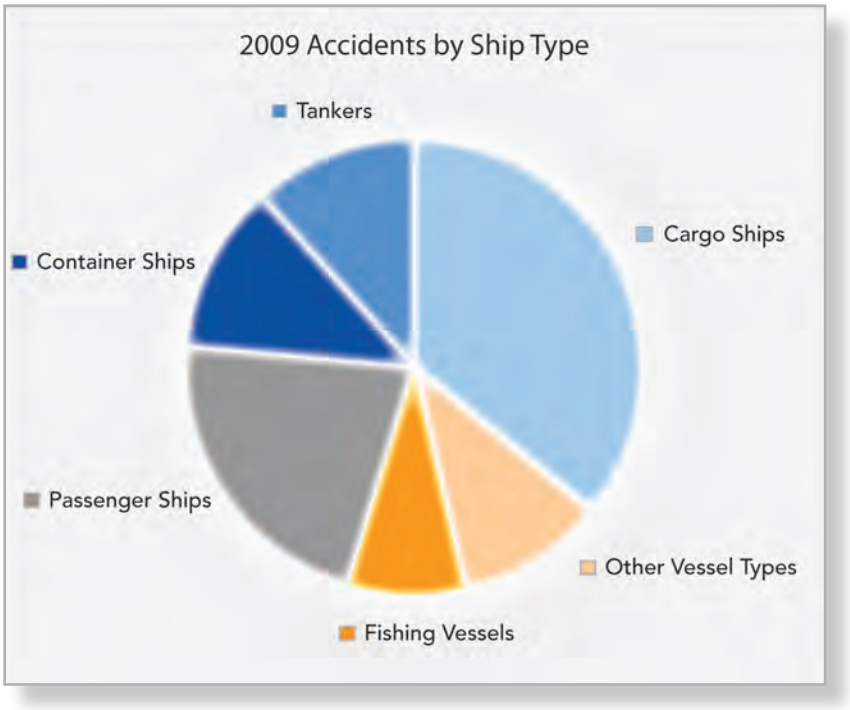
In terms of country of registry, as might be expected, the majority (over 66%) of the vessels involved in accidents in and around EU waters were registered in EU countries, while around 33% flew non-EU flags.

With respect to figures for classification societies, which assist countries of registry in carrying out their technical responsibilities, it was noted that around 32% of the vessels involved in accidents in and around EU waters in 2009 were not certified by classification societies (slightly up from 29% in 2008). It is the responsibility of flag states to certify that the vessels under their jurisdiction satisfy international requirements, either by themselves exercising flag state responsibilities, or by authorising classification societies to do so on their behalf. Almost 67% of vessel accidents involved vessels classed by EU recognised societies (slightly down from 70% in 2008), while non-recognised societies once again accounted for just over 1%. Importantly, EU recognised societies class well over 90% of the world fleet in terms of tonnage, although the proportion is less in terms of vessel numbers. It should also be borne in mind that the great majority of commercial vessels sailing in and around EU waters are certified by recognised societies, or by the Member States themselves.

With respect to the management of ships involved in accidents in and around EU waters, around 85% were EU managed (slightly up on 2008). With respect to loss of life, over 69% of lives lost were on EU managed vessels (down from 77% in 2008).

The great majority of vessel accidents do not result in serious damage, loss of life or environmental consequences. However, there were a number in 2009 which were worse than the rest, and these are highlighted in Chapter 2.

1.3 BREAKDOWN BY SHIP TYPE



1.3.1 Cargo Ships

The cargo ships category comprises general, ro-ro and refrigerated cargo ships, bulk carriers and vehicle carriers, and these make up the great majority of commercial ships.

Thus, it follows that this was once again by far the biggest category for vessel accidents in and around EU waters in 2009. However, it included only 36% of the accidents recorded in 2009, in comparison with around 41% in 2008 and 45% in 2007. General cargo ships accounted for 80% of the cargo ship accident total (up slightly from 77% in 2008), while bulk carriers accounted for over 16% and vehicle carriers for only 3%. The majority of general cargo ships, and many bulk and vehicle carriers, are in the 500-5000 gt range, and in 2009, most of the ships were involved in groundings (almost 34%) and collisions (around 29%), while contacts with infrastructure, fires/explosions and other types of accidents were less significant.

The consolidated figures showed that only 225 cargo ships were involved in accidents in and around EU waters in 2009 (down substantially from 307 in 2008 and 330 in 2007).

Again in line with the general downward trend in accidents in the economic downturn, only 6 general cargo ships sank (in comparison with 10 in 2008 and 11 in 2007), with again no bulk or vehicle carriers going down. However, the decrease in loss of life on cargo ships was not so marked, with 19 reported lost in 2009 (down from 24 in 2008 and 20 in 2007).

On the pollution side, two of the year's biggest spills (the bulk carrier ***Full City*** and the refrigerated cargo ship ***Petrozavodsk***) both fell into this category (see sub-section 3.2.2).

To provide a comparison with traffic figures, it should be noted that just over 9,900 cargo ships in the above mentioned categories called at EU ports in 2009, and that 242,943 port movements were recorded for these vessels.

It is of note that there is no direct proportional link between numbers of ships and movements. For example, 33% of the ships were bulk carriers, but they accounted for only 11% of port movements.

Cargo ships are vital for international trade, with nearly a quarter of a million port movements in Europe recorded in 2009

Nearly all tankers operating in and around EU waters are double-hulled. A ban on single-hulled tankers entering EU ports began in 2005

1.3.2 Tankers

Included in this section are all types of tankers, including oil, chemical and gas tankers, and it should be noted that the great majority operating in and around EU waters are now double hulled, in line with the international initiative to phase out single hulled tankers. Although significant efforts are being put in to minimise the number of tanker accidents, the fact that a ship has a double hull means that the potential for environmental damage is significantly reduced when accidents occur.

The tanker category is of particular interest, as an oil tanker accident can lead to huge environmental pollution in comparison to other ship types, and chemical and gas tankers can also cause significant damage if they have a serious accident.

There is a particular EU interest after a series of disasters, the most recent of which were the ***Erika*** (1999) and ***Prestige*** (2002) accidents, which polluted long stretches of the western EU coastline.

There were no major tanker spills in and around EU waters in 2009, which means that the record has now been kept relatively clean for 8 years. However, the EMSA sources reported a total of 67 tanker accidents (down from 76 in 2008, but up from 63 in 2007), despite the economic downturn. As in 2008, tanker accidents accounted for around 10% of the EU vessel accident total (up from 8% in 2007).

Breaking down the tanker accident total, with the exception of the sinking of the tank barge ***Kayak 5*** when it was servicing the 3200 gt chemical/oil products tanker ***Stolt Guillemot*** at the port of Antwerp, Belgium, on 19 January, there were no other sinkings reported. This means that, in total, only one small 450 gt oil tanker (the ***Savinosa*** at Tarragona, Spain, in September 2008) and one tank barge have sunk in and around EU waters in over three years. Tanker groundings made up almost 42% of the vessel accident total (significantly up from 26% in 2008), collisions with other vessels for around 34%, contacts with infrastructure for around 10% and fires/explosions for less than 3% (significantly down from 14% in 2008). Only 2 people were reported to have lost their lives in accidents on tankers in 2009 (down from 9 in 2008 and 3 in 2007), which marks a significant proportional improvement. Oil tankers accounted for around 76% of tanker accidents, chemical and other types for around 22% and only one contact was reported in the gas tanker category.

To put these figures in greater perspective, it should be noted that 4,434 tankers called at EU ports in 2009, and that 121,473 port movements were recorded for these vessels.

Container or 'box' ships are a key tool of globalisation. Worldwide, an estimated 18 million containers make 200 million trips each year.

1.3.3 Container Ships

2009 was an even better year than 2008 for container ship safety after some major accidents in 2006 and 2007, although this might have been expected given the well publicised information that large numbers of box ships had been laid up in the downturn, and that a large proportion were operating at significantly slower speeds. Once again, fewer accidents are good news for shippers and insurers, given that container ship accidents can be particularly expensive. This is because, tonne for tonne, these ships often carry very high value cargoes, and should an entire cargo be lost or significantly damaged, the costs can be high. Some individual containers carry millions of euros worth of goods each, so even if a small number of high value containers are lost, the cost can be more than the loss of a general cargo ship. One effect of the economic downturn may be to slow the tendency towards building larger and larger ships, which although they have the potential to increase efficiency, is giving coastal authorities worries. This is because some of these ships are so big that the salvage problem becomes immense and highly complex if they have a serious accident, particularly in terms of dealing with containers, bunker fuel and the ships themselves.

52 container ships were reported as being involved in accidents in 2009 (down from 60 in 2008). These ships accounted for around 8% of the 2009 EU vessel accident total, which was similar to 2008 and down from around 10% in 2007. Almost 33% of container ship accidents were collisions with other vessels, 25% were contacts with infrastructure, over 19% were groundings (down from around 30% in 2008 and less than 4% were fires/explosions. 2009 was not a significant year for container losses, but EMSA does not have accurate numbers or values available.

For comparative purposes, it should be noted that 2,150 container ships called at EU ports in 2009, and that 79,241 port movements were recorded for these vessels.

1.3.4 Passenger Ships

The passenger ship category includes ferries and cruise ships, and this is a very important category because it has by far the greatest potential for loss of life in the case of serious accidents. Consequently, EMSA is happy to report that, not only were there once again no major passenger ship accidents in and around EU waters, but also that loss of life was down to 4 (from 6 in 2008 and significantly down

Passenger ships include ferries and cruise ships. For many people, the only direct experience of commercial shipping is on board of such vessels.

from 10 in 2007). However, once again, there were several accidents where the consequences could have been a lot worse (see Chapter 2). This continues to be a cause for concern, because there were hundreds of passengers on the vessels, and any one of the accidents could have led to a disaster. The spectres of the accidents involving the ferries ***Estonia*** and the ***Herald of Free Enterprise***, on which many hundreds of people lost their lives, are now decades in the past, but it is important that the fight to ensure that passenger ships are built and operated more safely in the future continues.

135 passenger ships (121 ferries and 14 cruise ships) were reported as being involved in accidents in 2009, which was almost the same as the 134 in 2008 (114 ferries and 20 cruise ships). Once again, this was the second highest category for vessel accidents, representing almost 22% of the EU vessel accident total (up from 18% in 2008 and 20% in 2007). Yet again, there is room for significant improvement, although as usual, most of these did not result in serious damage, and there was also a significant reduction in accidents relative to 2007 (149). The fact that the vessel accident numbers did not reduce between 2008 and 2009 suggests that the passenger ship category is not nearly as susceptible to economic downturns as others, although the figures below suggest that this might have had some effect on cruise ships. Within the 2008 total, ferries accounted for almost 90% of accidents (up from 85% in 2008 and 80% in 2007), while cruise ships accounted for around 10% (significantly down from 15% in 2008 and 20% in 2007). Almost 43% of passenger ship accidents involved ferries hitting infrastructure, around 22% were groundings, almost 15% involved collisions with other vessels and over eight were fires/explosions.

As in 2008, there were no ferry sinkings in 2009 (compared with 3 in 2007). There were also no cruise ship sinkings, so the sinking of the Sea Diamond off Santorini, Greece, remains the only such accident in recent years. The number of cruise ships involved in accidents was down 30% in comparison with 2008, and down almost 58% on 2007. However, the average number of accidents was still over one per month, so there still remains room for improvement in the cruise ship category. The types of accidents were fairly evenly spread in terms of collisions, contacts, groundings and fires/explosions.

To add greater perspective, it should be noted that 927 passenger ships called at EU ports in 2009 (27% were cruise ships), and that 100,591 port movements were recorded for these vessels (almost 18% of movements involved cruise ships).

1.3.5 Fishing Vessels

The fishing vessel safety situation improved significantly in 2009, with only 18 fishing vessels reported as sinking (in comparison with 29 in 2008 and 27 in 2007). Nevertheless, they still accounted for almost two thirds of 2009 sinkings (up from just under a half in 2008 and 2007), although unlike previous years, there was no clear winter high for such accidents.

