Title: Post Implementation Review: The Merchant Shipping (Vessel Traffic Monitoring and Reporting Requirements) Regulations 2004 as amended.	Post Implementation Review
PIR No: DfTPIR0058	**Date:** 29/03/2023
Original IA/RPC No: DfT00085	**Type of regulation:** EU
Lead department or agency: Maritime and Coastguard Agency	**Type of review:** Statutory
Other departments or agencies: N/A	**Date measure came into force:** 20/09/2004
	Recommendation: Keep
Contact for enquiries: cers3@mcga.gov.uk	**RPC Opinion:** N/A

Recommendation and Summary of Justification

This is a review of the Merchant Shipping (Vessel Traffic Monitoring and Reporting Requirements) Regulations 2004 (SI 2004/2110 – "**the 2004 Regulations**")[1]. The 2004 Regulations have been amended by:

- the Merchant Shipping (Amendments to Reporting Requirements) Regulations 2005 (SI 2005/1092);
- the Merchant Shipping (Vessel Traffic Monitoring and Reporting Requirements) (Amendment) Regulations 2008 (SI 2008/3145);
- the Merchant Shipping (Vessel Traffic Monitoring and Reporting Requirements) (Amendment) Regulations 2011 (SI 2011/2616 – "**the 2011 Regulations**")[2];
- the Merchant Shipping (Prevention of Pollution) (Limits) Regulations 2014 (SI 2014/3306);
- the Merchant Shipping (Prevention of Pollution from Noxious Liquid Substances in Bulk) Regulations 2018 (SI 2018/68)
- the Merchant Shipping (Miscellaneous Provisions) (Amendments etc) (EU Exit) Regulations 2018 (SI 2018/1221);
- the Merchant Shipping (Prevention of Oil Pollution) Regulations 2019 (SI 2019/42); and
- the Merchant Shipping (Safety of Navigation) Regulations 2020 (SI 2020/673).

The 2011 Regulations inserted a provision in the 2004 Regulations that requires a review of the 2004 Regulation as amended.

Overall, the 2004 Regulations as amended, including by the 2011 Regulations, met their objectives and act as part of a harmonised approach to safety standards. They align the UK with European standards, are considered non-contentious and are low-cost. The Maritime and Coastguard Agency (MCA) conclude that the 2004 Regulations as amended, including by the 2011 Regulations, are fit for purpose and recommend that they should be **kept**.

At the time of the implementation of the 2011 Regulations the MCA conducted an evaluation of the impact of them on fishing vessels safety. This evaluation considered the number and nature of accidents, deaths and injuries. Since their implementation the 2011 Regulations are considered to have contributed positively towards the declining numbers of collisions per 100 vessels and the declining number of deaths and injuries per 100 vessels. However, while the policy is considered to have

[1] https://www.legislation.gov.uk/uksi/2004/2110/contents/made

[2] https://www.legislation.gov.uk/uksi/2011/2616/contents/made

contributed to a reduction in the number of accidents, its precise impact cannot be isolated from other confounding factors.

The MCA host the UK Safety of Navigation (UKSoN) stakeholder meeting twice a year which gives a broad section of industry and representative groups the chance to feedback or raise any issues, to date no issues have been noted. As part of the 2016 post implementation review (PIR), a targeted consultation was undertaken and two of the five stakeholders who responded agreed that the automatic identification system (AIS) requirements had had a positive impact on safety at sea (of the remaining three there were no negative comments with one responding N/A and two leaving the question blank).

1. What were the policy objectives of the measure?

The 2011 Regulations transposed into UK law Directive 2009/17/EC of 23 April 2009 ('**Directive 2009/17/EC**') amending Directive 2002/59/EC ('**Directive 2002/59/EC**') establishing a community vessel traffic monitoring and information system and 2011/15/EU of 23 February 2011 (see Annex A - Background for further detail).

The overarching aim of Directive 2009/17/EC was to update vessel traffic monitoring procedures given the advances in technology and changes in policy, and generally to improve safety. Additional elements encourage increased cooperation and communication between EU member states, particularly with the exchange of data.

The policy objectives of the 2011 Regulations were to insert a number of new articles into the 2004 Regulations with the aim of enhancing safety thus contributing to a reduction in the number of accidents and pollution incidents at sea by:

- Implementing Directive 2009/17/EC,
- Improving knowledge of maritime traffic, and
- Enhancing the carriage requirements for Automated Identification Systems (AIS). See Annex A – Background for further detail.

Implementation in the UK was intended to enhance knowledge of marine traffic by improving the collection and exchange of information through the community maritime information exchange system (known as SafeSeaNet) hosted by the European Maritime Safety Agency (EMSA) and streamline data transfer from UK ports by ensuring all information was managed electronically. Comprehensive and readily available data enables flag states to assess risk and aids the speed and effectiveness of response in the event of an accident or pollution incident.