16 crew members were reported to have lost their lives in fishing vessel accidents during 2009 (slightly more than a half of the totals for 2008 and 2007), which represented a little over 30% of all deaths on board vessels in and around EU waters (down from 37% in 2008).

The most serious individual fishing vessel accidents were the sinkings of the Polish fishing trawler ***WLA-127*** (with the loss of its 5 crew members) in the southern Baltic Sea on 30 April, and of the fishing vessel ***Aquila*** (with the loss of 3 crew members) off the north-eastern UK on 21 July (see sub-section 3.1.2).

As stated in the Scope and Purpose of the Review in the Annex, only sinkings and loss of life have been recorded for vessels under 50 gross tonnes.

1.3.6 Other Vessel Types

This category includes many different types of vessel, including tugs, offshore support vessels, anchor handlers, barges, research vessels, heavy lift vessels and dredgers, and these types of vessels were involved in 73 accidents in 2009 (substantially down from 97 in 2008).

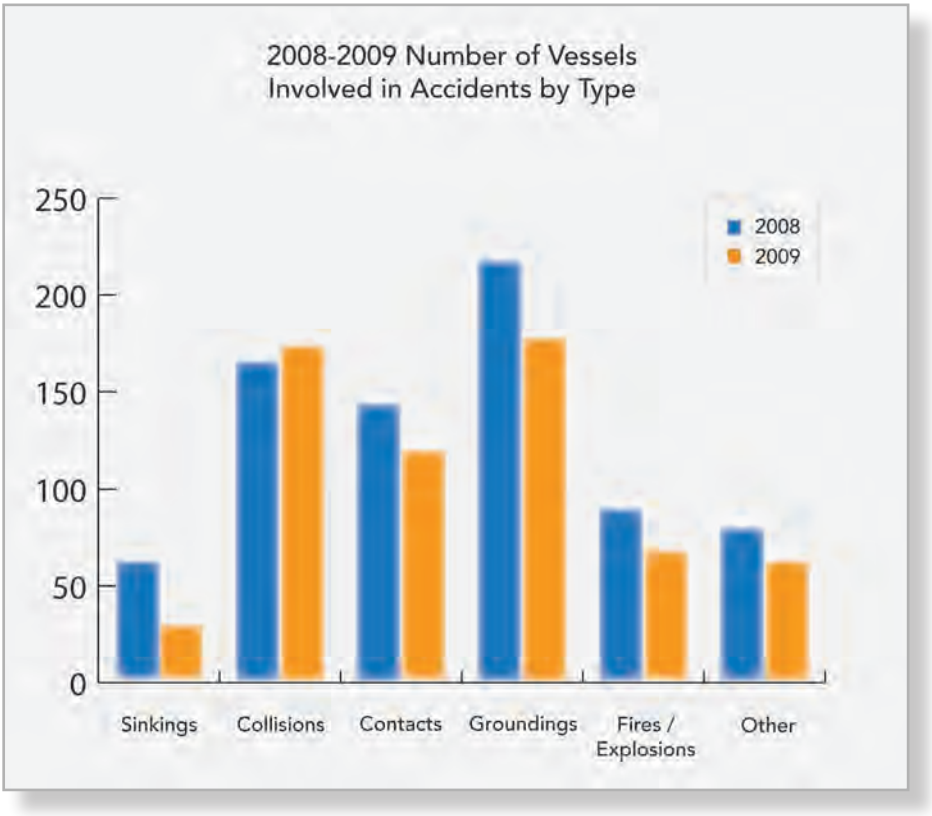
When taken together, almost 12% of the vessels involved in accidents in and around EU waters in 2009 were in this category (up from 9% in 2008). Only 4 vessels were reported as sinking (down significantly from 21 in 2008 and 12 in 2007) and 10 lives as lost (down from 11 in 2008 and 18 in 2007). The most significant vessel accident categories were collisions (around 42%), groundings and fires (around 18% each).

Unlike previous years, which saw the anchor handler ***Bourbon Dolphin*** sinking off Norway in 2007 with the loss of 8 crew members, and the dredger ***Rozgwiazda*** off Poland in 2008 with the loss of 5 crew members, the most serious accident in this category in 2009 was the sinking of the Russian fish factory ***Topaz A*** in the Barents Sea off northern Norway on 12 January with the loss of its captain (see sub-section 2.1.2).

To compare with traffic figures, it should be noted that 3,230 vessels in this category called at EU ports in 2009, and that 48,959 port movements were recorded for these vessels.

While many initiatives in the fishing industry aim to improve safety, commercial fishing consistently ranks among the most dangerous occupations.

2. TYPES OF ACCIDENTS



As mentioned in the introduction, this review deals with accident types in five different categories (sinkings, groundings, collision/contacts, fires/explosions and other types of accident), although collisions and contacts have been separated in the diagram for comparative purposes. Each of the following sections provides an overview of the figures, followed by a closer look at some of the more significant accidents that happened throughout the year. Accident black spots can be seen in the regional breakdown in Section 4.

2.1 SINKINGS

2.1.1 Overview

Once again, there were no disasters involving ships sinking with huge loss of life or pollution in 2009. The EMSA sources reported that only 28 commercial vessels sank during the year, which although it is still a long way from the ideal situation, is less than half the number reported in the peak year of 2008. 18 of these were fishing vessels (down from 29 in 2008), which means that there were only 10 sinkings involving other types. Almost all of the sinkings in and around EU waters in 2009 involved vessels of less than 2000 gt. 6 general cargo ships are reported to have sunk (down from 10 in the previous two years), but the biggest decrease was in the 'other' types of vessel category (inc tugs, offshore support vessels, anchor handlers, barges, research vessels, heavy lift vessels and dredgers), where only 4 were reported to have sunk, which is less than 20% of the 21 vessels reported in 2008. Sinkings accounted for 4-5% of the total number of vessel accidents (down from 8% in 2008 and 7% in 2007). Following small numbers of accidents in 2006, 2007 and 2008, bulk carriers, tankers, container ships, cruise ships and ferries all had a clean record in 2009 in terms of sinkings.

SINKING BY SHIP TYPE	2006	2007	2008	2009
General Cargo Ships	11	10	10	6
Bulk Carriers	1	1	0	0
Tankers	3	0	1	0
Container Ships	0	1	0	0
Cruise Ships	0	1	0	0
Ferries	4	3	0	0
Fishing Vessels	18	27	29	18
Other Vessel Types	8	12	21	4
TOTAL	45	55	61	28

The Braga lists heavily before sinking off north-west Spain, and eventually took several days to sink.

2.1.2 Most Significant Accidents

There were two particularly bad accidents involving vessels sinking in 2009.

The worst happened when 6 crew members were reported lost after the 38-year-old, 1,880 gt general cargo ship ***Langeland*** capsized and sank in a storm off southern Norway with a cargo of stone on board on 31 July. Before eventually sending out a distress signal, the crew had previously reported that the freighter had a list and that they were seeking shelter near the coast. The first rescue craft on scene found life vests and a lifeboat, following which a search and rescue operation found no survivors. It is of note that the freighter had previously grounded and cracked its ballast tank in February 2007 and collided with an oil products tanker in 2005, although there was not necessarily a link with the sinking.

Also, of the 18 reported fishing vessel sinkings, the worst happened when the 37-year-old, 110 gt fishing trawler ***WLA-127*** vanished in the Baltic Sea, together with its 5 crew members, while en route to fishing grounds near the island of Bornholm, Denmark, on 30 April. There was no Mayday call from the trawler, and the last contact was made by another trawler earlier that day. Following this, parts of a boat, an empty life raft and an oil slick were found during the subsequent search and rescue operation. The search was called off the next day when it was judged that there was no longer a chance of survival for the crew.

Another particularly bad accident happened when the 1,600 gt general cargo ship ***Salla 2*** capsized and sank in a storm around 250 km south of Cyprus (100 km from the Lebanese coast) while en route from Greece to Israel with a cargo of building materials on 12 December. As a result, despite an intensive search and rescue operation, 5 crew members were rescued, but 7 were reported lost.

The biggest ship to sink in 2009 was the 2,300 gt ro-ro cargo ship ***Captain Michalis***, which sank as a result of a collision with the 28,000 gt bulk carrier ***Santana*** in the Aegean Sea north-east of Amorgos island, Greece, on 4 October. As a result of the accident, 8 out of 9 crew members were rescued, but one was lost, although the bulk carrier was not reported to have sustained any serious damage.

In another significant accident, the 1,920 gt general cargo ship ***Braga*** took on water and developed a major list during a severe storm off north-west Spain on 24 January,

following which it is reported to have sunk during salvage operations on 27 January. The master of the Braga, which was carrying a cargo of grain at the time, died during an airlift operation. The ship had previously been involved in a collision in December 2007, at which time it was holed in the port side aft ballast tank and also took on water, but this was not necessarily linked with the sinking.

The only other ship over 1,000 gt that was reported to have sunk in 2009 was the 32-year-old, 1000 gt Russian fish factory ***Topaz A***, which took on water and sank in the Barents Sea off northern Norway on 12 January. The captain died, but the other 18 crew members were rescued by other vessels in the extremely cold conditions.

Probably the most unusual accident of this type during the year happened when the 360 gt cutter suction dredger ***M 30*** hit an unexploded World War II bomb and sank while it was working at Jade Weser Port, Germany, on 11 October. There were no injuries, but the dredger's cutting head was torn off in the explosion before it sank. It was later re-floated and towed to Wilhelmshaven for inspection and repairs.

Other sinkings of significance reported in 2009 were those of: the 560 gt general cargo ship ***Alrita***, which capsized and sank in a few minutes off Norway on 2 March; the 540 gt general cargo ship ***Bulk Star***, which took on water, capsized and sank off Norway on 9 February; the 520 gt fishing trawler ***Koralnes***, which sank in heavy seas and gale force winds in the Barents Sea off Norway on 24 April; the 120 gt fishing trawler ***Unora***, which sank in the Baltic Sea off Denmark on 17 February and the tank barge ***Kayak 5***, which sank when it was servicing the 3,200 gt chemical/oil products tanker ***Stolt Guillemot*** at the port of Antwerp, Belgium, on 19 January.

2.2 GROUNDINGS

2.2.1 Overview

The situation with respect to serious groundings (and their consequences) showed a significant improvement in comparison to 2008. In 2009, the EMSA sources reported that 177 vessels ran aground (down from the peak of 217 in 2008 and 197 in 2007, but significantly up from 117 in 2006).

These represented over 28% of the total number of vessel accidents (slightly down from around 29% in 2008, but up from 26% in 2007). Around 38% were general cargo ships (down from around 47% in 2008 and 2007) and tankers and ferries accounted for around 16% each (both around a third up on 2008). In contrast, groundings of container ships, bulk carriers and 'other' vessel types were well below the 2008 levels.

GROUNDINGS BY SHIP TYPE	2006	2007	2008	2009
General Cargo Ships	51	94	103	67
Bulk Carriers	12	14	12	9
Tankers	18	23	20	28
Container Ships	11	10	18	10
Cruise Ships	2	3	5	2
Ferries	13	21	21	28
Fishing Vessels	6	14	20	20
Other Vessel Types	4	18	18	13
TOTAL	117	197	217	177

2.2.3 Most Significant Accidents

By far the worst grounding of 2009 was that of the 15,900 gt bulk carrier ***Full City***, which sustained engine failure, dragged its anchor and ran aground in a storm off southern Norway on 31 July. As a result, rocks penetrated several metres into the hull, following which it listed and reportedly spilled 2-300 of its 1,120 tonnes of fuel oil into the sea. Accident investigators from Panama and Norway said that the bulker could have drifted onto the rocks because its anchor had broken into three parts after being deployed. Metallurgists subsequently examined the anchor stock and the recovered fluke to determine what might have caused such an unusual break. The bulker was eventually re-floated on 17 August, thus avoiding a complex and costly wreck removal. The master and third officer were detained in Norway on charges of negligence, and it is reported that they are accused of not keeping a safe watch and not reporting the incident soon enough.

The biggest ship to ran aground in 2009 was the 108,000 gt fully cellular container ship ***Xin Los Angeles***, which grounded off Zeebrugge, Belgium, on 27 March. The giant ship was eventually re-floated later the same day with the assistance of 4 tugs, but once again, after the grounding of the 90,000 gt container ship ***LT Cortesia*** off the south-eastern UK in 2008, the maritime community was reminded of the possibility of eventually having to deal with a major disaster involving one of these giant ships. In comparison,

The Full City aground on the Norwegian coast, with a boom deployed in the attempt to minimise pollution.

both of these ships are far bigger than the 53,000 gt ***MSC Napoli***, which grounded in the English Channel in 2007 and caused huge logistical problems for salvors and the maritime authorities over many months.

153 passengers had to be evacuated using a ladder in high winds in a snow storm after the 11,200 gt passenger/ro-ro ferry ***Richard With*** ran aground off the port of Trondheim, Norway, on 6 January. The fire services worked to keep the vessel stable over several hours, but it subsequently moved and the electric cables between the vessel and an emergency generator ashore were torn off. However, following the subsequent de-watering process (the water was two metres deep in the engine room), the ferry was re-floated later the same day, berthed and stabilised prior to being towed away for repairs.

Another serious grounding, was that of the 1,250 gt refrigerated cargo ship ***Petrozavodsk***, which ran aground in heavy fog, almost freezing waters and waves up to 3.5 metres under the cliffs on the southern tip of Bjornoya (Bear Island) in the Arctic, between Norway and Spitzbergen, on 11 May. Satellite tracking shows that the ship held a steady course straight towards the shore and hit at a speed of 10 knots. The 12 crew members put on survival suits and were eventually airlifted off, but the reefer subsequently spilled up to 60 tonnes of fuel and other pollutants into the sea in an area with major sea bird populations. After the accident, the master and mate were reported to have high blood alcohol levels, which resulted in the vessel entering a protected area and running aground. Both were charged and sent to prison in Tromso. In the days after the accident, it was too dangerous for salvors to approach and the weather seriously damaged the ship, with rolling stones penetrating the hull on the port side. Eventually, the ship was declared a total loss and plans were made to deal with the wreck when the weather subsided.

Refrigerated cargo ships do not often feature in accidents, as they only make up a relatively small proportion of the commercial fleet. However, on 10 May, only one day before the Petrozavodsk, the 2,380 gt refrigerated cargo ship ***Framnes*** also ran hard aground at full speed on a shoal off the southern coast of the island of Yaksi, Estonia. As a result, there was another oil spill, but this was not reported to be so significant, and the ship was eventually re-floated on 13 May after the 260 tonnes of fuel that remained on board had been pumped out. On this occasion, the master was reported to have an alcohol level of 0.99 ppm in his blood.

The Petrozavodsk aground under sheer rock cliffs on the south of Bjornoya (Bear Island), which is an environmentally sensitive area.

There was also an accident involving a single hulled tanker when the 1,800 gt chemical/oil products tanker ***Yasmin C*** ran aground on Salamis Island after drifting from its anchorage near the port of Piraeus, Greece, on 23 January. The tanker is reported to have grounded along almost half its length, but it was eventually re-floated on 2 February and taken for repairs. There was no pollution reported on this occasion.

Another accident which could have had more serious consequences, and underscored the need to replace single hulled tankers in and around EU waters occurred when the un-laden 6,000 gt single hulled oil products tanker ***Vemaoil XXI*** dragged its anchor and ran aground in a storm a few metres from a rocky breakwater at La Linea de la Concepción, Algeciras Bay, southern Spain, on 22 December. The tanker had been riding out the storm in the bay, but after dragging anchor, it drifted towards the still anchored, 2,900 gt, single hulled bunkering tanker ***Vemaoil IX***, which was carrying a cargo of heavy fuel oil. It hooked the chain of the anchored tanker, which also came adrift and ran aground in the same area. There was no pollution reported on this occasion, but the accidents renewed longstanding concerns about maritime safety relating to bunkering activities in Algeciras Bay. Over the past three years, Gibraltar and Algeciras have faced a string of major casualties, and this has led environmental campaigners and others to become highly critical of bunkering activity in the bay. Authorities in Gibraltar and Spain reject the criticism, saying that shipping and bunkering activity is tightly monitored and regulated, and Gibraltar, Spain and the UK are currently working on joint protocols to improve maritime cooperation and coordination in the area.

Another significant box ship accident happened when the 26,100 gt fully cellular container ship ***E.R.Hamburg*** ran aground off the island of Crete, Greece, on 9 January. As a result, it sustained major bow damage and, after it was re-floated, it was taken to Piraeus to offload its containers before being taken for repairs.

The 25,000 gt bulk carrier ***Hamburg Team*** was involved in a significant accident when it sustained engine failure in rough seas, drifted out of control and ran aground on rocks off the Avenida Maritima, Las Palmas, Gran Canaria, Canary Islands, Spain, with a pilot on board on 9 November. Two tugs were sent to the scene and were eventually able to re-float the ship later the same day, but it had sustained severe bottom damage and had to be taken for repairs.

Finally, a rather unusual sequence happened when the 2,900 gt general cargo ship ***Amiral Akdeniz*** ran aground twice in six days off Greece. The first time, it grounded in bad weather off the island of Kos on 23 January, and after being re-floated, it ran aground again off the northern coast of the island on 29 January. There was no pollution reported on either occasion.

2.3 COLLISIONS/CONTACTS

2.3.1 Overview

According to the EMSA sources, 292 vessels were involved in collisions (173) and contacts (119) in and around EU waters during 2009 (down from 308 in 2008 and 304 in 2007, but up from 217 in 2006), and these represented almost 47% of vessel accidents (up from 40% in 2008). Thus, it is by far the biggest vessel accident category. However, whereas general cargo ships accounted for the great majority of accidents in 2008, their situation substantially improved in 2009, and due to a worsening of the situation for ferries, the latter finally accounted for a small majority. Thus, ferries made up almost 26% of the collisions/contacts (up from around 22% in 2008), while general cargo ships made up 25% (down from around 34% in 2008). The numbers of vessel accidents involving other types of ships were significantly lower, with tankers (10%), container ships (10%) and "other vessel types" (almost 13%) having similar number of accidents to 2008, while the situation for bulkers and fishing vessels substantially worsened.

COLLISIONS/CONTACTS BY SHIP TYPE	2006	2007	2008	2009
General Cargo Ships	96	115	104	73
Bulk Carriers	10	17	16	20
Tankers	37	23	31	30
Container Ships	18	42	31	30
Cruise Ships	4	12	8	5
Ferries	40	61	69	75
Fishing Vessels	7	17	14	22
Other Vessel Types	5	17	35	37
TOTAL	217	304	308	292

2.3.2 Most Significant Accidents

One of the most serious collisions happened when the 29,700 gt passenger/ro-/ro ferry ***Gotland*** hit and severely damaged the 6,500 gt passenger/ro-ro ferry ***Gotlandia II*** in heavy fog just outside the port of Nynashamn, Sweden, on 23 July. As a result, 3 passengers were injured and many others were treated for shock, and the starboard side of the Gotlandia II was significantly pushed inwards, while the Gotland was reported to have two holes in its side. All passengers and vehicles were eventually discharged at the port, but it was another reminder of the requirement to design robust ro-ro ferries with appropriate stability in order to avoid disastrous capsizes should water enter the vehicle decks.

Another relatively serious passenger/ro-ro ferry accident happened when the 6,000 gt ferry ***Jonathan Swift*** was severely holed after crashing into the dock in windy conditions at the port of Holyhead, Wales, western UK, on 27th December. It overran the docking bay and crashed into one of the docking structures, thus causing significant damage to both the ferry the infrastructure. There were no injuries reported.

Also among the more significant ferry accidents involving infrastructure were a couple of repeat offenders. The 9,700 gt passenger/ro-ro ferry ***Samothraki*** hit the pier during berthing manoeuvres at the port of Chios, Greece, on 8 February, as a result of which it sustained a crack and dents in its forepart less than a metre above sea level, and it also damaged cars that were parked near the lacing area. This was the fourth collision/contact reported for the ferry.

A few days prior to the reporting period for this review, the fast ferry Jonathan Swift was severely holed at the port of Holyhead (UK).

Substantial damage to the ferry Gotlandia II, after the collision with the Gotland at the port of Nynashamn (Sweden) during July 2009.

The other was the 19,200 gt passenger/ro-ro ferry ***Theofilos***, which hit the pier during berthing manoeuvres in strong winds at the port of Lemnos, Greece, on 18 May, and as a result, it sustained a crack in its hull around 1 metre above sea level. This was also the fourth time that the ferry had been reported to have been in contact accidents with dock infrastructure.

One of the most memorable accidents was a series of collisions when the 67,400 gt vehicle carrier ***Hoegh London*** hit the 27,300 gt container ship ***Maersk Newark***, then the 42,400 gt container ship ***Maersk Bintan*** and then the 10,000 gt container ship ***Husky Racer*** before also hitting the Strom Quay at the port of Bremerhaven, Germany, on 26 May. It was reported that the collisions happened in up to Force 8 winds and a strong outgoing tide, and that only emergency anchoring eventually halted the progress of the ship. It was subsequently towed back to Bremerhaven for inspection and investigations, but there were differing degrees of damage to all of the ships, the worst of which was the Maersk Newark, which is reported to have had its hull ruptured in several places. Fortunately, the only pollution resulted from a ballast water tank being holed.

Only two ships were involved when the 8,900 gt general cargo ship ***Nirint Pride*** hit the fully 32,600 gt cellular container ship ***MSC Nikita*** in the west bound lane of a traffic separation scheme off the Hook of Holland, Netherlands, on 29 August. As a result, the container ship sustained a large hole in its starboard side engine room, took on water, lost several containers overboard and began sinking by the stern, following which the 25 crew members abandoned ship in a lifeboat. The crew of the freighter remained on board to fight a fire in its bow area. Fortunately, it was eventually possible to stop the water ingress on the MSC Nikita to the extent that it could be taken into Rotterdam.

In another significant container ship accident, the 7,700 gt fully cellular container ship ***Hanse Vision*** collided with the 21,200 gt ro-ro cargo ship ***Birka Express*** while leaving the Kudensee passing point on the Kiel Canal, Germany, on 12th January. As a result, the Birka Express sustained a hole of unspecified size in its hull and was found to be leaking.

There were also several significant collisions involving tankers, which could have had far more serious consequences. The 5,800 gt, single hulled chemical/oil

There was extensive damage to the Nirint Pride and MSC Nikita after the ships collided off the Hook of Holland (Netherlands).

products tanker ***Sichem Anne*** hit and almost sank the barge ***Margrethe*** at the conjunction of the Dordtse Kil and the Hollands Diep in Netherlands, on 11 January. The Margrethe was hit on its port side by the bulbous bow of the tanker, sprang a leak, and experienced water ingress and almost sank, so it had to be kept afloat by tugs, while the tanker sustained a crack above the waterline at the fore-peak. The barge was eventually deliberately grounded in order to de-water and lighter it.

Also, the 3,200 gt, double hulled chemical/oil products tanker ***Sundstraum*** hit the 5,000 gt general cargo ship ***Kapitan Lus*** in clear weather the Oresund Strait on the Danish side of the sound between Saltholm and Amager on 3 July. The tanker was south bound with a cargo of methanol at the time, and the freighter was northbound with a cargo of aluminium bars and raw uranium. As a result, there were no injuries or pollution reported, but the freighter sustained a large hole in its hull, one of the cargo holds was flooded and it developed a heavy list. The Danish institute of radiation risks later confirmed that there was no risk of radioactive contamination from the uranium.