Directive 2009/17/EC was intended to address safety at sea by introducing enhanced requirements for carriage of AIS. Implementation aimed to mitigate the risk of collisions involving fishing vessels by making the carriage of AIS enforceable on UK fishing vessels which were previously outside the scope of regulation. AIS equipment is used to augment ship to ship and ship to shore communication and can assist with the situational awareness of vessels operating in restricted or busy sea areas.

These policy objectives have not changed since the introduction of the 2011 Regulations. At the time of implementation, the UK was a member of the European Union and thus transposing the requirements of Directive 2009/17/EC also removed the risk of criticism and infraction proceedings against the UK.

2. What evidence has informed the PIR?

Based on the proportionality criteria in the Better Regulation Framework Manual (BRFM) and Magenta Book, a low level of resource has been used to inform a "light-touch review" of the evidence base in the impact assessment that was created at the time of implementation of the 2011 Regulations ('**2011 IA**')[3] .

[3] http://www.legislation.gov.uk/uksi/2011/2616/impacts/2011/410

The 2011 Regulations were not considered high profile or contentious but sought to address safety in the fishing industry where the rate of accident and fatality remains high in comparison with the rest of the maritime sector. As the regulations were European in origin, the option to consider alternatives to regulation was not available and the introduction of the regulations was not considered risky or novel.

The PIR conducted in 2016 did not discover significant deviations from the impacts outlined in the 2011 IA but recommended further analysis of the impact of the policy on safety. Hence, this will form the main focus of this PIR.

For this PIR, data has been collected from the UK Fishing Vessel List[4], the National Archives[5], Marine Accident Investigation Branch (MAIB) Annual Reports[6] and Marine Management Organisation (MMO) Annual Statistics[7].

To assess progress against policy objectives data from MAIB annual reports was reviewed to identify:

- The number of deaths and injuries not resulting in death per 100 vessels since 2011
- The number of fishing vessel accidents involving collision and contact since 2005

To consider the possibility of unintended effects, the following data was extracted from the UK Fishing Vessel List:

- The number of fishing vessels between 15 and 45 metres overall length registered on the UK flag at this time
- The number of fishing vessels between 15 and 45 metres overall length which left the UK flag each year since 2005
- The number of fishing vessels between 15 and 45 metres overall length which joined the UK each year since 2005

To consider the impact of the 2011 Regulation on 'Class A' AIS transponder market prices, as part of potential unintended consequences, primary research has been undertaken.

The MCA host the UKSoN stakeholder meeting twice a year which gives a broad section of industry and representative groups the chance to feedback or raise any issues. To date there have been no issues raised or evidence of unintended effects provided. Additionally, the Maritime Surveillance Team, within the MCA, has regular informal contact with ports about the status of operational policy and reporting methods. Similarly, this has not uncovered evidence of unintended effects. Previous stakeholder feedback and other evidence collected has not identified any unintended effects of the 2004 Regulations or the 2011 Regulations.

3. To what extent have the policy objectives been achieved?

Overall, it can be said that the 2004 Regulations as amended, including by the 2011 Regulations have been implemented effectively and are in operation with widespread compliance.

The policy is aimed to enhance safety and reduce the number of collisions through enhanced communication and situational awareness. MAIB reports data since 2011 shows an overall reduction in the number of accidents for fishing vessels with length over 15m (Table 1). A similar trend is observed when controlling for changes in the total number of fishing vessels registered under UK flag (Fig.1) The number of accidents per 100 vessels for the vessels over 15m and impacted by the 2011 Regulations is estimated to be 11.8 in 2011 and falls to between 6.7 and 9.4 for the years after the implementation of the policy in 2011. Higher number of accidents per 100 vessels is observed in 2012 and 2019.

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[4] Vessel lists over 10 metres - GOV.UK (www.gov.uk)

[5] [ARCHIVED CONTENT] Vessel list archive (nationalarchives.gov.uk)

[6] MAIB annual reports - GOV.UK (www.gov.uk)

[7] UK sea fisheries annual statistics report 2020 - GOV.UK (www.gov.uk)

Vessel size	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<15m	223	182	202	116	69	118	98	96	98	112
15-24m	63	66	37	31	35	37	42	31	57	46
>24m	13	12	9	6	11	8	6	9	8	7
All >15m	76	78	46	37	46	45	48	40	65	53
Total	299	260	248	153	115	163	146	136	163	165

Table 1. Estimates of the number of accidents involving fishing vessels under the UK flag per year on the basis of data from the MAIB Annual Reports[8]