In addition, the 66,900 gt, double hulled crude oil tanker ***Promitheas*** collided with the 45,600 gt bulk/oil carrier ***Searose G*** off Southwold, Suffolk, eastern UK, on 25 July. As a result, the Promitheas sustained a 4.5 metre gash in its port side ballast tank, while the bulker sustained light damage to bulwarks, railings and fairleads.

A significant hole was torn in the hull of the 31,000 gt bulk carrier ***Merit*** when it hit a quay in the Industry Harbour, Bremerhaven, Germany, on 23 July, resulting in a 6 tonne spill of heavy fuel in the harbour basin.

Another serious holing occurred when the 2,800 gt general cargo ship ***Delfin*** hit a buoy and became entangled off Denmark on 30th March. It was reported that the freighter then ran aground during an attempt to free its propeller, which was caught on the buoy chain. The buoy chain had twisted itself at least four times around the propeller and, as a result, a concrete block had been pulled into the hull, causing extensive damage.

The most serious bridge collision reported in 2009 was when the 1,200 gt general cargo ship ***Nyfjell*** hit the Nordhordland Bridge, north of Bergen, Norway, on 2 June. As a result, the freighter sustained heavy damage to its bow section and was subsequently taken to Bergen. The bridge also sustained some damage.

Finally, the 6,200 gt general cargo ship ***Dintelborg*** was holed when it hit a radar beacon in the central Baltic Sea between the coasts of Sweden and Finland on 28 February. This time, the accident caused a one-metre-long hole in the starboard bow of the ship.

2.4 FIRES/EXPLOSIONS

2.4.1 Overview

As in almost all accident categories, the number of fires/explosions in and around EU waters was down significantly in 2009. The figures showed that there were 67 ship fires in and around EU waters during 2008 (slightly down from 89 in 2008 and 91 in 2007, and up from 46 in 2006). This represented almost 11% of the EU accident total (slightly down from 12% in 2008).

A major fire broke out on one of the car decks of the passenger/ro-ro ferry Vicenzo Florio off Sicily.

Once again, by far the biggest category was general cargo ships, which accounted for almost 36% of the total (significantly up from 25% in 2008 and 30% in 2007), and had more fires on board than in 2008, whereas all other categories, except bulk carriers, reported a decrease. The most notable change concerned tankers, with only two accidents reported, which means that there was an 82% decrease in the number of on board fires. It was also good to see that the number of fires on ferries was down by around 36% when compared with 2008. Other ship types also showed significant decreases.

FIRES/EXPLOSIONS BY SHIP TYPE	2006	2007	2008	2009
General Cargo Ships	18	28	22	24
Bulk Carriers	2	1	4	6
Tankers	6	11	11	2
Container Ships	5	3	4	2
Cruise Ships	0	3	3	2
Ferries	5	14	14	9
Fishing Vessels	6	16	14	9
Other Vessel Types	4	15	17	13
TOTAL	46	91	89	67

2.4.2 Most Significant Accidents

Not only was the number of fires significantly lower in 2009, but also the severity, so there are very few accidents of significance to report. The worst of the year broke out on one of the car decks of the 30,700 gt passenger/ro-ro ferry ***Vincenzo Florio*** when it was near the island of Ustica, Sicily, near the end of a trip from Naples on 28 May. The blaze then spread throughout the car decks, and as a result, 456 passengers and many crew members were evacuated in life boats and picked up by other vessels in the area, following which 29 were reported to have been taken to hospital. Some of the crew members remained on board to try to extinguish the blaze while the ship was being taken into Palermo, but fire fighters had to continue to fight it for some time after it arrived. When it was finally extinguished, there was found to be extensive damage to decks five and six, and to many of the heavy goods vehicles on board. A court case ensued with, on the one side, the state-owned vessel owners saying that the fire systems worked well, and that the crew performed responsibly and correctly in the hours before the vessel was evacuated. On the other side, truckers and their lawyers said that no alarms went off to warn passengers that a fire had started, and that the crew failed over a period of hours to inform passengers of the situation and alert them to the dangers.

In another passenger ship accident, a number of passengers panicked and jumped overboard, and two crew members were injured and taken to hospital, when the 47,250 gt cruise ship ***Zenith*** had a fire on board while it was berthed at the Frihamnen terminal, Stockholm, eastern Sweden, on 18 August. The cause of the fire, which happened when the ship had around 1,600 passengers and 700 crew members on board, was reported as being an accident during welding on deck three in the bow of the ship. The rest of the passengers were on shore excursions at the time and those remaining on board were evacuated after the blaze started.

Also on a passenger ship, 6 people were taken to hospital after inhaling smoke from a fire on board the 35,736 gt passenger/ro-ro ferry ***Athara***, which began when it was en route from Genoa, northern Italy, to Porto Torres on 29 January. The fire began on a refrigerator truck, but there were no subsequent reports on the full extent of the damage caused.

The 1,300 gt anchor handling tug/supply ship ***Ocean Sky*** had a fire on board while it was operating in the North Sea on 29 April. The blaze began in the engine room, and as a result, it eventually disabled the ship and left it drifting without power, following which a tug arrived some time later and towed it to Kristiansund for inspection and repairs. There were no injuries, pollution or other serious consequences on this occasion, but this was a good example of an oil industry vessel losing control for a prolonged period, which if it occurred near drilling infrastructure, could lead to major problems.

2.5 OTHER TYPES OF ACCIDENT

2.5.1 Overview

Included in this section are all those significant accidents which do not fall into the previous four categories. Included are such things as structural failures, passengers/crew members lost overboard, lifeboat accidents, heavy weather damage, serious water ingress and listing, significant cargo loss and infrastructure (eg crane) collapse. Minor cargo losses, machinery failure, anchor losses, etc. are not included. Machinery and other failures often lead to groundings and collisions, and occasionally to sinkings around the world. However, EU waters are generally well monitored and the hundreds of breakdowns which happen each year are normally handled without significant consequences. It is worth noting that the issue is being more carefully monitored than previously, due to the recognition that slow steaming and delayed maintenance (brought about by the particularly difficult economic climate) are likely to increase the incidence of mechanical failure.

OTHER ACCIDENTS BY SHIP TYPE	2006	2007	2008	2009
General Cargo Ships	45	44	29	18
Bulk Carriers	7	6	7	2
Tankers	11	6	13	7
Container Ships	13	9	7	10
Cruise Ships	8	14	4	5
Ferries	16	17	10	9
Fishing Vessels	4	4	3	5
Other Vessel Types	6	15	6	6
TOTAL	110	115	79	62

Despite the economic boom times prevalent until the end of 2008, the number of accidents reported in this category has reduced significantly every year since 2007 (from 115 in 2007 to 79 in 2008 to 62 in 2009), and the 2009 figures were around 44% lower than in 2006. Once again, given their superior numbers, general cargo ships accounted for the majority (almost 30%) of vessel accidents in 2009 (down from around 37% in 2008), although the numbers were sharply down. Container ships moved well up the rankings, accounting for around 16% of the accidents (up from around 9% in 2008), while tankers dropped to around 11% (from around 16% in 2008). Ferries accounted for almost 15% (slightly up from 13% in 2008).

2.5.2 Most Significant Accidents

Although not included in the accident figures, one of the most memorable incidents to occur in and around EU waters in 2009 was the saga of the 4,000 gt general cargo ship ***Arctic Sea***, which was reported to have been hijacked in the Baltic Sea off Sweden while carrying a cargo of sawn timber on 23 July. Reportedly, eight masked men, who claimed to be drugs police, took over the vessel for around 12 hours, tied up the 15 Russian crew members, beat some of them and searched the hold. At the time, the Swedish police said that they may have been looking for drugs, but that the shipping company had not reported the incident until 28 July, and then only to the Russian embassy in Helsinki, which passed on the information to the Scandinavian authorities. By this time, the ship was nearing the Bay of Biscay, reportedly en

Wood lost from the Sinegorsk at sea washed upon southern UK beaches.

route to Algeria. The British coastguard communicated with it when it passed along the English Channel, but it was not realised at the time that anything was wrong. One of the possibilities reported was that the person speaking on the ship was either a hijacker or a member of the crew under threat. As the story unfolded, rumours developed, including that it had vanished without trace from all surveillance systems, and that it was carrying an illicit weapons shipment. It was eventually boarded by the Russian Navy when it was off West Africa and the hijackers were reported to have been flown to Russia for trial. The Russian Navy finally delivered the ship to Malta on 29 October, where after an inspection by Maltese authorities, it was allowed to enter harbor and was returned to its owner. No suspicious cargo was ever found on the ship by maritime authorities. The ship's hijacking and subsequent events remain mysterious, as no credible explanation exists for its disappearance. If ever confirmed to be an act of piracy, the hijacking would be the first for centuries in northern European waters.

The English Channel is becoming the most common place for significant accidents involving timber cargoes. After the ***Ice Prince*** peppered the south coast of England with wood after it sank in January 2008, the 7,100 gt general cargo ship ***Sinegorsk*** listed and lost another 1,500 tonnes of sawn wood in gales off the port of Newhaven on 19 January. A further 2,000 tonnes were left on deck and at risk, but the freighter eventually anchored off the Isle of Wight for the damage to be assessed and for the rest of its load to be secured. The floating timber was monitored while at sea, but it eventually came ashore in substantial amounts between the ports of Dover and Margate.

Another first for this review was the capsize of part of a ship when the bow section of the 32,300 gt passenger/ro-ro ferry ***Tor Freesia*** listed in strong winds, hit the side of a dry dock and capsized at a shipyard in Bremerhaven, Germany, on 25 July. The ferry was being lengthened at the time, and had been cut in two to insert a new mid-body. The accident happened when the bow section was being towed out of the dock, following which an investigation was carried out to determine whether the main cause of the accident was the bad weather or a ballast problem.

Another unusual accident involved an 80 tonne experimental ***wave power generator rig***, which capsized while it was being towed by the tugs ***Svitzer Trimley*** and ***Grey Vixen*** off the port of Southwold, eastern UK, on 20 September. The tugs were unable to right the rig, but they managed to attach tow lines and run it aground in around 18 metres of water in Dunwich Bay around five km off the Southwold harbour entrance. When it capsized, the rig

A heavy goods vehicle broke free on the Stena Voyager and forced open the rear loading door while it was en route from Stranraer to Belfast.

lost its expensive cargo overboard, and it was not certain whether the wave energy machine was badly damaged, or whether it would still be able to be salvaged and erected in the planned location. It was part of a pioneering plan to create power from waves, with the seabed off Southwold being used to test a new way of harnessing wave power which could ultimately generate electricity on a large scale.

One passenger was rescued and another was lost when a car fell off the ***Cross River Ferry*** in Cork, southern Ireland, on 8 March. A massive search involving 6 naval divers and a helicopter was launched for the missing man, but they were hampered by poor weather conditions and were ultimately unsuccessful. The cause of the accident was not reported at the time.

Another accident involving vehicles on ferries happened when a heavy goods vehicle broke free and forced open the rear loading door of the 19,600 gt passenger/ro-ro ferry ***Stena Voyager*** while it was en route from Stranraer to Belfast, northern UK, with 189 passengers and crew members and a number of vehicles on board on 28 January. Nobody was injured, and the ferry did not take on water through the door, but it had to return to Stranraer urgently to solve the problem. Passengers said they became concerned after hearing a loud bang, following which the lorry could be seen protruding from the back of the ship. Once back in port, a mobile crane took several hours to remove the vehicle, which was carrying non-hazardous ferrous sulphate powder (which did not leak), so that the ferry could be docked and cars could be driven off to board another ship.

In yet another goods vehicle accident, a driver had to be rescued when his vehicle was left dangling over the edge of the 16,300 gt container ship ***Victory*** after it overshot a loading railing at a dock at Purfleet in the Thames Estuary, south-eastern UK, on 14 June. He was finally cut free by fire fighters some time later, and they had to cut away the hand-rail and part of the van so that they could get him out.

Accidents involving waves have begun to feature more recently. A passenger suffered rib damage and a crew member sustained a head injury when the 11,200 gt passenger/ro-ro ferry ***Hrossey*** was hit by gale force winds and huge waves off Sumbrugh Head, Shetland Islands, northern UK, on 4 February. The accidents happened when the ferry rolled violently, having experienced two particularly significant rolls in quick succession, and the injured people were thrown against bulkheads.

3. CONSEQUENCES OF ACCIDENTS

3.1 LIVES LOST

3.1.1 Overview

As indicated in the introduction, the number of lives reported lost by the EMSA sources on commercial vessels in and around EU waters went down by almost 37% in 2009 (52 as compared to 82 in 2008 and 2007, and 76 in 2006). This was very good news for European maritime safety. Accidents on all vessel types were down, but the biggest improvement in the number lost was on fishing vessels, where the total number reported reduced by almost 47% against 2008, and the proportion of the loss of life total was around 31% (down from almost 37% in 2008).

LIVES LOST BY SHIP TYPE	2006	2007	2008	2009
General Cargo Ships	14	20	21	17
Bulk Carriers	4	0	3	2
Tankers	2	3	9	2
Container Ships	2	0	2	1
Cruise Ships	3	4	2	1
Ferries	2	6	4	3
Fishing Vessels	42	31	30	16
Other Vessel Types	7	18	11	10
TOTAL	76	82	82	52

Albeit at a much lower level, tankers showed the biggest proportional improvement, reducing by around 78% in comparison to 2008. With respect to general cargo ships, although the total number of lives lost reduced by almost 20% from 2008, the proportion of the total lost in and around EU waters was almost 33% (up from around 25% in 2008). The number of lives lost on "other vessel types" reduced very slightly, but as with general cargo ships, they substantially increased their proportion of the EU loss of life total (from around 13% in 2008 to over 19% in 2009).

3.1.2 Most Significant Accidents

The worst accident to happen in and around EU waters in 2009, in terms of loss of life, does not count towards the commercial vessel statistics, because it involved a Super Puma ***oil industry support helicopter*** which crashed into the North Sea around 24 km off the coast of Scotland, northern UK, while returning from the Miller offshore oil platform on 1 April. 16 people were reported to have lost their lives on a day when flying conditions were said to be good, but the accident happened after the aircraft entered a fog bank. It was the second such crash in the North Sea in six weeks, although all 18 people on board survived the first.

The worst commercial ship accident in terms of loss of life happened when the 1,600 gt general cargo ship ***Salla 2*** capsized and sank in a storm around 250 km south of Cyprus (100 km from the Lebanese coast) while en route from Greece to Israel with a cargo of building materials on 12th December. Following a distress call, a NATO ship in the area was sent to the scene and rescued one of the crew members from a life raft, while other empty life rafts were spotted floating in the area. In the end, 5 crew members were rescued, but 7 were lost.

Almost as bad was the capsize and sinking of the 1,900 gt general cargo ship ***Langeland*** in a storm near Koster, southern Norway, close to the Swedish border, while carrying a cargo of stone on 31 July. On this occasion, 6 crew members were reported to have lost their lives. The crew members had been in contact with the owner and reported that the vessel had a list and that they were seeking shelter. They subsequently sent out a distress signal and the first rescue craft to arrive at the position found life vests and a lifeboat and began to search for survivors, but the search and rescue operation was unsuccessful.

Almost one third of all reported lives lost on fishing vessels in 2009 happened in a single accident, when the 110 gt Polish fishing trawler ***WLA-127*** mysteriously vanished in the Baltic Sea, together with its 5 crew members, while en route to fishing grounds near the island of Bornholm, Denmark, on 30 April. There was no Mayday call from the vessel, and the last contact was made with another Polish trawler when it was 16 km south-east of the port of Nexo earlier the same day. Following this, an empty life raft with abandoned protective clothing was found 3 km south of Bornholm during the search and rescue operation, which began very quickly as the Danish navy was conducting an annual rescue exercise in the area at the time with 23 vessels from seven countries. One of the aircraft involved in the exercise later spotted a life buoy, a battered lifeboat, parts of a boat and an oil slick, but strong winds made the SAR operation extremely difficult.

Six crew members lost their lives when the Langeland sank. The wreck was eventually found at a depth of nearly 100 metres.

In another fishing vessel accident, one crew member was rescued, but 3 died when the 40 gt fishing vessel ***Aquila*** capsized in good weather off Ardnamurchan near Fort William, north-western UK, on 21 July. Rescuers arrived at the scene very soon after a bystander on Ardnamurchan peninsula saw the upturned hull in the sea near Fascadale. A nearby yacht, which was alerted by a mayday call from the coastguard, was able to find the survivor.

On 31 January, 2 crew members (a senior mechanic and a seaman) were killed and 4 others (the master, second officer, a senior mechanic and a seaman) were hospitalised with carbon monoxide poisoning after the 2,500 gt general cargo ship ***Sotnik*** sustained water ingress in a ballast tank while it was berthed at the port of Rostov, Germany. On this occasion, a portable benzine motor pump was used in a closed accommodation area to pump out the water, which resulted in the formation of the toxic fumes.

4 crew members were rescued, but 2 were lost, after the 120 gt fishing trawler ***Unora*** sank in the Baltic Sea off the island of Bornholm, Denmark, on 17 February. The four survivors abandoned ship and were rescued from a life raft, but it was not possible to find the missing two during the search and rescue operation.

The last in a long series of accidents involving cargo ships sinking fishing vessels happened when the 2,500 gt general cargo ship ***Mekhanik Tyulenev*** hit and sank the small fishing vessel ***Marina*** (Norwegian flagged and owned) near Anda Island in the Lofoten Islands off north-west Norway on 2 March. As a result, the sole crew member on board was lost. The wreck of the Marina was located at a depth of 80 metres by a mini-sub the next day, but the fisherman was not inside.

Although they are not counted in the commercial vessel figures in this review, the hundreds of deaths that happen each year when small vessels sink with illegal immigrants on board should not be forgotten. Most of these people try to reach the European Union via the Canary Islands, the Spanish mainland, Italy, Malta and Cyprus. In the worst, it is feared that over 300 people may have lost their lives when several vessels sank in the Mediterranean Sea off Libya while

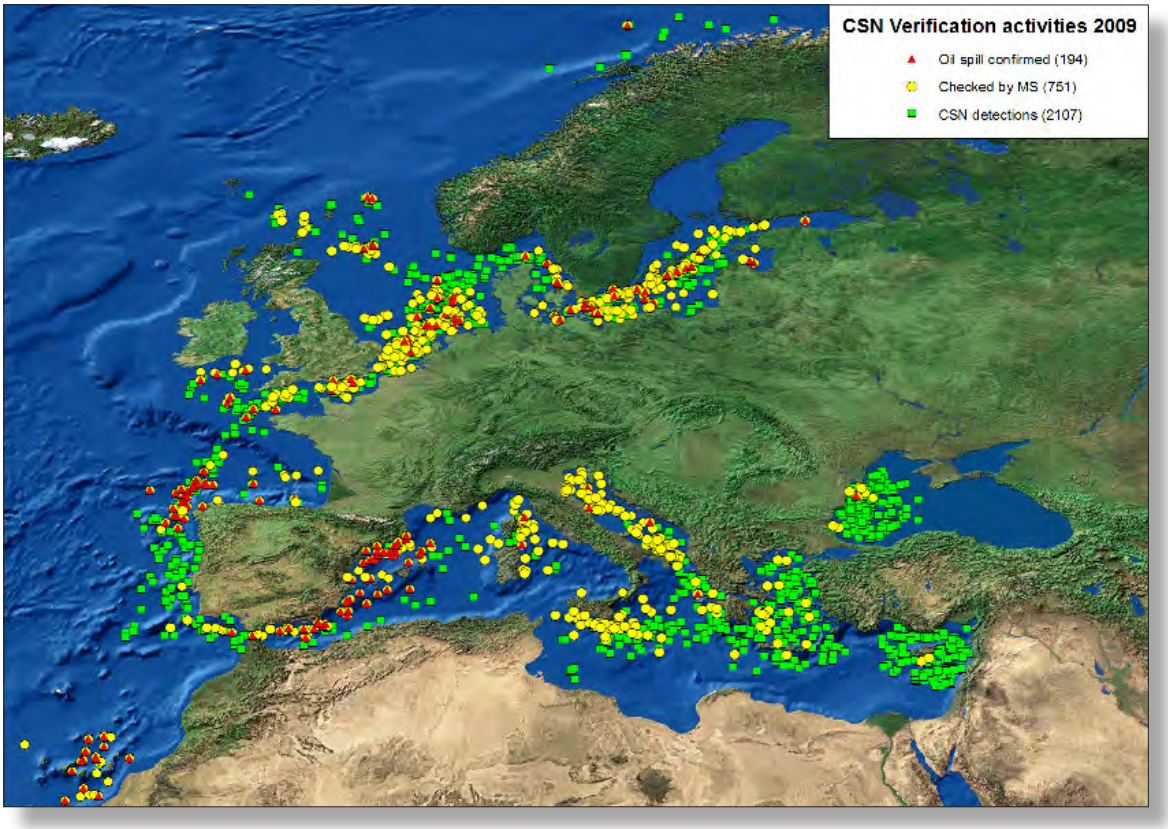
en route to Italy on 28/29 March. One of the vessels was reported to be carrying 365 people, although it was only supposed to hold 75, and a Tunisian man who was rescued said that he was the only survivor. In another accident on 30 March, 21 people lost their lives and dozens, possibly hundreds, were believed to be missing after another small vessel sank 30 km off the coast of Libya while en route to Italy. In other significant known accidents, 22 people were rescued, but at least 18 drowned when a small vessel capsized between southern Spain and Morocco on 4 June, and over 20 lost their lives when a fishing vessel capsized and sank in rough seas off Lanzarote, Canary Islands, Spain, on 15 February at the end of a voyage from the west coast of Morocco. Increased surveillance is now improving the situation in several areas.

3.2 POLLUTION

3.2.1 Overview

2009 was yet another year when the oil tanker industry kept its clean record in terms of pollution disasters, both in and around EU waters and around the world. However, there were still 51 accidents reported by the EMSA sources which involved oil tankers. When looking at bunker spills, although the situation was better than in 2008, there was still room for improvement (see sub-section 3.2.2). Nevertheless, after adding together the known bunker spills for the year, and adding a little for the larger number of very small spills, it is estimated that the total for accidental spills was in the region of 1,500-2,000 tonnes. This compares very favourably with the 2008 and 2007 estimates (2,000-3,000 and 7,000-8,000 tonnes respectively).

When looking at the situation over the last three years, it is also useful compare the figures with those over the last 20 years. This period witnessed major individual accidental spills such as the Haven (144,000 tonnes of Italy in 1991), the ***Sea Empress*** (72,000 tonnes off Wales in 1996), the ***Erika*** (20,000 tonnes off France in 1999 and the ***Prestige*** (63,000 tonnes off Spain in 2002). So, once again, it can clearly be seen that the situation has radically improved in recent years. Significantly improved pollution surveillance and the move towards ensuring that all oil tankers are properly constructed, maintained and operated with double hulls continue to be seen as significant drivers behind reductions in oil pollution.



2009 was again a busy year for CleanSeaNet, EMSA's service for the satellite-enabled detection of maritime pollution.

With respect to improved surveillance, the EMSA CleanSeaNet system continues to provide a clear picture of the position on both accidental and illegal pollution, with significant numbers of potential slicks spotted on a daily basis (see the map). Once again, the situation has improved, with the number of potential slicks detected reducing from 3,296 in 2008 to 2,107 in 2009, which represents a reduction of over 36%. Member State authorities checked 751 of these in 2009, and 194 were confirmed to be oil spills, which is down from 232 in 2008, so more comprehensive surveillance may be having an effect. However, this still adds up to almost 4 spills every week throughout the year. Although it is impossible to calculate the total amount, it is believed that deliberate discharges account for a progressively greater proportion of pollution than accidental events. Consequently, more effort is needed to ensure that those operating ships are motivated to deposit their pollutants in approved facilities, rather than at sea.