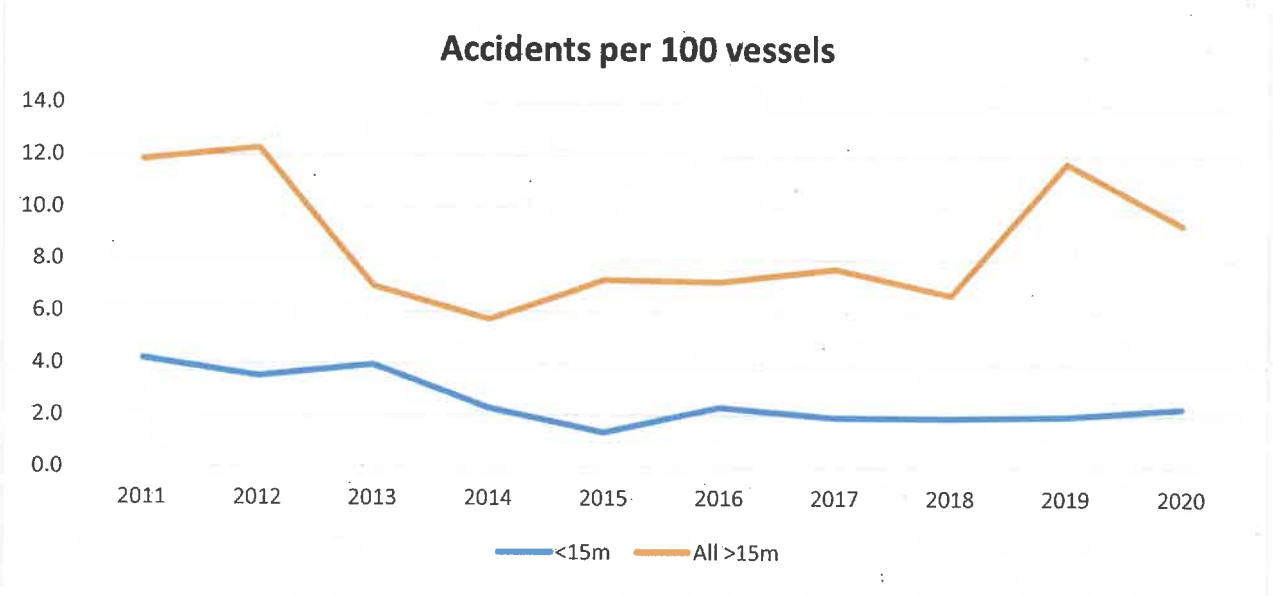


Figure 1. Number of accidents involving fishing vessels under the UK flag per 100 vessels per year on the basis of data from the MAIB Annual Reports

Focusing on the number of collisions and contacts, it can be observed that there is a decrease in the number of collisions and contacts involving fishing vessels with AIS transponders (over 15m length) compared to those not required to have transponders (under 15m). Note that this also includes the fishing vessels above 45m in overall length which were required to have an AIS transponder before 2011 (Table 2). This trend becomes less clear when controlling for the number of fishing vessels registered under UK flag in each category (Figure 2). This is also impacted by the fact that there are very few collisions per year so any small absolute change in the numbers would appear as a more significant fluctuation when considered proportionally.

Vessel size	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<15m	8	8	10	9	7	10	13	5	9	6
15-24m	5	9	4	6	4	3	2	0	5	6
>24m	2	3	1	2	4	1	1	2	1	1
All >15m	7	12	5	8	8	4	3	2	6	7
Total	15	20	15	17	15	14	16	7	15	13

[8] Data was taken from the statistics section of each MAIB annual report and compiled for a yearly review

Table 2. Estimates of the number of collisions and contacts involving fishing vessels under the UK flag per year on the basis of data from the MAIB Annual Reports[9]

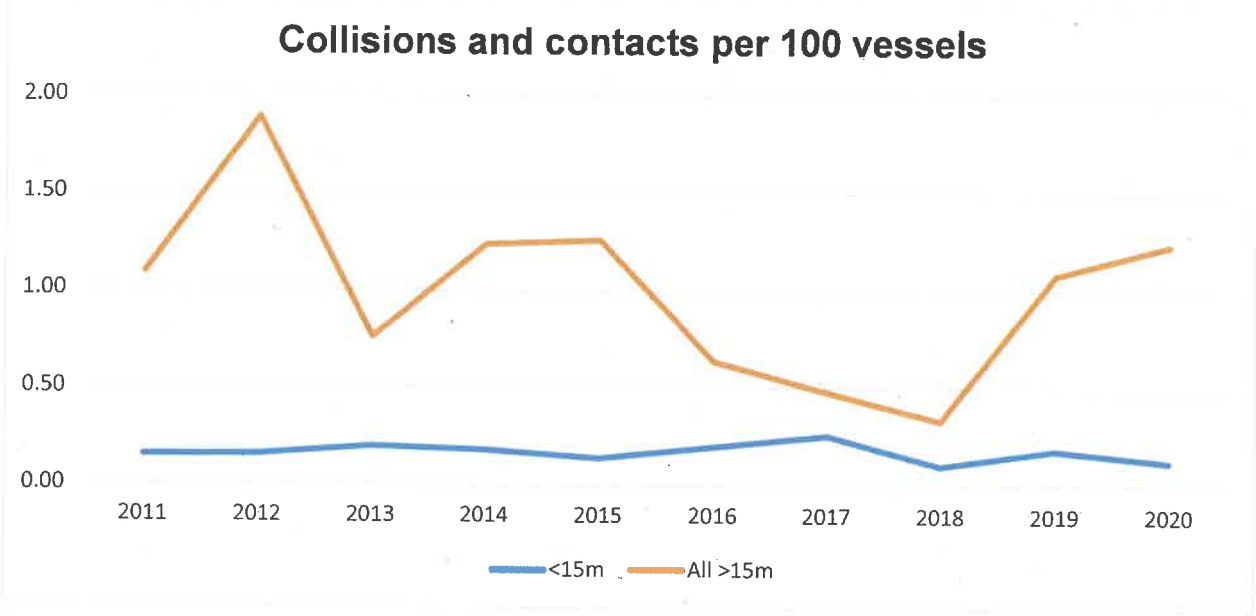
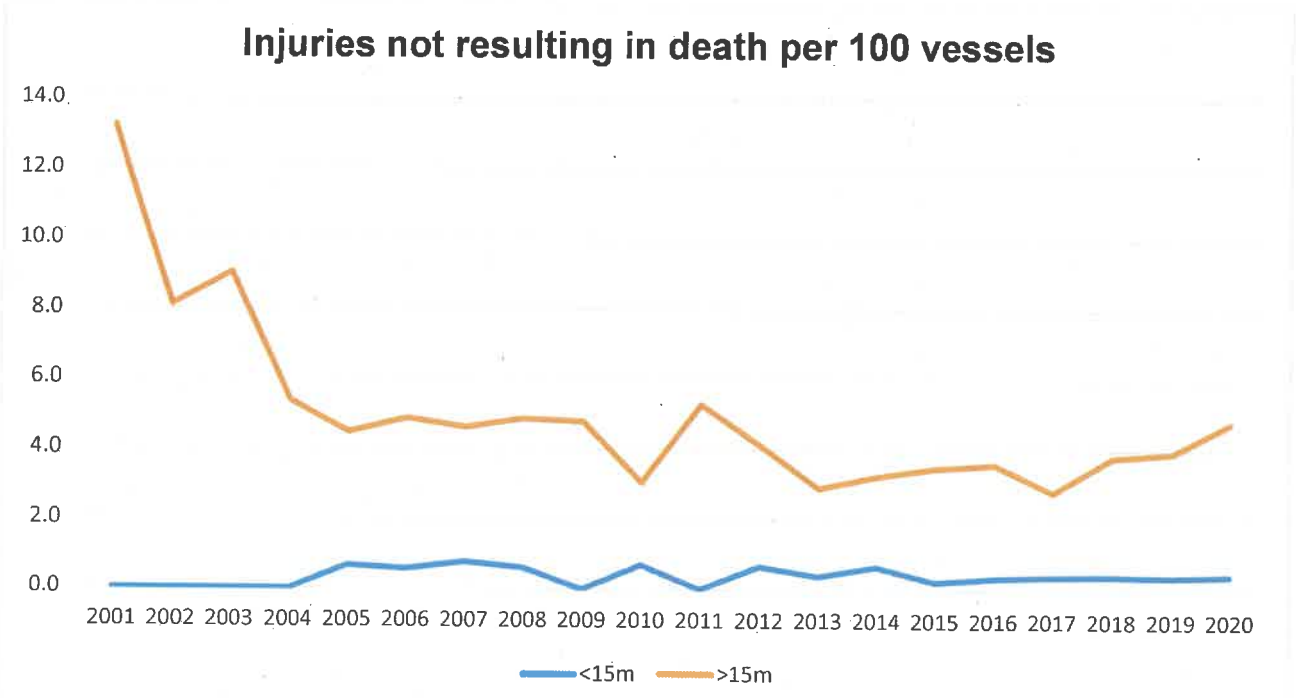


Figure 2. Number of collisions and contacts involving fishing vessels under the UK flag per 100 vessels per year on the basis of data from the MAIB Annual Reports

Further examination of the number of injuries not resulting in deaths per 100 vessels. Fig. 3 shows a declining trend, while the number of deaths per 100 vessels over time appears more volatile but the levels post-2011 remain below those pre-2011 (Fig.4).