3.2.2 Pollution Events of Significance

Following the grounding of the 15,900 gt bulk carrier ***Full City*** in a storm outside Langesund, southern Norway, on 31 July, with up to 1,120 tonnes of fuel oil on board, the ship began to leak oil and, although the majority was recovered from the ship, estimates were that a total of 2-300 tonnes was spilled. The bulker had just taken on over 1,000 tonnes of heavy fuel oil and diesel oil in preparation for a trans-Atlantic voyage at the time. Although not a huge quantity in comparison to major spills in recent decades, the spill was in a sensitive area, and resulted in extensive pollution to popular summer holiday spots west of the Oslo fjord. At its maximum extent, the slick was reported to be over 150 km long, and it eventually led to pollution along a significant length of coast in southern Norway. This, in turn, led to the deaths of hundreds of birds in colonies along the coast, and to problems in the fisheries and tourism sectors. The clean-up involved over 30 vessels and hundreds of people.

A spill of a similar size occurred when the 65,000 gt fully cellular container ship ***MSC Shenzhen*** ruptured a fuel tank when it hit the dock entrance at the Cernaval dry dock, Algeciras Bay, Spain, on 28 October. On this occasion, it was reported that around 280 tonnes of fuel oil leaked into the dock, and that a smaller quantity escaped to pollute beaches in the bay. At the time, Andalucia's regional council said that 741 tonnes of sand, fuel and polluted water had been collected from the beach at Rinconcillo alone.

The Full City aground and spilling oil on the Norwegian Coast.

Probably the year's biggest accidental spill, although not from a commercial vessel, happened when the 46,000 tonne Russian aircraft carrier ***Admiral Kuznetsov*** spilled an estimated 400-500 tonnes of heavy fuel oil while re-fuelling from a supply tanker in the Celtic Sea around 80 km south of Fastnet Rock off the west coast of Cork, Ireland, on 14 February. The spill occurred outside Irish territorial waters, but inside the EEZ (Exclusive Economic Zone), and it was spotted during routine monitoring operations by the EMSA CleanSeaNet system, following which the Irish and UK authorities were notified less than 30 minutes after the satellite overpass and the relevant satellite image was provided. The EMSA oil pollution response vessel ***Galway Fisher*** was subsequently put on stand-by. In the early stages, environmentalists warned that damage to marine life, including breeding birds, seals and dolphins, could be serious, particularly if the slick began washing up on the Irish and/or Welsh coastlines. However, it eventually drifted along the southern Irish coast and then north-east into the Irish Sea and dissipated over time. Statistically, although it caused little or no coastal pollution, it qualified as the largest oil spill in waters around the British Isles since the ***Sea Empress*** ran aground off Milford Haven, Wales, in 1996, spilling 72,000 tonnes of oil and causing widespread damage to the coastline.

At the head of the spills of less than a hundred tonnes was the grounding of the 1,300 gt refrigerated cargo ship ***Petrozavodsk*** at the southern tip of Bjornoya (Bear Island) in the Arctic (between Norway and Spitzbergen) on 11th May. As a result, the reefer was holed and spilled around 60 tonnes of the fuel and other pollutants on board into the surrounding Arctic waters, following which there was major concern about the potential effects, as the accident happened in an area with major sea bird populations. Many dead and injured seabirds were found along the coastline of Bear Island, which is an important area for several species of seabirds, but the high waves and bad weather in the area at the time made it difficult to get an overview of the situation. The accident occurred at the worst possible time, when hundreds of thousands of birds were about to start the nesting season. Following the spill, the Norwegian Governor of Svalbard called for a ban on the use and carriage of all heavy fuel oil on ships sailing around the archipelago. The use of heavy oil is already banned at two natural reserves on the eastern side, but the governor does not want restrictions applied only to certain areas. He maintained that Svalbard does not have the equipment to handle ecological disasters like a large-scaled oil spill, and that efforts should concentrate on preventing ecological catastrophes before they happen. Bearing in mind that it takes days for personnel and equipment to arrive from the mainland, and that Norway experienced two serious ship accidents in 2009 alone, the potential for a very serious accident is not seen as insignificant.

Just away from the sea, but of interest because of the quantity, was the spill that occurred when the inland tanker ***Triple*** collided with a lighter vessel and spilled around 25 tonnes of its load of 2,195 tonnes of petroleum into the Nieuwe Maas near Europoort, Rotterdam, Netherlands, on 14 June. Although it is reported that the petrol spread quickly across the water and evaporated, the fumes are reported to have awoken people living nearby in parts

Beach clean-up of fuel oil from the container ship MSC Shenzhen after it hit a dock entrance in Algeciras Bay, Spain.

Oil spill from the Admiral Kuznetsov off Ireland, first picked up by EMSA's CleanSeaNet service.

of north Rotterdam. The fumes were not considered dangerous by the authorities, but the emergency services responded quickly and the breach in the tanker was sealed.

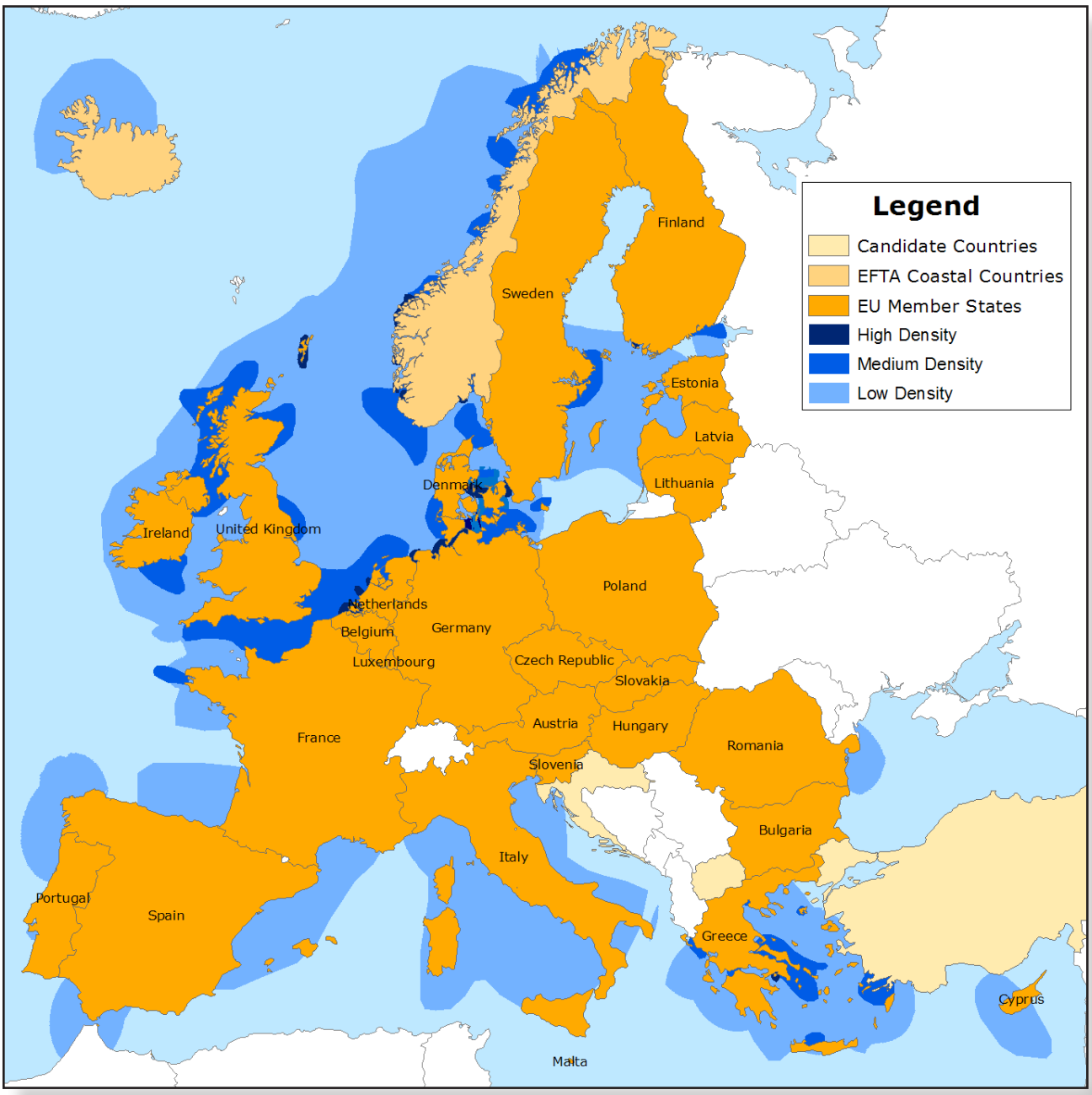
Very worthy of mention is the threat posed by ships that have sunk in the past, and may be time bombs waiting to release their oil. One such recent case involved an ***un-named cargo ship*** which sank 14 years ago, at the same time as another ship, off the port of Constanta, Romania, with the loss of 2 crew members. In late 2009, oil began leaking from the sunken wreck and polluted several kilometres of the Romanian coastline before booms were set in place. Leaks from the ship had already happened in the past, but not in such a large quantity, meaning that the tanks of the ship were more damaged by corrosion than the authorities had expected.

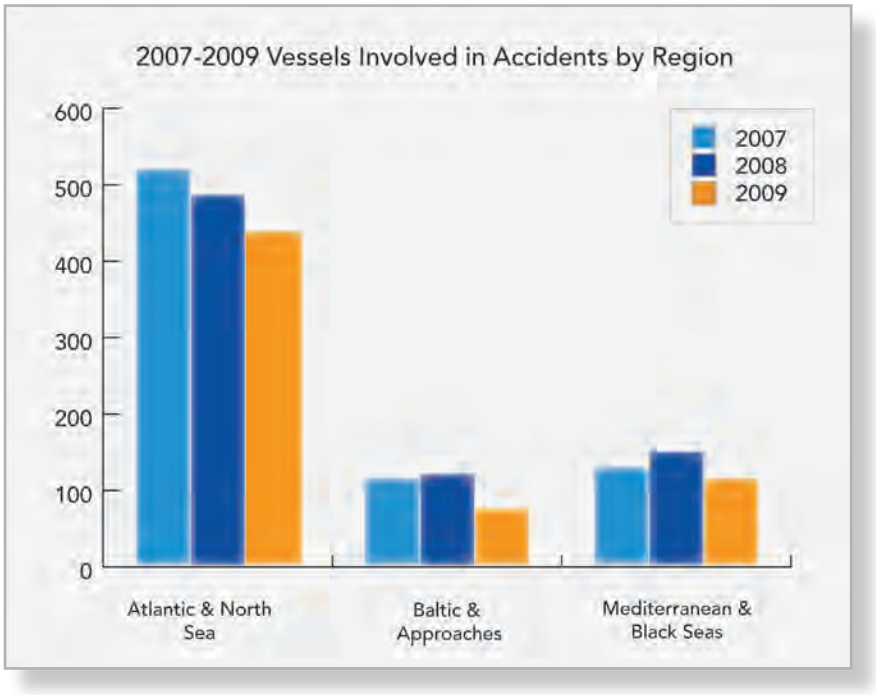
There were also other spills of note in 2009. These included the Finnish police arresting the captain of the 29,800 gt passenger/ro-ro ferry ***Finneagle*** for dumping oil in the Baltic Sea off south-western Finland on 29 March. The slicks were reported to stretch between Finland and the Aland Islands, with a heavy concentration of oil in the Airisto Strait, which is a popular tourist area. The 2400 gt refrigerated cargo ship ***Framnes*** ran hard aground at full speed on a shoal off the southern coast of the island of Yaksi, Estonia and also spilled an undisclosed quantity of oil into the sea on 10th May. The 30,000 gt bulk carrier ***Merit*** was holed when it hit the quay in the Industry Harbour, at Bremerhaven, Germany, on 23 July, and as a result, 6 tonnes of heavy fuel leaked out, polluting an area of around 9,000 square metres. Finally, the 7,000 gt fully cellular container ship ***Monte Brasil*** was found to have leaked around 4 tonnes of nitric acid from a container stowed in the hold while it was at the port of Praia da Vitoria, Azores, Portugal, on 8 June.