[9] Data was taken from the statistics section of each MAIB annual report and compiled for a yearly review

Figure 3. Number of injuries not resulting in death per 100 vessels per year on the basis of data from the MAIB Annual Reports

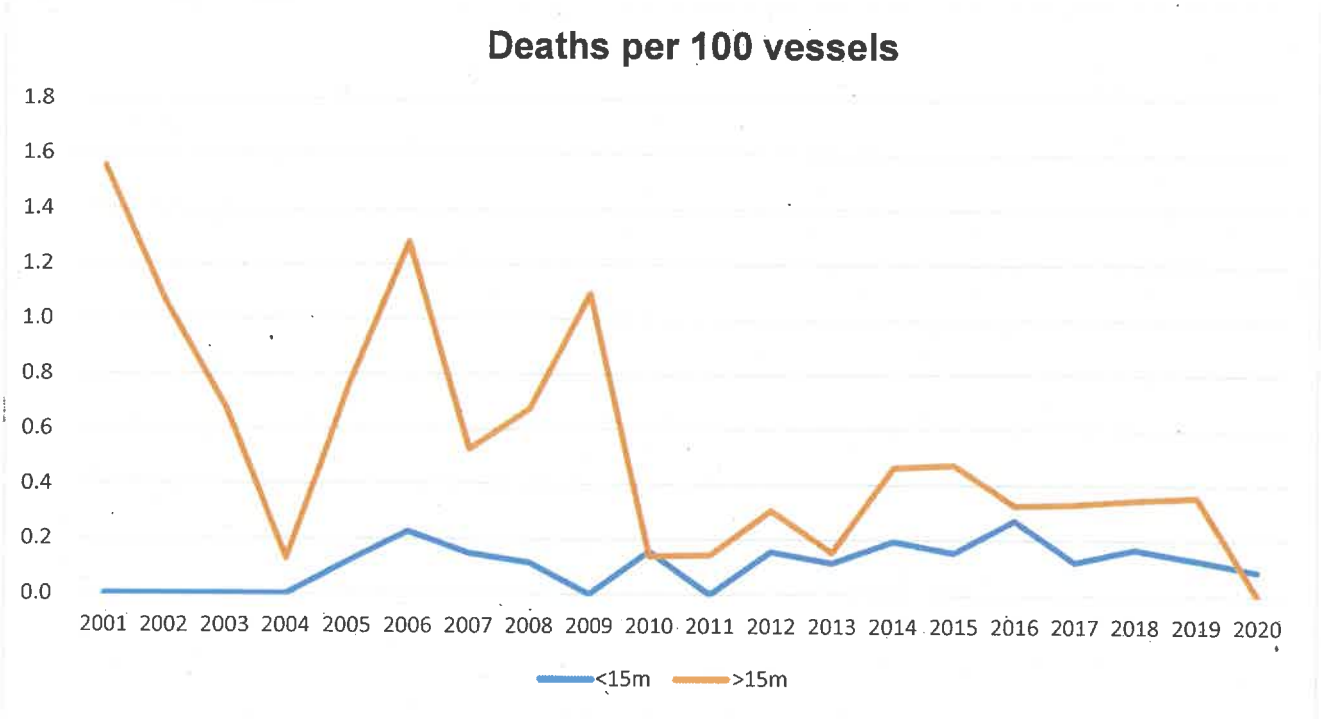


Figure 4. Number of deaths per 100 vessels per year on the basis of data from the MAIB Annual Reports

While the policy is considered to have contributed to this reduction in the number of accidents, the precise impact of the 2011 Regulations cannot be isolated from other confounding factors. As part of the 2016 post implementation review (PIR), two of the five stakeholders who responded to the consultation[10] agreed that the AIS requirements had had a positive impact on safety at sea (the other three responded N/A or left the question blank).

Sign-off for Post Implementation Review: Director, UK Maritime Services and Minister for Maritime, Aviation and Security

I have read the PIR and I am satisfied that it represents a fair and proportionate assessment of the impact of the measure.

Signed: Vere J Nalbiton. Date: 11 July 2023

[10] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/701236/VTMD_PIR_Summary_of_consultation_responses.pdf

4. What were the original assumptions?

The 2011 IA estimated the costs to UK registered fishing vessels of purchasing "Class A" AIS transponders, at around £1.0 to £3.3 million in 2011 prices with a best estimate of £2.1 million, over a 10-year period. The majority of these costs were transition costs for existing vessels in the fleet. This estimate however also included assumptions around growth in the UK registered fleet (where it was assumed there would be a steady decline based on past trends); the frequency of replacement (once every 7 years in the central scenario); and the cost of "Class A" AIS transponders (£2,075 in 2011 prices in the central scenario, which is roughly equal to £2,400 in 2016 prices).

The MCA was expected to incur transition costs of around £384,000 and additional maintenance costs of around £48,000 per year associated with updating CERS (Consolidated European Reporting System). The cost to ports of modifying their reporting systems was estimated at around £0.2 million. It was not considered possible to monetise any benefit associated with the introduction of the 2011 Regulations. Potential non-monetised costs relating to familiarisation time for industry, bunker fuel reporting requirements, measures to deal with the presence of ice and management of vessels operating on exemptions were also identified in the 2011 IA. Costs of enforcement were likely to be minimal. Improved understanding of marine traffic and reduction in safety and pollution were identified as non-monetised benefits.