4. REGIONAL BREAKDOWN

The complexity of the European Union coastline varies greatly from one country to another, and this has a significant effect on the number and types of accidents that occur, particularly when the combination of weather and physical features is taken into account. The following sections provide an overview of the nature of the different regions and the safety situation in each during 2009.

Accident Density 2009 (European Union)





4.1 THE ATLANTIC COAST, NORTH SEA AND ENGLISH CHANNEL

4.1.1 Overview

The coastlines of Portugal, north-western and south-western Spain, northern and western France, the UK, Ireland, Belgium, the Netherlands, north-western Germany, western Denmark, Norway and Iceland are included in this region. A major factor in accidents is the weather, as among other things, the coastline and surrounding seas experience the full effects of the systems coming across the northern Atlantic Ocean. The weather effects are complicated by the varied nature of the coastline and channels, which present many different challenges to navigation. Last, but not least, there is a huge amount of ship traffic operating between the Atlantic Ocean and northern EU ports, When all of these factors are added together, they result in a relatively high number of accidents, and this is clearly shows through in the figures in this review.

4.1.2 Accident Analysis

The EMSA sources reported that 437 vessels were involved in accidents in the Atlantic and North Sea areas during 2009 (down from 485 in 2008 and 528 in 2007), which represents almost 70% of the EU total for the year (up from 64% in 2008 and equal to 2007).

As has been the case in recent years, collisions/contacts accounted for the greatest number of accidents, with 45% of the region's accidents falling within this category (up from around 40% in 2008), although most did not result in significant damage. Significantly, the number of reported sinkings in the region more than halved from 47 to 22, although this still represented almost 79% of the EU total for 2009 (up slightly from 77% in 2008). Overall, reported loss of life in ship accidents in the region (34) was down by 15%, but it still accounted for the majority (over 65%) of the 52 lives reported as lost in and around EU waters in 2009 (up from around 50% in 2008). With respect to pollution, with the exception of the spill by the container ship ***MSC Shenzhen*** in Algeciras Bay, Spain, on 28 October, all of the significant oil spills that occurred in and around EU waters in 2009 were in this region (see sub-section 3.2.2).

TYPES OF ACCIDENT	2007	2008	2009
Sinkings	41	47	22
Groundings	128	128	124
Collisions/Contacts	218	197	197
Fires/Explosions	55	59	46
Other Types	86	54	48
TOTAL	528	485	437

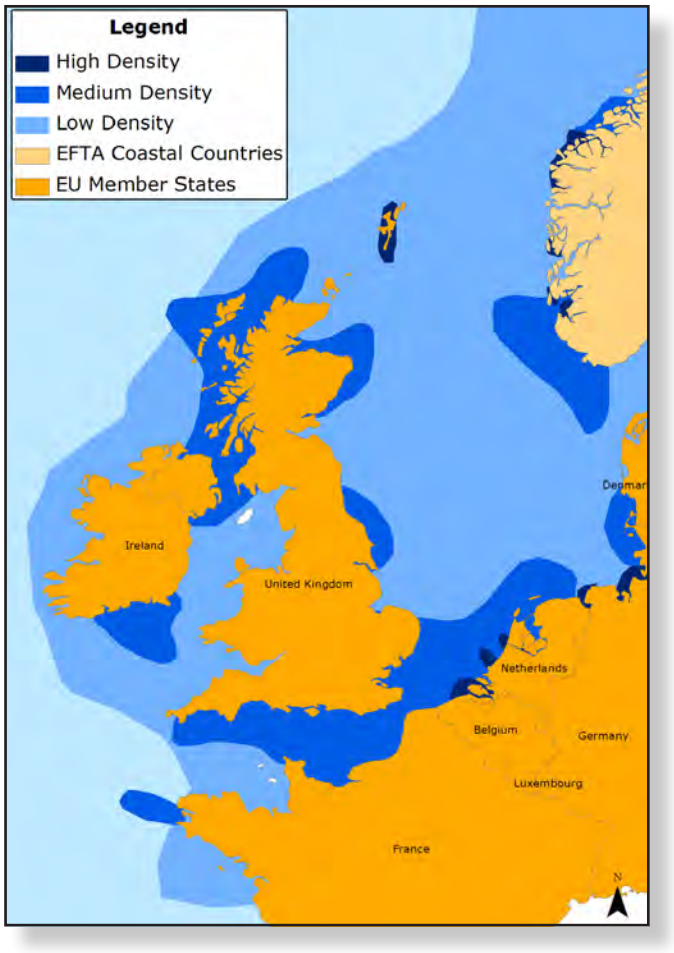
With respect to the total number of accidents, the records showed that the waters around Germany, the Netherlands, Norway and the UK accounted for around 79% of the regional total, and for over 55% of the European total. The Norwegian coast, in particular, saw a significant increase in the number of accidents reported in 2009, when compared with 2008, with groundings accounting for approximately half of the total. The relatively high accident numbers are not unexpected, because the heavily inundated and mountainous coastline means that, in comparison with other countries, a much larger number of trips are made by sea (in terms of both passengers and freight). Around 43% of the reported sinkings occurred in the waters around the UK and Norway, these being by far the longest coastlines in the region. As usual, Germany and the Netherlands saw a large number of vessels involved in accidents in confined channels (see Section 4.1.3), with collisions being by far the most common accident type.

4.1.3 Accident Blackspots

With respect to accident blackspots, the English Channel between the UK and France presents a significant traffic challenge to navigation and traffic control, and frequently sees significant accidents, although the number of accidents is relatively low. This major waterway sees large numbers of ships travelling along it in both directions every day; it is crossed by a significant number of ferries of varying speeds; large numbers of fishing vessels operate in different sections and; it is also used by many leisure craft and other types of vessels. However, despite these complications, with the exception of the 1,500 tonnes of sawn wood from the general cargo ship ***Sinegorsk*** that came ashore between the ports of Dover and Margate in January (see sub-section 2.5.2), the accident record was relatively clean in comparison to recent years.

Among the major ports located around the north-western EU coastline (eg Rotterdam, Antwerp, Felixstowe, Hamburg, Le Havre etc.), the port of Antwerp stands out as offering greater navigational challenges when entering than others. When approaching the port via the estuary of the River Scheldt, ships encounter a combination of frequent bad weather, locks, shallow waters and other obstacles, and as a result, a significant number of accidents occur each year, although they are rarely serious. This shows through in the collisions, groundings and contacts figures reported for Belgium and the Netherlands, which showed an improvement in comparison to 2008. Collisions were by far the most common accident type, and they accounted for around a third of the vessel accidents recorded for the two countries.

Accident Density 2009 (Atlantic Coast, North Sea and English Channel)



The other confined EU waterway that witnesses a disproportionate number of accidents each year is the Kiel Canal in Germany, although again the great majority do not result in serious consequences. Huge numbers of ships of many different EU and non-EU flags pass through every year, and the main reasons for the accidents are a combination of human error and equipment failure in a canal with multiple locks, a relatively narrow two stream channel and difficult weather conditions. Most vessel accidents were collisions in 2009, while contacts with infrastructure and groundings also feature significantly. As might be expected, the number of accidents reported in the canal in 2009 was lower than in 2008.

4.2 THE BALTIC SEA AND APPROACHES

4.2.1 Overview

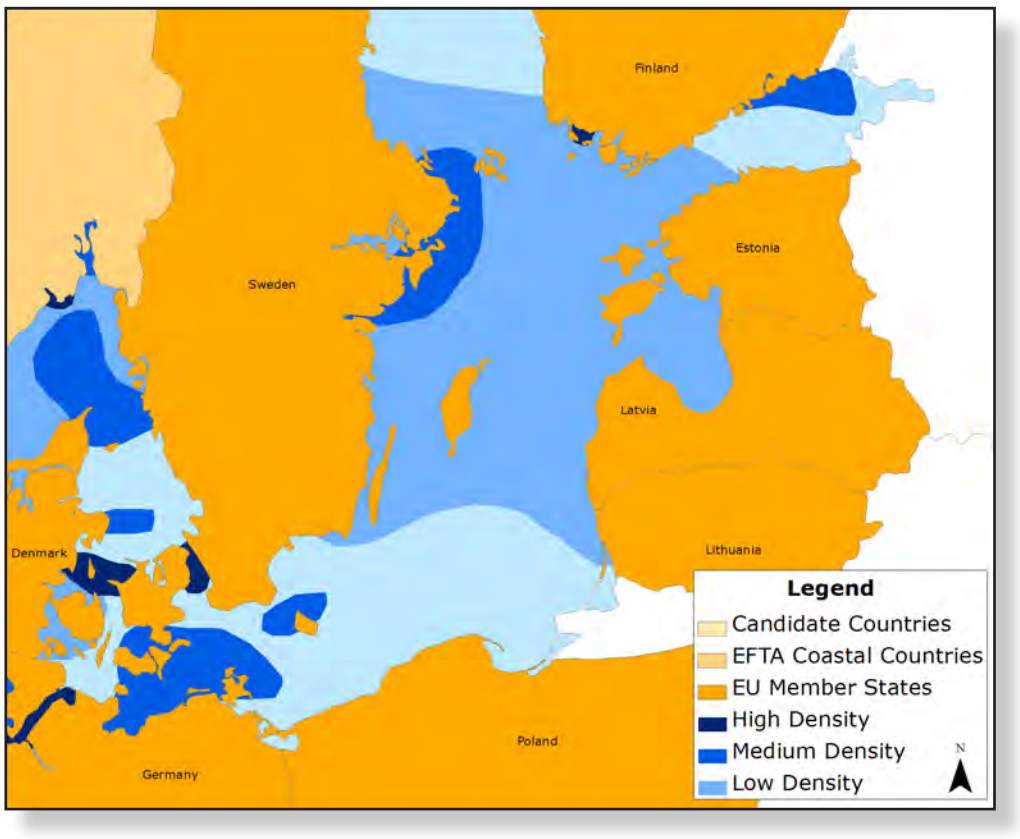
With the exception of a couple of Russian regions, (the eastern end of the Gulf of Finland and Kaliningrad), the Baltic Sea coast is within EU waters. It includes the coastlines of Sweden, eastern Denmark, north-eastern Germany, Poland, Finland, Estonia, Latvia and Lithuania. Although the extent can vary significantly from year to year, some of the northern parts of the Baltic, including the Gulf of Finland, freeze over in winter, and icebreakers are needed. Indeed, whereas the winters of 2007/2008 and 2008/2009 were relatively mild, the winter of 2009/2010 saw more sea ice than had been experienced in over 20 years, and this caused significant problems. With respect to the shipping traffic situation, most of this is located in the southern and central parts of the Baltic Sea, and economic downturns aside, ship voyages and cargo volumes are generally increasing, not least due to the transport of crude oil from Russia. The south-western approaches between Denmark and Sweden and the Gulf of Finland are the two areas with the greatest concentrations of shipping traffic.