A Small Firms Impact Test was conducted as part of the 2011 IA and the amendments to the 2004 Regulations were deemed to be of limited impact. A competition assessment identified that UK firms were not disadvantaged by the introduction of the 2011 Regulations as Directive 2009/17/EC had equal effect in all EU member states.

5. Were there any unintended consequences?

Previous stakeholder feedback has not highlighted any unintended consequences. For the 2016 PIR, no stakeholders highlighted any unintended consequences as part of a consultation[11] (although only 5 consultees responded). Furthermore, where the MCA host and attend stakeholder meetings like the UKSoN group, no reports of unintended consequences have been identified.

The declining trend for the number of fishing vessels under UK flag observed before the implementation of the policy remains unchanged. The conducted analysis finds that there is approximately 2% annual reduction in the number of fishing vessels under UK flag with a more significant drop observed in 2012. While it is possible that the AIS transponder requirement contributed, this is considered unlikely as this is an EU-wide regulation with relatively low compliance cost.

Further examination of the price of AIS transponders for unintended price effects shows that the average price remained stable and in March 2022 it is approximately £2,000[12], which is in line with the price in 2011.

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11 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/701236/VTMD_PIR_Summary_of_consultation_responses.pdf

12 Price options have been sourced from Google, for example https://digitalyacht.co.uk/product-category/ais-systems/ais-transponders/ or https://www.nauticexpo.com/prod/em-trak-marine-electronics/product-44376-568367.html

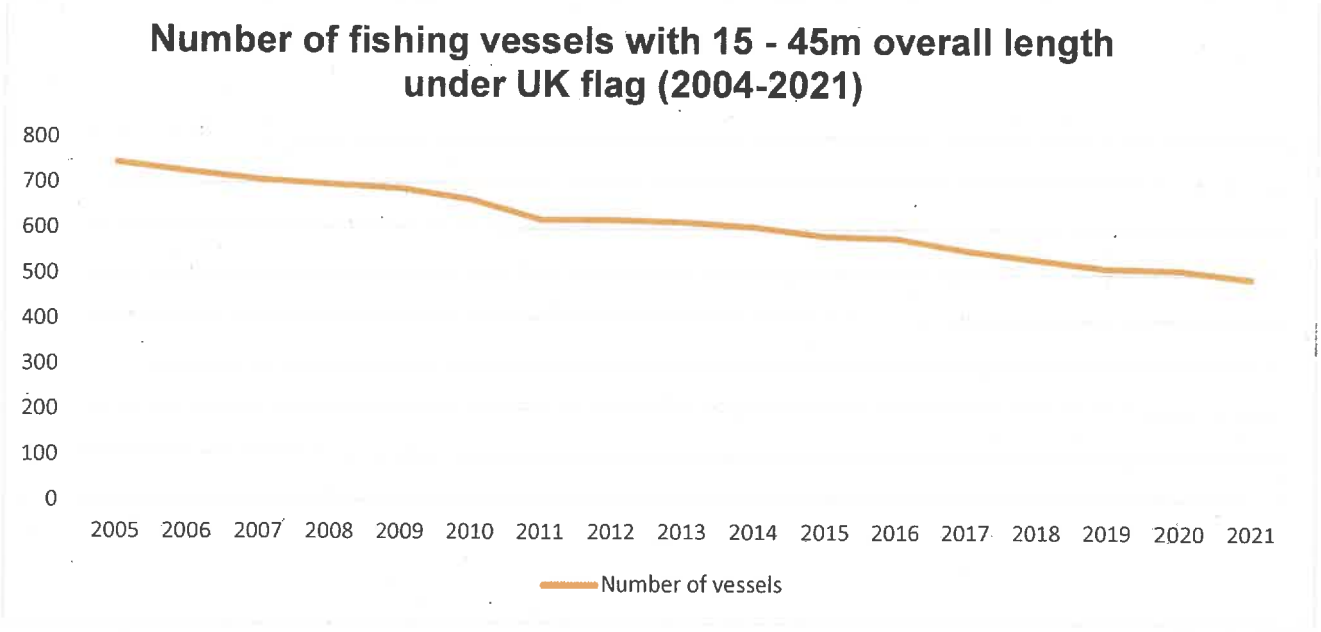

Figure 5. Number of fishing vessels with 15 - 45m overall length under UK flag (2004-2021) based on data from the UK Fishing Vessel List

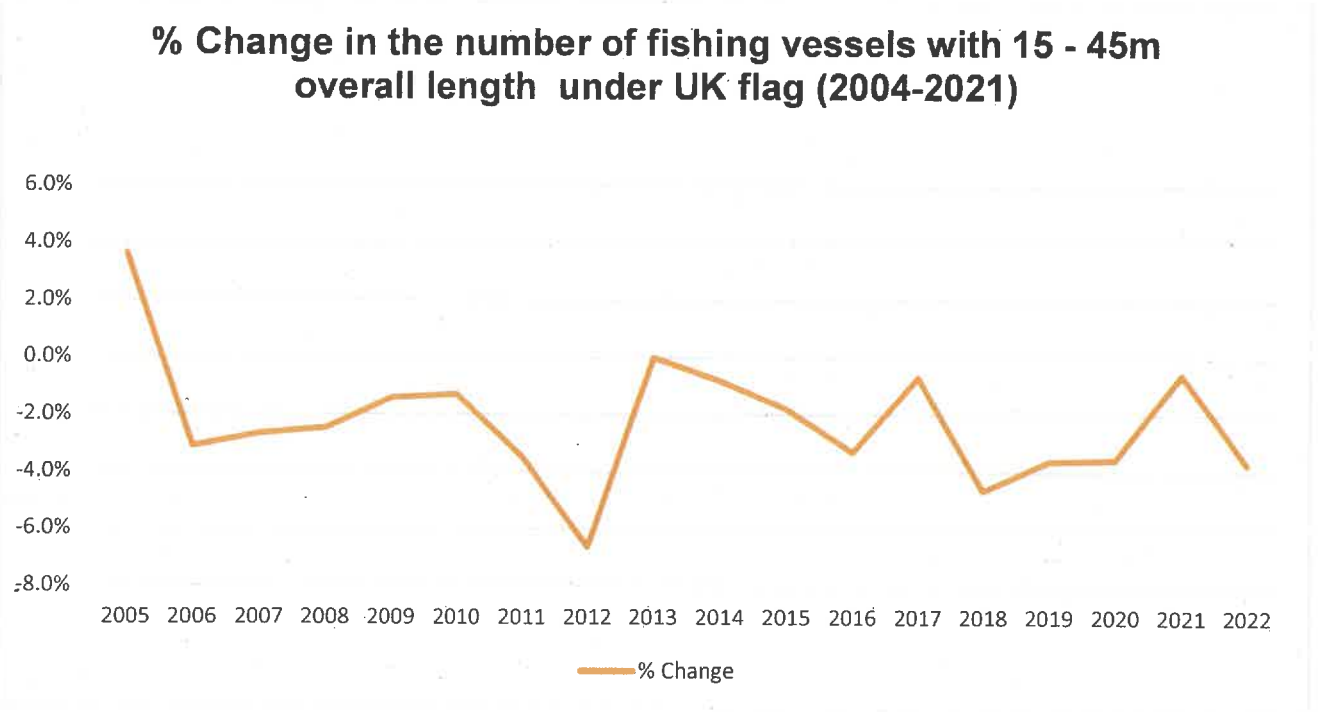

Figure 6. % Change in the number of fishing vessels with 15 - 45m overall length under UK flag (2004-2021) based on data from the UK Fishing Vessel List

6. Has the evidence identified any opportunities for reducing the burden on business?

No opportunities were identified for reducing the burden of business as part of this PIR or as part of the 2016 PIR. For the 2016 PIR, no respondents identified ways where the regulations could be improved[13].

13 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/701236/VTMD_PIR_Summary_of_consultation_responses.pdf

The MCA continues to review the system and processes for reporting under the regulations and incorporating improvements and efficiencies where appropriate via a continuous feedback process with stakeholders. Whilst there are many small or micro businesses in the fishing sector, no stakeholders have reported concerns to the MCA over this requirement.

7. How does the UK approach compare with the implementation of similar measures internationally, including how EU member states implemented EU requirements that are comparable or now form part of retained EU law, or how other countries have implemented international agreements?

The UK implementation is very similar to EU member states. The 2004 Regulations as amended, including by the 2011 Regulations do not 'gold-plate' the Directives and implement the minimum regulation necessary to comply so as not to regulate beyond the provisions of Directive 2002/59/EC and Directive 2009/17/EC. From interaction the MCA have had with EU counterparts the MCA have identified many consistencies in approach, and this has helped to reduce the burden on business where vessels operate internationally.

Summary

- Post Implementation Review:

The review provisions requiring this post implementation review were inserted in the 2004 Regulations by the 2011 Regulations. These provisions came into force on the 25/11/2011.

- Territorial Extent and Application of the Regulations:

The Regulations apply to non-UK ships whilst they are in UK waters, and to UK ships anywhere in the world. They apply to all ships over 300 gross tonnage. The provision relating to carriage of AIS also applies to fishing vessels greater than 15 metres in length irrespective of their gross tonnage.

- Recommendation:

Keep - The MCA recommend that the 2004 Regulations as amended, including by the 2011 Regulations are fit for purpose and should be kept. The MCA monitor all avenues of feedback regarding the implementation, adoption, and continual applicability of these regulations through, for example:

- The MCA host the UKSoN stakeholder meeting twice a year that gives a broad section of industry and representative bodies the opportunity to feedback on the efficacy of the regulations
- contact with surveyors through the survey and certification system
- enforcement branch where applicable.
- The post implementation review process, including, where applicable, data analysis and consultation

- Cost Summary:

The underpinning assumptions that implementing the 2011 Regulations would incur relatively low costs to business and the MCA appears to be reliable.