TYPES OF ACCIDENT	2007	2008	2009
Sinkings	3	5	3
Groundings	49	52	33
Collisions/Contacts	23	35	24
Fires/Explosions	16	17	10
Other Types	15	11	5
TOTAL	106	120	75

4.2.2 Accident Analysis/Blackspots

In 2009, the number of accidents reported in the Baltic Sea region was significantly lower than in 2008 (down over 37%). The EMSA sources reported that only 75 ships were involved in accidents in 2009 (down from 120 in 2008 and 106 in 2007). This represents around 12% of the European accident total for the year (down from 16% in 2008 and 15% in 2007). Unlike the Atlantic and Mediterranean/Black Sea regions, groundings were the most common accident type, and accounted for 44% of the regional accident total (similar to 2008 and 2007). Collisions and contacts was the second most significant category, and made up almost one third of the regional accident total (slightly up on 2008). As

Accident Density 2009 (Baltic Sea and Approaches)



usual, the Baltic Sea witnessed by far the lowest number of sinkings amongst the three EU regions. Only 3 sinkings were reported, which is significantly down from 5 in 2008, but the same as in 2007. Loss of life on commercial vessels in the region was down by 50% in 2009 when compared to 2008, and made up over 17% of the total in and around EU waters (down from around 20% in 2008). The only reported spills of any significance were those of the passenger/ro-ro ferry ***Finneagle*** for off south-western Finland on 29 March and the refrigerated cargo ship ***Framnes*** off the island of Yaksi, Estonia (see sub-section 3.2.2), but these were estimated to be relatively small in comparison to the much larger spills elsewhere.

As in previous years, the extensive Danish and Swedish coastlines accounted for the great majority (over 77%) of the region's accidents (up from 73% in 2008), and for almost 88% of the groundings (up from 80% in 2008), which were by far the most common accident type. Most of the accidents in the region happened in the heavily trafficked approaches around eastern Denmark and south-eastern Sweden, as these can be more difficult to navigate than many other areas. The navigation risks increase significantly when ships operate in bad weather and/or without a pilot. Therefore, to improve safety, the Danish authorities recommend that ships navigating through the area should comply with IMO Resolution MSC.138(76) when determining pilot requirements.

The EU sector of the Gulf of Finland, which comprises the most heavily trafficked parts of the Finnish and Estonian coastlines, also has a disproportionately high number of accidents, although far less significant than the Baltic approaches. Historically, as with other parts of the Baltic Sea, this area has been frozen for much of the winter. However, with the exception of the winter of 2009/2010, it has seen much less ice than normal in recent years. The recorded figures showed that around 17% of Baltic Sea accidents happened around the Finnish and Estonian coastlines in 2009 (up from around 15% in 2008).

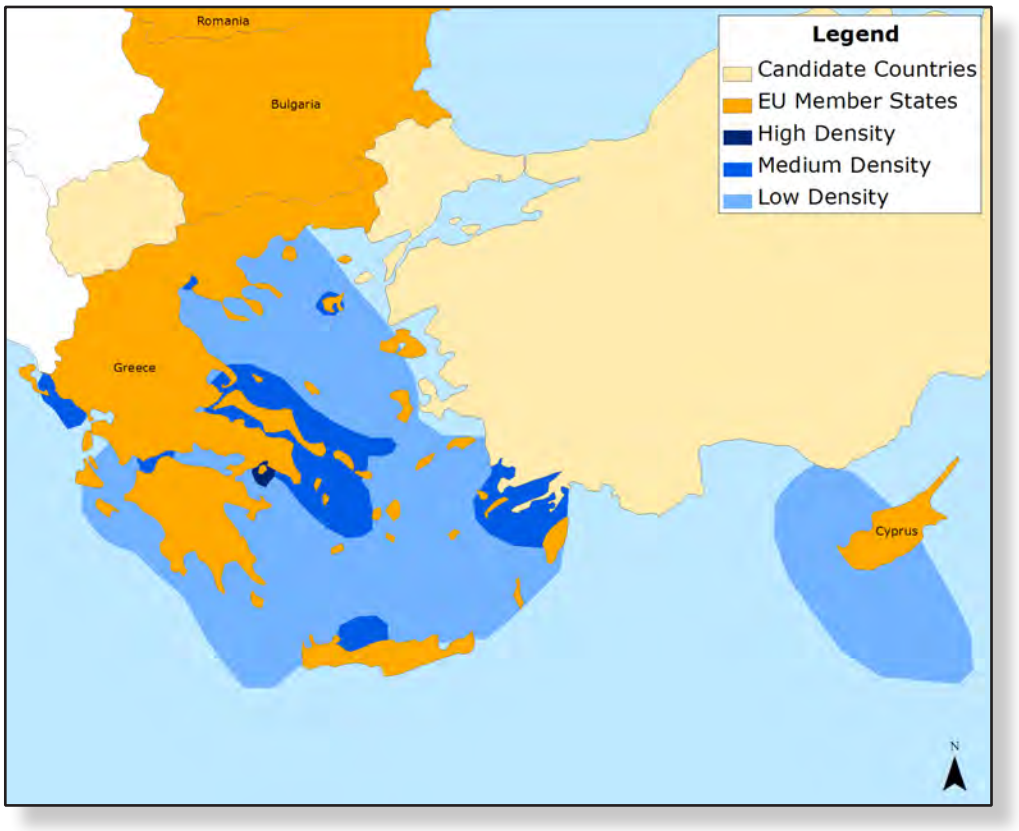
4.3 THE MEDITERRANEAN AND BLACK SEAS

4.3.1 Overview

The Mediterranean region of the EU encompasses the coasts of Greece, Cyprus, Malta, Slovenia, Italy, southern France and eastern Spain, while the Black Sea region includes the coastlines of Romania and Bulgaria. Taken together, they are very heavily trafficked in a number of areas, with much of the through traffic going in two main directions. The largest volume of through traffic uses the main east-west lanes between the Indian and Atlantic Oceans, and passes between the Suez Canal and the Straits of Gibraltar. There is also a huge volume of through traffic using the main north-south lanes, which pass through the Aegean Sea between Greece and Turkey. The requirement to move oil westwards from both the Black Sea and Gulf regions means that a significant number of tankers are also passing through. Finally, the amount of internal traffic in the region is also huge. Although the Mediterranean and Black Seas are both enclosed bodies of water, and although the sea conditions are frequently calmer than in more northerly waters, major storms and heavy seas can occur in both from time to time.

TYPES OF ACCIDENT	2007	2008	2009
Sinkings	11	9	3
Groundings	20	37	20
Collisions/Contacts	63	76	71
Fires/Explosions	20	13	11
Other Types	14	14	9
TOTAL	128	149	114

Accident Density 2009 (Eastern Mediterranean)



4.3.2 Accident Analysis/Blackspots

The EMSA sources reported that 114 commercial ships were involved in accidents in the Mediterranean/Black Sea region during 2009 (around 18% of the EU total), which is significantly down from 149 in 2008, and almost back to the level last seen in 2006. Once again, by far the largest accident category was collisions and contacts, which made up over 62% of the regional accident total in 2009 (significantly up from 51% in 2008). Groundings was still the second largest category, and there was a huge reduction in the number reported (down by over 45% on 2008). The situation with respect to sinkings was also greatly improved, with only 3 reported during the year (down from 9 in 2008 and 11 in 2007). The reported figures for loss of life on commercial vessels in the Mediterranean/Black Sea region in 2009 were down over 60% in comparison to 2008, and accounted for a little over 17% of the EU total. With respect to pollution, the only significant event reported was the spill by the container ship ***MSC Shenzhen*** in Algeciras Bay, Spain, on 28 October.

The two countries in the region which have by far the longest coastlines are Greece and Italy, and the Aegean Sea in particular offers significant challenges when the huge volume of traffic to and between the islands, and between the Mediterranean Sea and the Black Sea, is taken into account. These factors are reflected in the reported accident figures, with the waters around Greece accounting for around 68% of the vessel accidents in the region, and the majority occurring in the Aegean Sea, although accident numbers were significantly down in comparison with 2008. The most common accident type in these waters is ferry contacts with infrastructure, although most of these did not result in serious damage. To put this in context, it should also be borne in mind that there are far more ferry trips undertaken here than in any other part of the region.

Only 6% (similar to 2008) of the reported accidents in the region happened in the EU part of the Black Sea off Bulgaria and Romania. It is believed that this probably relates to relatively low traffic volumes in the area, rather than to significant under-reporting.

ESA "Earth from Space - United Europe"

ANNEX: THE SCOPE AND PURPOSE OF THE REVIEW

This is the third in an annual series of reviews which aim at making both the EU maritime community and EU citizens aware of the accidents happening in and around EU waters.

EMSA gathers daily information on maritime accidents, and this enables Agency staff and interested parties in the other European Union institutions to have an up to date picture of the real situation around the coastline at all times. This includes the Atlantic coast (including the North Sea and the English Channel), the Baltic Sea and the EU related parts of the Mediterranean Sea and the Black Sea. The information comes from multiple sources, including the media monitoring service of the European Commission, reliable accident information sources, recognised shipping information systems, the maritime and general media and a wide range of internet based publications. In order that a wider audience can benefit from the information obtained, the key points have been summarised in this review. The acknowledgements at the end of the review show the most prominent information sources. It is believed that the figures represent a relatively accurate overview of the accidents that happened in and around EU waters during 2009, although comprehensive reporting cannot be fully guaranteed due primarily to the possibility of under-reporting from some sources.

The review focuses on significant accidents involving commercial vessels of all ages and sizes (including fishing vessels) which occurred during the year, although only sinkings and loss of life have been recorded for vessels under 50 gross tonnes (gt). For the purpose of the review, significant accidents include all total/partial sinkings, collisions, groundings, fires and explosions on board ships while underway, under tow, anchored, berthed or under construction/maintenance. Unless otherwise stated, figures refer to the number of vessels involved, as opposed to the number of accident events (eg two or more vessels can be involved in a single collision event and one vessel can collide, ground and/or sink in a single accident).

It should also be noted that on the relatively rare occasions when a vessel has been involved in more than one event at the same time (sinking, collision, grounding, fire, etc.), only the event judged to be the most significant is recorded. For example, if a vessel collides and then sinks, it is recorded as a sinking, or if a vessel has a collision and then runs aground, it is recorded under the category which causes the greatest damage and/or which is judged to have had the greatest effect. In addition to those mentioned above, other types of significant accident have also been included (eg crew members/passengers lost overboard, significant cargo loss, major heavy weather damage, structural failure and infrastructure collapse).

The figures do not include machinery failures (i.e. those which had no further impact), minor cargo losses, anchor losses, etc. Although machinery failure occasionally leads to groundings or collisions in particular, EU waters are relatively well monitored and, with very few exceptions, the hundreds of breakdowns which happen each year are normally handled without incident. Figures for loss of life have also been inserted, although there is a risk of under-reporting for fishing vessel accidents, in particular, in some parts of the EU. As the review focuses on commercial vessels, the figures do not include the significant numbers attributed to illegal immigrants trying to reach the EU by sea.

Finally, the review does not focus on the causes of accidents. The reason for this is that: many accidents are not the subject of investigations; information sources frequently do not specify the cause and; in the case of those which do, the information may not be accurate. However, it is acknowledged that there is evidence to show that the great majority of accidents have a human error component, and also that seafarers often make mistakes under difficult circumstances (eg bad weather, geographical/infrastructure restrictions, fatigue, task overload, training shortcomings, structural failure, engine failure, steering failure, etc.). It is also acknowledged that alcohol intake contributes to accidents. These things show through in accident reports provided to EMSA by EU Member States, and in the information obtained from other sources for this review.

FURTHER INFORMATION

The EMSA website contains further information on this and all the other activities of the Agency, and it can be accessed at: http://www.emsa.europa.eu

Although the information comes from a large variety of sources, EMSA would, in particular, like to thank the following information providers for their input to this review:

European Commission Joint Research Centre
Equasis
Lloyds List/Lloyds MIU
Tradewinds
Fairplay

Statistics/tables/graphs/charts/maps generated by EMSA

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EMSA

About EMSA

The European Maritime Safety Agency is one of the European Union's decentralised agencies. Based in Lisbon, the Agency provides technical assistance and support to the European Commission and Member States in the development and implementation of EU legislation on maritime safety, pollution by ships and maritime security. It has also been given operational tasks in the field of oil pollution response, vessel monitoring and in long-range identification and tracking of vessels.

http://www.emsa.europa.eu

EUROPEAN MARITIME SAFETY AGENCY