- Proportionality:

Low – The MCA have adopted a proportionately light touch approach to this review. The 2004 Regulations have been in effect for 19 years and the 2011 Regulations for 12 years. They have been working effectively and any issues with them would have arisen and been acknowledged in that time. At the time of implementation, they were not contentious, introduced a relatively low cost / benefit and no other Department had a vested interest.

- Lessons Learned:

No particular lessons have been identified as part of this review.

- Next Steps:

The post implementation review process is a cyclical mechanism resulting in a published recommendation every 5 years. The next review is due to be published before 25 November 2026. The next UKSoN Meeting is due to be held Novermber 2023.

Annex A

Background

Background on Vessel Traffic Monitoring in the European Union

Directive 2002/59/EC (establishing a community vessel traffic monitoring and information system) established and regulates a mandatory vessel traffic monitoring and information reporting system that helps prevent accidents and pollution at sea.

The measures were designed to prevent accidents at sea and were implemented in response to the loss of the tanker MV ERIKA, which broke up in bad weather and sank 40 miles off the Brittany coast in December 1999.

Directive 2002/59/EC is implemented in UK law in the main by the 2004 Regulations, although some measures are also covered by the Merchant Shipping (Safety of Navigation) Regulations 2002 (SI 2002/1473), and the Merchant Shipping (Dangerous Goods and Marine Pollutants) Regulations 1997 (SI 1997/2367), in both cases, as amended.

The amending Directive 2009/17/EC updated the requirements of Directive 2002/59/EC. The changes introduced by Directive 2009/17/EC that have been implemented in the UK by the 2011 Regulations are listed below.

- Introducing a specific reporting mechanism (SafeSeaNet). This is simply naming the system set up in Europe to collect and hold the data sent to it from the various member states.
- Introducing measures in the event of risks posed by ice. This is a failsafe to stop ships encountering ice on their routes that they would not be able to break through.
- Widening the scope of Directive 2002/59/EC to include fishing vessels between 15 and 45 metres in Overall Length and Bunkers on ships under 1000 Gross Tonnage (GT) instead of 5000 tonnes of bunkers. Directive 2002/59/EC now applies to more ships and requires fishing vessels between 15 and 45 metres in Overall Length to fit Automatic Identification System (AIS) equipment.
- Introduce more rigorous requirements for information about the polluting goods onboard ships.
- Adding additional criteria for exemptions from reporting requirements. To be exempt from making some reports, ships now need to fulfil certain conditions.
- Amending the confidentiality requirements for data gathered in accordance with Directive 2002/59/EC, so that confidential data must be used in accordance with the Directive.

The Directive also required the Maritime and Coastguard Agency (MCA) to make a number of changes to the UK's data transfer system, which is known as the 'Consolidated European Reporting System (CERS)'. These changes have impacts on those organisations that undertake system-to-system transfers with CERS.

In addition, Directive 2009/17/EC introduced the concept of Long-Range Identification and Tracking (LRIT) systems. This allows member states to track vessels much further offshore than when using standard AIS equipment. The requirements on LRIT mirror recent amendments to the International Convention for the Safety of Life at Sea (SOLAS). The LRIT requirements were implemented in UK law by the Merchant Shipping (Safety of Navigation) Regulations 2011 which also implemented the amendments to SOLAS in UK law.

Directive 2011/15/EU, negotiated through comitology in the Committee of Safe Seas and the Prevention of Pollution from Ships (COSS) contains further minor amendments, notably new texts for Annexes II and IV of Directive 2002/59/EC that tidy up the drafting, and the updating of a reference to a revoked IMO Resolution, bringing Directive 2002/59/EC in line with requirements already in place under international law.

Background on the Automatic Identification System

The AIS is a VHF-based radio transponder system that, as required by Directive 2002/59/EC, is fitted to commercial vessels of more than 300GT and which transmits the identity of the vessel including the Maritime Mobile Service Identity (MMSI) number that may be used for establishing communications using Digital Selective Calling (DSC). In addition, the position, course and speed, heading, and other voyage-related data are provided. Commercial vessels use the 'Class A' variant of AIS. A simpler 'Class B' version has been developed for leisure vessels and small commercial vessels not required to fit Class A

Beside the vessel transponders described above, Search and Rescue (SAR) Helicopters and aids to navigation also provide appropriate information. In addition, AIS technology is being used for SAR homing, and has benefits for establishing vessel location in SAR incidents that enhances the potential for life saving. In the medium term, it may be used as a distress alert system.

The MCA as the UK National Competent authority has an infrastructure to collect AIS data around the UK coastline, and this is provided to our Rescue Centres and Surveyors. It has proved to be very useful in SAR missions, and in the protection of the environment with regard to illegal or accidental discharges from ships.

LRIT Systems are similar to AIS but allow for a much longer range of information transmission.